

# ANNUAL REPORT

OF THE

# DEPARTMENT OF THE INTERIOR

FOR THE YEAR

1900-1901

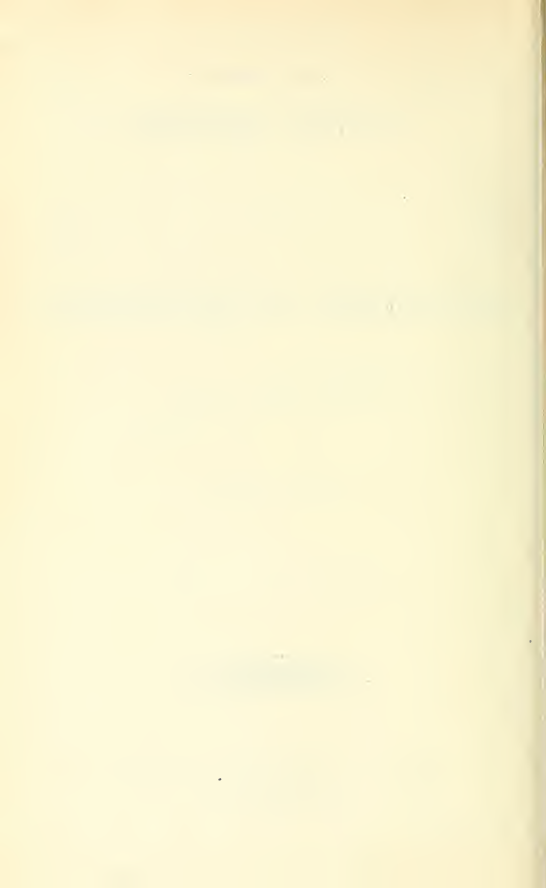
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OTTAWA

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EXCELLENT MAJESTY

1901



*To His Excellency the Right Honourable Sir Gilbert John Elliot, Earl of Minto,  
G.C.M.G., &c., &c., Governor General of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:—

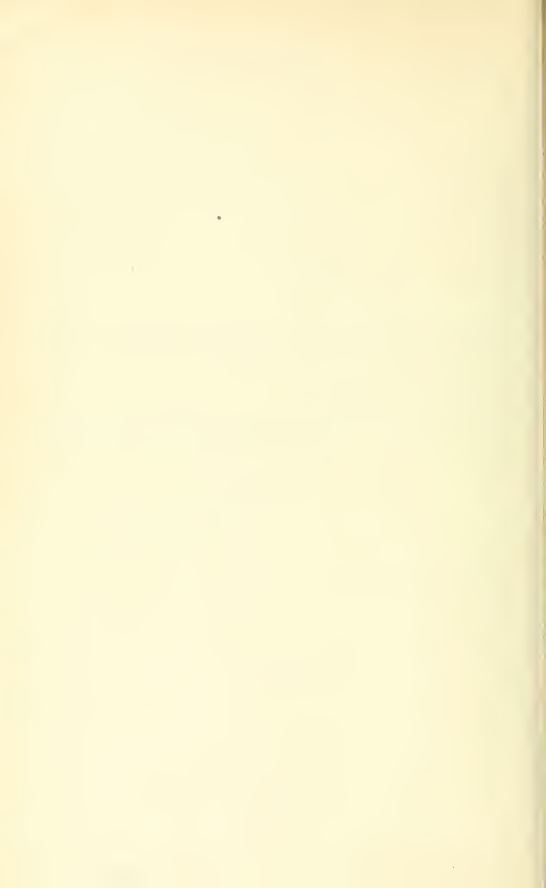
The undersigned has the honour to lay before Your Excellency the Report of the transactions of the Department of the Interior for the fiscal year ending June 30, 1901.

Respectfully submitted,

CLIFFORD SIFTON,

*Minister of the Interior.*

OTTAWA, November 30, 1901.





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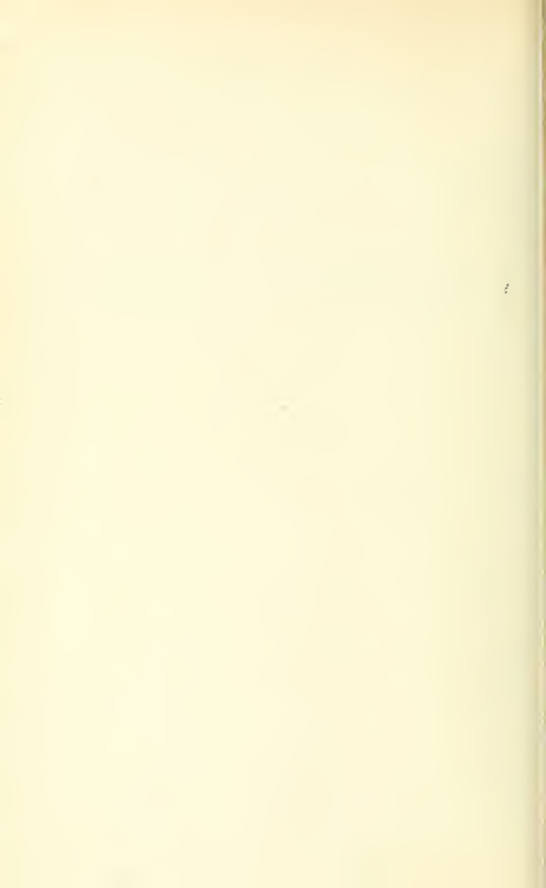
M A P S

[IN POCKET.]

MAPS TO ACCOMPANY REPORT OF THE SURVEYOR GENERAL.

Map of Exploration Survey of Divide between Great Slave Lake and Hudson Bay, Districts of Mackenzie and Keewatin, Dominion of Canada (22 sheets), accompanying report of J. W. Tyrrell, D.L.S.

Index Map to above.





## ANNUAL REPORT

OF THE

## DEPARTMENT OF THE INTERIOR

FOR THE YEAR 1901.

DEPARTMENT OF THE INTERIOR,

OTTAWA, October 28, 1901.

To the Hon. CLIFFORD SIFTON,  
Minister of the Interior.

SIR,—I have the honour to submit the report of the Department of the Interior for the twelve months ending June 30, 1901, being the 28th annual statement since the inception of the department in 1873.

As will be observed from the different returns submitted, which have been prepared with a view specially to affording every possible information of interest regarding the varied services under the immediate control of the department, the result of the work generally has been most satisfactory. Substantial increases have been recorded in the general revenue of the department, in the total acreage of land disposed of by sale by the government and railway companies, and what is the best indication of the development of the country, in the number of free homestead entries granted to bona fide settlers who have located on farms in western Canada. A careful examination of the returns for the last five years, as compared with the corresponding preceding period, will show the extent of the improvement that has been brought about in the results obtained through the efforts put forth by the department to open up to settlement the agricultural fields of Manitoba and the North-west Territories. The expectations for the past year would appear to have been fully justified, and the methods followed by the department in this relation have been attended with such marked success, that it is proposed to operate as nearly as possible on similar lines during the coming season. It is gratifying to note that the large increase in the population of Manitoba and the North-west Territories, as shown by recent census returns, has been chiefly due to the movement of immigration which the department in the last few years has succeeded in

directing towards western Canada, and that the additions thus gained to the population are composed of settlers who have proved themselves to be entirely self-sustaining and in every way worthy of Canadian citizenship. There is, therefore, every evidence that Manitoba and the Territories have entered upon an era of prosperity, which, coupled with the bountiful harvest of the past season will contribute in no small degree to bring their great agricultural resources prominently before the emigrating world.

#### DEPARTMENTAL CHANGES.

Amongst the important changes that have been made in the personnel of the department may be mentioned the appointment, on January 18, 1901, of Mr. J. Obed Smith, of Winnipeg, as Commissioner of Immigration, in lieu of Mr. W. F. McCreary, who had resigned that office on September 30 previous. Mr. Smith has been a resident of Manitoba for a number of years, and being possessed of superior administrative abilities, and a thorough knowledge of the country, he should prove himself fully competent to discharge the duties of his office to the satisfaction of the department and of the public.

I desire also to record the appointment, on the 5th of June last, of Professor Eugene Haanel, Ph. D., as Superintendent of Mines, in lieu of Mr. William Pearce, who was transferred, by Order in Council of the 8th June, to the office of Chief Inspector of Surveys.

It may be explained in this relation that in view of the recent development of mining industries in the Yukon Territory and other sections of the country where the lands are under the control of the Dominion government, it was felt that provision should be made for the appointment of a special technical officer whose scientific knowledge and practical experience in mining matters would fit him to take charge of this particular branch, such officer to advise the department upon the requirements in connection with this service and prepare reliable information for publication. Professor Haanel, who was latterly employed as Professor of Physics at the University of Syracuse, in the state of New York, had previously, for some fifteen years, held the chair of science at the Victoria University, Cobourg, Ont. He is a member of the Royal Society of Canada, an expert mineralogist, and otherwise specially qualified by scientific knowledge and attainments to take charge of the important position to which he has now been appointed. He has already rendered very valuable services in connection with the establishment of the new Dominion assay office at Vancouver, and as he will be specially charged with the compilation of accurate information and official statistics with regard to mines and mining industries generally throughout the Dominion, there is no doubt that he will thus be in a position to supply a long felt want in this respect.

Mr. Pearce, who is fully conversant with the Dominion system of surveys, having been continuously connected with the same in various capacities since the year 1874, will in future be entrusted with the work of superintending the inspection of surveys, as well as other special duties which may be entrusted to him by the department.

## SESSIONAL PAPER No. 25

## OFFICE ACCOMMODATION.

Owing to the large increase in the work of the department, it was found necessary to provide new quarters for the Topographical Surveys Branch, and for this purpose very commodious offices have been leased at the corner of Metcalfe and Slater streets, and are now occupied by the Surveyor General and his staff. The increased accommodation which has thus been provided will afford better facilities for the performance of the important technical work which is conducted under the direction of the Surveyor General, and at the same time permit of the lithographic office being equipped in such a way as to be in a position to cope with the increasing demands that are made upon it.

It was also decided to move the Immigration Branch from the Langevin Block to more suitable quarters, and with this end in view, one flat of the new Imperial Building, on Queen street, has been secured and is now occupied by the Superintendent of Immigration and the officials employed under him. These offices are centrally located, and will afford ample accommodation for the staff, as well as for the storage of the large stock of immigration literature which has to be kept on hand, and which in the Langevin Block formed a constant source of danger from fire, lying as it did in the halls and doorways, for lack of storage room.

I wish to state here that it would certainly be in the interest of the department that all the offices under its control at headquarters should be in one building, and it is hoped that some means may be devised at an early date to have this done. In the meantime, however, the arrangements that have been made would appear the best possible under the circumstances, and will answer the purposes of the department.

STATEMENT showing Gross Revenue (Cash and Scrip) received from all sources during the fiscal year 1900-1901, compared with the receipts for the previous fiscal year, 1899-1900.

Revenue.	Fiscal Year 1899-1900.		Fiscal Year 1900-1901.		Increase.	Decrease.	Total Net Increase			
	Cash and Scrip.		Cash and Scrip.							
	\$	cts.	\$	cts.	\$	cts.	\$	cts.		
Dominion Lands . . . . .	1,503,743	00	1,874,159	09	370,416	09				
School Lands . . . . .	230,874	78	48,049	83			172,824	95		
Seed Grain . . . . .	15,271	84	15,711	63	439	79				
Ordinance Lands . . . . .	11,043	53	14,604	47	3,560	94				
Fines and Forfeitures . . . . .	1,452	92	1,977	96	525	04				
Registration Fees . . . . .	24,711	69	33,979	77	9,268	08				
Casual Revenue . . . . .	3,664	00	1,587	57			2,076	43		
	1,780,761	76	1,990,070	32	384,269	94	174,901	38	269,368	56

## REVENUE AND EXPENDITURE.

The total revenue of the department for the past fiscal year ending June 30, 1901, as shown by the foregoing statement, amounted to \$1,990,070.32, being a net increase of \$209,308.56 over the preceding year.

The increase under the heading of Dominion lands has been \$370,416.09. This includes the revenue from the officials of the department in the Yukon Territory, but as the increase from this latter source was only \$105,103.06, it leaves a net increase of \$265,313.03 in the revenue on account of Dominion lands in Manitoba, the North-west Territories and within the railway belt of British Columbia.

It may also be pointed out that the revenue from school lands during the fiscal year 1899-1900, when extensive sales were held throughout Manitoba and the Territories, amounted to \$220,874.78, whereas the revenue from the same source fell to \$48,049.83 this year, which is a total decrease of \$172,824.95. This revenue is not chargeable to Dominion lands, and should hardly be taken into account when computing the business of the department, as the sales of school lands are not held at regular intervals, and the revenue derived therefrom is devoted exclusively to the school endowment funds of the province of Manitoba and the North-west Territories. Leaving out this item, therefore, from the gross revenue for the past year, as compared with the previous year, the net increase as between the two would be \$382,133.51 in favour of the former.

REPORT OF THE DEPUTY MINISTER

SESSIONAL PAPER No. 25

STATEMENT showing Receipts on account of Dominion Lands from July 1, 1872, to June 30, 1901.

Fiscal Year.	Homestead Fees.	Pre-emption Fees.	Improvements.	SALES.		Map sales, Office and Registration Fees, &c.	Surveyors' Fees.	Miscellaneous, including Trust.	Inspection, Cancellation, and Sundry Fees.	Timber Dues.
				Cash.	Scraps.					
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1872-73	6,360 00			19,170 20						169 25
1873-74	7,310 00			19,834 75						2,710 55
1874-75	11,510 00			13,696 90		129 00				2,535 25
1875-76	4,680 00			3,478 94	320 00					387 00
1876-77	2,250 00			1,085 86	136,975 16					320 00
1877-78	14,540 00			2,794 86	120,159 54					1,620 00
1878-79	17,630 00			4,968 39	210,004 84					325 00
1879-80	41,255 00	10,241 43		45,708 97	81,085 86	4 00	180 00			25,121 46
1880-81	50,150 00	10,801 75	269 00	71,170 17	70,828 39	81 00	310 00			32,628 34
1881-82	54,165 00	30,943 90	1,738 00	1,240,328 27	59,690 84	985 40	420 00			90,066 46
1882-83	73,015 00	54,725 00	7,114 91	516,992 21	33,638 40	3,036 45	890 00			147,983 10
1883-84	41,380 00	28,810 00	2,206 11	424,863 36	40,919 67	1,289 55	530 00			87,474 90
1884-85	25,645 00	17,100 00	2,328 75	199,275 32	45,875 00	1,621 82	370 00			64,930 31
1885-86	26,110 00	14,371 00	1,101 50	76,140 41	214,657 97	1,339 34	360 00			63,111 74
1886-87	19,014 00	6,887 93	1,971 55	48,175 76	337,640 19	1,171 30	240 00			2,685 00
1887-88	23,691 00	4,830 00	1,918 35	52,258 36	313,622 67	1,620 75	240 00			5,025 00
1888-89	35,020 00	10,650 00	4,128 48	57,513 16	318,238 57	1,410 16	230 00			7,778 40
1889-90	59,164 10	8,380 00	3,250 54	54,806 85	228,744 47	2,669 07	190 00			12,078 53
1890-91	46,394 00		6,302 61	91,664 98	171,425 14	1,854 78	88 00			96,250 00
1891-92	37,689 74		6,472 31	108,991 01	97,822 41	2,147 31	135 00			102,902 71
1892-93	36,402 26		7,113 50	93,671 67	71,293 18	975 20	82 00			105,825 24
1893-94	29,064 88		5,497 76	58,254 71	27,840 86	973 11	40 00			81,290 51
1894-95	18,278 00		3,163 90	37,293 71	23,269 62	685 90	80 00			74,679 30
1895-96	18,278 00		3,163 98	46,373 98	46,929 65	610 78	50 00			61,923 47
1896-97	21,179 00		3,737 01	49,335 53	16,929 38	795 05	70 00			68,302 82
1897-98	34,780 00		5,649 63	80,178 64	28,918 14	1,687 40	10 00			119,313 78
1898-99	58,255 00		4,207 62	116,698 35	21,307 58	1,262 65	20 00			155,360 63
1899-1900	72,690 00		4,835 81	168,247 58	88,796 22	1,258 85	190 00			126,345 82
1900-1901	79,910 00		5,213 22	40,360 35	328,270 63	3,874 14	165 00			269,399 32
	950,881 98	206,741 01	80,287 71	3,672,313 83	3,131,382 39	34,617 49	6,270 00	518,343 94	216,518 78	2,960,968 94

DEPARTMENT OF THE INTERIOR

1-2 EDWARD VII., A. 1902

Fiscal Year.	GRAZING LANDS.		MINING PERMITS, MINING FEES, STONE QUARRIES, &c.		ROCKY MOUNTAIN Park of Canada.		COLONIZATION LANDS.		Gross Revenue.	Refunds.	Net Revenue.
	Cash.	Scrip, &c.	Cash.	Scrip.	Cash.	Scrip.	Cash.	Scrip.			
1872-73									26,239 45		26,239 45
1873-74									29,980 80		29,980 80
1874-75									27,641 15		27,641 15
1875-76									8,865 94		8,865 94
1876-77									146,755 02		146,755 02
1877-78									139,584 40		139,584 40
1878-79									234,732 93		234,732 93
1879-80									292,165 29		292,165 29
1880-81									996,990 54		996,990 54
1881-82	2,245 00		40 00					354,036 17	1,805,734 87	4,636 08	1,795,047 32
1882-83	22,844 43		913 91					248,492 01	1,051,403 60	5,638 22	1,042,637 55
1883-84	11,370 60		640 90					258,713 40	1,001,776 67	8,746 05	992,556 17
1884-85	17,089 75		815 63					1,214 22	451,564 65	12,070 85	439,493 80
1885-86	29,562 31	3,131 08	1,284 83						457,973 95	63,389 12	394,584 83
1886-87	14,242 77	39,487 67	1,370 40	80 00					588,532 80	19,543 15	568,989 64
1887-88	5,922 47	23,023 28	2,273 73	80 00	2,951 58			10,000 00	569,986 68	6,277 66	563,709 02
1888-89	2,297 69	16,802 63	3,946 55		2,528 73			15,000 00	594,688 04	5,226 23	588,861 81
1889-90	1,365 57	9,021 63	9,242 08		1,094 37				462,536 26	8,299 74	454,236 52
1890-91	3,979 55	16,193 77	8,028 44	160 00	2,397 35			4,460 50	460,990 76	7,195 27	453,795 49
1891-92	3,726 80	17,292 60	5,616 85		3,648 45				432,151 08	15,291 39	416,859 69
1892-93	6,380 80	11,542 39	6,296 13		4,983 23				392,324 43	18,314 97	374,009 46
1893-94	5,540 79	7,687 86	5,223 15		2,823 92				250,069 12	4,544 01	245,525 11
1894-95	5,353 72	8,628 06	5,229 54		2,821 92				292,983 10	4,365 99	288,617 11
1895-96	7,071 86	6,255 90	5,813 51		2,734 82				227,694 93	8,368 79	219,326 14
1896-97	4,715 01	2,990 00	8,318 18		2,132 11				296,853 57	15,010 54	281,843 03
1897-98	4,728 58	510 39	699,334 76		3,045 65				1,069,741 63	4,678 55	1,065,063 08
1898-99	5,245 86	1,130,371 60	1,038,195 42		2,994 16				1,584,328 32	32,296 39	1,552,031 93
1899-1900	8,382 85	4,083 30	1,101,868 33	20 00	2,727 90				1,768,745 00	23,062 28	1,486,682 72
1900-1901.	4,726 28	14,671 95	1,101,868 33	20 00	4,047 31				1,874,159 69	18,368 85	1,855,790 24
	165,942 92	180,762 49	4,696,753 94	360 00	40,131 15			857,461 08	16,170,228 15	394,542 19	15,865,685 96

YUKON TERRITORY.

STATEMENT showing Revenue and Expenditure chargeable to income, Yukon Territory, from July 1, 1894, to June 30, 1901.

REVENUE.

Department.	Fiscal year 1894-95.		Fiscal year 1895-96.		Fiscal year 1896-97.		Fiscal year 1897-98.		Fiscal year 1898-99.		Fiscal year 1899-1900.		Fiscal year 1900-1901.		Total.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.		
Interior.....	255	00	272	00	8,573	00	735,485	09	1,263,415	15	1,134,518	95	1,297,648	07	4,380,167	26
Post Office.....							2,083	50	10,846	61	20,788	49	20,312	74	54,793	84
Customs.....	3,247	47	21,691	45	9,873	24	351,369	33	482,068	55	613,191	97	623,348	35	2,104,740	36
Mining and Fisheries.....											1,691	48	2,682	36	7,283	84
Public Works.....											30,423	17	106,272	13	138,695	30
Justice.....															14,493	29
	3,502	47	21,963	45	18,446	24	1,088,877	92	1,756,360	31	1,803,524	06	2,006,736	94	6,790,133	89

EXPENDITURE.

Interior.....	52,291	52	298,359	97	233,275	56	274,873	90	768,710	95				
Post Office.....			21,050	39	112,368	57	116,915	33	251,254	29				
Customs.....	374	88	3,260	23	3,938	78	31,141	29	24,433	47				
Public Works.....							18,543	98	215,575	88				
Mounted Police.....			27,565	03	22,134	76	890,018	99	416,739	18				
Militia and Defence.....							495,777	08	492,457	52				
Railways and Canals.....							116,090	00	185,869	42				
Justice.....							387,763	41	14,321	05				
Marine and Fisheries.....							55,952	92	12,256	52				
Inland Revenue.....							4,996	00	73,951	84				
							953	97	2,059	85				
	374	88	30,855	26	26,073	54	690,517	38	1,352,263	24	1,353,182	31	4,899,138	78

Excess of revenue over consolidated fund expenditure for the fiscal year 1900-1901 from commencement to June 30, 1901. . . . . \$ 773,674 63  
1,861,635 11

NOTE.—The above expenditure does not include sums charged to capital account in connection with the construction of public buildings, surveys, roads, and telegraph lines, amounting to \$1,046,977.50, \$458,068.43 of which was expended on the telegraph line through Northern British Columbia from Quesnelle to Atlin. The surplus of revenue over consolidated fund and capital account expenditure (deducting cost of telegraph line in British Columbia) is \$1,213,046.04; and if the expenditure in connection with the British Columbia telegraph lines is included, the surplus is \$754,977.61.

From this statement it will be observed that since the establishment of the government of the Yukon Territory in 1894, the excess of revenue over expenditure, in connection with the administration of the district, has been \$773,574.63, including all sums charged to capital account, the surplus exclusive of these sums being \$1,801,055.11.

It will also be noted that in so far as the Department of the Interior is concerned, the surplus revenue over expenditure since 1894 has been \$3,611,456.31, which is a very satisfactory showing, considering that the bulk of the work connected with the administration of the district is under the management of this department. While the department has not lost sight of the importance, in the public interest, of making adequate provision to meet the requirements of the territory, the comparatively small expenditure that has been incurred in this relation is certainly indicative of the care which has been exercised to administer this branch of the service as economically as possible.

STATEMENT of Revenue on Account of Registration Fees for eleven years from July 1, 1890, to June 30, 1901.

Fiscal Year.	Assiniboia Registration District. (Regina.)	North Alberta Registration District. (Edmonton.)	South Alberta Registration District (Calgary.)	East Saskatchewan Registration District. (Pr. Albert.)	West Saskatchewan Registration District. (Battleford.)	Yukon Territory Registration District. (Dawson.)
	8 cts.	8 cts.	8 cts.	8 cts.	8 cts.	8 cts.
1890-91.	5,332 16	585 82	5,554 35	2,021 37	89 61	.....
1891-92.	4,810 89	1,160 36	4,090 52	1,469 34	156 32	.....
1892-93.	6,042 15	1,982 33	4,146 02	1,157 21	110 27	.....
1893-94.	6,236 41	2,722 74	2,852 44	1,049 65	86 29	.....
1894-95.	5,161 74	2,653 97	3,219 50	730 22	89 23	.....
1895-96.	4,489 29	2,713 66	2,097 61	728 20	73 20	.....
1896-97.	5,339 55	1,900 76	1,991 90	848 75	123 78	.....
1897-98.	7,411 33	2,485 45	3,526 85	737 50	102 37	.....
1898-99.	9,275 55	3,553 73	3,608 90	1,151 95	31 75	1,598 85
1899-1900.	11,222 65	5,395 50	4,078 44	1,354 10	189 15	2,471 85
1900-1901.	14,317 20	6,995 50	5,207 43	1,662 70	51 13	5,745 81
	79,638 92	32,150 62	40,373 96	12,850 99	1,163 10	9,816 51



STATEMENT showing yearly the gross revenue (in cash only) received from all sources during the 14 years ending June 30, 1901.

Fiscal Year.	Dominion Lands (Cash.)		School Lands.		Steel Grain.		Ordnance Lands.		Fines and Forfeitures.		Registration Fees.		Casual Revenue.		Total.	
	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.
1887-88.	223,360	73	42,045	11	26,146	13	36,229	88	1,267	05	7,212	02	372	79	310,467	58
1888-89.	243,046	84	52,334	94	5,017	44	42,972	07	739	25	6,343	53	1,075	36	371,778	12
1889-90.	224,770	16	45,188	37	5,385	60	29,921	61	1,658	75	8,846	30	281	63	314,064	65
1890-91.	298,751	35	38,826	33	5,357	65	54,229	69	1,595	02	10,806	65	637	81	380,282	45
1891-92.	337,106	07	136,131	80	5,357	65	12,369	80	788	92	9,302	11	582	14	532,179	49
1892-93.	303,550	86	82,615	22	5,806	21	33,776	90	777	60	10,750	38	1,331	96	438,668	53
1893-94.	214,540	30	47,574	11	2,339	16	22,318	20	864	15	10,358	02	1,982	04	293,975	98
1894-95.	171,085	48	47,665	10	2,752	56	22,645	97	693	85	9,811	77	875	36	255,539	09
1895-96.	174,569	38	56,584	32	8,748	05	17,550	28	502	00	8,737	87	1,929	66	268,552	56
	2,190,721	17	548,985	50	62,212	80	301,115	40	8,185	99	82,118	74	8,979	75	3,172,649	35
1896-97.	187,424	19	24,292	43	9,887	13	9,831	27	1,316	00	8,097	24	2,683	65	244,431	31
1897-98.	990,313	10	52,410	82	12,351	71	22,537	17	529	66	14,283	50	269	92	1,082,660	28
1898-99.	1,563,020	74	41,249	77	12,388	69	12,349	65	2,891	63	19,230	73	2,629	91	1,635,651	72
1899-1900.	1,410,883	48	220,874	78	15,271	84	11,043	53	1,452	92	21,751	90	3,064	00	1,684,942	45
1900-1901.	1,533,197	07	48,049	83	15,711	63	14,004	47	1,977	96	33,979	77	1,587	57	1,649,108	30
	5,674,838	58	386,877	63	65,611	00	70,396	60	8,076	97	98,213	14	10,816	45	6,311,799	86
	7,835,559	75	435,863	13	127,823	80	371,481	49	16,262	96	180,661	88	19,706	20	9,487,449	21

## LAND TITLES OFFICES.

There has been an increase in the amount of registration fees collected during the past year. The total revenue from this source in 1899-1900 amounted to \$24,711.69, and during the past year to \$33,979.77. The revenue under this head for the five years from 1890-1 to 1895-6, inclusive, was \$74,553.07, and for the past five years \$102,380.43, showing an increase of \$27,821.36, or over 27 per cent in the amount of work performed at the registry offices. This furnishes further evidence, if any be required, of the beneficial results of the aggressive policy which has been pursued by the department within the past few years in regard to the settlement of the North-west.

STATEMENT of Land Sales by Railway Companies having Government Land Grants and by the Hudson's Bay Company.

Name.	1893.		1894.		1895.		1896.		1897.	
	Acres.	Amount	Acres.	Amount	Acres.	Amount	Acres.	Amount	Acres.	Amount
		\$		\$		\$				\$
Hudson's Bay Company . . . . .			7,526	48,225	4,431	23,209	9,299	52,410	10,784	53,277
Canadian Pacific Railway Co. . . . .	93,184	295,288	43,155	131,628	55,453	176,950	66,624	220,360	135,681	431,095
Manitoba South-Western Colonization Railway Co . . . . .	14,164	57,559	6,312	28,003	5,623	22,330	21,254	88,568	63,800	234,644
Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company . . . . .	1,603		640		2,391		286		2,524	
Calgary and Edmonton Railway Company . . . . .	11,290		11,035		46,815		10,553		9,436	
Total . . . . .	120,211	352,847	68,668	207,856	114,713	222,489	108,016	361,338	222,225	719,016

## SESSIONAL PAPER No. 25

## STATEMENT of Land Sales by Railway Companies, &amp;c.—Continued.

Name.	1898.		1899, (Fiscal Year.)		1900, (Fiscal Year.)		1901, (Fiscal Year.)	
	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.
		\$		\$		\$		\$
Hudson's Bay Company.....	62,000	310,000	56,875	274,625	70,196	352,631	82,308	399,804
Canadian Pacific Railway Com- pany.....	242,135	757,792	261,832	814,857	379,091	1,152,836	339,985	1,046,665
Manitoba South-Western Coloni- zation Railway Company.....	106,473	263,982	58,019	193,458	133,507	457,449	59,749	214,953
Qu'Appelle, Long Lake and Sas- katchewan Railroad and Steam- boat Company.....	22,534		61,030	178,517	18,932	53,974	22,266	74,810
Calgary and Edmonton Railway Company.....	15,481		24,738	53,335	46,653	128,256	116,719	352,637
Total.....	448,623	1,431,774	462,494	1,520,792	648,379	2,145,146	621,027	2,088,269

## LAND SALES.

The total acreage disposed of by railway companies is not quite as large as for the previous year, but the combined area of lands sold by the department and companies amounted this year to 712,566 acres, as against 699,178 acres in 1890, showing an increase of 13,388 in favour of 1901.

It may be further stated in this relation that during the past year there was a total area of 231,076 acres of land granted by the department in redemption of half-breed scrip, a very large proportion of which it is reasonable to suppose has been taken up by actual settlers. By adding this area to the figures given in regard to the lands disposed of by sale, the total area is brought up to 943,642, as against 706,218 in 1900, when the acreage of land granted in redemption of half-breed scrip was about 7,040 acres, showing an increase of 237,404 acres in favour of the last fiscal year. However, the fact that during the past five years a total area of 7,255,859 acres of land has been disposed of by the department and railway companies, either by sale or homestead entry, must be accepted as very conclusive evidence that the efforts that have been made by the department, through its representatives in the United States and abroad, to have the agricultural capabilities and natural resources of western Canada properly understood and recognized have been very successful. That a great stimulus has been given to settlement in Manitoba and the Territories within the last five years, as a result of the vigorous immigration propaganda inaugurated in 1896-7, there can be no better proof than by signalling the fact that during the four years preceding 1896, the total area of land disposed of by the department and companies amounted to only 2,336,789 acres, or 3,651 farms of 160 acres each, whereas during the last five years an average of 9,069 quarter-sections has been disposed of yearly.

The following is a comparative statement of the homestead entries and sales which have been made at the several agencies of the department during the fiscal years ending June 30, 1900, and June 30, 1901, respectively:—

	Fiscal year June 30, 1900.		Fiscal year June 30, 1901.	
	No. of entries.	Acres.	No. of entries.	Acres.
Homesteads. .... .	7,426	1,188,160	8,162	1,305,920
Sales. .... .		50,799		91,539

The following statement shows the number of homestead entries reported in each year since 1874, and the number and proportion of those entries which have been cancelled for non-fulfilment of the conditions of entry.

Departmental Year ended	HOMESTEADS.			PRE-EMPTIONS.		
	Number of Entries.	Number cancelled.	Percent- age.	Number of Entries.	Number cancelled.	Percent- age.
October 31, 1874. .... .	1,376	890	64	643	613	95
" 31, 1875. .... .	499	306	61	391	230	58
" 31, 1876. .... .	247	153	44	263	136	51
" 31, 1877. .... .	845	463	54	594	352	59
" 31, 1878. .... .	1,788	1,385	77	1,580	937	59
" 31, 1879. .... .	4,068	2,062	50	1,729	1,470	84
" 31, 1880. .... .	2,074	681	32	1,004	501	49
" 31, 1881. .... .	2,753	643	24	1,649	802	48
" 31, 1882. .... .	7,483	3,535	47	5,654	3,304	58
" 31, 1883. .... .	6,063	1,909	31	4,120	1,883	45
" 31, 1884. .... .	3,753	1,195	31	2,762	1,221	44
" 31, 1885. .... .	1,838	631	33	653	501	76
" 31, 1886. .... .	2,637	872	32	1,046	507	48
" 31, 1887. .... .	2,636	499	18	585	319	54
" 31, 1888. .... .	2,635	765	28	454	310	68
" 31, 1889. .... .	4,416	1,972	44	1,355	1,060	78
" 31, 1890. .... .	2,955	999	33	371	1	...
" 31, 1891. .... .	3,523	1,343	38			
" 31, 1892. .... .	4,840	2,070	42			
" 31, 1893. .... .	4,067	1,570	38			
" 31, 1894. .... .	3,209	1,283	39			
December 31, 1895. .... .	2,394	975	40			
" 31, 1896. .... .	1,857	473	25			
" 31, 1897. .... .	2,384	541	22			
" 31, 1898. .... .	4,848	972	20			
" 31, 1899. .... .	6,689	1,125	16			
June 30, 1900. .... .	7,426	414	5			
" 30, 1901. .... .	8,167	31	...			

## SESSIONAL PAPER No. 25

STATEMENT showing the number of Homestead Entries made during the fiscal years ended June 30, 1900 and 1901 respectively, by persons coming from the various States and Territories of the American Union.

States.	NO. OF ENTRIES.		States.	NO. OF ENTRIES.	
	1900.	1901.		1900.	1901.
Alabama.....		1	Minnesota.....	267	429
Arizona.....	1		Missouri.....	15	33
California.....	14	9	Montana.....	27	66
North Carolina.....		1	Nebraska.....	152	234
Colorado.....	3	9	New Hampshire.....	1	3
Connecticut.....	2	2	New Jersey.....		4
Dakota.....	414	640	New York.....	15	16
Delaware.....	1		Ohio.....	29	17
Florida.....		3	Oklahoma.....	4	8
Georgia.....		1	Oregon.....	14	31
Idaho.....	14	25	Pennsylvania.....	12	8
Illinois.....	31	45	Rhode Island.....	3	
Indiana.....	7	7	Texas.....	3	8
Indian Territory.....	1	10	Utah.....	50	74
Iowa.....	126	191	Vermont.....	1	
Kansas.....	58	80	Virginia.....		5
Kentucky.....		5	Washington.....	13	43
Louisiana.....		2	Wisconsin.....	51	53
Maine.....	5	1	Wyoming.....	1	10
Massachusetts.....	5	6			
Michigan.....	131	111	Total.....	1,462	2,191

STATEMENT showing the number of Homestead Entries made during the first six months of the year 1901, by persons coming from the various States and Territories of the American Union.

States.	Number of Entries.	States.	Number of Entries.
Alabama.....	1	Minnesota.....	252
California.....	5	Missouri.....	11
Colorado.....	4	Montana.....	32
Connecticut.....	1	Nebraska.....	135
Dakota.....	413	New Hampshire.....	2
Florida.....	2	New Jersey.....	3
Georgia.....	1	New York.....	9
Idaho.....	16	Ohio.....	5
Illinois.....	27	Oklahoma.....	4
Indiana.....	2	Oregon.....	7
Indian Territory.....	3	Texas.....	7
Iowa.....	102	Utah.....	56
Kansas.....	41	Virginia.....	3
Kentucky.....	2	Washington.....	26
Louisiana.....	2	Wisconsin.....	34
Maine.....	1	Wyoming.....	5
Massachusetts.....	2		
Michigan.....	65	Total.....	1,281

STATISTICAL STATEMENT *re* Homesteaders, comparing the reports of the Dominion Lands Agents for the fiscal year ended June 30, 1901, with those of the fiscal year ended June 30, 1900.

Nationalities.	NO. OF ENTRIES.	
	1900.	1901.
Canadians from Ontario . . . . .	1,887	1,606
"    Quebec . . . . .	261	176
"    Nova Scotia . . . . .	49	74
"    New Brunswick . . . . .	39	37
"    Prince Edward Island . . . . .	18	22
"    British Columbia . . . . .	16	16
"    Manitoba . . . . .	337	292
"    North-west Territories . . . . .	100	128
	2,647	2,351
Persons who had previous entry . . . . .	746	816
Canadians returned from the United States . . . . .	155	165
United States . . . . .	1,307	2,026
Newfoundland . . . . .		3
English . . . . .	639	659
Irish . . . . .	102	99
Scotch . . . . .	187	182
French . . . . .	58	38
Belgians . . . . .	21	22
Swiss . . . . .	1	2
Italians . . . . .	1	4
Roumanians . . . . .	3	46
Syrians . . . . .		2
Germans . . . . .	217	255
Austro-Hungarians . . . . .	1,033	1,056
Hollanders . . . . .	3	2
Danes (other than Icelanders) . . . . .	12	10
Icelanders . . . . .	48	140
Swedo-Norwegians . . . . .	87	93
Russians (other than Mennonites and Poles) . . . . .	83	105
Mennonites . . . . .	74	83
Poles . . . . .	2	8
	7,426	8,167

## SESSIONAL PAPER No. 25

STATEMENT showing the number of Homestead Entries made during the first six months of the Year 1901, and the Nationality of the Homesteaders, as reported by the several Agencies of the Department.

Nationalities.	Number of Entries.	Nationalities.	Number of Entries.
Canadians from Ontario	805	French	18
"    Quebec	106	Belgians	8
"    Nova Scotia	49	Swiss	1
"    New Brunswick	20	Italians	2
"    Prince Edward Island	11	Roumanians	41
"    British Columbia	6	Syrians	1
"    Manitoba	171	Germans	130
"    North-west Territories	62	Austro-Hungarians	494
	1,230	Swedo-Norwegians	53
Persons who had made previous entry	464	Danes (other than Icelanders)	6
Canadians returned from the United States	103	Icelanders	100
United States	1,178	Russians (other than Mennonites and Poles)	70
Newfoundland	1	Mennonites	59
English	340	Poles	7
Irish	45		4,444
Scottish	93		

## FREE HOMESTEAD ENTRIES.

An examination of the above statements will show that the number of entries granted during the past year, namely, 8,167, was 741 in excess of the previous year, and was the largest ever granted in the history of the department since its establishment, 1873. During the last five years there were 29,514 entries made, as compared with 16,367 for the preceding five years, or an increase of 13,147.

During the four years preceding 1896, the average falling off in the number of entries from year to year was at the rate of 20 per cent, and during the five years following 1896, the increase in the number of entries granted for each year over the preceding one has been at the rate of 29 per cent, so that there is a difference of 49 per cent in favour of the latter period as compared with the preceding four years.

It will also be seen that there has been a substantial increase in the number of entries made by settlers coming from the United States, especially from Dakota, Illinois, Iowa, Kansas, Michigan, Montana, Nebraska, Utah, Washington Territory and Wisconsin. This increase has been gradual since 1898, when the number was but 698: in 1899, 1,169; in 1900, 1,462, and in this year 2,191, or over 25 per cent of the entire number of entries made.

It is well known that of the large areas of land sold by the Canadian Pacific Railway and other companies, American settlers have been the chief purchasers, and it is quite reasonable to assume that a considerable proportion of these settlers have located on purchased lands, without taking up lands on homestead conditions.

STATEMENT showing the number of Letters Patent issued by the Department in each year since 1874, and the number of those issued which have since been cancelled in each year.

Period.	Number Issued.	Number Cancelled.
Year ended October 31, 1874.	536	6
" " 31, 1875.	492	4
" " 31, 1876.	375	4
" " 31, 1877.	2,156	13
" " 31, 1878.	2,597	32
" " 31, 1879.	2,194	57
" " 31, 1880.	1,704	41
" " 31, 1881.	1,768	11
" " 31, 1882.	2,766	11
" " 31, 1883.	3,591	16
" " 31, 1884.	3,837	24
" " 31, 1885.	3,257	18
" " 31, 1886.	4,570	17
" " 31, 1887.	4,599	26
" " 31, 1888.	3,275	34
" " 31, 1889.	3,282	30
" " 31, 1890.	3,273	20
" " 31, 1891.	2,449	35
" " 31, 1892.	2,955	27
" " 31, 1893.	2,936	16
" " 31, 1894.	2,553	15
Year ended December 31, 1894.	2,682	16
" " 31, 1895.	2,118	12
" " 31, 1896.	2,665	20
" " 31, 1897.	2,972	17
" " 31, 1898.	3,037	19
" " 31, 1899.	3,904	11
6 months ended June 30, 1900.	1,970	14
Year ended June 30, 1901.	6,461	17

#### PATENTS.

The above statement shows a large increase in the number of letters patent that have been issued. This is of course due to the increased number of settlers who obtained entries within the past few years, and who have since earned title to their homesteads; but the increase is largely made up by the issue of patents to different railway companies, that had long since become entitled to their land grants through the completion of their lines. It was felt that it would be far more satisfactory to close out these land grants by the issue of patents, and it is the intention of the department to continue to pass title as quickly as possible to the companies for such lands as they may have earned under their respective charters.



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## CORRESPONDENCE.

The following statement shows the number of letters received and sent by the department in each year since its establishment :—

Departmental Year ended October 31.	Letters Received.	Letters Sent.	Total
1871	3,482	4,150	7,632
1875	1,974	2,189	4,163
1876	2,256	3,097	5,353
1877	3,137	3,677	6,814
1878	4,642	6,009	10,651
1879	5,586	6,179	11,765
1880	8,222	9,540	18,162
1881	13,605	15,829	29,434
1882	25,500	30,500	55,800
1883	27,180	33,500	60,680
1884	27,525	33,386	60,911
1885	33,970	43,997	77,967
1886	60,964	67,973	128,937
1887	47,845	60,890	108,735
1888	43,407	52,298	95,705
1889	48,316	50,500	98,816
1890	36,200	36,068	72,268
1891	38,000	36,267	74,267
1892	41,990	42,203	84,193
1893	50,794	48,145	98,939
1894	48,619	50,840	99,459
1895	49,991	45,808	95,889
1896	47,501	44,238	91,739
1897	60,714	64,147	129,861
1898	88,913	87,845	176,758
1899	95,023	91,876	186,899
1900	121,219	133,177	254,396
1901	144,978	136,548	281,526

The number of registered letters during the departmental year 1901 was :—

Received, 5,007 ; sent, 12,563.

Consequent upon the extension of the work of the department, there has been a large increase again this year, as shown by the above statement, in the general correspondence. It is fortunate that ample accommodation has been provided for the records, as this has contributed largely to the expeditious transaction of the business, and at the same time insured the safekeeping of the records.

IMMIGRATION. *pd c*

The reports and returns in connection with the immigration service will be found under Part II.

The general result of the work for the year has been very satisfactory. There has been a substantial increase in the number of arrivals, and according to the reports of the agents of the department at the ports of landing and in the west, the class of settlers who have come to Canada with a view to settling on the vacant lands is a very desirable one. Although only a comparatively small proportion of the large influx of European emigration to America is directed toward Canada each year, there is no doubt that, as

a result of the careful selection exercised by the officers of the department, Canada receives more than a fair proportion of the European agriculturists who arrive in America with sufficient means and experience at their disposal to locate on vacant Dominion or Crown lands and become self-sustaining.

Considering the immense areas of arable lands still remaining vacant throughout the Dominion, there is no doubt that it would be in the interest of the Dominion that its population should be increased so as to permit of the development of the immense agricultural resources now lying dormant. There is one important fact, however, which should not be lost sight of, and that is that the western provinces of Canada cannot count upon the same numerous accessions to their population of experienced agriculturists from the British Isles as did the more fortunate eastern provinces, and in view of this the department is taking the greatest care in encouraging only settlers who have followed agriculture in continental countries to emigrate to Canada, in order that only such desirable classes may be secured as may assimilate themselves with Canadians and adopt the conditions of the country. While it is proposed to prosecute the same vigorous immigration policy during the coming season as brought about the satisfactory results recorded during the past few years, special attention and care, as in the past, will continue to be given to the proper selection of settlers who may be induced to locate in Manitoba and the North-west Territories.

As to the settlement of Manitoba and the North-west Territories only by the sons of Canadian farmers, or by British settlers, I need scarcely point out the utter impracticability of such a scheme. It should be considered that the total area of Manitoba and the North-west Territories, including Athabasca, is about 384,000,000 acres, of which about 71,000,000 acres have been disposed of as homesteads and by transfer to colonization societies and the railway companies, leaving a balance of about 311,000,000 acres. After deducting 50,000,000 acres of land which may be covered with water or otherwise unsuited for agriculture, there would still remain two hundred and sixty million acres. Last year was possibly the largest, with regard to sales of land and in homestead entries, and less than two million of acres were disposed of. If the settlement continues at this rate, it will be seen that one hundred years from now will not see the North-west country settled and the lands being developed to their fullest capacity, and even at the same rate of increase the population would not exceed 5,000,000 of people at that time. It will, therefore, be seen that when the extent of territory is taken into account, and also the proportion of the country that is being settled year by year, there need be little fear but that there will be plenty of land left for a number of generations of Canadians and British immigrants. The fact is that in a very few years to come the various nationalities, Mennonites, Icelanders, Galicians, Doukhobors, Scandinavians and Germans, will undoubtedly be lost in the great Canadian nationality, and, under the circumstances, every possible encouragement should be given to the agriculturists of any country of Europe who have proved themselves to be industrious, and who are willing to move to Canada for the purpose of assisting in its general development.

The following table shows the total annual immigration from 1897 to 1901, inclusive, classified according to the various countries from which the same was derived :

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	1897.	1898.	1899.	1900.	Total for Calendar Years 1897 to 1900, inclusive.	1901 (fiscal).
English and Welsh.	9,393	9,475	8,587	8,184	35,639	9,401
Scotch	1,239	1,400	1,337	1,411	5,387	1,476
Irish	751	733	699	765	2,948	933
Galicians.	3,917	4,010	6,806	6,593	21,326	4,702
Germans.	636	563	787	705	2,691	984
Hungarians			276	530	806	546
Austrians	540	470	131	248	1,389	228
Scandinavians	718	724	816	2,380	5,638	1,750
Doukhobors.			7,350		7,350	
French and Belgians	740	545	413	483	2,181	492
Russians and Finlanders.			1,536	2,067	3,603	1,726
United States	712	9,119	11,945	15,500	37,276	17,987
Miscellaneous	1,370	3,703	4,123	5,831	15,027	8,924
Total.	20,016	30,742	44,506	44,697	141,261	49,149

From this it will be seen that 41 per cent of the entire immigration for the last five years came from the continent of Europe, and 29 per cent from the British Isles and the United States of America. The table further shows that while there has been a substantial increase in the immigration from the continent of Europe, that from England, Wales, Scotland and Ireland has remained about the same, whereas the current of immigration from the United States has assumed such proportions as to show an increase over that from the British Isles during the period under consideration.

The approximate expenditure during the past fiscal year chargeable against immigration from the countries above mentioned, not including the expenses connected with the reception and location of immigrants, was as follows :—

Continent of Europe. . . . .	\$ 43,647 12
Great Britain and Ireland . . . . .	113,198 65

It may be interesting to note, also, in this relation that the per capita cost of immigrants during the last fiscal year has been as follows :—

Continental. . . . .	\$2 65
British. . . . .	9 58
United States. . . . .	7 96
Average per capita. . . . .	6 11

The total average per capita cost, including expenditure in caring for and looking after settlers in Canada, was \$8.34.

## BRITISH AND CONTINENTAL IMMIGRATION.

The reports of the High Commissioner for Canada in London, and of Mr. W. T. R. Preston, Inspector of Agencies in Europe, will, I am sure, be read with interest, as they contain much valuable information upon the work which is being conducted under them.

The figures with regard to British immigration show a very satisfactory advance over the previous years.

It is satisfactory to note that there is not much probability, as pointed out by the High Commissioner, of any active measures being taken by the home government with a view to assisting persons to settle in South Africa. The following statement appears in the report of the commissioner who was appointed by the Imperial government some time ago to make a study of the scheme:—' We have already stated that, in our opinion, it is desirable that such a settlement should be encouraged, and after having given very careful consideration to the matter, we are also of the opinion that, under proper conditions, it is also possible. At the same time we cannot close our eyes to the fact that soldiers, under any scheme of settlement, would have great difficulties to contend with, and that the conditions under which agriculture and stock-raising are conducted in South Africa are very peculiar. The seasons are uncertain, the recurrence of drought often causes serious disasters, and the injury inflicted by locusts and by the various pests and diseases which, in South Africa, afflict almost every living thing in the animal and vegetable world, make the occupation of farming an exceedingly precarious one. Even those who have been longest in the country often find themselves unable to escape ruin, owing to one or other of the above causes.'

Under the circumstances, no matter what encouragement may be given by the Imperial government to ensure the settlement of these lands, Canada need not fear the competition which may thus be started in favour of South Africa, as the great natural advantages attached to our Dominion lands would more than compensate for any monetary assistance which might be granted to settlers to locate on less desirable ones.

The subject of school books, referred to by Mr. Preston, is certainly one of great importance, and advantage will be taken of the readiness of publishers to make such change or additions in the same as will impart a correct knowledge of the resources and climatic conditions of the Dominion.

\* Mr. Preston's remarks respecting continental emigration would indicate on the whole that owing, on the one hand, to the unfavourable attitude of some of the continental governments towards Canada, and on the other to difficulties in respect to ocean transportation and heavy rates charged from European ports to Canada, it follows that: 'None but a desirable class, those who by thrift and industry have accumulated ample and sufficient means to settle in a new country, can possibly take advantage of the opportunities offered by Canada to become settlers in the Dominion.'

\* This state of things is not unsatisfactory, as the proportion of our total immigration coming from Europe is continuing to grow.

The reports which have been received from time to time from the officials of the department having charge of the location of settlers, and also from the General Colonization Agent, Mr. C. W. Spcers, who visits all the colonies in the west two or three times in the year, show conclusively that the Galician and other European immigrants are making very satisfactory progress, and that in the majority of cases they have been

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able to make a satisfactory commencement on their lands. It is pleasing to record that they are nearly all good farmers and have adapted themselves readily to the necessities of successful agricultural pursuits in their adopted country. Most of them appear to be only too anxious to acquire a thorough knowledge of the English language, and favour the establishment of schools for that purpose. Contrary to the general opinion here, most of the European settlers have come from countries where the most thorough systems of education are enforced, and consequently their early training makes them only too willing to acquire an education which will place them on an equal footing with their neighbours.

Regarding the Doukhobors, it is almost unnecessary to say that they are now very well able to take care of themselves, and from my personal observation of these people, when I visited a number of their settlements during the year, there would appear to be no doubt as to their being likely to achieve as great success as did the Mennonite colonists who settled in Manitoba in 1875.

## IMMIGRATION FROM THE UNITED STATES.

The results obtained in the United States, as shown by the statements submitted above, are highly satisfactory, and great credit is certainly due for this to the able staff of resident and travelling agents operating in that country.

The class of settlers who are crossing the boundary to locate in Canada are of the best type of practical agriculturists that could be secured in any country, and as this movement, which has since a few years taken such large proportions is likely to still further increase during the coming years, it is a source of great satisfaction that the methods employed by the department to have these results brought about have proved so successful.

Over 55,000 United States settlers with their families settled in the North-west during the past five years, and the accuracy of these figures is fully borne out by the large percentage, as shown by the returns, of the persons from that country who have entered for free homesteads during that period.

It is also highly satisfactory to know that the United States settler, who crosses the boundary to permanently settle on Canadian soil, soon becomes a fervent admirer of Canadian institutions and fully appreciates the advantages that the same offer.

## THE BUFFALO PAN-AMERICAN EXHIBITION.

It being felt that a North-west Territories exhibit at the Pan-American exhibition would be the means of advertising the territories as a desirable field for settlement and of opening new and better markets for the surplus product, a grant of \$5,000 was made by the Dominion government to the Territorial government to assist the latter in having a suitable exhibit prepared.

Mr. Molyneux St. John, of Ottawa, was appointed as the representative of the department at the exhibition, and with the co-operation of our United States agents, did

excellent work in the way of distributing attractive immigration literature, and otherwise interesting visitors as to the excellence of Canadian products.

The North-west exhibit attracted considerable attention, and the display of the collection of grains and of economic minerals elicited the most favourable comments.

Nothing better could have been devised to advertise the vast resources of the territories, and much good is expected therefrom in view of the movement of immigration which is now being directed towards Canada from the United States.

#### TIMBER, MINERAL AND GRAZING LANDS.

The report of the chief clerk of this branch of the department will be found under No. 19 of the Dominion lands division of the report.

In view of the extensive developments which have taken place within the last few years in the mining fields of the Yukon Territory, and the increased local demand for building material consequent upon the opening up of new settlements throughout Manitoba and the North-west Territories, the work of this branch of the department has grown largely in importance, and the results obtained during the year, as contained in the various statements submitted, will no doubt prove interesting.

The total revenue on account of timber, mineral and grazing lands during the past fiscal year, exclusive of the sales of mineral lands, amounted to \$1,341,293.08, the largest receipts ever recorded from these sources, being an increase of \$43,156.95 over the unprecedented revenue of the year 1898-9, and of \$512,862.07 over the year 1897-8.

#### TIMBER.

The total revenue on account of timber dues amounted to \$209,399.32, or an increase of \$83,053.50 over the previous year. Three hundred and seventy-one licenses to cut timber over a total area of 4,479.20 square miles were issued, as compared with 306 licenses, and an area of 3,610.37 square miles during the year 1899-1900.

The total revenue received from timber in Manitoba, the North-west Territories, British Columbia and the Yukon Territory, up to July 1, 1901, was \$2,060,998.94. The total revenue from timber within the railway belt in British Columbia up to the same date was \$418,521.36, and in Manitoba and the North-west Territories, \$1,434,105.97.

The output of manufactured timber in Manitoba during the past season was 23,532,300 feet B.M., as compared with 23,692,680 during the previous year, or a decrease of 160,380 feet B.M. It is estimated, however, that the total quantities of lumber disposed of in Manitoba during the year amounted to 150,532,300 feet B.M.

Although about one-sixth of the above quantity was imported, in the log, from the United States, it may be observed, as noted by the Crown Timber agent at Winnipeg when dealing with this subject, that as regards manufactured lumber our importation from the States is decreasing year by year, it having fallen off to 11,000,000 feet this year from 24,000,000 during the year ending June 30, 1900. The same remark applies

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to shingles, there having been but 2,340,000 imported during the year 1900-1 as compared with 10,235,000 during the previous year.

The output of manufactured lumber in the North-west Territories was 16,129,189 feet B.M., showing an increase of 2,618,902 over the preceding year; in the railway belt in British Columbia the output was 32,877,216, or an increase of over 3,000,000 as compared with the year 1899-1900, and for the Yukon Territory it was 6,233,917 feet B.M. The total output of manufactured lumber by mills operating under licenses of the department was 78,772,622 feet B.M., as compared with 66,886,970 for the preceding year.

The number of timber berths licensed, or authorized to be licensed, in Manitoba and the Territories is 209, and on Dominion lands in the province of British Columbia, 177. Ninety-seven berths have been granted in the Yukon Territory, covering a total area of 225.11 square miles.

A list of the timber berths, giving names of licensees, appears in the report of the chief clerk of the Timber and Mines branch.

The following are the principal changes that have been made in the regulations since my last report:—

I already referred in my report of last year to the Order in Council, dated 3rd September, 1900, amending the timber regulations for Manitoba, the North-west Territories and the railway belt in British Columbia, which provides for the reduction of dues on square timber and saw-logs cut under permit, with the exception of oak, to \$1.50 per thousand feet B.M., the dues on oak remaining unchanged.

It was also provided by the same Order in Council that returns must now be made by the quantity of lumber manufactured from timber cut under permit in Manitoba, or the North-west Territories, instead of computing the quantity in the log by 'Scribner's log rule.'

By Order in Council of January 3, 1901, provision was made by which dues on shingles manufactured from timber cut in the railway belt in British Columbia shall in future be paid at the rate of 50 cents per cord on the bolts instead of 20 cents per thousand. This was considered advisable, as although 20 cents per thousand might be deemed a fair price in Manitoba and the North-west Territories, it was felt that it was too high for shingles manufactured in British Columbia, where the marketable price for such article is much less than in Manitoba and the Territories.

By Order in Council of April 9, 1901, the regulations were also amended by providing that all licenses and permits issued on and after May 1, 1901, shall contain a clause to the effect that one-half the cost of fire guarding the timber on Dominion lands shall be defrayed by the holders of the berths, the Crown defraying the other half. This provision was deemed advisable in view of the expenditure which is now being incurred by the government to protect timber lands from destruction by fire, and as persons or companies engaged in lumber industries are personally interested in the preservation of the timber areas under license to them. It was felt that they should fairly be called upon to contribute their share in the cost of fire guarding timber lands under the control of the Dominion government.

By an Order in Council, dated July 30, 1901, provision was made that all timber cut under license in the railway belt in the province of British Columbia should be manufactured within the limits of the Dominion. This provision was made in order to prevent the exportation of saw-logs.

The regulations provided for a rebate of forty cents per thousand feet B.M. to be allowed on lumber exported from British Columbia to places outside the Dominion of Canada, but by an Order in Council, dated September 24 last, this rebate was cancelled. This action was taken owing to representations made to the department that the lumber interests of British Columbia were established on a firm basis, and that the conditions under which licensees conducted their business are more favourable than those across the international boundary line.

#### TIMBER IN THE YUKON TERRITORY.

The regulations covering the issue of licenses to cut timber on Dominion lands in the Yukon Territory, provided that a licensee should erect a saw-mill within a certain period to be fixed by the Minister of the Interior, but by Order in Council, dated March 16, 1901, provision was made that a licensee should have in operation within one year from the date that he is notified by the proper officer of the Department of the Interior that the Minister of the Interior regards such a step necessary or expedient in the public interest, and to have in operation for at least six months of each year of his holding, a saw-mill in connection with the berth described in his license.

With a view to prevent a large area of timbered lands in the Yukon Territory from being acquired for speculative purposes, provision was made in the regulations that not more than five berths of five square miles each should be granted to any one person or company. By an Order in Council, dated May 31 last, provision was made that when an applicant who had already acquired five berths could show to the satisfaction of the Commissioner of the Yukon Territory that he actually required additional timber for manufacturing purposes at the mill or mills which he had erected, the provision restricting the granting of more than five berths to one applicant might be waived.

#### GRAZING AND STOCK-RAISING.

During the past year the department issued 241 leases for grazing lands. The total number of ranches comprising Dominion lands at present cover an area of 605,794.75 acres.

The total number of leases of school lands in the province of Manitoba for grazing purposes in force on August 22, 1901, was 45, containing an area of 11,263.88 acres, and in the North-west Territories on August 26, 1901, 227 leases, containing an area of 77,127.98 acres.

#### HAY.

There were 5,171 permits to cut hay issued during the past year, and the sum of \$17,500.75 was collected for dues, as compared with 4,411 permits and \$17,838.88 for the previous year.



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By an Order in Council, dated January 3, 1901, provision was made that in case payment of the rental of a grazing lease is not made within ninety days from the date upon which it becomes due, the Minister of the Interior may require the lessee to pay an additional sum equal to fifteen per cent of the amount of the rental due.

By an Order in Council, dated 5th of the same month, regulations for the administration of grazing and hay lands in the Yukon Territory were established. These regulations provided for the issue of grazing leases for a term not exceeding ten years at a rental of \$100 per square mile; for the issue of hay leases for a like period at an annual rental of fifty cents an acre, and for the issue of permits to cut hay at the rate of \$3 per ton, and an office fee of \$2.50.

## MINERALS OTHER THAN COAL.

There were but 46 entries granted for quartz locations by the agents of Dominion lands in Manitoba and the North-west Territories, as compared with 138 entries during the previous year; and 1,156 entries for similar locations were granted in the Yukon Territory, as compared with 918 for 1899-1900. This would seem to indicate that quartz prospecting was again last year actively prosecuted in the Yukon Territory, and it is to be hoped that the same may lead at an early date to some practical result.

It is gratifying to note that there has been a substantial increase in the number of placer claim entries granted. The returns for the past fiscal year show that 4,424 of this class of claims were granted, as compared with 1,340 during the previous year; 6,291 renewals and relocations as compared with 4,880 in 1899-1900, and 5,569 assignments as compared with 6,215 for the previous year.

From these figures it will be seen that there has been an increase in new discoveries, in so far as the staking of new claims would indicate, and a corresponding increase in the amount of work performed. The revenue collected from placer and quartz entries, renewals and relocations, and for registration of assignments and other documents in connection with mining operations, amounted to \$348,658.30, or an increase of \$194,271.60 over the previous year, which is a most satisfactory showing.

In the Yukon Territory 24,524 placer claims, 2,793 quartz claims, 16,573 renewals and relocations, and 25,020 assignments of claims were recorded up to July 1, 1901. Up to July 1, 1901, 59,449 free miners' certificates were issued, producing a revenue of \$596,168.82. During the present fiscal year 12,511 miners' certificates were issued, and the revenue derived therefrom was \$125,861.

The total sum collected up to July 1, 1901, for royalty on the gross output of placer claims in the Yukon Territory, after deducting the exemption allowed by the regulations, was \$2,192,645.41; of this amount the sum of \$596,368.03 was collected during the past fiscal year. A statement showing the royalty received, the places where the royalty was collected, and the names of the creeks, gulches and hills on which the claims from which the gold was taken are located, appears in the report of the chief clerk of the Timber and Mines branch.

Leases now in force to dredge for minerals in the submerged beds of rivers in the Yukon Territory cover 270 miles, and for the same purpose in the North-west Territories 911.75 miles.

The total revenue received for rent of the leaseholds in the Yukon Territory up to July 1, 1901, was \$139,655.50, and for the last fiscal year, \$2,650.

The total revenue for rent of the leaseholds in the North-west Territories to July 1, 1901, was \$20,262.71, and for the past fiscal year, \$3,000.

By an Order in Council, dated the 18th of the same month, the regulations for the mining in the Yukon Territory were rescinded and new regulations substituted therefor. The new regulations provided for the payment of royalty on the gold mined from a claim in excess of \$5,000 per annum at the rate of five per cent instead of ten per cent as heretofore, and provision was also made that it would be necessary for any one exporting gold out of the territory to produce to the officers of the government at the boundary a certificate from the Gold Commissioner that the royalty thereon had been paid, otherwise the gold would be confiscated for the use of the Crown.

By an Order in Council, dated the 18th of the same month, the regulations for the hearing and decision of disputes in relation to mining property in the territory were cancelled, and new regulations covering the establishment of an appeal court at Dawson were substituted therefor.

#### QUARTZ MINING.

Section 84 of the regulations for the disposal of quartz mining claims on Dominion lands in Manitoba, the North-west Territories, and the Yukon Territory provides that nothing contained therein shall be construed to limit the right of the Lieutenant Governor of the North-west Territories in Council, or of the proper authorities in any province containing Dominion lands, to lay out public roads through any mining property without compensation. By an Order in Council, dated January 3 last, provision was made that the above right should also apply to the proper authorities of any territory containing Dominion lands.

By an Order in Council dated the 21st of the same month provision was made that when the survey of a mining claim has been made within one year from the date upon which it was recorded, and such survey has been duly approved by the proper officer of the Crown, the cost of the survey—not exceeding \$100—may be allowed to be counted as work done on the claim for that year.

By Order in Council dated February 6 last, the price of quartz mining locations was reduced to \$1 an acre, and provision was made that all Crown patents issued for quartz mining claims situated in the Yukon Territory shall be made subject to the town site provisions of the regulations governing the administration of Dominion lands in that territory other than coal lands.

By Order in Council dated the 20th of the same month, provision was made that the royalty to be reserved in a patent issued for a quartz mining location shall not exceed 5 per cent on the sales; and that the legal action to be instituted by any person claiming an adverse right to a mineral claim must be in accordance with the regulations governing the hearing and decision of disputes.

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By an Order in Council dated January 3 last, exception was made of *house servants* in connection with those persons in the employment of a person or company holding mining property who are required to take out free miner's certificates.

## DREDGING IN THE YUKON TERRITORY.

The regulations governing the issue of leases to dredge for minerals in the beds of rivers in the Yukon Territory provided that the lessee should have at least one dredge in operation upon each five miles of river leased to him within two seasons from the date of his lease, but, by an Order in Council dated August 9, 1900, provision was made that the lessee should have, within two years from the date of his lease, at least one dredge in operation upon the portion of the river leased to him, not exceeding thirty miles, and should, within six years from the date of such lease, have one dredge in operation upon each five miles of river under lease to him; and by an Order in Council dated January 5 last, provision was made that the lessee shall pay for the first year a rental of \$100 for each mile of river leased to him, but for each subsequent year rental at the rate of \$10 a mile shall be charged.

## DREDGING IN MANITOBA AND THE NORTH-WEST TERRITORIES.

The regulations governing the issue of leases to dredge for minerals in the submerged beds of rivers in Manitoba and the North-west Territories, except the Yukon Territory, provided that the lessees' right to mining and dredging should be confined to the submerged bed or bars of a river below low water mark. By an Order in Council dated September 4, 1900, provision was made that the holder of more than one dredging lease on the Saskatchewan river should also have a right to dredge, during the period of his leases, between high and low water mark on both sides of the river within each alternate five miles of his leaseholds, such privilege to be subject to the rights of persons who acquired mining privileges prior to that date.

## PETROLEUM.

The petroleum regulations provided for the reservation for an applicant for a period of six months of an area not exceeding 640 acres of land for prospecting purposes, and, if oil were found in paying quantity, for the sale of the land to an applicant at the rate of \$1 per acre, subject to a royalty of two and one-half per cent upon the sales.

By an Order in Council dated May 31 last, however, provision was made that on and after the first day of July last, all unappropriated Dominion lands in Manitoba, the North-west Territories, and within the Yukon Territory, should be open to prospecting for petroleum by any individual or company desiring to do so, and that should oil in paying quantities be discovered, an area not exceeding 640 acres of land, including and surrounding the discovery, would be sold to the discoverer, at the above rate of \$1 an acre, provided the lands were available, subject to royalty at such rate as might from time to time be specified by Order in Council.

## HYDRAULIC MINING.

By an Order in Council dated January 5 last, provision was made that a lease which may be issued for an hydraulic mining location in the Yukon Territory shall be subject to the right of the Crown to withdraw from the operation of the lease at any time during its currency portions of the location for agricultural or building purposes, which at the time of such withdrawal are not being operated by the lessee.

## COAL MINING LAND.

The revenue for the year derived from the sale of coal lands was \$101,772, as compared with \$5,650.33 for the previous year, and the number of applications received was 860, as compared with 48, which shows that there has been considerable interest taken lately in this industry. The total area of coal lands sold up to July, 1901, was 40,402 acres, and the total amount received therefor was \$266,843.

By an Order in Council, dated February 6, 1901, provision was made that payment for coal lands in Manitoba, the North-west Territories and in British Columbia, might be made in cash or scrip when an application is granted, or payment might be made of one-quarter of the purchase price only and the balance in three equal annual instalments with interest at the rate of five per cent per annum upon the unpaid balances, but that scrip could not be accepted unless payment was made in full at the time of the sale. Provision was also made for the payment of royalty at such rate as might from time to time be specified by Order in Council; and by an Order in Council, dated May 31 last, provision was made that the above royalty should be at the rate of ten cents per ton of 2,000 pounds.

By an Order in Council, dated January 21 last, the regulations governing the administration of Dominion lands in the Yukon Territory containing coal were rescinded, and new regulations substituted therefor. The amended regulations provided that the Commissioner of the Yukon Territory might sell not more than 320 acres of land to one individual or company at the rate of \$20 an acre if the coal were anthracite, and \$10 for any other class of coal; that payment should be made in cash or scrip at the time of the sale, or in four equal annual instalments, and that a royalty at such a rate per ton as might from time to time be specified by the Governor in Council would be levied and collected on the gross output of the mine. The person purchasing such lands is required to develop the same within two years from the date of the application and to have a survey thereof made at his own cost. The lands are to be sold subject to the reservation of all minerals other than coal, and also subject to town site conditions.

The Crown timber agent at Winnipeg has furnished the following statement of the consumption of coal and wood at points in Manitoba and as far west as Regina, which can be taken as approximately correct:—

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	Tons.
American anthracite.....	37,500
American bituminous.....	4,200
Canadian anthracite.....	6,500
Canadian bituminous (Galt).....	10,000
Canadian lignite (Souris).....	43,000
	101,200
Canadian cord-wood (Winnipeg only).....	125,000 cords.

*Prices of Coal f.o.b. at Winnipeg.*

	Per ton.
American anthracite.....	\$9 50
American bituminous.....	7 00
Canadian anthracite.....	9 00
Canadian bituminous.....	7 50
Canadian lignite (at Winnipeg).....	3 75
Canadian lignite (at Melita).....	2 60
Canadian lignite (at Brandon).....	3 20
Canadian lignite (at Regina).....	3 30
	Per cord f.o.b. at Winnipeg.
Canadian poplar.....	\$2 40 to \$2 60
Canadian tamarack.....	3 25 to 4 00
Canadian spruce.....	2 60 to 3 00
Canadian jack pine.....	3 00 to 3 50
American oak.....	3 75 to 4 25
American maple.....	5 00 to 5 50

The quantity of American fire-wood imported is very small and almost inappreciable.

## IRRIGATION AND IRRIGATION SURVEYS.

Owing to the unusually heavy rainfall which southern Alberta and western Alberta, in common with the other portions of the Territories, experienced during the early part of the past season, irrigation was not resorted to in many districts where crops during dry years cannot be successfully raised without the artificial application of water.

The faith of the residents of the semi-arid portion of the Territories in the principle of irrigation, and the knowledge that the cycle of dry seasons is again about due, has influenced many smaller owners to proceed with the construction of irrigation ditches, fourteen applications for water rights for these smaller ditches having been recorded during the year.

The present standing of irrigation canal and ditch construction in the Territories may be summarized as follows:—

Number of canals and ditches constructed. . . . .	169
Length of constructed canals and ditches . . . . .	469 miles.
Number of water rights recorded for canals and ditches not yet completed. . . . .	14
Number of acres susceptible of irrigation from constructed canals and ditches. . . . .	614,684 acres.
Number of water rights recorded for domestic, power and other purposes . . . . .	127

Reference has been made in previous annual reports to the water rights which have been, and are being, from time to time set aside under the provisions of the North-west Irrigation Act in the eastern portion of the Territories in connection with the storage of water in reservoirs for stock-watering and domestic purposes. During wet seasons the necessity for the storage of water in this manner is of course not so pressing, but the reservoirs created by the Territorial government and the recording of water rights therefor are doing much to solve the problem of a surface water supply, particularly in Eastern Assiniboia during dry years. The dams erected to create these reservoirs now number some three hundred, and several of these dams are large structures impounding extensive bodies of water.

In the Lethbridge district of Southern Alberta the settlement and development which commenced with the completion last year of the Canadian North-west Irrigation Company's canal have progressed rapidly, and the transformation which has taken place in that district within the past year has to be seen to be adequately realized. Two populous and thriving villages (Stirling and Magrath) are now situated on the line of the canal where three years ago only scattered herds of range cattle could be seen, and a third village (Raymond) has been located and is now springing up at the point where an extensive plant for a sugar-beet factory has been located. These astonishing results are almost directly attributable to the construction of the irrigation canal, because, although it was not found necessary during last season, owing to a rainfall much in excess of the average, to resort to irrigation to any great extent to produce bountiful crops, the fact that such crops can be produced with sufficient moisture has been proved, and the canal affords a certainty of ample water supply during dry seasons.

In the early months of the year the Canadian Pacific Railway Company decided to fully investigate the proposed Bow irrigation canal scheme, which has been referred to in past annual reports and fully dealt with in the Fourth General Report on Irrigation and Irrigation Surveys. This canal, which is designed to head in the Bow river near Calgary and supply water from that stream for the irrigation of a large area of land lying east of that point and between the Bow and Red Deer rivers, was located in connection with our general irrigation surveys in 1895 and 1896, and the feasibility of the scheme from general standpoints satisfactorily proved. The Canadian Pacific Railway Company employed Mr. George G. Anderson, irrigation engineer, of Denver, Colorado, who had charge of the construction of the Canadian North-west irrigation

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canal, to thoroughly examine into and report regarding the proposed scheme, and although his report has not, of course, been made public, it is understood that he has confirmed the favourable reports made at the time of the original location of this canal, and concurs in the claim made in our General Irrigation Reports that this canal not only does not present any serious engineering problems, but is calculated to work a wonderful transformation in the country lying along the main line of the Canadian Pacific Railway east of Calgary.

The construction of the Springbank irrigation canal, to which reference was made in the last annual report of the department, was continued during the past season. The work was, however, seriously delayed by bad weather and has not yet been completed. The headworks and main portion of the canal are, however, now about finished, and it is expected that the remaining portion of the canal will be finished in time to supply water for irrigation, if needed, next season.

Among the smaller irrigation undertakings which have been recorded during the past year, several are designed to irrigate considerable areas, but are all being constructed as private or mutual undertakings for the irrigation of lands belonging to the applicants for the water right.

During the past season one division of the irrigation survey staff has been engaged in completing certain surveys in the Springbank district, west of Calgary, and in superintending the engineering work in connection with the construction of the Springbank canal. The second division of the staff has completed certain surveys and investigation in the Milk River district of Southern Alberta, and in connection therewith has located a canal which will divert water from Milk river for the irrigation of land lying north of that stream and east of the tract of country irrigated by the Canadian North-west Irrigation Company's canal. The location of the Milk River canal proves that a large area of valuable land can be supplied with water from that stream, should it be found feasible to divert water from the head of the St. Mary river into Milk river so as to augment the present flow into the latter stream.

The hydrographic work of the irrigation surveys has been kept up during the past season, and the information obtained from gauge-rod readings and the automatic record supplied by nilometers and hydrographs on the larger streams will be of the greatest value in finally determining the volume of water available from streams in the southern and south-western portion of the Territories for irrigation purposes.

The Fifth General Report on Irrigation and Irrigation Surveys, which brings all information down to date, is not yet ready for the printers, its preparation having been delayed pending the completion of some of the more important maps to accompany it. This report will, however, it is expected, be ready for issue in the early part of the year in monograph form, and will no doubt prove of great value in supplying full and detailed information regarding a subject that is rapidly becoming one of the most important with which we have to deal in the Territories.

## OPERATIONS OF THE TOPOGRAPHICAL SURVEYS BRANCH.

During the half year extending from July 1 to December 31, 1900, there were thirty survey parties in the field. Seven of these were in Manitoba, seventeen in the Terri-

teries, two in British Columbia, two on that part of the sixtieth parallel of north latitude which forms the boundary between British Columbia and the Yukon Territory, one in the districts of Keewatin and Mackenzie, and one party in the Yukon Territory.

Besides these there were several parties engaged in the Yukon Territory under the direction of the commissioner.

Nine parties were engaged on contract subdivision surveys, this being a greater number than for some years past.

This season there are also thirty parties in the field, of whom five are working in Manitoba, twenty-two in the Territories, and three in British Columbia. Twelve of the parties are engaged in subdivision work under contract. A party organized by Mr. L. E. Fontaine early in May, for work in northern Alberta, near Onion lake, was shortly afterwards disbanded, Mr. Fontaine having met with an accident which prevented his remaining in the field.

#### SUBDIVISION SURVEYS.

Mr. Cyrus Carroll was employed during the last half of 1900 in the south-eastern portion of Manitoba, in the vicinity of the Manitoba and South-eastern Railway.

This season the work in this neighbourhood is being carried on by Mr. J. A. Coté.

Mr. R. Bourne has been engaged since September, 1900, in resurvey work, and the survey of outlines in central Manitoba.

Mr. C. F. Aylsworth was last year working in the vicinity of the Thunder Hill Doukhobor reserve, and in the Swan River district. This season he is engaged upon resurvey and subdivision work, about twenty-five miles east of Winnipeg.

Mr. H. B. Proudfoot is this season working under contract in central Manitoba, between the principal meridian and the south end of Lake Winnipeg.

Mr. A. F. Martin last season had a subdivision contract in the Beaver Hills in Assiniboia. This year he has been instructed to survey certain outlines in Manitoba, between Lakes Winnipeg and Manitoba, in connection with the examination of swamp lands, for the selection of which he is one of the commissioners. This survey was necessary in order to locate the lands to which the province of Manitoba is entitled under statute.

Mr. C. A. Bourget was last year working under contract. He subdivided several townships on the west shore of Lake Winnipegosis.

Mr. James Dickson was employed last season in the Swan River district. This year he is engaged in the survey of outlines east of Prince Albert.

Mr. J. C. Desmeules was working during 1900 in the Dauphin district. This year he is subdividing several townships in the Edmonton district.

Mr. J. J. Dalton has been instructed to make a number of surveys in Assiniboia, near Yorkton and Pelly.



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Mr. A. J. Brabazon was last season renewing the marks of corners in some townships near Yorkton.

Mr. A. Bourgeault was working under contract in 1900 in the country west of Prince Albert. He is again working under contract this year in Saskatchewan, north of Quill lakes.

Mr. P. R. A. Belanger was last season surveying township outlines west of the second meridian in the vicinity of Pasquia mountain. This year he is engaged in similar work east of Prince Albert.

Mr. J. A. Belleau was employed during 1900 in the Thickwood Hills, and near Carlton. This season he is east of Prince Albert.

Mr. C. C. DuBerger was last year employed in northern Alberta, near Edmonton. This year he is running township outlines near the ninth and tenth base lines west of the second meridian.

Mr. L. P. Gauvreau was last season awarded a contract in the Doukhobor reserve, near Carlton.

Mr. J. J. McKenna has been working under contract during 1900 and 1901. Last year he was in the Cypress Hills, this year he is in central Alberta, near Red Deer.

Mr. E. J. Rainboth was working under contract last year in southern Alberta. This year he has again been awarded a subdivision contract in the same neighbourhood.

Mr. J. E. Woods was last year engaged on scattered surveys in southern Alberta and through the Crow Nest pass. This year the surveys in this district are being carried on by Mr. G. J. Lonergan.

Messrs. C. E. Towle and G. P. Roy have been awarded subdivision contracts in Alberta, near Red Deer.

Mr. W. F. O'Hara was last year engaged in the survey of township outlines in the Finlander's reserve, west of the fifth meridian. This year Mr. J. N. Wallace has been instructed to continue the work in this neighbourhood.

Mr. A. McFee was last year, and is again this season, working under contract west of the fifth meridian, near Red Deer.

Mr. John Molloy and Mr. Hugh McGrandle are both subdividing townships under contract in northern Alberta.

Mr. Louis Gosselin has been awarded a subdivision contract in the Beaver Hills, near Edmonton.

Mr. R. W. Lendrum was last year working under contract west of the fifth meridian, south of Pigeon lake. This season he has been awarded a subdivision contract in the Beaver hills, near Edmonton.

Mr. J. B. Saint Cyr is working under contract in northern Alberta.

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Mr. J. K. McLean was last year engaged in subdivision work in the Edmonton district. This season he is surveying township outlines, north of Edmonton.

Mr. A. C. Talbot has been sent to Lesser Slave lake to make various surveys which have been asked for by the settlers in that neighbourhood.

Mr. C. C. Fairchild is surveying in the vicinity of the Peace river, near Dunvegan, in the district of Athabasca.

Mr. J. E. Ross and Mr. W. J. Deans have been working during 1900 and 1901 in the railway belt in British Columbia. Their work has been altogether to meet the immediate requirements of the settlers in that district.

## SETTLEMENT SURVEYS COMPLETED TO DATE.

Hereunder will be found the usual table of subdivision or settlement survey work completed each year since the commencement of the surveys, with the result of last season's operations added:—

	Acres.	Number of Farms of 160 acres each.		Acres.	Number of Farms of 160 acres each.
Previous to June, 1873. . . . .	4,792,292	29,952	In 1889	516,968	3,231
In 1874. . . . .	4,257,864	26,487	1890	817,075	5,106
1875 . . . . .	665,000	4,156	1891 . . . . .	76,560	476
1876 . . . . .	420,507	2,628	1892 . . . . .	1,395,290	8,720
1877 . . . . .	231,691	1,448	1893 . . . . .	2,928,640	18,304
1878 . . . . .	306,936	1,918	1894 . . . . .	300,240	1,876
1879 . . . . .	1,130,482	7,066	1895 . . . . .	406,240	2,539
1880 . . . . .	4,472,000	27,950	1896 . . . . .	506,560	3,166
1881 . . . . .	8,147,000	50,919	1897 . . . . .	428,640	2,679
1882 . . . . .	10,186,000	63,662	1898 . . . . .	859,840	5,374
1883 . . . . .	27,234,000	170,212	1899 . . . . .	1,022,720	6,392
1884 . . . . .	6,435,000	40,218	1900 . . . . .	735,480	4,596
1885 . . . . .	391,680	2,448	1901 . . . . .	1,603,680	10,023
1886 . . . . .	1,379,010	8,630	Total	83,282,855	521,263
1887 . . . . .	643,710	4,023			
1888 . . . . .	1,131,840	7,074			

## TOPOGRAPHICAL SURVEYS.

Mr. A. O. Wheeler has been instructed to prepare a map of the country in the vicinity of the Selkirk mountains in British Columbia. He commenced the field work in connection with it about the end of June, of this year.

## INTERPROVINCIAL BOUNDARIES.

Mr. Geo. White-Fraser and Mr. Arthur Saint Cyr were engaged last season on the boundary between British Columbia and the Yukon Territory. This was a continuation of their previous season's work. Mr. White-Fraser established astronomical stations along the boundary at intervals of about twenty miles. He carried the line westward about as far as the Alsek river.

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Mr. Saint Cyr connected these stations and established monuments along the line about one mile apart. He has completed the line between Bennett and Teslin lakes.

## YUKON TERRITORY.

The system of survey adopted in the North-west Territories has not been extended to the Yukon Territory; the land instead of being subdivided into sections is surveyed into lots of convenient size.

Mr. C. C. Chataway was sent to Dawson in April of last year for the purpose of supervising these surveys. He was authorized to issue instructions to the Dominion land surveyors working in the territory, and to examine returns of surveys. Mr. C. W. MacPherson was last season working under his instructions.

In November, 1900, Mr. Chataway's office was made a permanent 'survey office,' and he is at present in charge of it as 'director of surveys.' He has a staff of three men in the office, and the surveyors in the field under his directions are Messrs. James Gibbon, P. T. C. Dumais, C. W. MacPherson and A. J. MacPherson.

## EXPLORATORY SURVEYS.

Mr. Thomas Turnbull was last season engaged in making an exploratory survey of the country between Lakes Winnipeg, Manitoba and Winnipegosis.

Mr. J. W. Tyrrell left early in 1900 to make an exploratory survey in the districts of Keewatin and Mackenzie. He crossed the country between Great Slave lake and Chesterfield inlet on Hudson bay, and returned to Ottawa in December of last year. Mr. Tyrrell's report, which will be found at the end of Part III., is of great importance, as containing details of accurate information about a very large stretch of country previously almost unknown, and which is now shown to possess considerable value, in several directions, from a commercial point of view.

## INTERNATIONAL BOUNDARY SURVEYS.

The report of the commissioners, Messrs. W. F. King and O. H. Tittmann, appointed under the provisions of the *modus vivendi* entered into between Great Britain and the United States on October 20, 1899, upon their survey of the provisional boundary line between Alaska and British Columbia in the region about the head of Lynn canal, was received in January last, and was, in due course, laid before parliament.

In my last annual report, reference was made to correspondence with the United States government with reference to the bad condition of many, and the total disappearance of some of the monuments marking the southern boundary of Canada. In addition to the repair and replacement of these, as to the necessity of which there was a concurrence of opinion, the setting of new monuments, in places where the marks of the original survey are too far apart to meet present requirements, was proposed, but not agreed to, as it was thought that the placing of new monuments, being an addition to the original survey, should properly be made the subject of a special convention, supplementary to the various conventions under which the several parts of

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the boundary line were originally surveyed. An informal agreement was, however, come to with the government of the United States for the examination of the existing monuments on the 49th parallel from the Rocky Mountains to the sea, between British Columbia and the States to the south. This examination is being conducted by surveying parties of both governments, those of the United States being under the joint direction of the superintendent of the United States Coast and Geodetic Survey and the director of the United States Geological Survey, and those of Canada under the direction of Mr. W. F. King, chief astronomer of this department. The two Canadian surveying parties are under charge of Messrs. J. J. McArthur and W. F. O'Hara, Dominion land surveyors, the former working in the Cascade Mountains and west therefrom, the latter between the Similkameen and the Columbia river.

In order to take advantage of this opportunity for forwarding the work of the Geological Survey in the little-known region of the Cascade Mountains, a small party, under Mr. J. M. Macoun, of that survey, as biologist, and Mr. R. A. Daly, as geologist, was detailed to accompany Mr. McArthur's party.

An agreement has also been reached for the joint examination and repair and replacement of broken or destroyed monuments on the boundary between the State of New York and the province of Quebec, that is to say, from the Richelieu river to the St. Lawrence.

The field astronomical work of the department during the present year includes a determination of the latitude and longitude of a point on the international boundary near Midway, B.C. Another, which was desired near White River, Ontario, where it would form a needed tie point for geographical purposes, had to be left uncompleted on account of the approach of cold weather.

Preparation is being made for the erection of an astronomical observatory at Ottawa, and the installation of a large telescope, provision for this having been made by parliament at its last session.

#### THE YUKON TERRITORY.

There are two important appointments to record in connection with the administration of the Yukon Territory, namely, on March 11 last, that of the Honourable James Hamilton Ross, formerly Commissioner of Public Works in the government of the North-west Territories, as Commissioner of the Yukon Territory, in lieu of Mr. Wm. Ogilvie, and that of Mr. F. T. Congdon, barrister, of Halifax, N.S., on the 13th of the same month, as legal adviser and member of the Yukon council.

Mr. Ross' experience as administrator, and his practical knowledge of official requirements in connection with the public service specially fit him for the office of trust and responsibility to which he has been appointed.

I wish to place on record here the heartfelt sympathy of the department at the great misfortune which befell Mr. Ross by the loss of his estimable wife and child through the wreck of the *Islander*, on her south-bound trip from Skagway, off Douglas island, near Juneau, August 15 last.

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As Mr. Ross has only been a few months at the head of the government of the territory, he has not yet been in a position to send a detailed report upon the operation of each branch of the service under his control. He has, however, furnished a general report upon the present condition of the district, which will be found under Part IX.

The general tenor of this report is very satisfactory. The discovery and use of coal for city and mining purposes; the probable increase in the gold production through the cheaper transportation facilities promised by companies directly interested in that industry; the extension of the road systems in the vicinity of Dawson and the surrounding mining centres; the municipal incorporation of Dawson; the almost total absence of crime, are subjects ably touched upon by the Commissioner, and which are all indicative of the permanency of the Yukon gold fields and of their gradually increasing importance.

Although there has been a decrease in the royalty collected on Yukon gold this year, which is of course attributable to the reduction from 10 to 5 per cent on gold mined which came into force in the month of April last, the bulletins which have been recently published would appear to show that the gold production for the past two or three months has been in excess of all previous returns issued in this relation. It may be further pointed out that the general revenue from the Yukon during the past year, namely, \$2,011,311.07, was the largest on record, being an increase of \$207,787.01 over 1899-1900.

Full particulars with regard to operations of the department's offices in the Yukon will be found under the Timber and Mines section of the report.

I think it will be useful to quote in full the regulations now in force with regard to the importation of spirituous liquors into the Yukon Territory. They are as follows:—

*Regulations governing the importation of liquors into the Yukon Territory, as authorized by Orders in Council, dated respectively February 25, 1901, and March 18, 1901.*

In accordance with the provisions in that behalf contained in the Act 61 Victoria, Chapter 6, "The Yukon Territory Act," as amended by the Act 62-63 Victoria, Chapter 11, the Commissioner of the Yukon Territory is authorized to issue permits for the importation into that Territory of such liquors and other intoxicants, but solely upon and subject to the following conditions or regulations, that is to say:—

1. In these regulations and in any permit issued thereunder and in the ordinance hereinafter mentioned and any other ordinance which may be passed under the provisions of the said Acts for the purpose of preventing the importation of any malt or spirituous liquors or other intoxicants, except under permit subject to the said regulations: (a) the expression "permit" means a permit issued under, in virtue of and in accordance with such regulations; (b) the expression "liquor" or "liquors" means and includes all spirituous and malt liquors and all combinations of liquors and drinks and drinkable liquids which are intoxicating; (c) the expression "proof," "strength of proof" or "spirits of the strength of proof," means any intoxicating spirit or liquor having the strength of proof by Sikes' hydrometer; (d) the expression "gallon" means an Imperial gallon; (e) the expression "commissioner" means the Commissioner of the Yukon Territory; and (f) the expression "wholesale license" means a license for the sale within the Yukon Territory, by wholesale only, of liquors, as hereinabove defined, in warehouses, stores, shops or places other than taverns, inns, saloons,

ale or beer houses or similar public houses, in quantities—if the liquors are in cask, barrel or other similar vessel—of not less than five Imperial gallons, and in quantities of not less than one dozen bottles if the liquors are bottled, no bottle to contain less than one-half pint, Imperial measure.

‘2. No permit shall be issued to any person who has not previously obtained a wholesale license from the commissioner, and the commissioner shall have the sole right, power and authority to issue such wholesale license, which shall be signed by him, in which the name of the licensee and the warehouse, store, shop or place wherein he may sell and dispose of liquors by wholesale in quantities not less than those hereinbefore specified shall be mentioned, and in which it shall also be set forth that such wholesale license shall be and become void in case the licensee at any time during the currency thereof, either directly or indirectly, or by or with any partner, clerk, agent or other person, disposes of or sells liquors in any less quantities, respectively, than as hereinbefore specified, or disposes of or sells liquors in any quantity to be drunk or consumed in the warehouse, store, shop or other place mentioned in the wholesale license, or in, about or upon any premises connected therewith.

‘3. Each permit shall also be signed by the commissioner.

‘4. A fee of \$2,000 shall be paid to the commissioner for each wholesale license before the delivery of the same to the applicant therefor; and all moneys paid for such fees shall be and become part of the liquor revenue fund of the Yukon Territory, and shall be deposited to the credit of the comptroller of that territory on account of such fund.

‘5. Except in the case of beer, as beer is hereinafter defined, a fee of \$2 shall be paid for each and every gallon of liquors, of the strength of proof, or under, and so in proportion for any greater strength than the strength of proof, to be admitted under permit into the Yukon Territory.

‘6. In these regulations, in any ordinance to be passed as hereinbefore mentioned, and in any permit the expression “beer” means and includes beer, ale, porter or lager beer, containing 10 per cent or less of spirits of the strength of proof, and a fee of 50 cents shall be paid for each and every gallon of beer to be admitted under permit into the Yukon Territory.

‘7. All moneys received for fees for liquors (including beer) to be admitted, under permit, into the Yukon Territory, shall be paid to the comptroller of the Yukon Territory before the permit is issued, and all such moneys shall be and become part of the liquor revenue fund of the Yukon Territory, and shall be deposited to the credit of the comptroller of the Yukon Territory on that account.

‘8. Each permit shall be delivered to the officer who admits into the Yukon Territory the liquors or any portion thereof to be admitted under such permit, so that it may be transmitted to the commissioner after such officer has made any entries thereon with regard to the admission of such liquors or portion thereof as it may be necessary for him to make; and if the total quantity of liquors mentioned in any application for a permit to the commissioner cannot be taken into the territory at one time, the applicant shall state that fact and shall also state in how many shipments such quantity of liquors will be imported, so that if the application for the whole quantity or for more than one shipment thereof be granted, a separate permit may be issued for each of as many shipments as it may be decided to allow to be imported or brought into the territory.

‘9. No permit shall be issued for a greater period than six months from the date thereof, and after the expiration of that period the permit shall lapse and be and become absolutely null and void, and no liquors shall be admitted into the Yukon Territory thereunder.

‘10. No liquors which are allowed to be imported or taken into the Yukon Territory under any permit shall be sold, exchanged, traded or bartered by the permittee to or with any person or company who are not licensed to purchase and sell malt, spirituous or other intoxicating liquors in the territory under the ordinance or ordinances

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now passed or hereafter to be passed in that behalf by the Governor General in Council or Commissioner in Council under the provisions of section 8 of "The Yukon Territory Act," as enacted by section 2 of the Act 62-63 Victoria, chapter 11, or any Act which may be passed to amend the same.

11. Each permittee who imports or brings liquor into the Yukon Territory under permit shall keep a record in writing of the sale or other disposal of such liquors, in which shall be set forth the quantity and class or kind of liquor in each instance and the name of the company or person to whom it was sold, or with whom it was traded, bartered or exchanged, and such record shall be open to the inspection of the commissioner, the chief liquor license inspector of the Yukon Territory, or of any one authorized by either of them in writing for the purpose, when and as often as the commissioner or such inspector may desire to inspect the same.

12. The commissioner or chief liquor license inspector of the Yukon Territory may take from any liquors which are being brought or which have been brought into that territory, under permit, a sufficient quantity thereof to determine whether such liquors are of the kind and strength mentioned in the permit, or whether they are of a different kind and of greater strength than therein stated.

13. Wines required for altar or communion purposes by the minister, priest or other clergyman or the missionary in charge of any parish, church or mission in the territory shall be admitted therein free of any fee, duty or other charge, except ordinary customs or excise duties, as the case may be, upon the application to the commissioner in writing over his own signature of the minister, priest, missionary or other clergyman of the parish, church or mission, or of any bishop or other dignitary of the church for which such wines are required, but the purposes for which they are required shall be stated in the application.

14. Except wines for altar or communion purposes, no liquors shall be admitted into the Yukon Territory except when carried in or by sailing ship, or vessel propelled by steam, or by railway.

15. It shall be the duty of the captain or senior officer of any ship or vessel or conductor of any railway train in which liquors are being brought into the Yukon Territory, as well as the duty of the permittee, to report such liquors to the officer in charge of the North-west Mounted Police at the post nearest the point of entry into the territory, or to such other officer at that post as may be especially named and appointed for such purpose by the commissioner or the chief liquor license inspector of the Yukon Territory.

16. The commissioner may appoint from time to time, as may be deemed necessary by him, one or more preventive officers to aid him and the chief liquor license inspector of the Yukon Territory in enforcing the provisions of the foregoing regulations, and in detecting and arresting any person known or suspected to be guilty of a breach of any such regulations; and the commissioner may fix the duties and powers of such preventive officer or officers, and may fix the salary, fees or other remuneration which each of them is to be paid for his services in that behalf, which salary, fees or other remuneration shall be paid by the commissioner out of the liquor revenue fund of the Yukon Territory.

17. It shall be the duty of every officer, non-commissioned officer, policeman or other member of the North-west Mounted Police stationed in the Yukon Territory, to see that the several provisions of the foregoing regulations are duly observed, and to aid and assist the commissioner, chief liquor license inspector of the Yukon Territory or preventive officer or officers appointed by the commissioner, in enforcing the provisions of the foregoing regulations; and also to detect and arrest or aid in the detection and arrest of any person who is known to or suspected by such officer, non-commissioned officer, or policeman or other member of such force, of being guilty of a breach of any such regulations, or who is named in writing signed by the commissioner, chief liquor license inspector of the Yukon Territory or preventive officer, and addressed to such officer, non-commissioned officer, policeman or other member of such force, as

being guilty or as being suspected of being guilty of a breach of any of such regulations.

'Notwithstanding anything contained in any of the foregoing regulations, or in the ordinance P.C. No. 257 which was passed upon March 5, 1901, being "An ordinance to prevent the illicit importation of intoxicating liquors into the Yukon Territory and the manufacturing of such liquors therein," the Commissioner of the Yukon Territory is authorized to grant permits to the officers of the North-west Mounted Police force on duty at different points in that territory, to bring into such territory to the posts at which such officers and the men of that force under their command are respectively stationed, limited quantities of beer for the personal use of such officers and men, free of all fees and other charges, the quantity in each case to be determined by the commissioner who grants the permit.'

#### DOMINION GOVERNMENT ASSAY OFFICE.

I have already referred in an earlier part of this report to the establishment of the Dominion Government Assay Office at Vancouver, B.C. I may add in this relation that this office is now believed to be as well equipped as any other similar institution in America, and has been in full operation since the month of August last. It will undoubtedly prove of much benefit to the miners of the Yukon and British Columbia districts, and will at the same time be of great advantage to Vancouver in attracting business which would otherwise go to the American coast cities. The office has been placed under the management and control of Mr. Thomas McCaffrey, formerly manager of the Union Bank of Canada at Winnipeg, whose thorough business training and experience specially fit him for the position.

As an encouragement to miners to have their gold assayed at this office, the government has passed a regulation by which miners who personally deliver their gold at the office are refunded one per cent on the net value of the gold upon which they have paid royalty, so that in the case of such miners the royalty is reduced to only four per cent. This concession will no doubt act as an incentive to miners to patronize the institution.

While there may be at first a financial loss in the operation of the assay office, the resulting benefits will be of such widespread character as to much more than compensate for the deficiency.

#### FORESTRY.

The report of the superintendent of forestry, upon the work of his office during the past year, will be found under part VIII., and will no doubt prove very interesting.

Although this branch of the department is only as yet in its infancy, having been first established in the month of August, 1899, the results that have so far been achieved through its operations fully justify the comparatively small public expenditure which its maintenance involves. When it is considered, as pointed out by the superintendent, that owing to the efficient work performed by the forest rangers acting under his instructions, millions of feet of merchantable timber within the railway belt in the province of British Columbia were saved from destruction by impending fires this year—and the same remark applies to the Riding Mountain reserve which was also protected



## SESSIONAL PAPER No. 25

against serious damage from the same cause through the efforts of the rangers—there can be no ground for questioning the wisdom of the policy inaugurated by the department in this relation.

In view of the importance of the interests attached to the good administration of the forest domain, it is not to be wondered at that from time immemorial in the chief countries of Europe, notably Germany, France, Belgium, Spain, Italy, Russia, Norway and Sweden, systems of silviculture and stringent laws have been in force for the improvement of forests and their preservation against depredation and abuse. As pointed out in my report of 1899, when dealing with this particular subject, the success which had attended the work of afforestation which it was my privilege to observe while travelling in Belgium was such as to leave no doubt in my mind that similar results could be obtained in Manitoba and the North-west Territories by methods suitable to the climate.

Great progress in the same direction has of late years been made in Germany and France, and more recently the efforts put forth in the neighbouring republic to improve forest lands have proved most successful from every standpoint.

It may be interesting to note here that in the year 1885 a committee was appointed by the House of Commons in England to consider whether, by the establishment of a forest school, or otherwise, the woodlands of England, Wales, Scotland and Ireland could be rendered more remunerative, and the following extracts from the committee's report may prove interesting:—

'The committee has received evidence from persons representing various professions, occupations and interests, connected with woodlands and forest management in England, as well as in Scotland and Ireland, and has especially directed its attention to the following points:—

'(1.) How far there is need of some means of giving instruction to those engaged in the cultivation and management of woodlands.

'(2.) How far the establishment of a school of forestry would meet such need.

'(3.) Whether a board of persons representing various interests and associations connected with agriculture, and silviculture, should be formed, with the assistance of parliament for the purpose of examination, granting certificates, and generally promoting the improvement of our woodlands.

'(4.) Whether by either or both of such means the cultivation of woodlands could be made more remunerative.

'The woodlands belonging to the state are comparatively small, though even, as regards them, the difference between skilled and unskilled management would itself more than repay the cost of a forest school. The woodlands in private hands, however, are far more considerable, and the total area of woodlands amounts, according to the agricultural accounts, to 2,788,000 acres, viz.:

' England . . . . .	1,466,000
' Wales . . . . .	163,000
' Scotland . . . . .	829,000
' Ireland . . . . .	330,000

'Moreover, strong evidence has been given before your committee that large tracts of land in the United Kingdom, especially in Scotland and Ireland, might be planted with advantage. The forests in India and the colonies must also be taken into consideration, and on the whole, the forest area in the British Empire is greater than that

belonging to any other country. Your committee are satisfied that so far as Great Britain and Ireland are concerned, the management of our woodlands might be materially improved. Moreover, the present depressed values render economical and skilful management even more important than if the range of prices were higher, though it is probable that, with the waste of forest elsewhere, a brighter future is in store for home forestry, and that some considerable proportion of timber now imported, to the value of £16,000,000, might, under more skilful management, be raised at home.

‘Nearly every other civilized state possesses one or more forest schools. In this country, on the contrary, no organized system of forestry instruction is in existence, excepting in connection with the Indian service.

‘The witnesses examined before the committee have been generally and strongly of the opinion that the establishment of forest schools, or at any rate of some organized system of forest instruction, would be very desirable; but they have differed considerably as to the best mode in which this might be effected. There is a general agreement that the establishment of a forest board would be a wise step.

‘As regards the formation of a forest school, more than one centre of instruction would be desirable; though in the first instance it might be well to establish one school only, in order to secure the most complete equipment, the best teachers and a sufficiency of students. The Indian forest students might constitute a nucleus. The Indian government is already at some expense on their behalf, and it is probable that the fees from other students might nearly, if not altogether, repay any additional expense which their admission would entail. This school would doubtless be situated in England, but a school for Scotland is also urgently needed, and your committee are of the opinion that it would probably be desirable to found another in Ireland.

‘Sir Alexander Taylor, president of the Royal Engineering College at Cooper’s Hill, considers, however, that a separate course would be required if English students are to be admitted, and your committee are not informed whether the Indian government would be prepared to organize such course.

‘As regards Great Britain and Ireland, the demand would be principally for instruction adapted to the needs of the land agents, foresters and wood reeves; and your committee have it in evidence that they might profitably receive instruction together with those studying the higher branches of forestry for Home, the Indian and colonial service, who would carry their studies further. Even as regards ordinary woodmen, your committee consider that a certain amount of simple and practical instruction would be very useful. It has been stated by your committee that the authorities of other institutions, as, for instance, of the Agricultural College at Cirencester and Downton, would be prepared to organize a system of forest instruction, but the evidence has not been sufficient to enable your committee to decide on the respective advantages which might be offered by these institutions.

‘Apart from the question of actual profit derived from tree-planting, its importance as an accessory to agriculture is shown by the effects which woods have in affording shelter and improving the climate; and your committee are of the opinion that, whilst on public and national grounds timber cultivation on a more scientific system should be encouraged, landowners might make their woods more remunerative were greater attention paid to the selection of trees suitable to different soils and to more skilful management after the trees are planted. Your committee have had evidence that, apart from any immediate pecuniary benefits, there would be considerable social and economical advantages in an extensive system of planting in many parts of the kingdom, especially on the west side of Ireland and in the Highlands of Scotland. This subject is one of great importance and well worthy of early consideration.’

In a country so extensively wooded as was Canada at the time of its first occupation, it will be readily understood why such little notice has so far been taken of the forests, except as to clearing the land for settlement. The ruthless destruction of some of the most valuable timber areas, coupled with the increased demand for timber

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consequent upon the development of the country makes it quite clear to-day, however, that any measures taken by the government towards the reservation and improvement of our woodlands, which are by far the most important natural asset of Canada, should commend themselves to all who take any interest in its welfare.

## TIMBER RESERVATIONS.

The suggestions of the superintendent with regard to the necessity of maintaining our timber reserves, and of increasing their number where it may be found necessary to do so, are worthy of careful consideration. While it is, no doubt, in the interest of the prairie region, from a climatic and agricultural point of view, that every encouragement should be given to the propagation of trees and tree-planting generally in Manitoba and the North-west Territories, the first duty incumbent upon the government is that effectual measures be adopted and stringently enforced for the preservation and improvement of our forest lands. It is, therefore, proposed to prosecute vigorously the policy which has been inaugurated in this relation.

## TREE-PLANTING.

From the large number of applications that have been received from settlers who are desirous of taking advantage of the assistance afforded by the government to those who wish to devote a portion of their farms to tree-culture, there would appear to be a growing interest taken throughout the west in forest plantations and shelter belts, and the remarks of the superintendent in this respect will also be read with interest. It is gratifying to note that this branch of the work is looked upon with favour by settlers generally in the west, and that the prospects for the future are most promising.

## THE CANADIAN FORESTRY ASSOCIATION.

The second annual meeting of this association was held at Ottawa on the 7th of March last, and the report upon its operations, which has since appeared in a very attractive pamphlet form, will be found to be a valuable addition to the present limited supply of literature bearing upon the forest resources of Canada. The contributions, embodied in the report, from leading representatives of the different provinces, upon the woodlands of their respective districts, will not fail to greatly advance the cause of forestry, coming as they do from persons of such high scientific attainments and thoroughly competent to speak authoritatively upon the important matters which they have so ably treated. I desire to place on record the department's appreciation of the valuable assistance thus afforded to the department by the association, and beg to quote in full the conclusion of the report of the board of directors, in which I fully concur:—

‘The great extension of the pulp industry and the demand created thereby for spruce timber especially render it advisable that a special study of this tree should also be made so that we may know what our resources for this purpose are and when and how steps should be taken to ensure that the returns from this source of wealth should be retained at the highest possible permanent figure.

‘Tree planting on farms, and particularly on the great plains of the west, is now receiving more of the attention which it deserves. It is a subject for congratulation that

the Dominion government is giving special consideration to this question, and we hope the deliberations of this association may result in proper support being given to any properly devised plan for advancing this work.

'While all the steps in the development of the forestry policy of Canada may not yet be perfectly clear, the necessity for, and the method of the preservation of the present timber supply are sufficiently evident to justify your board in urging that the influence of the association should be used to secure that the Forest Fire Acts of all the provinces should be made as effective as possible, both by proper provisions and a wide-spread advertisement of them. The extension of the fire ranging system should also be urged when the necessities of the case will permit.

'Recognizing the advantage of having a strong public sentiment behind any governmental action, and believing that there is a latent and hitherto unexpressed feeling in the country in favour of both the federal and provincial governments giving more attention than heretofore to the forestry problem, your board would suggest the advisability of holding during the current year a number of public meetings in the large centres of population, similar to those recently held in Toronto and Kingston.

'Your board feel that they would fail in their duty if they did not make mention of the kind assistance the association has received from various quarters from the press of the country; from the various kindred societies and departmental officers, both here and in the United States, and especially from the railway companies of the country, which have been exceedingly generous in furthering the interests of the association.'

It will also be interesting to note here the following remarks from Dr. C. A. Schenck, Principal of the School of Forestry, at Biltmore, North Carolina, who is without doubt one of the leading authorities on forestry in America to-day, and who very kindly favoured the association with his presence on the occasion of their last meeting, and afforded them the benefit of his experience in tree culture and afforestation:—

'I think in the matter of forest fires we ought to move. The laws must be enforced. It can be done. It is done abroad. It is done in India. I think it can be done here. Whether at an expense of \$6,000 or \$60,000 you must guard all these miles of forest from fire. Though you cannot adopt European systems without money and plenty of it, fires can be prevented. We should impress that on the minds of our people and legislators constantly. It is a sure investment, sure to pay. Trees are one of the best investments that the government of any people can make.

'In Canada, if the population continue to increase, if the facilities of transportation continue to be developed, the price of pine stumpage, 80 years hence, might be \$20 per 1,000 feet B.M.,—the price now prevailing in Germany and France. If such are the prospects, Canada will be the richest country on earth before the dawn of the next century, provided that she continues to conservatively manage her forest resources; again, if such are the possibilities, we should at once proceed to reforest every acre of ground unfit for the plough but fit for timber production.

'If such are the chances, every sapling in the forest should be as carefully protected from fire as if it were a paper dollar bill.'

#### ROCKY MOUNTAINS PARK OF CANADA.

The report of the superintendent of the Rocky Mountains park will be found under Part IV.

The returns for the year are very satisfactory, and show, amongst other things, that the total number of visitors for the twelve months ending June 30 last was 8,156, as compared with 6,533 for the ten months ending September 1, 1900.

The following is a table of the number of persons who visited the park during the past five years:—

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1897.. . . . .	5,087
1898.. . . . .	5,537
1899.. . . . .	7,387
1900 (ten months).. . . . .	6,533
1901.. . . . .	8,156

These figures are certainly indicative of the increasing popularity of the park as a resort for health and pleasure, and I quite agree with the superintendent's suggestion that everything possible should be done to develop the attractions of the park, as, owing to its splendid situation, its unrivalled scenery and other natural beauties, it has in fact already become one of the most attractive resorts in America.

It may be mentioned in connection with the park revenue and expenditure, that the receipts for the first five years after its establishment in 1887 amounted to \$11,383, while the government expended \$142,000, and the Canadian Pacific Railway Company \$150,000, making a combined expenditure for that period of nearly \$300,000, and the population of the park, consequent upon the construction of the railway, was about 1,000. The revenue during the last five years has been \$14,945, an increase of over \$700 per year as compared with the first period, and the government expenditure but \$42,000. It is estimated that the revenue from the park this year will be about \$3,500, and there is every reason to believe that the revenue from this source will increase from this on.

It is also satisfactory to note that there were no floods or extensive fires within the limits of the park during the past year.

The superintendent's statements with regard to the animal preserve are very encouraging. As the natural surroundings of the park would appear to be quite congenial to almost any species of animals in the country, and the cost of maintenance comparatively trifling, it is the intention to add new specimens, from time to time, to the present collection, which now consists of 30 buffalo, 5 elk, 4 moose, 17 Angora goats, or 56 head in all. These animals prove a source of much interest to tourists and add greatly to the attraction of the park generally. It may be pointed out further that the establishment of an animal preserve of this kind would appear to be advisable from a national point of view, as it may ensure the rescuing of certain valuable species of animals from complete extinction, as is now being done in connection with the buffalo.

It may also be stated that the question of extending the boundaries of the park is now under consideration, as this would bring under government control several small lakes, at the heads of streams falling into Bow river, which are well stocked with fish, and which are surrounded by a country abounding in game of various sorts. The proposed extension will not involve any additional expenditure further than laying out the lines and making winding roads so as to take in the watershed of the Bow river.

The department also intends to issue properly illustrated and descriptive publications, with the view of disseminating more widely and accurately a knowledge of the park's beauty.

## SCHOOL LANDS.

The report of Mr. Frank S. Checkley, the clerk in charge of the school lands branch, will be found under No. 28 of the Dominion lands division of the general report.

There were no general sales of school lands held during the past year, as it was felt, after the extensive sales in Manitoba and the North-west Territories of the previous year, that the demand for this class of land would not justify the holding of any sales this year, in the interest of the school lands endowment fund.

Statements of the revenue and expenditure in connection with the position of the fund on the 30th of June last will be found annexed to the report.

With regard to charges of irregularities which were made in connection with certain of the auction sales held in Manitoba in June, 1900, reference is called to the clear and concise summary, which appears in Mr. Checkley's report, of the decision arrived at by his honour, James E. P. Prendergast, who conducted the inquiry in this relation.

It is gratifying to observe that every case of default and re-sale was duly investigated and reported upon, and that while it would appear from the result of the investigation that at several of the sales there were instances of combination and collusion between the bidders at the first sales and re-sales, there was no wrong doing or impropriety for which the officials of the department were responsible.

In all cases where it was shown that there had been any collusion, and the bidder failed to complete the purchase at first sale and the land was again put up, the department declined to carry out the sales, except on the condition that the purchaser should pay the price bid for the land at the first sale.

Out of 1,269 parcels of land disposed of by auction in 1900, only 31 were affected by the result of Judge Prendergast's inquiry.

## MANITOBA SWAMP LANDS.

Under the provisions of section 1 of the Act 48-49 Victoria, Chapter 50, swamp lands situated in the province of Manitoba were granted to the province, and by Orders in Council, dated respectively June 19, 1856, and February 27, 1899, provision was made for the selection of these lands.

The total acreage of swamp lands transferred to the province to the 11th of September last, was 1,188,507 acres, and for the past five years, 695,396 acres.

As it was felt that it was in the public interest that the transfer of these lands should be concluded as speedily as possible, and at the suggestion of the government of Manitoba, it was decided to increase to four the number of commissioners who should make the selections, and Mr. J. A. Macdonnell, civil engineer, and Mr. A. F. Martin, Dominion land surveyor, both of the city of Winnipeg, were, therefore, appointed by Order in Council of the 31st of January last, joint commissioners for this purpose.

Messrs. H. Jukes and W. A. Ducker, the commissioners appointed in 1898, in this relation, have since been continuously engaged at the work of examination, and it is hoped now that by the combined efforts of both commissions the whole selection will be completed at an early date.

## HALF-BREED COMMISSIONS.

Under Part VI. will be found the reports of the half-breed commissioners, who were appointed by Order in Council of the 2nd of March, 1900, to investigate and adjudicate upon the claims to land or scrip arising out of the extinguishment of the Indian title preferred by or on behalf of half-breeds born between the 15th July, 1870, and the end of the year 1885, in the organized districts of the North-west Territories. Mr. J. A. J. McKenna, of the Department of Indian Affairs, who was a member of the Indian Treaty Commission of 1899, in the district of Athabasca, and Mr. James Walker, of Calgary, who was a member of the half-breed commission for the same district, were appointed joint commissioners for the investigation and settlement of claims preferred by half-breeds resident in the districts of Assiniboia and Alberta. They examined in all 4,397 claims; of these 3,306 were allowed, representing an issue of money scrip to the value of \$315,600, and of land scrip covering 477,840 acres; 235 claims were disallowed and 856 reserved. Mr. N. O. Coté, of the Department of the Interior, who acted as half-breed commissioner jointly with Mr. Roger Goulet, in 1887, for the settlement of pre-transfer claims, and Mr. Samuel McLeod, of Prince Albert, N.W.T., member of the North-west legislative assembly, were appointed joint commissioners for the purpose of settling claims preferred by half-breeds resident in the district of Saskatchewan and within that portion of the territory included in the province of Manitoba, which was not within the said province as constituted by the Manitoba Act, 33 Victoria, Chapter 3.

This commission issued 1,851 certificates calling for money scrip redeemable in the purchase of land, aggregating \$344,266.55, and 492 for land scrip covering an area of 117,680 acres of land; 2,146 claims were examined, 1,990 of which were allowed, and the balance either reserved or disallowed. The whole number of claims investigated by both commissioners amounted to 6,543.

The claims in the Saskatchewan district, with a few exceptions in the case of absentees, were all investigated and dealt with, but owing to the delay occasioned by the large number of claimants who appeared at the first sittings of the Assiniboia and Alberta Commission, several of the claimants were unable to await the arrival of the commissioners, and, in order to remove any ground of complaint, special sittings were arranged for this year, and Mr. J. A. J. McKenna, who has since been promoted to the position of Assistant Indian Commissioner at Winnipeg, was appointed sole commissioner by Order in Council of March 16 last, to finally dispose of all remaining unsettled half-breed claims.

It is satisfactory to note that notwithstanding the onerous labours devolving upon the commissioners, who were called upon to travel by trail at remote points, the work was performed carefully and expeditiously.

It is hoped that the commission now in the field will be able to complete this year the investigation and settlement of all claims arising out of the extinguishment of the Indian title in Manitoba and the North-west Territories. While the cost to the country to have this brought about may appear large, it should be remembered that the claims in question should have been wiped out sixteen years ago, and that their settlement, even at this late date, removes all possible grounds for further difficulties in the future.

## THE DISTRICT OF KEEWATIN.

The report of His Honour Lieutenant Governor McMillan upon the condition of affairs in the district of Keewatin, during the past year, will be found under Part VII.

It may be observed that there is very little intercourse between the outside world and the groups of population that are scattered throughout this vast territory, which contains an area of 282,000 square miles, and which extends from the northern boundary of the province of Manitoba through the whole frigid zone, including the most northerly arctic regions. Although the native population, in the exercise of its natural avocation of hunters and fishermen, necessarily lead a nomadic life, they each belong to some particular settlement, or post, where they spend most of their lives, and thus come within the influence of the missionaries, the Hudson's Bay Company officers and other white traders who established posts or stations at all important points in the district.

It is unfortunate, as mentioned by the Lieutenant Governor, that he has been unable to make a personal journey into the territory, as it was his intention to do, as the information that he would have been able to gather in that way would not have failed to prove very interesting and useful. However, it is satisfactory to note his statement that, according to the general information which he has been able to obtain, the natives of that part of the district immediately bordering the province of Manitoba who are more particularly engaged in the fishing industry, as well as those living more to the north, have enjoyed a fairly prosperous year, and that the prospects for the future would appear to be even brighter, and that there is, therefore, no occasion for anxiety as to their means of livelihood.

## THE DISTRICT OF ATHABASCA.

Two survey parties were sent out during the past season to this district, one under Mr. A. C. Talbot, who proceeded early in the spring to Lesser Slave lake, with instructions to lay out occupied lands into lots of suitable size, as requested by settlers in that neighbourhood; and the other party under Mr. C. C. Fairchild, D.L.S., who left in May for Peace river, near Dunvegan. Mr. Fairchild's mission was for the purpose of surveying township outlines and subdividing the necessary townships in the tract of 'La Société de Colonisation de la Rivière la Paix.'

With the exception of the above there has been no other action taken by the department with regard to this district. I am glad to be in a position to report, however, that the different groups of population living in that territory would appear to have enjoyed continued peace and prosperity since last year.

Reports have recently been received, however, that half-breeds and Indians living in the eastern part of Athabasca, in the vicinity of Ile a la Crosse, north-west of Prince Albert, have suffered considerable damage from the rising of the rivers and lakes during the month of August last, and that there is some likelihood of distress resulting in consequence. The department has taken the necessary steps to have the matter fully inquired into, and its officers will afford such relief as may be necessary.

I have the honour to be, sir,

Your obedient servant,

JAS. A. SMART,

*Deputy Minister of the Interior.*



PART I.

DOMINION LANDS



# DOMINION LANDS.

## No. 1.

### REPORT OF THE COMMISSIONER.

DEPARTMENT OF THE INTERIOR,

OTTAWA, September 12, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to present a statement showing the principal items of work performed in my office during the departmental year ended June 30 last, and, for the sake of comparison, the statement for the previous year is given alongside.

You will also find herewith the reports, covering the same period, of the Inspector of Dominion Land Agencies, as well as the reports of the several local agents :—

#### COMMISSIONER'S OFFICE—GENERAL STATEMENT OF WORK PERFORMED.

	1901.	1900.
Files transferred and dealt with.....	31,153	26,527
Letters sent.....		
Originals,	21,620	18,897
Triplicates,	16,978	10,555
	38,598	29,482
Applications for patent—		
Examined.....	5,456	5,464
New applications.....	2,202	2,373
Certificates of recommendation issued.....	2,131	2,895
Official receipts issued.....	469	649

The reports of the local agents are, on the whole, of an exceedingly gratifying and encouraging character ; in some of the older districts, there has been a falling off in the number of entries granted. This must, of course, be anticipated as the available lands become occupied. Additional surveys, increased railway and road facilities will, however, from time to time open up new districts where desirable locations may be secured. Very many incoming settlers have preferred to purchase lands in the more populated localities in order to gain the advantages of neighbours, churches, schools, &c. These do not appear in the agents' returns, so that even where there has been a falling off in the number of entries granted, this does not necessarily mean a diminution in the number of new arrivals.

The agents' reports further indicate that the settlers, generally speaking, are prosperous and well satisfied with their holdings : the effect of which will be increased settlement, as there is no more potent factor in inducing desirable immigration than the favourable testimony of such settlers.

Although Manitoba and the North-west Territories have experienced many good seasons, the crop prospects for this year have never been equalled. The stock and dairying industries are also said to be flourishing.

There has also been very little damage reported by reason of fire or storm, and the general outlook is of the most hopeful character.

I am, sir, your obedient servant,

J. G. TURRIFF,

Commissioner.

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## No. 2.

## REPORT OF THE INSPECTOR OF AGENCIES.

DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE INSPECTOR OF AGENCIES,  
WINNIPEG, MANITOBA, September 13, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to transmit herewith for publication my annual report for the year just closed, dealing with the work of my office as Inspector of Dominion Lands and Crown Timber Agencies. There are at the present time under my supervision, sixteen permanently established offices, and twenty-four sub-agencies. All of the permanent offices were visited and thoroughly inspected once in the year, and some of them twice, while as to the sub-agencies, these have been inspected only in cases where the volume of business transacted seemed to call for such inspection.

My report was duly transmitted to you on completion of each inspection. The matters dealt with in these reports being merely of departmental concern, it is unnecessary to make further allusion to them here. Generally I was able to report an efficient discharge of their duties by the staffs of the several offices. The work of the past year has been extremely heavy at several of the offices, which necessitated additions to the respective staffs. Further changes are desirable in the near future in order to adjust the staff as a whole in strict relation to the volume and character of the business to be transacted in the various agencies. In pursuance of this policy, you may find it advisable to transfer certain officers from agencies in which the transactions may show a decline to those in districts to which settlement is being more largely directed.

There are now employed at the sixteen permanent agencies, forty-eight officers (including the agents), as compared with forty-one officers employed in the preceding year. The expenditure of the permanent agencies was \$47,957.29 for the year, being an increase of only \$2,090.56 over 1899-1900, a small additional cost in view of the large increase in business represented by a revenue of \$420,875.15, exclusive of payments made at the head office on account of the respective agencies. For the antecedent year the revenue was \$301,633.59.

Statements are hereto annexed designated 'A,' 'B' and 'C,' exhibiting as far as practicable the transactions of the permanent agencies, of the sub-agencies and of the homestead inspection and forest ranger service.

Statement 'A' offers a comparison of the business transacted during the past two years. It will be observed that under every heading a substantial increase is shown in favour of the year which closed on June 30 last.

It is gratifying to note that the number of homestead entries granted exceeds by nearly 700 those of any previous year, the total number being 8,167. It is unnecessary to enter further into a discussion of the particulars set forth in Schedules 'A,' 'B' and 'C,' as they are intended to be self-explanatory.

In addition to the regular inspection duties, you are aware that my office now carefully scrutinizes the monthly expenditures of all lands and timber agents, homestead inspectors and forest rangers, and that I am called upon during the year to undertake such special work as occasion may demand. In October and November last, I was associated with you in the commission appointed to investigate the management and sale of lots in the town sites of Virden, Qu'Appelle, Regina and Moose Jaw, in

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all of which the government owns a half interest. I was also selected to accompany you during the past summer on your visit to the various lands agencies, and during your examination into existing conditions of the ranching industry, stock-watering reservations, and other matters of departmental concern.

Enclosed with this are my reports as agent of Dominion Lands and Crown Timber Agent for the Winnipeg district, addressed to the Commissioner of Dominion Lands, together with the several schedules appertaining to these reports.

Respectfully submitted,

E. F. STEPHENSON,  
*Inspector of Agencies.*

## A.—DOMINION Land Agencies, principal transactions for the year ending June 30, 1901.

Agencies.	Homestead Entries granted.		Land sales.		LAND SCIP LOCATED.		Applications for Patent received.		Land entries cancelled.		Timber permits issued.		LETTERS.		REVENUE.		No. of staff.	Expenditure, Salaries and Contingencies.
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	Received.	Sent.	Scrp.	Total Scrp & Cash.	\$	cts.	\$	cts.		
Alameda	466	1,680	7	1,680	100	174	311	605	4,441	2,894	6,636	13,655	81	13,655	81	1,974	26	
Battleford	10	240	1	240	2	2	15	12	531	214	160	721	15	721	15	329	17	
Brandon	407	2,349	10	2,349	307	131	372	902	12,078	11,269	12,068	24,546	52	24,546	52	3,897	14	
Calgary	802	22,252	96	22,252	63	129	164	182	6,934	4,588	44,080	64,217	29	64,217	29	3,547	34	
Dauphin	437	2,532	12	2,532	293	144	768	467	5,819	3,769	2,769	13,152	41	13,152	41	2,534	98	
Edmonton	1,631	64,190	538	64,190	278	352	791	46	8,092	6,487	5,402	29,124	15	29,124	15	4,216	60	
Kamloops	62	39	21	39	5	5	5	5	1,626	1,300	4,483	6,514	77	6,514	77	1,530	15	
Lethbridge	524	7,720	60	7,720	83	120	130	45	7,733	5,396	34,210	55,674	75	55,674	75	2,177	31	
Minnesota	383	800	5	800	173	21	516	326	5,253	3,411	3,947	11,490	58	11,490	58	1,976	30	
New Westminster—Land	24	27	6	27	27	2	83	.....	1,765	1,666	485	1,193	10	1,193	10	1,541	85	
Timber	.....	.....	.....	.....	.....	.....	.....	.....	1,357	1,721	.....	14,862	85	14,862	85	2,834	26	
Prince Albert	512	39,639	18	39,639	98	87	343	65	2,274	1,523	3,163	17,067	20	17,067	20	2,479	82	
Red Deer	846	6,240	33	6,240	88	204	531	45	5,171	3,602	7,039	17,510	77	17,510	77	2,192	46	
Regina	912	69,419	306	69,419	416	350	271	1,046	13,305	9,106	31,853	51,183	53	51,183	53	4,374	63	
Winnipeg	688	176	193	176	193	916	1,635	16,178	16,314	34,735	90,678	37	90,678	37	13,084	19		
Yorkton	443	156	33	156	156	318	131	5107	4,104	4,028	6,977	20	6,977	20	2,937	06		
For year ending June 30, 1891.	8,167	214,571	1,601	214,571	10	2,328	5,344	5,291	96,391	7,288	197,416	422,373	51	422,373	51	51,056	62	
For comparison, year ending June 30, 1900	7,407	.....	.....	.....	2,234	2,123	5,174	4,432	74,273	60,911	68,369	301,633	69	301,633	69	45,796	73	

E. F. STEPHENSON,  
Inspector of Agencies.

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B.—Last of Sub-Agents of Dominion Lands and Statement of Work performed by them during the Departmental Year ended June 30, 1901.

Name.	Place.	Application for homestead entries taken.	Application for patents taken.	Application for timber permits taken.	Application for day permits taken.	Amount remitted to local land office.	Salary.	Remarks.
Reed, North.	Fort Qui'Appelle	63	6	26	31	855 80	\$ cts.	
H. Harley.	Swan River	208	7	188	132	2,434 05	169 68	Date of appointment, October 17, 1900.
R. W. Hill.	Carman	8			18	194 40	300 00	No record.
Seymour Green.	Moosajaw	28	3	4	2	362 50	75 00	Paid by commission.
Spencer Page.	Wapella	53	67	30	84	836 69	300 00	Date of appointment, April 1, 1901.
L. Adamson	Fort Saskatchewan.	67	18	42	2	786 95	300 00	
L. B. Cachran.	Medicine Hat.	122	5	40	4	2,632 15	300 00	
J. E. Sheppard.	Leduc	3	4			30 00	37 50	Appointment dated May 15, 1901.
R. M. Mitchell	Weyburn.	51	23	14	26	615 40	300 00	
Jms. R. Burn.	Milestone.	45	1	2		452 95	300 00	
A. E. Cox	Pincher Creek	180	8	62	18	3,490 17	300 00	
P. A. Miquelon	Wetaskwin.	853	38	38	9	9,625 75	300 00	
F. Veckerson.	Laocomb	471	21	255	16	6,121 21	300 00	
R. B. Taylor.	Greenhof				5	28 90	10 00	Appointment dated June 10, 1901.
H. G. Wilson.	Indian Head.	29		1	31	256 05	150 00	" " January 1, 1901.
Jon. Nixon.	Macleod	112	5	3		1,736 75	300 00	
R. M. Douglas	Tantallon.	13	7	1	11	181 50	300 00	For six months ended June 30, 1901. Sub-agent kept no record of previous six months' business.
C. O. Card.	Cardston.	125	47	7		1,446 50	300 00	Eleven months to May 31, 1901. No record for June.
H. de Beffal	Duck Lake.	175	28	130	15	2,665 18	775 00	
F. J. Musgrove.	Estevan	38	3	3	12	455 55	300 00	
J. J. English.	Marble Creek.	48	2	5	10	580 00	150 00	Appointment dated August, 1900.
W. D. P'ternair	Poncha	170	3	19	1	2,134 57	52 00	" " March 17, 1901.
Robt. W. Logan	Olds.	23	3		4	427 00	30 00	" " May 1, 1901.
Thos. Copland	Saskatoon	91	8	19	25	1,467 00	180 00	Office closed May 1, 1901. Records incomplete paid by com.
C. O. Clomera	Melfort.	68	1	31	9	621 43	150 00	Office closed May 15, 1901.
F. A. Grinnel	Saskark	23	1	1	24	384 75	150 00	No record of business for months of January and February. Office closed May 1, 1901.
John McClung	Roskreen	33	28	45	40	600 45	150 00	
		3,081	335	961	529	40,132 97	5,829 18	

E. F. STEPHENSON,  
Inspector of Agencies.

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C.—STATEMENT showing the work of the Homestead Inspectors and Forest Rangers for the twelve months ending June 30, 1901.

Name of Inspector.	Head Quarters.	Number of Land Inspections Made.	Number of Applications for patent taken	Miles Travelled by Wagon.	Miles Travelled by Rail.	Remarks.
John Coleman	Edmonton.	249	52	3,234	160	Retired June 30, 1901, on account of sickness.
R. D. Foley	Winnipeg.	443	84	4,785	2,234	Appointed June 1, 1901. Resigned Sept. 30, 1901.
John Franks	Red Deer.	227	122	3,312	1,342	Off duty three months during year, no salary paid.
J. F. Gibson	Brandon.	197	50	3,114	411	Dismissed June 30, 1901.
Martin Jerome	Winnipeg.	25	17	2,654	374	
J. S. MacDonald	New Westminster.	22	17	4,377	36	
James McArthur	Prince Albert.	170	184	491	407	
Niel McCallum	Yorkton.	26	33	16	2,769	Time chiefly devoted to timber work.
D. J. McDonald	Kamloops.	191	77	4,468	427	Appointed May 1, 1901.
R. E. McGregor	Dauphin.	57	47	1,065	512	Forest ranger and acting home-head inspector.
Wm. McMillan	Treherne.	140	25	1,350	977	Appointed March 1, 1901.
S. P. Porter	Regina.	119	39	2,431	1,153	Retired October 1900, on account of sickness.
John Rogers	"	140	19	1,436	652	Appointed January 12, 1901.
W. W. Stuart	Calgary.	121	77	3,187	1,562	Dismissed December 1900.
J. R. Thompson	Minnedosa.	217	107	2,277	369	Off duty four months during year, no salary paid.
J. W. Thompson	Medora.	360	146	4,425	2,307	
W. B. Underhill	Dauphin	2,718	1,105	42,666	16,862	
Thomas Young						



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## FOREST RANGERS and Preventive Officers.

Name.	Head Quarters.	Timber Permit Applications Received.	Hay Permit Applications Received.	Seizures Made.	Miles Travelled.	Remarks.
Chas. A. Walkindlaw	Bassivain.	306	7	1	4,092	
Joseph Cox	Sedkirk	2	.....	1	1,725	
Wm. McMillan	Trehorn	34	.....	10	2,429	
John Abercrombie	Moose Mountain	102	.....	.....	.....	
D. J. McDonald	Kamloope	47	.....	.....	.....	
		491	7	12	8,237	

\*See under heading Homestead Inspector.  
Appointed December 18, 1900.

E. F. STEPHENSON,  
*Inspector of Agencies.*

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## No. 3.

## REPORT OF THE AGENT AT ALAMEDA.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
ALAMEDA, ASSINIBOIA, August 7, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit the annual report of the work of this agency for the year ending June 30 last.

A statement of the work done will be found attached, which shows a large increase over any previous year in the number of letters both received and sent, and also in the number of hay and timber permits issued. There has been a falling off in the matter of homestead entries, partially owing to the fact that most of the desirable lands within a radius of ten or twelve miles of the towns have been taken up. There are, however, large tracts of unoccupied lands throughout this district, waiting only for the settler to acquire possession of as free homesteads.

The Canadian Pacific Railway branch was completed last fall as far as Arcola, where a thriving town has sprung up, which already boasts of four hundred inhabitants. This road will be an inestimable boon to the settlers south of Moose Mountain. Large areas of Canadian Pacific Railway lands have been sold to the settlers who are desirous of farming on a large scale.

Owing to the dry season last year it was feared there would be a scarcity of fodder for cattle, but the spring opened up early and stock came through in good condition. The season so far has been one of, if not the most, favourable on record for crops of all kinds, and judging by present appearances, wheat will average at least twenty-five bushels per acre. There will also be a large crop of oats and roots, and abundance of hay. Some wheat has already been cut, and harvesting will be general in three or four days.

During the month of June about 6½ inches of rain fell, and farmers have broken large areas of land.

There has been a large influx of settlers from the United States, many of them being returned Canadians. These settlers are all possessed of ample means to enable them to begin work under favourable conditions.

The export of live stock does not begin till next month, and I regret that, owing to the early preparation of this report, I am unable to give any estimate of this trade.

There has been a large increase over previous years in the output of coal from the mines at Roche Percee and Coalfields, and the presence of this coal practically solves the fuel question of the whole of this south-western country.

Appended is a statement of the work performed during the fiscal year ending June 30 last.

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Letters received.....	4,441
Letters written.....	2,894
Homestead entries.....	466
Entries cancelled.....	174
Land sales.....	28
Land serip located.....	1,680 acres.
Applications for patent.....	100
Hay permits issued.....	605
Timber permits issued.....	311
Seed grain collections.....	20

I am, sir, your obedient servant,

R. CLAUD KISBEY,  
*Agent of Dominion Lands,*

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## No. 4.

## REPORT OF THE AGENT AT BATTLEFORD.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
BATTLEFORD, SASKATCHEWAN, July 22, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit the following report for the year ended the 30th ultimo.

I am glad to be able to report once more that the atmospheric conditions have favoured the agricultural industries of our settlers. The winter was long but not severe, and ranchers had every reason to rejoice. The spring was unusually wet, but has been succeeded by such warm weather that crops of grain, roots and vegetables will suffer little or no disadvantage from early drawbacks.

The yield of grains last year was phenomenal, particularly as to quality. The fact that a carload of oats was exported for seed, involving a haul of 95 miles to Saskatoon for shipment, furnishes effective testimony to the fact that this district deserves a prominent place in the rank of grain-producing portions of the west. This year's grain crop will not mature so early as that of last year, but in quantity and sample it is expected to rival that of last year. Weather conditions during harvest will have great effect in deciding the quality of the grain; if, as is sometimes the case, excessive rainfall occur, the grain will be materially injured, but if August and September be dry as usual, the grain will doubtless be saved in excellent condition.

But cultivation of the land is not yet conducted on an extensive scale, though the area under cultivation is now increasing rapidly, as the advent of a line of railway in the near future is assured. Hitherto sufficient grain for local consumption only was grown, and surplus grain was fed to stock in fitting it for market. It now appears that mixed farming is destined to supplant ranching as the chief industry of the settlers, and when a railway is projected through the district ranchers will move further back, leaving the lands over which herds are now grazing for those who will obtain homestead entries and proceed to earn their livelihood by means of farm and dairy products. This district offers exceptional advantages along the line of dairy farming.

The number of cattle and horses has not increased materially during the past year. About 3,000 head of cattle have been exported, chiefly to the Liverpool market. Between 1,000 and 1,200 head have been used for local consumption, and no doubt the natural increase of the cattle in the district one year ago does not far exceed the total number thus disposed of. The chief market for horses has been with the Doukhobor immigrants, who have located in the adjoining district, just beyond our eastern boundary. Some dealers have found good markets all along the railway between Saskatoon and Prince Albert. The total number thus exported was between 250 and 300, but the natural increase is estimated at 700 or 750 more than that. Horses have enhanced in value, partly owing to the influence of the demand created by the South African war, but chiefly owing to the needs of the large numbers of immigrants to the Prince Albert district.

It is not yet certain in which particular direction either of the proposed railway lines will pass; consequently many of our settlers who are entitled to homestead

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entries defer making application in the hope that they may secure favoured locations when the routes of the railway lines are definitely fixed. Notwithstanding this, however, the number of entries shows an increase over last year.

The revenue of this office shows a gross increase of nearly 20 per cent over that of last year, though the work of the office has not increased materially. The following is a statement of the work done during the year :—

Letters received.....	351
Letters sent.....	214
Homestead entries granted.....	10
Entries cancelled.....	2
Hay permits issued.....	12
Timber permits issued.....	15
Applications for patent received.....	2

I am, sir, your obedient servant,

R. F. CHISHOLM,  
*Agent of Dominion Lands.*

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## No. 5.

## REPORT OF THE AGENT AT BRANDON.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
BRANDON, MANITOBA, August 8, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit the annual report for the year ending June 30, and in doing so I am pleased to be able to state that Manitoba never presented such an excellent appearance as at the present time. The spring opened early and enabled the farmers to sow a large acreage; then, we have had very warm weather, with showers almost daily during the month of June, so that everything goes to show that this year will produce the greatest quantity of wheat and the largest acreage yield in the history of the province.

Land appears to be rising in value, and if the crop comes off successfully, I feel sure there will be a great demand for the purchase of land this fall; and I think we have reason to anticipate a large immigration of new settlers in the spring.

My report will show a decrease in the number of entries as compared with last year, but this is owing, no doubt, to the land being pretty well taken up in this district, and to the fact that there seems to be a boom in the Arcola and Moose Mountain districts. My report will also show a decrease in the number of cancellations, indicating that the applicants intend to become owners of the land.

Creameries are flourishing in this district, as the farmers are patronizing them more every year on account of mixed farming becoming more general.

Although we have this summer felt the effects of last year's drought, yet there is an air of prosperity prevalent which should increase the notoriety of Manitoba.

I append herewith a statement of entries, &c. :—

Letters received.....	12,078
Letters sent.....	11,189
Homestead entries granted.....	405
Entries cancelled.....	152
Hay permits issued.....	902
Timber permits issued.....	372
Applications for patent received.....	304

I am, sir, your obedient servant,

L. J. CLEMENT,  
*Agent of Dominion Lands.*

## No. 6.

## REPORT OF THE AGENT AT CALGARY.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,

CALGARY, ALBERTA, August 14, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit my report of the work performed in this office during the year ended June 30, 1901 :—

Letters received.....	6,934
Letters sent.....	4,588
Homestead entries granted.....	803
Sales entries.....	118
Half-breed land scrips located.....	96
Entries cancelled.....	129
Hay permits issued.....	182
Timber permits issued.....	164
Applications for patent received.....	63
Mining fees received.....	49
Collections on account of grazing rentals.....	104

The number of homestead entries, 803, exceeds the number granted the previous year by 365.

The revenue from lands amounts to \$53,778.55, exclusive of a considerable amount paid at head office on account of grazing leases, &c., and exceeds the revenue for the preceding twelve months by \$39,064.16.

The crop of 1900 was very good in this district. Notwithstanding the snow storm in harvest time, during the latter part of August, little or no damage was done; fine weather came, the snow disappeared, and everything dried out nicely. This year the crops are looking well in this district, the growth being excellent; and, if the weather continues, a splendid harvest will be gathered.

The cattle business, one of the most important industries of this section of the country, is in a very flourishing condition, the prices being very good.

The lumber trade has also been very brisk.

Immigration into the whole of Alberta has been very large this year, and this district has received a very fair share. The number of people accommodated at the immigration hall during the year ended June 30 last amounted to 2,675 persons, being an increase over the number accommodated the previous year of 916; but this, as has been stated in previous reports, does not afford an adequate means of estimating the total number of settlers, as very many put up at hotels, or proceed to their destination without stopping over. From an estimate made by Mr. James Winn, the caretaker of the immigration hall at this point, 13,425 immigrants landed in Calgary during the year just ended.

The settlers, generally, seem to be doing well, and appear to be happy and contented.

The city of Calgary is going ahead steadily.

I am, sir, your obedient servant,

J. R. SUTHERLAND,

*Agent of Dominion Lands.*

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## No. 7.

## REPORT OF THE AGENT AT DAUPHIN.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
DAUPHIN, MANITOBA, July 3, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—In reporting on the district for the year ending the 30th ultimo, I have the honour to inform you that there has been a falling off in the number of homestead entries from last year ; still, it is thought that there may have been almost as many new people arrive, as numbers have bought, others squatted on lands not as yet on the market, while some who came to friends have not as yet selected locations.

Considerable activity has prevailed in sale transactions, the railway and Hudson's Bay companies, as well as owners of patented homesteads, having disposed of large areas, these generally through the district, though the bulk of the operations has been confined to the older settled parts, where in many instances high prices have been obtained.

The large proportion of good land that is on the market, and open for entry, is now taken up, and to provide for any heavy influx of new settlers, further surveys are required, these at as early a date as possible.

A large tract on the east side of the district is said to contain some desirable land. Some few townships near Lake Dauphin are already surveyed, and contain some settlers, though owing to difficulties in reaching the locality, efforts have not been very successful in directing immigration there. Still, it is thought that if larger blocks were opened, this trouble would in a great measure be overcome, as a greater selection of land would enable more people to locate, and the increased numbers would enable the people to improve the trails.

The crops last year were not as good as in some former years, heavy rains during harvest having depreciated the sample of wheat to a considerable extent, and in consequence prices ranged low ; still, increased advantages in marketing helped the producers in a great measure. The Gilbert Plains branch of the Canadian Northern Railway being in operation in time to move the crop of that section, was of great assistance, as in former years long hauls were necessary to reach markets. Oats were a good crop, and brought good prices, the demand being greater than the supply, quantities being wanted for use on railway construction and lumbering work ; considerable quantities were imported. Barley is not grown to any great extent, but was a good crop. Roots and vegetables were as good, if not better than usual ; specimens shown at the fairs were very fine. Some potatoes were shipped out to other markets and commanded good prices.

The markets for cattle and hogs still keep up, the demand being greater than the supply, and there does not appear to be that attention paid to these lines that the business warrants, the butchers finding it difficult to secure good beef, while pork is imported in large quantities.

Poultry is still in great demand, and more and closer attention would give a good return on investments in this line.

There are good prospects for a crop this season, though in certain of the low parts, heavy rains have to some extent damaged grain ; still, dry weather after this should bring all up to a fair average.



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The selection of large blocks by the Swamp Lands Commissioners has curtailed in a considerable measure, the lands available for settlement, and the Galician and other foreign immigrants would have located on numbers of the quarters so selected had they been available.

Some damage was done by fires in the timbered portions, but not to such an extent as in some other years, and the damp state of the ground will preclude further destruction this fall, it is hoped.

The majority of new settlers have been Galicians, who have scattered over the district; wherever lands could be found, new settlements are springing up constantly.

The operations in timber under free permits have been exceptionally heavy, and in many instances it is feared that advantage is taken of the liberal allowance granted homesteaders and other settlers. There is no doubt that due care is not exercised in taking out timber, great waste prevailing, especially where logs for sawn lumber are wanted, as the whole of the tree is not taken. This is being closely looked into by the rangers and departmental officers, and is likely to be reduced in the future.

There is evidence of steady improvement all through the district, but very few cases of destitution having come up, and these among the recently arrived Galicians; farmers are improving their surroundings, new houses and barns are to be met with in all parts, some of quite pretentious appearance. Work is being done on the roads as fast as possible, new bridges are being built, and grades put up. The question of drainage is going to be of great importance in the lower parts of the country. Some regular system will have to be inaugurated, and this would result in large areas of land now of no value being opened for settlement.

School districts are being formed from time to time, as requirements call for them, and churches are being built in all the centres.

The following is a statement of some of the work done during the year in the office :—

Homestead entries.....	457
Inspections.....	7
Cancellations.....	87
Land sales (cash).....	12
Land sales (scrip).....	12
Timber permits issued.....	768
Hay permits issued.....	467
Timber seizures.....	4
Letters received.....	6,019
Letters sent out.....	3,769
Applications for patent taken.....	263
Cancellations put through.....	139
Number of staff.....	2

I am, sir, your obedient servant,

F. K. HERCHMER,  
*Agent of Dominion Lands.*

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## No. 8.

## REPORT OF THE AGENT AT EDMONTON.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
EDMONTON, ALBERTA, September 6, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit the annual report of this office for the year ending June 30 last.

It is pleasing to be able to report a large increase in the number of entries granted, as also in the revenue collected.

The fertile lands and attractive appearance of the country, combined with the contentment and evident prosperity to be observed throughout the district, have so impressed delegates and land hunters, that a result of their inspection has been their coming and settling. A steady stream of settlers has been flocking in all this season, acquiring land and adding to the development observable on every side.

The homestead entries granted during the year were 1,633, while the revenue collected from all sources amounted to \$29,704.55. These figures, which are entirely independent of the work entailed on this office by the administration of the Indian Department lands situate in this agency, and for which no credit is received, will indicate the volume of business now being done here. A comparison with the previous year might not prove uninteresting, and is given below :—

1899-1900.		1900-1901.	
Entries.	Revenue.	Entries.	Revenue.
1,033	\$24,017.59	1,633	\$29,704.55

Settlement has extended on both sides of the Calgary and Edmonton Railway, but in a greater degree to the east than to the west of it. Latterly the trend has been more easterly, through the tract where it is supposed the Canadian Northern Railway will run, where settlers may secure first-class farming lands in close proximity to what will be a second transcontinental line, and in every way a most desirable locality. Settlers have now to go between thirty and forty miles to secure good free-grant lands, and the opening up by the Canadian Northern Railway of the country through which it will run, will be a boon to thousands of intending settlers, placing them, as it will, within easy distance of transportation facilities and running through an equally good tract of country to this.

The crop outlook is splendid, and harvesting throughout the district is general. During the months of June and July rains were heavy and continuous all over the district, retarding the ripening of grains long past the usual time of maturity. However, the weather since then has been almost continuously fine, without any frost, and farmers and old residents aver this will be the largest and most bountiful harvest ever reaped here. It is estimated there will be between four and five million bushels of oats for export in that part of the country to the north of Red Deer river. The yields for the different grains are estimated at 30 to 40 bushels to the acre for wheat, 60 to 80 for oats and 35 for barley. I regret being unable to furnish an estimate of the

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yield of wheat and barley for the district, there being no figures compiled from which a calculation could be based to arrive at such information.

I find from careful inquiry that the profitable working of the gold dredging areas on the North Saskatchewan river has been almost demonstrated by the results so far achieved. I hope to obtain information within a couple of weeks to enable me to give you definite assurance with regard to the success of this important enterprise.

The condition of the district as a whole is very satisfactory. The settlers are prosperous and contented, and merchants and business men are well satisfied with their prospects for the future.

Appended is a statement of work performed :—

Letters received.....	8,002
Letters sent....	6,487
Applications for patent received.....	278
Homestead entries cancelled.....	412
Hay permits issued ....	46
Timber permits issued ....	791
Homestead entries granted.....	1,633
Half-breed scrip locations ....	538—64,109·05 acres.

I am, sir, your obedient servant,

A. NORQUAY,  
*Acting Agent of Dominion Lands.*

## No. 9.

## REPORT OF THE AGENT AT KAMLOOPS.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
KAMLOOPS, B.C., September 13, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—In accordance with instructions, I beg to submit the following report for the year ended June 30 last:—

Letters received . . . . .	1,626
Letters written . . . . .	1,302
Homestead entries granted . . . . .	62
Applications for homestead patent . . . . .	39
Entries cancelled . . . . .	20
Hay permits . . . . .	5

The spring crops are about an average, while the fall crops will, I believe, be considerably above it. Hay is a heavy crop, and has been well saved. This, in a cattle country, is a matter of great importance.

Each year is proving the value of this district as a fruit producing one. Mr. Fortune, of Tranquille, seven miles from here, and Mr. Cooney, of the same locality, have quantities of magnificent peaches (one I saw weighed went 13½ ounces) and all grown in the open. Salmon Arm is also coming much to the front in fruit.

In a previous report I referred to the work being done on the North Thompson Dredger. I am now able to report this dredger an accomplished fact, and I am informed that the results are of a very encouraging nature.

Although the decision of the department to grant grazing leases is of recent date, it has already brought forth a number of applicants, anxious to take advantage of it, and, in my opinion, the effect will be that the ranges will gradually improve, as in self defence the lessees will have to fence, and so prevent the bunch grass from being tramped out.

I am, sir, your obedient servant,

E. A. NASH,  
*Agent of Dominion Lands.*

## No. 10.

## REPORT OF THE AGENT AT LETHBRIDGE.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
LETHBRIDGE, ALBERTA, July 11, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit my annual report for the year ending June 30, 1901.

The steady increase in immigration to this district this season, and the general development consequent thereon, are the most noteworthy and promising features I have to report.

The homestead entries for the year were 524, as compared with 293 for the previous one, while the receipts, exclusive of over \$40,000 paid in to head office to the credit of this agency, amounted to \$55,074.75, as against \$17,412.44 last year. Apart from the above, the Alberta Railway & Coal Company and the Calgary & Edmonton Railway Company have also disposed of large areas of their lands.

The work of the office has very largely increased, as the above figures will show. The following comparison of the letters received and sent, with those of the previous year, might also prove interesting as indicating the volume of work now being performed at this office :—

1899-1900.		1900-1901.	
Received.	Sent.	Received.	Sent.
2,925	2,106	7,727	5,423

A very considerable portion of the work was occasioned by the administration of the coal lands along the Crow's Nest branch of the Canadian Pacific Railway near Blairmore, where a large amount of money has been expended in prospecting, purchase and development of these lands.

Inquiries among farmers elicit the information that crops of all kinds are doing remarkably well, and although the spring was backward, present indications point to a very favourable harvest. In the Cardston, Mountain View, Leavitt and Actna districts the area under cultivation this year is double what it was last, and it is confidently predicted, by parties in a position to know, that the acreage under cultivation next year, which will mean over 20,000 acres, will be double what it is at the present time. After a fair test, fall wheat has been proved a success, the time for seeding being the months of July and August.

The construction of a comprehensive irrigation system has been largely instrumental in attracting the attention of a class of people who, knowing the benefits accruing from an artificial supply of water, that may be utilized whenever circumstances demand it, are taking advantage of the reasonable terms upon which irrigated lands may be secured from the company controlling them. The beneficial conditions due to and existing in those states where irrigation is in vogue are also to be obtained here, while the difference in the price of land is so greatly in favour of this district that this circumstance will be a most potent factor in the inducement of immigration to this part.

Although the discovery of a first-class coking coal along the line of the Crow's Nest Railway is not new, still, nothing had been done towards its development till

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this season, when the possibilities of profitable investment appear to have drawn the attention of capitalists to that part. The value of this product, particularly to that section where it can be utilized so largely in the reduction of ores, &c., can hardly be estimated, while the coal measures are of such great extent that their working insures to investors a permanent and profitable return. Mr. H. L. Frank and associates at Blairmore are expending a very large amount of money in the opening up of their properties there.

Southern Alberta, through its climatic advantages and the nutritive quality of its grasses, is becoming widely known as one of the finest ranching localities on this continent. There has been a great influx of ranchers from other parts of the Dominion and the United States this spring, prospecting the country with a view to securing locations. These parties have in nearly all cases applied for leases. The following figures show the value of stock imported from the United States during the last twelve months :—

Cattle.....	\$72,252
Horses.....	90,891
Sheep.....	8,588

Besides these, there have been shipped from Manitoba and Ontario to Medicine Hat and Lethbridge, 16,263 cattle and 720 horses, while the exports from these points are as follows :—

Cattle.....	11,410
Horses.....	580

It is encouraging to note that the visit of Colonel Dent, in connection with the purchase of remounts for the Imperial army, has had a beneficial effect on the ranchers, who now better understand the kind of horses required.

The last winter proved a trying one on stock, owing to the scarcity of snow, but this season has been very favourable, and all kinds of stock are now in fine condition. A feature of the cattle business this year has been the large importation of 'dogies'—cattle from Manitoba and Ontario. These cattle are doing splendidly on our western ranges.

With regard to sheep, there are at present about 42,300 head on lands leased especially for sheep-grazing purposes. The revenue from the wool alone will amount to about \$28,500. This is an industry that is as yet only in its infancy here. The conditions for sheep-raising are extremely favourable. There appears to be a consensus of opinion among sheep men that a sheep-grazing district should be established here, within which other stock should not be allowed to graze. They also claim it would be very advantageous to have some broken and timbered land set apart for them to be used during the months of July and August, where the sheep could obtain shelter from the sun during the heat of the day.

Appended is a statement of the work performed during the year :—

Letters received.....	7,727
Letters sent.....	5,423
Homestead entries granted.....	524
Homestead entries cancelled.....	120
General sales.....	147
Hay permits issued.....	45
Timber permits issued.....	130
Applications for patent received.....	83

I am, sir, your obedient servant,

A. J. FRASER,  
Agent of Dominion Lands.

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## No. 11.

## REPORT OF THE AGENT AT MINNEDOSA.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
MINNEDOSA, MANITOBA, July 27, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to inclose you a statement of the work performed in this office during the year ending the 30th ultimo, which shows that the number of homestead entries granted is largely in excess of the number granted in any recent year, and that there has been a large increase in the correspondence as also in the number of hay and timber permits issued.

You will probably observe that the number of entries cancelled is smaller than those cancelled in previous years, and I regard this as very satisfactory, indicating as it does that settlers value more highly their homestead rights and are giving more careful attention to the performance of their homestead duties.

At present the crops are in a most promising condition, seeding was completed in good time, there has been an abundant rainfall, and with good weather for the harvest and plenty of help to secure the grain the result will be the largest and most profitable crop ever gathered in this district.

Then, too, the grazing has been and is exceptionally good, cattle are in fine condition, cows are giving an unusual flow of milk, and this increases the business of the creameries, all of which are doing well.

The following is a statement of the work performed in the office during the year ending June 30, 1901 :

Letters received . . . . .	5,113
Letters sent . . . . .	3,314
Homestead entries granted . . . . .	383
Homestead entries cancelled . . . . .	20
Hay permits issued . . . . .	326
Timber permits issued . . . . .	518
Applications for patent received . . . . .	173

I am, sir, your obedient servant,

JOHN FLESHER,  
*Agent of Dominion Lands.*

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## No. 12.

## REPORT OF THE AGENT AT NEW WESTMINSTER.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
NEW WESTMINSTER, B.C., July 10, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I beg to submit my annual report covering the period from June 30, 1900, to June 30, 1901.

I mentioned in my previous report that the details asked for in the monthly statements of work comprise but a small part of the everyday duty of this agency, but that these monthly statements show a gradual expansion in the volume of correspondence. I have now to emphasize that remark, because a great deal of my time is taken up in furnishing information, making sketches, and other matters of the utmost importance to the development of this district.

Although the number of homesteads granted during the past year does not exceed the number for the previous year, I find that a very large number of people have come into the district to purchase from private parties lands which have been homesteaded and patented in past years. The majority of these arrivals seek partly improved lands, and they are wise in so doing, because the available vacant Dominion lands lie in somewhat inaccessible localities and not quite satisfactorily reached in the surveys. Hence you will observe that the names in the homestead entry returns are those of settlers who have been on their lands for a number of years waiting for the necessary lines to be run.

Many of the general sales at \$5 per acre made in the years 1889, 1890, 1891 and 1892, are not yet completed, and my remarks on this point in my last year's report apply for this year also.

So far as I can observe in travelling through the district there is a gradual improvement in the cultivation of the farms, the building of houses and the making of public roads, and the settlers appear to be growing in the spirit of content amidst the clearing of some very difficult places.

The summary of my 12 months' statement of work shows:—

Letters received . . . . .	1,765
Letters sent . . . . .	1,666
Homestead entries granted . . . . .	24
Homestead entries cancelled . . . . .	6
Applications for patent approved . . . . .	27
Timber permits issued . . . . .	83

I am, sir, your obedient servant,

JOHN MCKENZIE,  
*Agent of Dominion Lands.*



## No. 13.

## REPORT OF THE AGENT AT PRINCE ALBERT.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
PRINCE ALBERT, SASKATCHEWAN, July 22, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR.—In submitting my report of the work done at this office during the year ending June 30 last, I beg to say that the period covered by this report has been the most prosperous one in the history of this office. The excellent harvest of 1900 and the still more promising one of the current year are having their natural effect in increased immigration and in general prosperity and contentment.

The number of entries recorded was in excess of that of any previous year. These, in addition to the half-breed scrip locations, amount to the not inconsiderable number of 805. A fair idea of what this number means may be entertained when it is considered that it is equal to all the available lands for homesteading in twelve townships.

The receipts of the office on account of Dominion lands, notwithstanding the abolition of cancellation fees, have more than doubled those of the previous year.

The work performed is as follows :—

Letters received.....	2,274
Letters sent.....	1,523
Homestead entries granted.....	511
Half-breed scrips located.....	294
Homestead entries cancelled.....	54
Hay permits issued.....	65
Timber permits issued.....	343
Applications for homestead patent.....	99

I am, sir, your obedient servant,

JNO. McTAGGART,  
*Agent of Dominion Lands.*

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## No. 14.

## REPORT OF THE AGENT AT RED DEER.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
RED DEER, ALBERTA, August 6, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I beg to submit herewith a report of work performed in this office during the fiscal year ended June 30, 1901.

As predicted in my last report, the homestead entries for the last twelve months are largely in excess of the number granted during the previous year; this, I think, is partly the result of the good work done by the immigration agents in the United States and elsewhere, but were the country not all that they represent it to be, their work would be unavailing, as the reports of those whom they have induced to settle in the country have more effect in promoting or retarding settlement than any argument that could be used by an agent. In the east and south it is generally believed that the winters in northern Alberta are long, and extremely cold; this, I believe, has been the chief factor in retarding immigration, but those who have spent a winter here make the work of the immigration agent comparatively easy, as they relate their experience, and write to their friends and relatives, telling them of our fine climate, and mild winters. Owing to the large number of homesteads entered for during the past two years it is difficult to find a quarter section of land available for entry within less than twenty miles from a town, or railway, but any one willing to go that distance can still obtain 160 acres of as good land as could be desired.

The paramount need of this district is good roads; by reason of the comparative newness of the country very little has been done in the way of ditching or grading, and owing to the heavy rains of the past two seasons, the trails have been almost impassable, which fact has retarded settlement to a greater or less extent. The settlers, however, are fully alive to the urgent necessity of good roads, and a good start has been made in that direction this summer.

The town of Red Deer has shared in the general prosperity of the district, and has more than doubled in size within the past twelve months. A fine creamery, with all modern improvements, has been added to the business interests of the town, and is now in full operation.

The lands in Sharphead Indian reserve have nearly all been disposed of, about three sections only being left for sale at the present time. The action of the department in refusing to sell to speculators any land available for homesteading meets with universal approval, except, perhaps, in the case of the speculators, many of whom have visited the district during the past year, and have materially assisted in enhancing the value of the lands.

About 30 per cent more land has been sown to crop this year than last, and if the favourable weather which we now have continues for three weeks or a month longer, the largest crop ever gathered in this district will be one of the results.

Last winter being open and mild cattle came through in good shape, and the calf crop this spring was above the average. The settlers in this district are, on the whole, prosperous, contented and happy, and their prospects for the future are exceedingly bright.

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## SUMMARY OF WORK.

Letters received.....		5,172	
Letters written.....		3,602	
Applications for patent.....		88	
Entries cancelled.....		254	
Free grants.....		6,240	acres.
Homestead entries.....	846	\$8,370	00
Inspections.....	2	20	00
Cancellations.....	146	730	00
Improvements.....	44	559	18
Sales.....	46	7,179	93
Sundries.....	—	50	00
Timber permits.....	531	289	61
Timber seizures.....	1	15	00
Hay permits.....	45	88	70
Grazing rents.....	4	33	70
Coal land fees.....	1	5	00
Seed grain collections.....	—	169	64
Sales of lands in Indian Reserve No. 111.....	—	8,117	36
		\$25,628	12

I am, sir, your obedient servant,

W. H. COTTINGHAM,  
*Agent of Dominion Lands.*

## No. 15.

## REPORT OF THE AGENT AT REGINA.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
REGINA, ASSINIBOLA, July 27, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit herewith my report for the year ended June 30, 1901.

The statement of work performed is as follows :—

Letters received.....	13,305
Letters written.....	9,106
Homestead entries granted.....	902
Homestead entries cancelled.....	350
Hay permits issued.....	1,046
Timber permits issued.....	271
Applications for patent received.....	416

The revenue of this office for the year just closed was \$51,183.58, as compared with \$29,096.65 in 1900 and \$20,779.99 in 1899, or more than that of the two previous years combined.

The demand for land is steadily increasing, not only by the new settlers, but also by those who are in a position to second homestead or purchase.

The policy of the department in limiting the acreage sold to one individual, and selling only to bona fide settlers, is a move in the right direction, and in the interests of the communities affected.

The crops in this district at the present time are in a very promising condition, and should the weather continue favourable, the returns will exceed that of any former year, averaging in the neighbourhood of forty bushels per acre.

The benefits to be derived from tree planting and tree culture were ably set forth in this agency by Mr. Stewart, Superintendent of Forestry, on his visits in the west, and the encouragement and stimulus given to this industry will prove of inestimable value to the country generally.

We are now occupying our new land office, and the excellent furniture and fittings supplied greatly facilitate the work of the staff.

I am, sir, your obedient servant,

D. S. McCANNEL,  
*Agent of Dominion Lands.*

## No. 16.

## REPORT OF THE AGENT AT WINNIPEG.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
WINNIPEG, MANITOBA. September 12, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I beg to submit my report of the Winnipeg Dominion Lands agency for the year ended June 30 last.

The statement of work which is incorporated in the annual report of the Inspector of Agencies exhibits the transactions of the office so far as they are capable of tabulation. An increase over the record of the preceding year will be observed under nearly all of the headings, while the revenue shows also a satisfactory augmentation.

The number of homestead entries granted (688) affords but a meagre indication of the progress of settlement during the period under review. To arrive at even a fair approximation of the number of new settlers who have entered into personal occupation of farming lands within the district is difficult, if not impossible. It might be feasible to ascertain how many quarter sections have been disposed of by the larger landed corporations but there are a great many individuals who have effected sales of agricultural lands, and it is unlikely that either corporate or individual vendors are in a position to show how much of the land sold has fallen into the possession of new settlers, and how much has been purchased for the purpose of enlarging the farms of persons who have been in the district for some years.

The activity in the exchange of agricultural lands is, however, general over the whole district, and offers undoubtedly the best and most reliable and significant evidence of the prosperous condition of the agricultural industry. That this condition prevails throughout the province is fully attested by the reports of the harvest recently to hand, and that this the most important of all industries is now established upon a sound and permanent basis is a matter of common acknowledgment and general satisfaction. Failures and partial failures in cereal production are incident to the prosecution of agriculture in every country; in this respect, Manitoba compares favourably with the best known regions. Farmers throughout the province do not depend solely (and perhaps not mainly) on the production of cereals. Cattle, hogs and poultry are everywhere among the most conspicuous and most profitable revenue-producers of the farm, and railway facilities are within convenient reach in nearly every part of the district. So soon as the extension of the Selkirk branch of the Canadian Pacific Railway shall have been completed to Icelandic river, transportation will be within reach of all.

As an indication of the present condition of my district I may be permitted to submit the following information extracted from a bulletin issued by the Provincial Municipal Commissioner:—

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'Statistical information compiled to December 31, 1900, relating to rural and urban municipalities within the Winnipeg district.

Rural population . . . . .	61,617
Resident farmers . . . . .	13,874
No. of acres in organized municipalities . . . . .	5,188,616
No. of acres under cultivation . . . . .	884,176
No. of acres wooded . . . . .	226,988
No. of horses . . . . .	44,003
No. of cattle . . . . .	102,474
No. of sheep . . . . .	17,172
No. of pigs . . . . .	30,833
Assessment, realty and personalty . . . . .	\$20,372,555
Urban population . . . . .	57,553
Assessment, realty and personalty of urban municipalities . . . . .	\$29,660,413.'

You will notice that the rural and urban populations of the district do not exhibit the usual proportionate relation, due to the fact that Winnipeg has become a trading and jobbing centre for the whole of the prairie region of the west. Handling and storage facilities provided by Winnipeg and the towns and villages of the district are generous in number and capacity. Cereals, beef and all meat products now fall into recognized channels and are marketed with the least possible inconvenience, and with the utmost profit to the producer. As the output of creameries, cheese factories and meat packers increases, export business must reach that point at which the sufficiency of supply insures the highest market price, not always to be obtained in cases where the product is limited in quantity and incapable of supplying the full demand.

#### LABOUR.

It is probable that the question of labour supply throughout the western country will receive due consideration by the officers of the department, who have no doubt directed their attention to this subject in its widest application. I desire to merely remark that if provision can be made for an addition of several thousands of heads of families of Austrians, from Galicia, to the settlements of these people which have been established upon so thriving and progressive a footing east of Emerson and in the vicinity of Pleasant Home, the labour supply would be increased and the money earned would be applied to the improvements of our own lands. These people are frugal, hardy and extremely industrious, and the progress already made by those of them who have settled in localities in which the natural difficulties of the situation are somewhat excessive, is ample evidence of their value as wealth producers. After seeding in the spring the male head of the family is ready to go out to work at wages for several months, and these families already supply female domestics for service in the urban municipalities. The demand for these domestic servants always exceeds the supply, so that there is not the slightest danger to the cause of labour in general in largely augmenting the number of Austrian settlers from Galicia who have already made their homes here.

#### DRAINAGE.

Much has been done by the provincial government as well as by the various municipalities in the prosecution of drainage works, and more remains to be done. It is reckoned that the government has expended directly and in association with municipalities, not less than one million dollars, and that the exclusively municipal expenditure on kindred works probably exceeds that sum.

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## SWAMP LANDS.

The swamp lands already handed over to remunerate the province, to some extent at least, for the expenditure incurred in drainage works is believed to have aggregated on June 30 last, about one and a quarter million of acres. These lands are held for sale by the province at a minimum price of \$2 per acre, 10 per cent being payable at the inception of the purchase, and the balance in eight equal successive annual instalments bearing interest at 6 per cent.

## HAY LANDS.

As it is quite impracticable for the department to create and maintain reservations of lands which might be relied upon to supply the hay to even a small proportion of the settlers, I am of opinion that the interests of settlement generally will be advanced by allowing lands which yield more or less hay to fall under the operation of the home-stead provisions of the 'Dominion Lands Act.' These lands are not, in the true meaning of the words, valuable for this hay. Their value in that capacity depends upon varying meteorological conditions. There may be an abundant yield of hay in one year and little or none in the next year. The extension of drainage works is rapidly bringing all lands in the district under more or less efficient control, and the time is rapidly approaching when the native hay product must give way to cultivated grasses and fodder crops.

## WATER POWERS.

A large number of applications for the purchase of land fronting on the Winnipeg river valuable in connection with water powers, have recently been made to this office. The development of these and the eventual application of the same to manufacturing industries, and to public services in Winnipeg and at other points in the province may be looked for at no very distant date. There can be no question as to the value of the results to accrue from such development and application of these powers, whose capacity is practically illimitable.

## LAKE MANITOBA DRAINAGE.

The overflow channel under construction at Fairford about completed, is said to answer admirably the purpose of its designers. There is, however, a general misconception of that purpose. It is not the intention to greatly reduce the level of the water, but merely to provide this additional facility to keep the water of the lake at what may be called its normal stage. The lands contiguous to the lake or covered by water under normal conditions will not be affected as a result of the construction of the Fairford works. Contiguous lands will benefit only by the avoidance of submersion when conditions are favourable to an abnormal rise in the lake level.

## ST. ANDREW'S RAPIDS WORKS.

The benefit to accrue to Winnipeg and to the province at large as far south as Emerson, from the completion of the works now in progress at the St. Andrew's rapids on the Red river is difficult of estimation. It is reckoned that easy communication being thus established between Lake Winnipeg and this city, the price now paid for cord wood may be reduced by from 50 cents to \$1 per cord. As the annual consumption is at present 125,000 cords, and increasing, its results, in the effect upon this one item alone, will assuredly justify the expenditure which is being incurred on a work of such

great public utility. The improvements to navigation will also bring the stone quarries and fisheries of the lake within easy reach of the railways which radiate from the city of Winnipeg, and give a minimum cost for transport. Cheap communication and transport being established between this city and the country contiguous to the lake, will not only affect the development of the cord-wood and, to some extent, the lumber industries, but must enlarge and cheapen quarry products and render a thorough test of the minerals which may be found accessible from Lake Winnipeg much more easy than at present, and if the prospects warrant, their cheap development.

#### THE PEMBINA VALLEY CEMENT AND LAKE MANITOBA GYPSUM DEPOSITS.

In my last year's report, allusion was made to the project of developing these valuable native deposits. I have now to inform you that on the lands occupied by the Manitoba Union Mining Company (Ltd.) (the N.E. 16-5-7 west 1st meridian), works have been erected at a cost of \$30,000, and the company has shipped and marketed 55 car-loads of cement. The price per barrel, f.o.b., on cars at Arnold, on the Morris-Brandon branch of the Canadian Northern Railway is \$2, a highly remunerative price to the company so soon as the output becomes large. At this price the consumers can save probably one-third of the cost of the imported cement. This, considering the diminishing supply and increasing cost of native lumber, is a highly important matter to the farmers of Manitoba, who are thus assured, at moderate cost, of an abundant supply of the best material for the construction of farm buildings.

#### GYPSUM.

The Manitoba Union Mining Company (Ltd.) is also developing its gypsum deposit on a claim of 2,000 acres situate in proximity to the north-east arm of Lake Manitoba, township 31, range 10 west 1st meridian, unsurveyed territory. A mill has been erected there at a cost of \$15,000, and a steamboat, costing \$8,000, transports the mill products to Westbourne and Delta, the terminus of the Canadian Northern Railway branch line at the southern end of Lake Manitoba. The plaster produced at the mill is said to be fully equal to the imported article. Already about 800 tons have been produced, and 650 tons sold in the Winnipeg market, the price in Winnipeg being \$13 as compared with \$18 for imported plaster of Paris.

I am, sir, your obedient servant,

E. F. STEPHENSON,  
*Agent of Dominion Lands.*



## No. 17.

## REPORT OF THE AGENT AT YORKTON.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
YORKTON, ASSINIBOLA, July 19, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit my report for the year ending June 30, 1901.

The settlement of this district is proceeding with very much the same satisfactory results as last year. Although the number of entries made does not appear so large, it is more indicative of the real settlement, as many of the entrants last year had been in the country and located on lands for two years past, not having made entries on account of want of funds, being mostly Galicians. These people have now come to the front and made entries; any that remain will, I think, complete entry this fall, when they return from work. Their progress on their farms has been very satisfactory, and they are now becoming favourite helpers in farm work. They are well satisfied with the country and seem happy and contented.

The prospect for grain crops all over this district is very bright, and if all goes well, the largest crop ever cut will be the result. The hay crop is very good, while the heavy fall of rain has filled up the sloughs, and the upland will this year yield a far superior quality of hay.

All the foreign settlements surrounding Yorkton are doing extremely well, and have good schools and churches as well as post offices, and form a contented and happy people. The flour mill built last year has been found a great convenience to the district, and the creamery is doing so well that it will double the output of last year. Owing to the light crops, both of hay and grain, last year, the shipment of cattle was not as large as at first estimated, only 5,400 being reported as shipped from this point.

The work of the office has increased over 50 per cent in all but the actual entries, as the following list will show:—

Letters received. . . . .	4,104
Letters sent. . . . .	4,028
Homestead entries granted. . . . .	443
Homestead entries cancelled. . . . .	318
Hay permits issued. . . . .	510
Timber permits issued. . . . .	131
Applications for patents received. . . . .	146

The money received has also increased in the same ratio.

Immigration from the northern United States has been large this year, and there seems to be a promise of still larger immigration next year, as those who return for their families will give a good report of the country.

I am, sir, your obedient servant,

W. C. DE BALINHARD,  
*Agent of Dominion Lands.*

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## No. 18.

## REPORT OF CHIEF INSPECTOR OF SURVEYS.

DEPARTMENT OF THE INTERIOR,  
CALGARY, ALBERTA, June 30, 1901.J. G. TURRIFF, Esq.,  
Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to report, through you, for the information of the Minister, on the work performed by me, and other matters, during the past departmental year.

Excepting during a portion of last autumn, when I came west with a view to accompanying Mr. George G. Anderson, C.E., over what was known as the Bow River irrigation scheme, until March 23 last, my time was occupied wholly at Ottawa in connection with the railway land grants. The reports on that were from time to time submitted to the department. Owing to contingencies which could not be foreseen at the time the arrangement was entered into, Mr. Anderson was unable to make the inspection last fall, but he commenced on same on April 1 of this year; concluded the field work on June 8; prepared his report in Calgary, and left for home on the 18th ultimo. I accompanied him throughout the entire inspection, and expect within a few days to make a special report concerning such inspection. Since then and up to this date I have been looking into an irrigation proposition south of the Bow. The plans necessary for a report of the same will at once be prepared and forwarded with such report.

I have, therefore, very little to embody in my annual report, beyond stating that the winter was a very favourable one, and it was fortunate for the stock interests that it was so, as, owing to the very wet autumn of last year, the grass did not ripen; the result was the pasturage was wretched. This condition, however, was not universal, but it covered territory which carries probably 80 per cent of the range stock of the Territories. In Western Assiniboia, however, the grass in nearly every locality matured fairly well. The result was that stock there came through in good condition, whereas along the Foot hills, and to some considerable distance east of them in the district of Alberta, the stock came through very poor, which, coupled with a cold, backward spring, caused a very considerable loss—in some cases, a high one. Much of this loss, however, could have been avoided by herding the cattle, as nearly the whole of it was caused by cattle in a weak state miring in soft places, some of which were alkaline bogs or swamps; the grass showing more growth there than on the ridges, the cattle naturally took to them. The prairie fires played a considerable part also in the loss of stock, in this way, that the grass came up earlier on the burnt places, or rather, owing to the burnt condition the cattle could nibble at it when it was so immature that little or no nourishment existed in it. The result was that cattle would take to it and get weaker day by day, whereas if they could have been kept on the old grass the results would have been much more beneficial.

## SHEEP.

It is difficult to understand why the price of mutton remains so high in this country. Mutton has been selling, choice cuts, as high as twenty cents per pound, and as

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high as eight cents by the carcass, not high grade at that. It would appear that there were favourable prospects for a very considerable development in sheep in this district.

There are a number of other matters on which it might be desirable to comment, and on which it has been usual for me in my annual reports to do ; but the season is not sufficiently advanced to discuss the same with any approach to accuracy, and in others, no doubt other officials will report sufficiently thereon, and with more information generally than is available to me at present.

Respectfully submitted,

WM. PEARCE,

*Inspector.*

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## No. 19.

## REPORT ON TIMBER, MINERAL, GRAZING AND IRRIGATION.

DEPARTMENT OF THE INTERIOR,  
OTTAWA, September 4, 1901.JAMES A. SMART, Esq.,  
Deputy Minister of the Interior.

SIR,—I have the honour to submit the twenty-first annual report of the Timber and Mines Branch of the Department of the Interior.

The annexed statements, lettered 'A' and 'B,' show that the revenue derived from timber, grazing, hay and mineral lands from July 1, 1900, to July 1, 1901, exclusive of sales of mineral lands, amounted to \$1,341,293.08. The above amount includes the dues received for timber and hay cut on school lands, and rent of those lands for grazing purposes.

Reports received from the Crown Timber Agents at Winnipeg, Calgary and Edmonton, Prince Albert, and New Westminster, showing the revenue collected by them and other information are appended hereto.

For the sake of reference and comparison, statement lettered 'C,' showing by fiscal years the revenue derived from timber, mineral, grazing and hay lands from the year 1872 up to July 1, 1901, not including sales of mineral lands, has been prepared, and will be found at the end of this report.

The statement referred to in the previous paragraph does not include the revenue from school lands, but statement lettered 'B' appended hereto, shows the revenue from this source for the fiscal year 1900-1, and the statement lettered 'D' shows the total revenue up to June 30, 1901.

The total revenue of the Winnipeg Agency for the fiscal year 1900-1 was \$59,155.02.

The price of lumber within the Winnipeg agency was from \$12 to \$17.50 per thousand feet B.M. There are 33 mills in operation within the agency, cutting timber under government license.

The revenue received from the British Columbia agency during the fiscal year 1900-1 was \$23,134.70.

Lumber sold at the average price of \$10 per thousand feet B.M.

There are twenty-four mills within the agency operating under license from the Dominion government.

The total amount of dues collected within the Calgary agency during the fiscal year 1900-1 amounted to \$8,570.03.

The price of lumber at Calgary was \$8 to \$17, and at Macleod, \$7 to \$16.

Seven saw-mills were operating within the agency last year under government license.

The total amount of dues collected within the Edmonton agency during the fiscal year amounted to \$10,262.01.

The price of lumber during the year was \$10 to \$12 per thousand feet B.M.

There are five saw-mills in operation within this agency.

The total amount of dues collected within the Prince Albert agency during the year amounted to \$35,759.62.

Lumber sold at Prince Albert at \$15 per thousand feet B.M. There are three saw-mills in this agency cutting timber under license.

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Saw-mills returns received at this department give the following quantities of building material as having been manufactured and sold during the year within the six agencies:—

	Manufactured.	Sold.
Sawn lumber . . . . .	78,773,422 ft. B.M.	67,745,989 ft. B.M.
Shingles . . . . .	1,355,550	1,382,550
Shingle bolts . . . . .	5,233½ cords	3,715½ cords
Laths . . . . .	631,600	929,400

Three hundred and seventy-one licenses to cut timber over a total area of 4,479.20 square miles were prepared. The areas licensed in the province of Manitoba, the four provisional territorial districts, on Dominion lands in the province of British Columbia, and in the Yukon Territory, are as follows:—

	Square Miles.
Manitoba . . . . .	1,186.18
Alberta . . . . .	1,147.19
Assiniboia . . . . .	16.24
Saskatchewan . . . . .	898.54
Keewatin . . . . .	30.00
British Columbia . . . . .	975.94
Yukon Territory . . . . .	225.11

The number of applications received during the year to cut timber was 253; the number of berths granted was 118.

Within the past year forty-three berths were cancelled or relinquished by the owners thereof.

The number of berths under license or authorized to be licensed, in the province of Manitoba and the Territories is 209, and on Dominion lands in the province of British Columbia, 177. In the Yukon Territory, 97 berths have been granted, covering a total area of 225.11 square miles.

The number of berths covered by permits on August 2, 1901, was 129.

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The following statements show the timber limits either licensed or authorized to be licensed within the several Crown timber agencies:—

## WINNIPEG AGENCY.

Limit.	License.	Name.	Locality.	Area.
				Sq. Miles.
1	Lease 10	D. E. Sprague	Rosseau and Pine rivers	5.20
2	10	"	"	4.30
14	90	Merchants Bank of Canada	Shell River	50
15a	91	"	"	11.25
15	91	"	"	38.75
16	21	D. Ross	Near Whitemouth River	120
23	92	J. Hanbury	Shell River	50
25a	293	"	"	25
25	293	"	"	25
26a	122	H. B. Mitchell	"	5.17
26b	122	"	"	3
26	122	"	"	4
27a	140	J. Hanbury	"	11.50
27b	140	J. F. Worley	"	3.75
48	112	J. Hanbury	Little Boggy creek	8.10
92	53	V. B. Wadsworth	Little Swan river	50
544	113	Wm. Robinson	Bad Throat river	5.60
546	331	Imperial Bank of Canada	"	49.14
551 D	173	J. & T. Shaw	Tp. 23, R. 19, W. 1st M.	18
554	124	D. E. Sprague	Two islands in Whitemouth lake.	2
567, No. 1	196	P. McArthur	Fairford river.	2.69
567 " 3	196	"	"	8
567 " 4	196	"	"	13.40
567 " 5	196	"	"	16.20
567 " 6	196	"	"	17.82
568	393	D. E. Sprague	Tp. 18, R. 7, E. P. M.	16.38
571	330	Jas. Shaw	Tps. 25-26, R. 25, W. P. M.	34
575	230	J. Watson	Tps. 22-23, R. 20, W. P. M.	18
578	265	D. H. Harrison	Tp. 23, R. 18, W. P. M.	14
581	178	Middleton & Aske	Black Bear island.	16
592	174	Thomas & Co.	Tp. 18, R. 3, E. P. M.	4.50
603	201	"	"	2
615	217	F. A. Fairchild	Tps. 18-19, R. 19, Tp. 19, R. 20, W. P. M.	6.31
618	293	Middleton & Aske	Tps. 21-22, R. 21, W. P. M.	6
621	270	Wm. Robinson	Bad Throat river	16.51
624, No. 1	237	D. E. Sprague	Between Lake of the Woods and Whitemouth river	5
624 " 2	237	"	"	22.75
624 " 3	237	"	"	1.60
624 " 4	237	"	"	3
624 " 5	237	"	"	3
662	284	Middleton & Aske	Tp. 21, R. 21, W. P. M.	7
670	285	J. A. Christie	"	1
676	263	Frank L. Engman	Tp. 19, R. 18, W. P. M.	2.50
702	201	J. D. McArthur	Lake Winnipeg	50.00
716	287	Wm. Robinson	Shoal river	11.50
733	338	P. McArthur	Swan river	7.30
734	338	"	Swan lake	10
735	338	"	"	9
736	338	"	"	10
737	338	"	"	8.80
742	248	J. Hanbury	Tp. 30, R. 30, W. P. M.	6.24
745	252	Wm. Robinson	Bad Throat river	8
751	290	J. Hanbury	Tp. 30, R. 30, W. P. M.	6
752	256	Wm. Peden	Tp. 20, R. 22, W. P. M.	6
754	249	S. T. Thomas	Tp. 18, R. 3, E. P. M.	1
759	286	J. D. McArthur	Lake Winnipeg	2
761	438	Lac du Bonnet Mining, Development & Manufacturing Co.	Tp. 14, R. 11, E. P. M.	5
786	326	Middleton & Aske	Tps. 21-22, R. 21, W. 1st M.	5.75
795	292	J. Hanbury	"	3
814	281	T. A. Burrows	Tps. 31-32-33, R. 22, W. P. M.	15
815	294	Jas. Drake	On east side Lake Winnipeg	4
827	337	McKenzie, Mann & Co.	"	50
824	336	P. McArthur	"	15

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WINNIPEG AGENCY—*Concluded.*

Limit.	License.	Name.	Locality.	Area.
				Sq. Miles
825	277	G. B. Housser	Tp. 22, R. 18, W. P. M.	26
826	274	Wm. Peden	Tp. 20, R. 24, W. P. M.	1
838	302	P. McArthur	Red Deer point	15
856	344	J. Drake	Bad Throat River, ..	12 25
857	333	Lac du Bonnet Mining, De- veloping & Manufacturing Co	Tp. 15, R. 11, E. P. M.	10 31
865	350	A. L. Wells	E. side Washow Bay, Lake Wjg	2 90
866	352	T. Fulton	Tp. 38, R. 5, W. 2nd M	18 00
867	407	Wm. Robinson	North of Hole River	8
869	355	"	On E. Shore Lake Wjg	21
888	377	M. & J. Ritchie	In Tp. 22, R. 17, W. P. M.	4
900	405	J. H. McClure	Tp. 19, R. 2, E. P. M	12
918	416	J. D. McArthur	West side of Lake Winnipeg.	14
924	420	J. H. McClure	Tp. 19, R. 2, E. P. M	8
927	419	"	Tp. 18, R. 1 & Tp. 19, R. 2, E. P. M.	6
931	432	Messrs. Robinson & Co.	Tps. 16 and 17, R. 4, E. P. M.	5 50
944	430	P. McArthur	Tps. 28 and 29, R. 17, W. P. M.	1 50
948	434	The Dominion Fish Co.	Nelson river, Lake Winnipeg.	30 00
950	444	K. Finsson	Tps. 23, Rges. 3 & 4, E. P. M.	0 75
958	464	A. W. Fraser	Tps. 40 & 41, Rges. 5 & 6, W. 2nd M.	40 00
965a	439	The Lac du Bonnet Mining, De- velopment & Manufact'g Co	Tp. 13, R. 12, E. P. M.	30 00
967	440	The Lac du Bonnet Mining, De- velopment & Manufact'g Co	Tp. 14, R. 10, E. P. M.	36 00
974	462	Thomas Mackie	Greenwood River.	24 00
976	467	J. T. Thomas	Tp. 18, Rges 3 and 4, E. P. M.	1 57
980	476	Thomas Mackie	Near Crooked Creek	20 00
985	478	Wm. Robinson	West end of Lake Winnipeg.	50 00
			Total area. ....	1,363 32

## EDMONTON AGENCY.

9 Block 5	Lease 15	Geo. Burn	Red river	8 55
9 " 6	15	"	"	17 50
302	83	"	N. Saskatchewan river.	3 75
436	87	"	"	50 00
788	296	D. R. Fraser	Tp. 52, rge. 4, W. 5th M	4 00
799	353	Walter & Humberstone	In vicinity of tp. 52 rg. 4, 5th M.	2 80
849	362	D. W. McKenzie	Half Moon lake.	3 00
863	354	G. A. Love	On Lobstick.	18 00
864	343	Walter & Humberstone.	In tp. 50, rge. 3, W. 5th M.	1 72
881	369	"	In tp. 51, rges 25, 26, W. 4th M.	2 00
887	372	Bourchier, Gouin & Co	In tp. 51, rge. 26, W. 4th M	6 00
906	415	L. Peterson	Tps. 46 & 47, rge. 28, W. 4th M.	4 00
911	413	G. A. Love	Tp. 41, R. 2, W. 5th M	2 00
928	445	S. J. Eccles	Tps. 51 & 52, rge. 26, W. 4th M	2 00
949	441	C. H. Swanson & L. Peterson.	Tps. 45, 46 & 47, R. 1, W. 5th M	6 00
955	447	W. S. Dwinell	Wolf river.	1 00
956	454	J. F. Featherstonhaugh.	Near Buck lake.	3 00
959	465	H. Bowtell	Tp. 41, R. 24, W. 4th M.	1 50
962	451	W. S. Dwinell.	Buck Lake	2 00
963	452	"	"	5 33
968	459	"	Wolf river.	8 00
970	457	"	Buck lake.	1 00
971	456	"	Saskatchewan river	1 00
972	455	"	Near Pigeon Lake.	9 00
			Total area	172 04

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## CALGARY AGENCY.

Limit.	License.	Name.	Locality.	Area.
				Sq. m.
34	30	Jas. Walker .....	Bow river.....	4 00
36 No. 1	99	Peter McLaren .....	S. Fork of Old Man river...	3 00
36 " 2	99	" .....	" .....	5 25
36 " 3	99	" .....	" .....	5 48
36 " 4	99	" .....	" .....	3 75
36 " 5	99	" .....	" .....	10 00
36 " 6	99	" .....	" .....	2 80
36 " 7	99	" .....	" .....	7 40
36 " 8	99	" .....	" .....	1 20
36 " 9	99	" .....	" .....	1 44
36 " 10	99	" .....	" .....	5 67
36 " 11	99	" .....	" .....	3 90
36a " 1	117	" .....	Middle Fork of Old Man river...	28 13
36a " 2	117	" .....	" .....	8 25
36a " 3	117	" .....	" .....	8 75
36a " 4	117	" .....	" .....	2 73
36a " 5	117	" .....	" .....	2 25
80	45	North-west Coal and Naviga tion Co. ....	Near South Fork Old Man river...	50 00
105	39	Alberta Lumber Co. ....	Red Deer river.....	47 00
106	36	" .....	" .....	47 75
179	86	Peter McLaren .....	Middle Fork of Old Man river...	50 00
185	37	Alberta Lumber Co. ....	Red Deer river .....	48 75
186	38	" .....	" .....	47 70
199	46	" .....	S. S. Clearwater lake.....	51 24
200	46	" .....	" .....	50 21
203	46	" .....	" .....	50 40
204	46	" .....	" .....	49 91
242	46	" .....	" .....	50 04
252	115	Peter McLaren .....	Red Deer river.....	17 70
253	114	" .....	" .....	11 76
292	183	Chas. Beck.....	North Fork High river.....	47 08
318E	88	Eau Claire and Bow River Lumber Co. ....	Bow river .....	16 50
318F	88	" .....	" .....	16 00
318H	88	" .....	" .....	6 00
313I	88	" .....	" .....	4 00
318J	88	" .....	" .....	5 63
417K	88	" .....	" .....	7 50
425	50	Alberta Lumber Co. ....	S. S. Clearwater lake .....	35 25
455	176	Peter McLaren .....	Red Deer river .....	48 93
468	111	Jas. Quinn .....	Little Red river .....	50 00
552	319	La Corporation Episcopale Ca- tholique Romaine de St-Al- bert and Mgr. Goupert.....	Cascade river.....	5 00
559	128	D. Morrison .....	Near S. F. of Sheep river.....	3 41
569	170	J. Lineham .....	S. Fork, Sheep river.....	21 33
573	Not issued.	Dept. of Indian Affairs.....	Tp. 9, R. 3, W. 4th M.....	11 35
579	213	Wm. E. Lineham.....	North Fork, High river.....	33 33
582	Not issued.	Dept. of Indian Affairs.....	Belly river .....	6 50
583	145	R. G. Belvidere.....	Tp. 1, Rgs. 27, 28, W. 4th M.....	4 00
594	190	John Lineham .....	S. Fork, Sheep river.....	6 13
606	206	A. W. Gillingham .....	N. Fork, Old Man river .....	3 00
784	250	Wm. Smitert .....	Tp. 8, Rge. 3, W. 4th M.....	1 00
884	363	Indian Dept .....	Tps. 9 & 10, Rgs. 29 & 30, W. 4th M.	2 00
885	373	Lynn & Stewart .....	Tp. 35, Rge. 4, W. 5th M.....	1 00
886	364	Indian Dept .....	Tp. 10, Rge. 30, W. 4th M.....	2 00
984	479	R. L. Findlay .....	Tp. 14, Rge. 1, W. 5th M.....	0 50
			Total area.....	1,014 00



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PRINCE ALBERT AGENCY

Limit.	License.	Name.	Locality.	Area.
				Sq. m.
9 Block 1	Lease 15	Geo. Burn	Red river	6 00
9 " 2	15	"	"	6 04
9 " 3	15	"	"	1 87
46 or 'A'	33	"	Near Junction Rabbit creek	47 83
245	49	"	Little Red river	50 00
320	80	"	Fox and Upper Rabbit creek..	50 00
474	79	"	Sandy lake	50 00
563	Not issued.	Pas Band of Indians	West end Salt channel.	0 39
598	192	Jas. Sanderson.	Tp. 52, R. 1, W. 3rd M.	6 00
616	225	Geo. Burn	Stony lake	35 00
616A	225	"	"	3 59
633	230	Jas. Sanderson	Tps. 51-52, R. 1, W. 3rd M.	4 12
691	272	Geo. Burn.	District of Saskatchewan.	10 19
698	271	"	Tp. 23, R. 4, W. 3rd M.	5 00
708	346	W. Cowan	Stony creek	2 30
710	332	"	Near Sandy lake	49 00
729	289	Jas. Sanderson	Tp. 52, Rgs. 1 and 2, W. 3rd M.	9 00
801	288	W. Cowan	Stony creek	1 00
802	346	"	"	3 55
848	304	J. W. Shannon & Co	Tp. 52, R. 1, W. 3rd M.	8 50
862	347	W. Cowan & Co.	Crossing of Shoal creek	1 00
868	361	J. H. Sanderson	Tp. 53, R. 3, W. 3rd M.	36 00
889	380	Moore & Sanderson.	On Sask'n riv., below Two Islands	3 00
890	381	"	"	3 00
891	382	"	"	3 00
892	383	"	"	3 00
893	384	"	"	3 00
894	385	"	"	3 00
895	386	"	"	2 00
896	387	"	below Seeponock chan.	3 00
897	390	"	On Pine ck., trib. of Sask'n river	3 00
915	417	"	Sask'n river, R. 8, W. 2nd M.	6 00
916	418	"	" R. 10, W. 2nd M.	3 00
920	422	"	Saskatchewan and Carrot rivers.	50 00
921	421	"	White Loon lake	50 00
945	442	J. H. Sanderson	Tp. 53, R. 2, W. 3rd M.	4 12 1/2
946	446	E. H. Moore.	Tp. 52, Rgs. 1 and 2, W. 3rd M.	4 53
954	463	Moore & Sanderson.	Sucker creek	24 00
960	453	Thomas Mackie	Crooked and Carrot rivers	50 00
961	450	Wm. Cowan.	"	50 00
964	448	Thomas Mackie.	Saskatchewan and Carrot rivers	32 00
965	449	"	White Loon lake	25 00
977	472	J. W. Wilson.	Tp. 44, Rgs. 12 and 13, W. 2nd M	16 00
			Total area	727 635

NEW WESTMINSTER AGENCY.

Aa, Bb	119	Yorkshire Guarantee & Securities Corporation (Ltd).	South of Cheam Indian Reserve	680 acres
B	102	British Columbia Mills, Timber & Trading Co.	Tp. 7, lot 302, G. 1, New West	3,480
H	108	British Columbia Mills, Timber & Trading Co.	Tp. 2, lot 33, Bk 5, R. 2, W. 6th M.	960
K	107	Grant & Kerr	Tp. 2, Dist. New West.	960
L	109	British Columbia Mills, Timber and Trading Co.	Tp. 7, New West	640
M	159	Grant & Kerr	Stave River	41
O	184	British Columbia Mills, Timber & Trading Co.	Tp. 39 North, Dist. New West	960
Q	141	Grant & Kerr.	Tp. 1, Dist. New West	180
R	129	The British Columbia Timber & Electric Co.	Tp. 2, rgs. 1, 2, Dist. New West	2,720
T	121	The British Columbia Mills, Timber & Trading Co.	"	160
W	138	Dobbie, Davidson & Strathy	Tps. 4, 2, 12, Dist. New West	10,704
X	197	Thomas L. Briggs	Tp. 15, East of Const M	1,800

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## NEW WESTMINSTER AGENCY.—Continued.

Limit.	License.	Name.	Locality.	Area.
Y No. 1	182	Mosson Boyd Co.....	Upper and Lower Lillooet lakes	3 20sq. m
Y No. 2	182	"	"	2 50 "
Z No. 1	154	Davidson, Henderson & Strathy	Tp. 15, East of Coast M.	7 22 "
Z No. 2	154	"	"	3 75 "
3	103	W. C. Wells	Kicking Horse river.	2 00 "
5	134	J. R. & T. S. Reilly	Kicking Horse river and Beaver creek.	10 00 "
14	204	Columbia River Lumber Co.	Columbia river	49 23 "
15	204	"	"	42 30 "
16	200	"	"	13 55 "
17	241	"	"	16 50 "
19	370	"	"	25 00 "
20	142	T. & J. Long	Blue Water river.	34 55 "
27	130	Columbia River Lumber Co.	"	1 00 "
29	202	W. C. Wells	Tp. 25, R. 19, W. 5th M.	13 16 "
30	257	Columbia River Lumber Co.	Columbia river	4 40 "
32	391	"	Illecillewaet river.	640 acres
33 No. 1	146	E. H. Heaps & Co.	Stave River and Stave lake.	1,024 "
33 No. 2	146	Brunette Saw Mill Co.	"	2,803 20 "
33 No. 3	146	E. H. Heaps & Co.	"	342 "
33 No. 4	146	"	"	155 "
36	123	Thomas W. Patterson.	Tp. 39, G. 1, Dist. New West.	1,371 20 "
38	169	Wm. Caldwell	Coquitlam and Gold creek.	14 50sq. m
40 No. 1	371	Columbia River Lumber Co.	Stony creek	6 25 "
40 No. 2	371	"	"	4 00 "
43	162	E. A. Wilmott & Co.	Tps. 4, 5, R. 28, W. 6th M.	1,685 acres
44 No. 1	167	Brunette Saw Mill Co.	Bks. 12, 3, 4, Province British C.	396 70 "
44 No. 2	167	"	"	570 "
44 No. 3	167	"	"	500 "
44 No. 4	167	"	"	659 81 "
44 No. 5	221	"	Lillooet river	160 "
45	389	Columbia River Lumber Co.	"	24 50sq. m
47	205	"	Blackwater creek.	22 65 "
48 No. 1	345	J. F. Murphy	Near James Lake.	
48 No. 2	345	"	"	
48 No. 3	34	"	"	3,537 88 "
48 No. 4	345	"	"	
48 No. 5	345	"	"	
49	133	Stein & Robinson.	Tp. 23, R. 2, W. 6th M.	560 "
50c	155	McLaren & Ross.	Chilliwack river	10 50sq. m
51	325	Grant & Kerr.	Tp. 2, G. 2, N. West dist.	120 acres
52	137	Hastings Shingle Manufact. Co.	Tp. 39, New West dist.	876 30 "
55	322	Ross & McLaren	Tps. 19, 22, 25, East Coast M.	15,900 "
57	150	Huntingdon Lumber Co.	Tp. 16, District N. West.	1,920 "
58	137	Thos. W. Patterson.	Tp. 39, Dist. N. West.	480 "
61	153	Yorkshire Guarantee & Securities Corporation (Ltd).	Tps. 2, 3, R. 29, W. 6th M.	130 33 "
63 No. 1	194	Harrison River Mills Co.	Harrison lake	960 64 "
64	187	Shuswap Milling Co.	Illecillewaet river.	947 20 "
65	305	Columbia River Lumber Co.	Wait-a-bit creek	27sq. m
66	180	"	Sec. 24, Tp. 20, R. 10, W. 6th M.	542 acres
67	320	Chas. J. Carrière	Hospital creek.	960 "
69	149	G. W. Phipps.	Tp. 39, W. Coast M.	354 "
70	321	Columbia River Lumber Co.	Columbia river	50sq. m
71	163	"	Tps. 22, rgs. 10, 11, W. 6th M.	2,560 acres
72	186	"	Salmon Arm of Shuswap lake	4 79sq. m
73	306	"	Columbia river	18 "
74	307	"	"	27 "
77	148	T. J. Hammill	Tp. 39, Dist. New West	384 acres
78	165	Columbia River Lumber Co.	Tp. 21, R. 10, W. 6th M.	978 "
79	198	T. L. Briggs	Tps. 3, 4, rgs. 3, 4, W. 7th M.	2,240 "
80	172	T. J. Hammill	Tp. 4, R. 4, W. 6th M.	149 "
81	342	Huntingdon Lumber Co.	Tp. 16, New West	960 "
83c	356	McLaren Ross Lumber Co.	Railway Belt, B.C.	362 "
83d				680 "
86	410	British Columbia Mills & Trading Co.	New West district	420 "
87	262	British Columbia Mills & Trading Co.	Tp. 2, 38, R. 1, W.	640 "

## SESSIONAL PAPER No. 25

## NEW WESTMINSTER AGENCY—Continued.

Limit.	License.	Name.	Locality.	Area.
88	185	Genelle Bros.	Columbia river	4 22sq. m.
91	191	Martin Bros.	Tributary Harrison I.	1 "
94	210	Thos. W. Patterson.	Tp. 30, W. Coast M	480 acres
96	188	E. H. Heaps & Co.	Stave river	640 "
98	411	British Columbia Mills & Trading Co.	Near Stave Lake.	400 "
99	412	British Columbia Mills & Trading Co.	Tp. 41, New West, dist	1 25sq. m.
101	198	T. L. Briggs	Tps. 3, 4, W. 7th M	160 acres
103	189	Grant & Kerr	Stave river.	163 "
105	308	Columbia River Lumber Co	Columbia river	6sq. m.
106	392	H. R. Stephen	Stave river.	4,859 acres
110	358	Thos. W. Patterson.	Tp. 39, Dist. New West	698 "
111	211	"	"	640 "
112	335	The Fred Robinson Lumber Co.	Columbia river	3sq. m.
113	334	"	"	3 "
114	297	Genelle Bros.	"	9 "
116	329	Daniel Robinson.	Beaver river.	4 "
117	328	"	"	4 "
118	273	"	Columbia river	9 "
119	219	Columbia River Lumber Co.	Salmon arm of Shuswap lake.	393 acres
123	268	The Fred Robinson Lumber Co.	Tp. 23, R. 2, W. 6th M	240 "
125	323	Brunette Saw Mill Co.	Near Burrard inlet.	530 "
127	278	Genelle Bros.	Columbia river	1,920 "
128	318	"	"	640 "
129	279	Peter Genelle & Co.	Tp. 22, R. 10, W. 6th M	2,120 "
134	239	"	Tp. 22, R. 10, W. 6th M	176 "
138	317	J. W. McRae	Tp. 18, E. of Coast M.	985 "
140	"	Joseph Genelle	Tp. 24, R. 8, W. 5th M	960 "
144	314	Harrison River Mills Timber & Trading Co.	Harrison lake	216 "
145	315	"	"	216 "
148	253	Wm. Sculley	Stave lake	329 "
150	265	J. R. Wren	"	320 "
152	288	The Fred. Robinson Lumber Co	Fish river and Coyd creek	1,920 "
153	299	"	"	329 "
154	300	"	"	320 "
155	301	"	"	640 "
158	309	Albert McLaren	Chilluweyuk river	440 "
159	310	"	"	600 "
160	311	"	"	720 "
161	312	"	"	560 "
162	313	"	"	440 "
163	314	"	"	320 "
171	260	Shuswap Milling Co.	Tp. 20, R. 13, W. 6th M	1sq. m.
173	280	J. & A. Trotheway	Tp. 2, R. 29, W. 6th M	90 acres.
176	264	British Columbia Mills, Timber and Trading Co	Tp. 1, W. of the coast M.	480 "
177	327	Pacific Coast Lumber Co.	Coquhalla river	1,038 "
185	276	E. H. Heaps & Co	Tp. 4, ranges 2 & 3, W. 7th M	582 "
186	275	Peter Genelle & Co.	Columbia river	480 "
205	341	J. D. Breeze	"	1,457 "
206	324	Wm. McKeuzie.	"	6 50sq. m.
207	339	F. Robinson	"	4 25 "
209	357	G. W. Phipps.	In Tp. 39, W. C. W.	307 acres.
213	348	D. J. Campbell	On North Arm Burrard Inlet.	950 "
216	351	Grant & Kerr	On Stave River	580 "
217	353	S. Edge	In Tp. 42, E. C. M.	329 "
225	360	J. D. Breeze.	In Tp. 23, E. C. M.	640 "
226	366	P. Ryan	In Tps. 25, R. 28, W. 5th M.	3 57sq. m.
227	368	Harrison River Mills Timber & Trading Co	In Tp. 3 R. 30, W. 6th M	80 acres.
228	374	Grant & Kerr	Near North Arm Burrard Inlet	731 "
231	375	Columbia River Lumber Co.	In Tp. 23, R. 18, W. 5th M.	1 00sq. m.
232	376	"	In Tp. 25, R. 20, W. 5th M	1 50 "
233	379	P. Ryan	On west side of Adams Lake	23,040 acres.
234	388	Grant & Kerr	In Tp. 1, W. C. M.	140 "
235	469	P. Ryan	In Tp. 25, R. 28 W. 5th M.	6 75sq. m.
236	403	T. Allen	On east side of Pitt Lake	160 acres.

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NEW WESTMINSTER AGENCY—*Concluded.*

Limit.	License.	Name.	Locality.	Area.
237	394	P. Ryan.....	Near S. boundary of R'y belt.	35.00 sq. m.
238	395	"	"	15.00 "
239	396	Columbia River Lumber Co.	Shuswap Lake	35.00 "
240	397	P. Ryan	"	20.00 "
241	398	Columbia River Lumber Co.	Seymour Arm, Shuswap Lake	15.00 "
242	399	"	Tp. 21, R. 11, W. 6th M.	9.87 "
243	400	P. Ryan	Tp. 24, R. 4, W. 6th M.	20.25 "
244	401	Columbia River Lumber Co.	Tp. 24, R. 5, W. 6th M.	25.00 "
245	402	"	Tp. 23, R. 6, W. 5th M.	21.13 "
246	404	K. Mikuni	Burrard Inlet	473.25 acres.
248	406	The Harrison River Mills Trading & Lumber Co.	Tp. 3, R. 30, W. 6th M.	123.00 "
249	408	The Fred Robinson Lumber Co.	Columbia River	10.00 "
250	414	The Columbia River Lumber Co.	Tp. 21, R. 10, W. 6th M.	1.13 sq. m.
251	429	(Yorkshire Guarantee & Securities Corporation, Ltd)	Harrison Lake	3,520 acres.
253	423	P. Ryan	Tp. 25, R. 28, W. 5th M.	22.44 sq. m.
254	424	Harrison River Mills Timber & Trading Co.	Chehalis Creek	640 acres.
255	425	Columbia River Lumber Co.	Tp. 25, R. 21, W. 6th M.	0.87 sq. m.
256	426	"	Tp. 23, R. 18, W. 5th M.	1.25 "
257	427	"	"	0.75 "
258	428	"	Tp. 24, R. 18, W. 5th M.	1.75 "
259	431	"	Tp. 15, E. C. M.	0.50 "
260	436	"	Tp. 23, R. 18, W. 5th M.	0.75 "
261	437	"	"	0.30 "
262	435	"	"	0.25 "
263	433	(The Ashcroft Water, Electric & Improvement Co.	Adams Lake	18.00 "
264	443	Harrison River Mills Timber & Trading Co.	Chehalis Creek	427 acres.
265	475	E. O. Patterson	Pitt Lake	420 "
266	474	"	"	320 "
268	460	E. H. Heaps & Co.	Stave Lake	960 "
269	466	Jas. C. Shields	Lillooet Lake	120 "
270	473	G. W. Phipps & G. E. Farrer.	Burrard Inlet	320 "
271	470	Peter Ryan	Tp. 25, R. 27, W. 5th M.	7.38 sq. m.
272	471	Harrison River Mills Timber & Trading Co.	Chehalis Creek	1,109 acres.
273	477	G. E. Farrer	Burrard Inlet	160 "
274	481	J. Duncan	Tp. 3, R. 29, W. 6th M.	95 "
Total area.				975.94 sq. m.

## YUKON TERRITORY.

T. B. No.	Name.	Locality.	Area.
			Sq. m.
1	D. K. Campbell.	At the junction of the Lewes river with the Teslin river.	5.00
2	"	At the junction of McClintock creek with Lake Marsh.	5.00
3	"	At the junction of the Pelly and Yukon rivers.	5.00
4	"	At the junction of the Lewes river with the Teslin river.	5.00
6	"	On west side of Lewes river, at its junction with Lake Labarge.	5.00
7	"	On east side of Lewes river, at its junction with Lake Labarge.	5.00
8	"	Windy arm, Tagish lake.	5.00
9	A. S. Kerry.	"	5.00
10	A. W. Stevenson & Geo. A. Drumm.	"	5.00
11	mond.	On a creek tributary of Lake Labarge.	5.00
	North American Transportation Co.	Klondike river.	5.00

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YUKON TERRITORY *Continued.*

T. R. Nos.	Name.	Locality.	Area. Sq. m.
12	The Canadian Yukon Lumber Co.	Lewes river	5 00
14b	" " "	On Lewes river..	2 00
14c	" " "	On Stewart river	3 00
15	" " "	Stewart river..	5 00
16	" " "	Lake creek	5 00
17	" " "	Stewart river..	5 00
18	" " "	Rosebud creek	5 00
19	" " "	Independence creek..	5 00
20	" " "	Stewart river..	5 00
21	" " "	" " "	5 00
22	A. E. Philip.	On west side of Taku arm, Tagish lake.	5 00
23	The Canadian Yukon Lumber Co	Lewes river	3 50
24	The Kerry Canadian Mill Co	On east side of Tagish lake	2 50
25	J. W. Boyle	Klondike river.	5 00
26	" " "	" " "	5 00
27	Richard Davenport.	On left bank of the Yukon river.....	1 00
28	Bonin <i>et al.</i>	On Lewes river, near Five Finger rapids..	1 00
30	F. Swanson	Sixty Mile river.	1 00
31	The Yukon Saw Mill Co	Yukon river	1 00
32	" " "	" " "	1 00
33	J. J. Heney & Wm. Stewart.	Yukon river and Indian river	6 00
34	D. H. Partridge	On a creek tributary of West arm of Lake Bennett	1 00
36	The Canadian Yukon Lumber Co..	Stewart river..	4 00
37	" " "	On south side of Stewart river.....	4 00
38	" " "	On a creek tributary of Lake Bennett	5 00
39	" " "	On north side of the Stewart river..	5 00
42	F. M. Rattenbury.	On a creek tributary of Lake Bennett.	5 00
43	A. A. McRae.	Stewart river.....	1 00
45	Dawson Electric Light & Power Co.	Yukon river..	1 00
46	Jas. A. Ritchie.	" " "	1 00
49	H. Maitland Kersey.	Lewes river	1 00
50	C. A. Macomber	On Yukon river.	1 00
51	Harper & Ladue	Yukon river	5 00
52	The Kerry Canadian Mill Co.....	" " "	1 00
53	J. B. Marsh	Lake Tagish.....	1 50
54	D. A. Matheson.	Yukon river	1 00
55	" " "	" " "	1 00
56	F. C. Wolfe	Lewes river..	1 00
57	The Joseph Ladue Gold Mining & Development Mining Co. of Yukon.	Stewart river..	1 00
58	" " "	" " "	1 00
59	The Canadian Yukon Lumber Co	Yukon river.	2 50
60	Thompson-McNeil	" " "	1 00
61	The Joseph Ladue Gold Mining & Development Co. of Yukon.....	" " "	1 50
62	Maitland Kersey.	Lewes river	1 00
63	" " "	" " "	1 00
64	Stanley McFadden	Yukon river	1 00
65	Klondike Mills Co	" " "	1 00
66	Yukon Saw Mills Co	" " "	1 00
67	McNabb & Hatheway	" " "	1 00
68	Ruth Howard.	Crooked creek	1 00
69	Yukon Saw Mill Company.	Moosehide creek	1 00
70	C. Henry	Lewes river	1 00
71	Yukon Saw Mill Company	Pelly river.	1 00
72	" " "	Lewes river	1 00
73	" " "	" " "	1 00
74	A. Larose.	A tributary of the Lewes river	1 00
75	Ruth Howard.	Stewart river..	1 00
76	S. B. Reynolds.	Yukon river	1 00
77	" " "	" " "	1 00
78	North American Transportation & Trading Co	Carlisle creek.	2 00
79	Delia M. Coolidge.	Yukon river	2 50
80	M. King.	Lake Bennett	1 00
81	The Upper Yukon Consolidated Co.	Taku arm, Lake Tagish	1 00
83	R. Palmer.	Lake Bennett	1 00
84	Yukon Saw Mill Co.	Tributary Lewes river	3 00

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YUKON TERRITORY—*Concluded.*

T. B. No.	Name.	Locality.	Area. Sq. m.
85	The Joseph Ladue Gold Mining & Development Co.	Yukon river.	1'00
86	Christian Sonnicksen	Stewart river.	1'00
87	The Joseph Ladue Gold Mining & Development Co.	At junction of Yukon and White rivers	1'00
88	C. E. Miller	Lewes river.	1'00
89	The Joseph Ladue Gold Mining & Development Co.	Yukon river.	1'00
90	The Joseph Ladue Gold Mining & Development Co.	Stewart river.	1'00
91	The Joseph Ladue Gold Mining & Development Co.	Pelly river.	1'00
92	Yukon Saw Mill Co.	Tributary of the Lewes river.	2'00
93	The Joseph Ladue Gold Mining & Development Co.	Yukon river.	1'00
94	Yukon Saw Mill Co.	Pelly river.	1'00
95	"	"	1'00
96	The Joseph Ladue Gold Mining & Development Co.	Yukon river.	1'00
97	The Joseph Ladue Gold Mining & Development Co.	Stewart river.	1'00
98	The Joseph Ladue Gold Mining & Development Co.	Ballarat creek.	1'00
99	The Joseph Ladue Gold Mining & Development Co.	Yukon river.	1'00
100	Klondike Mills Co.	"	1'00
101	"	On a tributary of the Yukon river.	1'00
102	The Canadian Yukon Lumber Co.	Yukon river	1'00
103	Klondike Mill Co.	Selwyn river	1'00
104	North American Transportation & Trading Co.	Cliff creek.	3'11
105	D. H. Hume	Lake Labarge.	1'00
106	Alexander Wilson.	On a tributary of the Yukon river.	1'00
Total area			225'11

## SESSIONAL PAPER No. 25

TIMBER ON DOMINION LANDS IN MANITOBA, THE NORTH-WEST TERRITORIES, AND WITHIN THE RAILWAY BELT IN THE PROVINCE OF BRITISH COLUMBIA.

*Licenses.*

A license to cut timber can be acquired only at public competition. A rental of \$5 per square mile is charged for all timber berths excepting those situated west of Yale, in the province of British Columbia, for which the rental is at the rate of 5 cents per acre per annum.

In addition to the rental, dues at the following rates are charged :—

Sawn lumber, 50 cents per thousand feet B.M.

Railway ties, six and eight feet long,  $1\frac{1}{2}$  and  $1\frac{1}{4}$  cents each.

Shingle bolts, 25 cents a cord.

All other products, 5 per cent on the sales.

A license is issued as soon as a berth is granted, but in unsurveyed territory no timber can be cut on the berth until the licensee has made a survey thereof.

*Permits.*

Permits to cut timber are also granted at public competition, except in the case of actual settlers, who receive the timber for their own use.

Settlers and others may also obtain permits to cut up to 100 cords of wood for sale without competition.

The dues payable under a permit are from \$1.50 to \$3 per thousand feet B.M., for square timber ; from  $\frac{1}{2}$  to  $1\frac{1}{2}$  cents per lineal foot for building logs ; from  $12\frac{1}{2}$  to 25 cents per cord for wood ; 1 cent for fence posts ; 3 cents for railway ties, and 20 cents per thousand for shingles.

Homesteaders having no timber of their own are entitled to a permit free of dues to cut the following quantities :—

3,000 lineal feet of building logs, not to exceed 12 inches at butt end. If the timber is cut from dry trees 3,000 lineal feet of any diameter may be taken.

400 roof poles.

500 fence posts.

2,000 fence rails.

Homesteaders and all bona fide settlers whose farms may not have thereon a supply of timber, or who are not in possession of wood lots or other timbered lands, will be granted a free permit to take and cut dry timber for their own use on their farms for fuel and fencing.

A permit fee of 25 cents in each case is charged.

## YUKON TERRITORY.

*Licenses.*

A license to cut timber on an area not exceeding five square miles in the above territory may be granted to the first applicant therefor upon payment of a bonus of not less than \$250 per square mile, but not more than five such berths will be granted to one individual or company, unless it can be shown to the satisfaction of the Commissioner of the Yukon Territory that an applicant requires additional timber for manufacturing purposes at the mill or mills which he has erected.

The licensee shall cause a survey to be made of the berth, when called upon by the Minister of the Interior to do so, and shall erect a sawmill in connection therewith within a certain period to be fixed by the Minister of the Interior, and shall pay a stumpage of \$2 per thousand feet B.M. on the sales of the lumber manufactured from the timber cut, also dues at the rate of 50 cents per cord for cordwood, six cents each for ties, and ten per cent of all sales of all other products of the berth.

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*Permits.*

Permits to cut cordwood and ties in the Yukon Territory may be obtained from the Crown timber agent upon payment of a fee of \$5, and dues at the rate of 50 cents a cord for the former and 6 cents each for the latter.

## MINING LANDS OTHER THAN COAL.

During the past fiscal year forty-six entries were granted by the agent of Dominion lands in Manitoba and the North-west Territories.

In the Yukon Territory 24,524 placer claims, 2,793 quartz claims, 16,573 renewals and relocations, and 25,020 assignments of claims were recorded up to July 1, 1901.

The returns for the fiscal year ending June 30, 1901, show that 4,424 entries for placer claims, 1,156 entries for quartz claims, 6,291 renewals and relocations, and 5,569 assignments were recorded during the year. The revenue collected from this source and for fees collected for registering other documents in connection with mining operations, was \$348,658.30.

Up to July 1, 1901, 59,449 free miner's certificates were issued, producing a revenue of \$596,168.82. During the fiscal year, 12,511 free miner's certificates were issued, and the revenue derived therefrom was \$125,861.

The following is a list of the agents of the government who were authorized to issue free miner's certificates, and the number issued by each agent during the year:—

*Agents of Dominion Lands—*

Calgary, N.W.T. ....	21
Edmonton, N.W.T. ....	17
Kamloops, B.C. ....	1
Lethbridge, N.W.T. ....	3
Winnipeg, Man. ....	19

*Agencies within the Yukon Territory—*

Dawson ....	7,517
Dalton Trail ....	3
Dominion Creek ....	711
Fort Cudahy ....	14
Grand Forks ....	2,043
Gold Run ....	433
Hunker ....	512
Hootalinqua ....	93
Selkirk ....	40
Sulphur Creek ....	194
Stewart River ....	198
Tagish ....	258
Forty-mile ....	59
Upper Stewart River ....	13

*Collectors of Customs—*

Atlin ....	65
Montreal ....	3
Vancouver ....	24
Victoria ....	33
Ottawa, Ont., Department of the Interior. ....	198
Rat Portage, Ont., P. H. Austin ....	29
London, Eng., the High Commissioner's Office ....	10

Total ....	12,511
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## SESSIONAL PAPER No. 25

## DREDGING.

Leases now in force to dredge for minerals other than coal in the submerged beds of rivers in the Yukon Territory, cover 270.00 miles, and for the same purpose in the North-west Territories cover 911.75 miles.

SCHEDULE of Individuals and Companies who have secured dredging leases on certain streams in the Yukon District.

Lease No.	Name of Lessee.	Stream.	Number of Miles.
23	Michael Guerin.....	Klondike River.....	5
24	James J. Guerin.....	Klondike River.....	5
25	J. M. Guerin.....	Klondike River.....	5
26	F. E. Devlin.....	Klondike River.....	5
27	Edmund Guerin.....	Klondike River.....	5
40	James J. Guerin.....	Stewart River.....	5
41	Mary E. Guerin.....	Stewart River.....	5
42	James J. Guerin.....	Stewart River.....	5
48	F. J. White, assignee of F. J. Monroe...	Stewart River.....	5
49	F. J. White, assignee of F. J. Monroe...	Stewart River.....	5
50	F. J. White, assignee of F. J. Monroe...	Stewart River.....	5
51	F. J. White, assignee of F. J. Monroe...	Stewart River.....	5
52	F. J. White, assignee of F. J. Monroe...	Stewart River.....	5
53	F. J. White, assignee of F. J. Monroe...	Stewart River.....	5
	Golden Crown Mining Company—		
140	Assignees of Elizabeth Rogers.....	Stewart River.....	5
141	Assignees of Elizabeth Rogers.....	Stewart River.....	5
142	Assignees of Elizabeth Rogers.....	Stewart River.....	5
143	Assignees of Elizabeth Rogers.....	Stewart River.....	5
144	Assignees of Elizabeth Rogers.....	Stewart River.....	5
145	Assignees of Elizabeth Rogers.....	Stewart River.....	5
146	Assignees of Jennie E. Smillie.....	Stewart River.....	5
147	Assignees of Jennie E. Smillie.....	Stewart River.....	5
148	Assignees of Jennie E. Smillie.....	Stewart River.....	5
149	Assignees of Jennie E. Smillie.....	Stewart River.....	5
150	Assignees of Jennie E. Smillie.....	Stewart River.....	5
151	Assignees of Jennie E. Smillie.....	Stewart River.....	5
152	Assignees of Lynn T. Leet.....	Stewart River.....	5
153	Assignees of Lynn T. Leet.....	Stewart River.....	5
154	Assignees of Lynn T. Leet.....	Stewart River.....	5
155	Assignees of Lynn T. Leet.....	Stewart River.....	5
156	Assignees of Lynn T. Leet.....	Stewart River.....	5
157	Assignees of Lynn T. Leet.....	Stewart River.....	5
158	Assignees of N. C. Smillie.....	Stewart River.....	5
159	Assignees of N. C. Smillie.....	Stewart River.....	5
160	Assignees of N. C. Smillie.....	Stewart River.....	5
161	Assignees of N. C. Smillie.....	Stewart River.....	5
170	F. B. Vrooman, assignee of G. H. Rogers	Hootalinqua River.....	5
171	F. B. Vrooman, assignee of G. H. Rogers	Hootalinqua River.....	5
172	F. B. Vrooman, assignee of G. H. Rogers	Hootalinqua River.....	5
173	F. B. Vrooman, assignee of G. H. Rogers	Hootalinqua River.....	5
174	F. B. Vrooman, assignee of G. H. Rogers	Hootalinqua River.....	5
175	F. B. Vrooman, assignee of G. H. Rogers	Hootalinqua River.....	5
	Lewes River Mining and Dredging Co.—		
200	Assignees of J. A. McPherson.....	Lewes River.....	5
201	Assignees of J. A. McPherson.....	Lewes River.....	5
202	Assignees of J. A. McPherson.....	Lewes River.....	5
203	Assignees of J. A. McPherson.....	Lewes River.....	5
204	Assignees of J. A. McPherson.....	Lewes River.....	5
205	Assignees of J. A. McPherson.....	Lewes River.....	5
233	Geo. E. Kelth.....	Stewart River.....	5
234	Geo. E. Kelth.....	Stewart River.....	5
235	Geo. E. Kelth.....	Stewart River.....	5
236	Geo. E. Kelth.....	Stewart River.....	5
273	F. X. Halder.....	Stewart River.....	5
274	F. X. Halder.....	Stewart River.....	5
Total number of miles.....			270

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## SCHEDULE of Leases to dredge for gold in Rivers, &amp;c., in the North-west Territories.

Lease No.	Name of Lessee.	Stream.	Number of Miles.
1	G. A. Drolet.....	North Saskatchewan River.....	30
2	H. D. Smith.....	Peace River.....	5
3	Wm. H. Roughsedge.....	Peace River.....	5
4	W. P. Scarfe and C. D. Brindly, assignees of Chas. H. Brindly.....	Peace River.....	5
5	Chas. H. Bower.....	Peace River.....	5
6	Wm. McLaren.....	Peace River.....	5
7	Jas. T. MacLaren.....	Peace River.....	5
8	Wm. P. Scarfe and Wm. E. Phin, assignees of John Love.....	Peace River.....	5
9	W. L. Robertson, assignee of Wm. Robertson.....	Peace River.....	5
10	Geo. Hillier.....	Peace River.....	5
11	Thomas Black.....	Peace River.....	5
12	G. Ford.....	Peace River.....	5
13	Jas. A. Green.....	Peace River.....	5
14	Geo. F. Cleveland.....	Peace River.....	5
15	Alex. S. Robertson.....	Peace River.....	5
16	Daniel Hector.....	Peace River.....	4
17	Geo. Black.....	Peace River.....	5
20	Isaac Cowie.....	Peace River.....	5
21	R. H. Lany, assignee of F. W. Klippel.....	North Saskatchewan River.....	5
22	D. S. Keith.....	North Saskatchewan River.....	5
23	Geo. E. Keith.....	North Saskatchewan River.....	5
24	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
25	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
26	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
27	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
28	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
29	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
30	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
31	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
32	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
33	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
34	G. A. Drolet, assignee of N. C. Smillie..	Peace River.....	5
	Discoverers Finance Corporation (Ltd.)—		
35	Assignees of Jas. Gibbens.....	North Saskatchewan River.....	5
36	Assignees of Jas. M. Douglass.....	North Saskatchewan River.....	5
37	Assignees of F. A. Osborne.....	North Saskatchewan River.....	5
38	Assignees of J. A. McDougall.....	North Saskatchewan River.....	5
39	Assignees of R. Secord.....	North Saskatchewan River.....	5
40	Assignees of W. J. Walker.....	North Saskatchewan River.....	5
41	J. H. Gritton.....	North Saskatchewan River.....	5
42	J. H. Gritton.....	North Saskatchewan River.....	5
43	J. H. Gritton.....	North Saskatchewan River.....	5
44	J. H. Gritton.....	North Saskatchewan River.....	5
45	J. H. Gritton.....	North Saskatchewan River.....	5
46	J. H. Gritton.....	North Saskatchewan River.....	5
47	G. A. Drolet.....	North Saskatchewan River.....	5
48	G. A. Drolet.....	North Saskatchewan River.....	5
49	G. A. Drolet.....	North Saskatchewan River.....	5
50	G. A. Drolet.....	North Saskatchewan River.....	5
51	G. A. Drolet.....	North Saskatchewan River.....	5
52	G. A. Drolet.....	North Saskatchewan River.....	5
	Discoverers Finance Corporation (Ltd.)—		
53	Assignees of A. E. Hogue.....	North Saskatchewan River.....	5
54	Assignees of A. E. Hogue.....	North Saskatchewan River.....	5
55	Assignees of A. E. Hogue.....	North Saskatchewan River.....	2
72	J. J. Codville.....	Muddy Creek.....	5
73	Chas. R. Tryon.....	Muddy Creek.....	5
80	I. B. Forbes, assignee of Wm. P. Scarfe	Smoky River.....	5
81	Wm. H. Roughsedge.....	Smoky River.....	5
82	W. H. Blake.....	Smoky River.....	5
83	A. J. Oliver.....	Smoky River.....	5
84	Thos. Black.....	Smoky River.....	5
85	Alex. Mackenzie.....	Smoky River.....	5
86	F. E. Gauthier.....	Smoky River.....	5
87	W. E. Phin.....	Smoky River.....	5
90	Hume Blake.....	Little Smoky River.....	5

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## SCHEDULE of Leases to dredge for gold in Rivers, &amp;c.—Continued.

Lease No.	Name of Lessee.	Stream.	Number of Miles.
91	A. J. Oliver.....	Little Smoky River.....	5
92	W. L. Robertson.....	Mountain River.....	5
93	John J. Codville.....	Mountain River.....	5
94	John Love.....	Mountain River.....	5
95	E. M. Roughsedge.....	Muddy Creek.....	5
96	H. N. Ruttan.....	Boundary Creek.....	5
97	Fred. Murray O'Meara.....	Boundary Creek.....	5
98	F. C. Robinson.....	Boundary Creek.....	5
99	Wm. Hume Blake.....	Rat Creek.....	5
100	Chas. R. Tryon.....	Rat Creek.....	5
101	Wm. L. Robertson.....	Rat Creek.....	5
102	Wm. H. Roughsedge.....	Peace River.....	5
103	Wm. H. Roughsedge.....	Peace River.....	5
104	Wm. H. Roughsedge.....	Peace River.....	5
105	Wm. H. Roughsedge.....	Peace River.....	5
106	Wm. H. Roughsedge.....	Peace River.....	5
107	N. D. Beck.....	North Saskatchewan River.....	5
108	The Victoria-Alberta Gold Dredging Syndicate, assignees of Isaac Cowie.....	North Saskatchewan River.....	5
109	J. A. Mercier.....	North Saskatchewan River.....	5
110	J. A. Mercier.....	North Saskatchewan River.....	5
111	J. A. Mercier.....	North Saskatchewan River.....	5
112	J. A. Mercier.....	North Saskatchewan River.....	5
113	J. A. Mercier.....	North Saskatchewan River.....	5
114	E. C. Emery.....	North Saskatchewan River.....	5
115	Chas. B. Beck.....	North Saskatchewan River.....	5
119	The Victoria-Alberta Gold Dredging Syndicate, assignees of I. Cowie.....	North Saskatchewan River.....	5
120	Assignees of I. Cowie.....	North Saskatchewan River.....	5
121	Assignees of I. Cowie.....	North Saskatchewan River.....	5
122	Assignees of I. Cowie.....	North Saskatchewan River.....	5
123	The Victoria-Alberta Gold Dredging Syndicate, assignees of J. C. P. Brown.....	North Saskatchewan River.....	5
124	Discoverers Finance Corporation (Ltd.).....	North Saskatchewan River.....	5-75
125	N. D. Beck.....	Peace River.....	5
126	N. D. Beck.....	Peace River.....	5
127	N. D. Beck.....	Peace River.....	5
128	N. D. Beck.....	Peace River.....	5
129	N. D. Beck.....	Peace River.....	5
130	N. D. Beck.....	Peace River.....	5
143	Chas. H. Bower.....	Peace River.....	5
144	Chas. H. Bower.....	Peace River.....	5
145	Chas. H. Bower.....	Peace River.....	5
146	Chas. H. Bower.....	Peace River.....	5
147	Chas. H. Bower.....	Peace River.....	5
166	John D. Black.....	Peace River.....	5
176	E. A. Braithwaite.....	North Saskatchewan River.....	5
177	Chas. D. Brindly.....	North Saskatchewan River.....	5
183	G. A. Glines.....	Clear Creek.....	5
184	Albert MacLaren.....	Peace River.....	5
185	Henry MacLaren.....	Peace River.....	5
186	Henry MacLaren.....	Peace River.....	5
187	Daniel MacLaren.....	Peace River.....	5
188	Daniel MacLaren.....	Peace River.....	5
189	John A. MacLaren.....	Battle River.....	5
190	John A. MacLaren.....	Battle River.....	5
191	Jos. Kavanagh, A. Charette, and D. W. and H. Rochester.....	Cedar Lake.....	5
192	A. Woods, Jr.....	North Saskatchewan River.....	5
193	A. Woods, Jr.....	North Saskatchewan River.....	5
194	Geo. E. Casey.....	North Saskatchewan River.....	5
195	Geo. E. Casey.....	North Saskatchewan River.....	5
196	C. F. Hibbert.....	North Saskatchewan River.....	5
197	C. F. Hibbert.....	North Saskatchewan River.....	5
198	J. G. Tipton.....	North Saskatchewan River.....	5
199	J. G. Tipton.....	North Saskatchewan River.....	5
200	D. Baird.....	North Saskatchewan River.....	5
201	D. Baird.....	North Saskatchewan River.....	5
202	M. E. Weaver.....	North Saskatchewan River.....	5

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SCHEDULE of Leases to dredge for gold in Rivers, &c.—*Concluded.*

Lease No.	Name of Lessee.	Stream.	Number of Miles.
203	M. E. Weever.....	North Saskatchewan River.....	5
204	G. P. Spittal.....	North Saskatchewan River.....	5
205	G. P. Spittal.....	North Saskatchewan River.....	5
206	J. O. Hibbard.....	North Saskatchewan River.....	5
207	J. O. Hibbard.....	North Saskatchewan River.....	5
208	C. M. Farley.....	North Saskatchewan River.....	5
209	C. M. Farley.....	North Saskatchewan River.....	5
210	M. Johnston.....	North Saskatchewan River.....	5
211	M. Johnston.....	North Saskatchewan River.....	5
212	E. S. Leetham.....	North Saskatchewan River.....	5
213	Thos. Dunderdale.....	North Saskatchewan River.....	5
214	E. A. Walberg.....	North Saskatchewan River.....	5
215	E. A. Walberg.....	North Saskatchewan River.....	5
216	F. H. Markey.....	North Saskatchewan River.....	5
217	F. H. Markey.....	North Saskatchewan River.....	5
218	Fred. Cook.....	North Saskatchewan River.....	5
219	Fred. Cook.....	North Saskatchewan River.....	5
220	Thos. Patterson.....	North Saskatchewan River.....	5
221	Thos. Patterson.....	North Saskatchewan River.....	5
222	R. M. MacLeod.....	North Saskatchewan River.....	5
223	R. M. MacLeod.....	North Saskatchewan River.....	5
224	A. E. Fairbairn.....	North Saskatchewan River.....	5
225	A. E. Fairbairn.....	North Saskatchewan River.....	5
226	H. Hopp.....	North Saskatchewan River.....	5
227	H. Hopp.....	North Saskatchewan River.....	5
228	H. Webb.....	North Saskatchewan River.....	5
229	H. Webb.....	North Saskatchewan River.....	5
230	W. D. Morris.....	North Saskatchewan River.....	5
231	W. D. Morris.....	North Saskatchewan River.....	5
232	W. F. Powell.....	North Saskatchewan River.....	5
233	W. F. Powell.....	North Saskatchewan River.....	5
234	W. H. McAuliffe.....	North Saskatchewan River.....	5
235	W. H. McAuliffe.....	North Saskatchewan River.....	5
236	G. H. Rogers.....	North Saskatchewan River.....	5
237	G. H. Rogers.....	North Saskatchewan River.....	5
238	F. Taylor.....	North Saskatchewan River.....	5
239	F. Taylor.....	North Saskatchewan River.....	5
240	W. H. Hurdman.....	North Saskatchewan River.....	5
241	W. H. Hurdman.....	North Saskatchewan River.....	5
242	J. H. Higginson.....	North Saskatchewan River.....	5
243	J. H. Higginson.....	North Saskatchewan River.....	5
244	H. H. Cameron.....	North Saskatchewan River.....	5
245	H. H. Cameron.....	North Saskatchewan River.....	5
246	C. G. Hurdman.....	North Saskatchewan River.....	5
247	C. G. Hurdman.....	North Saskatchewan River.....	5
248	R. A. McCormick.....	North Saskatchewan River.....	5
249	R. A. McCormick.....	North Saskatchewan River.....	5
250	C. D. Spittal.....	North Saskatchewan River.....	5
251	C. D. Spittal.....	North Saskatchewan River.....	5
		Total number of miles.....	911.75

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## SCHEDULE of Individuals or Companies to whom Hydraulic Mining Leases have been issued.

Lease No.	Names of Lessees.	Number of miles.	Locality.
1	The Klondyke Government Concession (Ltd.) assignees of R. Anderson.....	2 50	Hunker creek.
2	R. Lee, <i>et al.</i> .....	0 68	Bonanza creek.
3	F. X. Halder.....	5 00	Indian river.
4	F. X. Halder, assignee of E. Griffith, <i>et al.</i> .....	5 00	Ancient bed of the Stewart river.
5	Honourable E. H. Bronson and C. C. Ray.....	2 50	Bonanza creek.
6	The Dome (Yukon) Gold Mining Co., (assignees of Messrs. R. N. Mason, E. Bennett, A. Joyce and J. Dickson).....	10 00	Australia creek.
7	The British Columbia Gold Fields of the Klondike, Ltd, (assignees of Gregor and Frost).....	2 50	Indian river.
8	R. Lee, <i>et al.</i> .....	0 68	Bonanza creek.
9	C. A. Matson <i>et al.</i> .....	1 50	" "
10	The Quartz Creek (Yukon) Syndicate, (Ltd) assignees of J. W. Boyle.....	3 33	Quartz creek.
13	G. L. Milne.....	2 50	Hunker creek.
14	A. W. Williams.....	2 00	" "
16	W. H. Scroggie.....	5 00	Scroggie creek.
17	The British Canadian Gold Fields of the Klondike, (Ltd) assignees of N. H. Johnson.....	5 00	Cassiar creek.
18	H. B. McGiverin, assignee of J. W. Boyle.....	6 72	Klondike river.
20	Messrs. Ensell <i>et al.</i> .....	3 00	Eureka creek.
	Total mileage.....	57 91	

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The total revenue received for dredging leases in the Yukon Territory up to July 1, 1901, was \$139,655.50, and for the fiscal year, \$2,650. The total revenue received for the rent of the leaseholds in the North-west Territories up to July 1, 1901, was \$20,262.71, and for the past fiscal year, \$3,000.

The total sum collected up to July 1, 1901, for royalty on the gross output of placer claims in the Yukon Territory, after deducting the exemption allowed by the regulations was \$2,192,645.41. Of this amount the sum of \$596,368.03 was collected during the last fiscal year.

The royalty was collected at the following places:—

Office.	Collecting officers.	Amount of royalty.
<i>Dawson</i> —		
	T. A. Wroughton.....	\$ 2,608 58
	P. C. H. Primrose.....	2,620 54
	W. H. Routledge.....	1,233 99
	A. E. C. McDonell.....	33,786 68
<i>Grand Forks</i> —		
	S. Marshall.....	78,170 56
	J. C. D. Lorimier.....	48,440 01
	F. L. de Chaumont.....	23,373 02
	Stanley Hildyard.....	69,706 78
	C. C. Raven.....	109,598 93
	A. E. C. McDonell.....	62,973 93
	J. R. Patterson.....	63 63
<i>Gold Run</i> —		
	T. Candle.....	10,156 46
	Frank Smith.....	21,517 92
	W. S. Jealous.....	4,139 84
<i>Hunker</i> —		
	Stanley Hildyard.....	20,386 47
	P. J. Ryan.....	11,032 04
	G. H. Goodall.....	10,253 02
<i>Dominion</i> —		
	T. Candle.....	17,659 79
	C. C. Raven.....	12,127 11
	Stanley Hildyard.....	27,627 36
<i>Sulphur</i> —		
	H. A. Sparrow.....	11,448 36
	Georges de Beaupin.....	5,593 22
	G. H. Goodall.....	2,169 66
	A. E. C. McDonell.....	859 50
	Cortland Starnes.....	804 62
	T. Candle.....	3,462 52
<i>Hootalinqua</i> —		
	P. C. H. Primrose.....	801 85
<i>Eureka</i> —		
	C. A. Corneil.....	44 59
	Total.....	\$592,660 98
	Collected on gold taken from Crown claims.....	3,707 05
	Grand total.....	\$596,368 03

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The gold was taken from the following creeks, gulches and hills :—

American Gulch, Adams' Hill, Bonanza Creek, Bear Creek, Big Salmon, Cheechaga Hill, Dominion Creek, Eldorado Creek, Fox Gulch, French Hill, French Creek, Gold Run Creek, Gold Bottom Creek, Gold Hill, Hunker Creek, Little Skookum, Last Chance, Monte Christo, Magnet Gulch, Skookum Creek, Sulphur Creek, Trail Creek, Victoria Creek, Eureka, Livingstone.

## MINERALS—BRITISH COLUMBIA.

The precious metals within the railway belt in the province of British Columbia are the property of the province, and the base metals are owned by the government of Canada. All the minerals, however, are administered by the provincial government under the mining laws of that province. This is in accordance with an arrangement between the government of Canada and the provincial government of British Columbia, and ratified by orders of His Excellency the Governor General in Council, dated the 11th and 28th of February, 1890. This agreement may be terminated at any time by either government. Under this agreement 2,443·21 acres have been transferred to the provincial government, and the total amount received therefor was \$7,459·37.

## PETROLEUM.

Under authority of an order in council dated August 6, 1898, the Minister of the Interior was authorized to reserve for an applicant 640 acres of land situated south of the Canadian Pacific Railway in the district of Alberta, to prospect thereon for petroleum, and if oil were found in paying quantities, to sell the land to the applicant at the rate of one dollar per acre, with a provision that a royalty of two and one-half per cent upon the sales of the petroleum be paid to the Crown. This order was rescinded by an order in council dated May 31, 1901, and provision was made that on and after July 1, 1901, all unappropriated Dominion lands in Manitoba, the North-west Territories, and the Yukon Territory, shall be open to prospecting for petroleum by any individual or company desiring to do so; that should oil in paying quantities be discovered, and should such discovery be established to the satisfaction of the Minister of the Interior, an area not exceeding 640 acres, including and surrounding the land upon which the discovery has been made, will be sold to the person or company making the same, at the rate of \$1 per acre, subject to such royalty as may from time to time be prescribed by order in council.

## QUARTZ REGULATIONS.

The following is a synopsis of the regulations now in force for the disposal of quartz mining claims on Dominion lands in Manitoba, the North-west Territories and in the Yukon Territory :—

Every person 18 years of age and over, but not under, and every joint stock company holding a free miner's certificate, may obtain an entry for a mining location.

A free miner's certificate is granted for one or more years, not exceeding five, and is not transferable. The fee for a free miner's certificate for an individual is \$10; and for a free miner's certificate to a joint stock company, from \$50 to \$100, according to the nominal capital of the company.

The holder of a free miner's certificate who has discovered mineral in place, may locate a claim not exceeding 1,500 feet long by 1,500 feet wide, by marking it with two legal posts, one at each end, on the line of the lode, or vein, and marking out the line between them. Upon each post shall be marked the name of the claim, the name of the person locating and the date, and the number of feet lying to the right and left of the line.

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The claim shall be recorded with the mining recorder of the district within which it is situated within fifteen days after the location thereof, if located within ten miles of the office of the recorder; one additional day shall be allowed for such record for every additional ten miles or fraction thereof. In the event of a claim being more than 100 miles from a recorder's office, and situated where other claims are being located, the free miners, not less than five in number, may appoint a free miner's recorder; but if the latter fails within three months to notify the nearest government mining recorder of his appointment, the claims which he may have recorded will be cancelled. The fee for recording a claim is \$5.

An expenditure of not less than \$100 per year must be made on the claim, or a like amount paid to the mining recorder in lieu thereof. When \$500 has been expended, or paid, in connection with the location, the locator may, upon having a survey thereof made and upon complying with certain other requirements, purchase the land at the rate of \$1 per acre cash.

A location for the mining of iron and mica not exceeding 160 acres in area may be granted, provided that should any free miner obtain a location which subsequently is found to contain a valuable mineral deposit other than iron or mica, his right in such deposit shall be restricted to the area prescribed for other minerals, and the remainder of the location shall revert to the Crown.

The patent for a mining location shall reserve to the Crown forever whatever royalty may hereafter be imposed on the sales of the products of all mines therein, and the same royalty shall be collected on the sales which may be made prior to the issue of the patent, such royalty, however, not to exceed 5 per cent.

The Minister of the Interior may grant locations for the mining of copper in the Yukon Territory, each location to consist of an area not exceeding 160 acres in a square block. The boundary lines of each location shall be due north and south and due east and west, and not more than one area shall be granted to any one person within a district of ten miles. The grant of such location for the mining of copper shall not give to the grantee any rights to any other minerals, except minerals that are combined or mixed with copper or copper ore, but in no case to include free milling gold or silver.

There shall be paid to the government on the gross output of copper from any such location a royalty to be fixed by the Minister of the Interior, not exceeding five per cent on such gross output.

The Minister of the Interior may make such rules and regulations and impose such conditions for ensuring the development of any such area, and securing the payment of the royalty as he may consider necessary in that behalf.

The fee to be paid to the gold commissioner or a mining recorder for an entry for a copper mining location of 160 acres shall be \$20, and the same fee shall be charged for each renewal of an entry.

#### PLACER MINING IN THE YUKON TERRITORY.

Claims are creek, gulch, river and hill claims, the length on the base line or general direction of creek or river not to exceed 250 feet, the width being from 1,000 to 2,000 feet. Bench claims are 250 feet square.

Claims are marked by two legal posts, one at each end, bearing notices. Entry must be obtained within ten days if the claim is within ten miles of the recorder's office. One extra day allowed for each additional ten miles or fraction.

The person or company staking a claim, and each person in his or its employment, except house servants, must hold a free miner's certificate.

The discoverer of a new mine is entitled to a claim 1,000 feet in length, and if the party consists of two, 1,500 feet altogether, on the output of which no royalty shall be charged; the rest of the party ordinary claims only.



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Entry fee \$15. Royalty at the rate of five per cent charged on the gross output of the claim, with the exception of an annual exemption of \$5,000.

No free miner shall receive a grant of more than one mining claim on each separate river, creek or gulch, but the same miner may hold any number of claims by purchase, and free miners, not exceeding ten in number, may work their claims in partnership, by filing notice and paying a fee of \$2. A claim may be abandoned and another obtained in the same creek, gulch or river by giving notice and paying a fee.

Work must be done on a claim each year to the value of at least \$200, or in lieu of work payment may be made to the Mining Recorder each year for the first three years of \$200, and after that \$400 for each year.

A certificate that work has been done or fee paid, must be obtained each year; if not, the claim shall be deemed to be abandoned, and open to occupation and entry by a free miner.

The boundaries of a claim may be defined absolutely by having a survey made, and publishing notice in the Yukon Official Gazette.

## REGULATIONS RE DREDGING, YUKON TERRITORY.

Regulations governing the issue of leases to dredge for minerals in the beds of rivers in the Yukon territory were approved by Order in Council of January 18, 1898. The following is a summary thereof:—

A free miner may obtain a lease of an unbroken extent of five miles of a river, but not more than six such leases will be issued in favour of an individual or company.

The lease shall be for a term of 20 years, renewable from time to time thereafter in the discretion of the Minister of the Interior. The lessee's right of mining and dredging shall be confined to the submerged bed or bars in the river below low water mark, that boundary to be fixed by its position on the 1st day of August, in the year of the date of the lease.

The lease shall be subject to the rights of all persons who have received or who may receive entries for claims under the placer mining regulations.

The lessee shall, within two years from the date of the lease, have at least one dredge in operation upon the portion of the river leased to him, not exceeding 30 miles, and shall, within six years from the date of such lease have one dredge in operation upon each five miles of the river under lease to him.

The rental is \$100 for the first year for each mile of river leased, and \$10 per mile for each subsequent year.

The lessee shall pay to the Crown a royalty of 10 per cent on the output in excess of \$15,000 for each five miles of river leased; but the lessee under one lease shall not be entitled to the exemption as to royalty where the dredge or dredges used by him have been used in dredging by another lessee, or in any case in respect of more than 30 miles.

The lessee is permitted to cut free of all dues on any land belonging to the Crown such timber as may be necessary for the purposes of his lease, but such permission shall not extend to timber which has been or may be granted to other persons or corporations.

The regulations also provide that the lessee shall not interfere with free navigation of the river nor with the construction of roads, ways, bridges, drains or other public works. It is also provided that the lessee shall not transfer a lease without the consent in writing of the Minister of the Interior.

## REGULATIONS RE DREDGING, MANITOBA AND N. W. TERRITORIES.

The regulations now in force provide that a free miner can obtain two leases of five miles each. The lease is for a term of twenty years, renewable from time to time thereafter in the discretion of the Minister of the Interior.

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The lessee's right is confined to the submerged bed or bars of the river below low water mark, and is also subject to the rights of all persons who have received or who may receive entries for bar diggings or bench claims, except on the Saskatchewan river, where the lessee may dredge to high water mark on each alternate leasehold.

The holder of more than one dredging lease on the Saskatchewan river, however, has the right to dredge during the period of his leases, between high and low water mark, on both sides of the river within each alternate five miles of his leaseholds. Such privilege to be subject to the rights of persons operating bar diggings under the provisions of Section 1 of the Regulations governing Placer Mining along the North Saskatchewan river in the North-west Territories, also subject to any entries granted for bench claims under the provisions of the Regulations prior to the date upon which the leaseholder furnishes the Agent of Dominion Lands, within whose district his leaseholds are situated, with a description of the particular alternate five miles upon which he desires to operate between high and low water mark.

The lessee shall have a dredge in operation within one year from the date of the lease for each five miles leased to him. If, however, a company or individual has obtained more than one lease, one dredge for each fifteen miles or portion thereof, will be accepted. The rental is \$10 per annum for each mile leased. The lessee shall pay to the Crown a royalty of 2½ per cent on the output after it exceeds \$10,000.

The lease provides that the lessee shall not interfere in any way with the navigation of the river or with any roads, ways, bridges, drains and other public works and improvements now existing or which may be made in the future.

The lease shall provide that any one who has or who may receive entry under the mining regulations, shall be entitled to run tailings into the river at any point thereon, also to mine two feet below the surface of the water at low water mark by putting in wing dams.

Provided that it shall not be lawful for such person to construct a wing dam within one thousand feet from the place where any dredge is being operated nor to obstruct or interfere in any way with the operation of any dredge. This provision shall also apply to leases issued anterior to January 13, 1899.

#### HYDRAULIC MINING—YUKON TERRITORY.

The following is a synopsis of the regulations in force on January 1, 1900 :—

Locations may have a frontage of from one to five miles, as may be decided by the Minister of the Interior, and a depth of one mile, but where such location is situated in a valley, its depths may extend to the limits of the valley, if so ordered by the Minister of the Interior.

To the person who files in the Department of the Interior at Ottawa an application for a location previously prospected by him, or his authorized agent at the time the location was prospected, a lease will be issued, provided he is the first qualified applicant therefor.

No application for a lease for hydraulic mining purposes shall be entertained for any tract which includes within its boundaries any placer, quartz, or other mining claim under the Regulations in that behalf, or in the immediate vicinity of which placer, quartz or other mining claims have been discovered, or which are being profitably operated.

It is necessary, however, for the applicant to furnish the department with a report from the Gold Commissioner to the effect that there are no placer, quartz or other mining claims within the location applied for; that it has been proved to his satisfaction, that the applicant himself, or a person acting for him, was upon and actually prospected prior to the date of the application, the ground included in the location; and that the ground included in the location is not being worked and is not suitable to be worked under the Regulations governing placer mining.

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In addition to the above it will be necessary for an applicant for a lease for hydraulic mining purposes, to file in the Department of the Interior a declaration made by a mining engineer, or other competent person, to the satisfaction of the Minister of the Interior, that the location applied for is suitable for hydraulic mining purposes; that there is a sufficient quantity of water available with which to successfully operate the location; and that there is a sufficient dumping ground upon which to deposit the tailings produced from his operations.

Before a lease is issued it is necessary for the applicant to obtain a free miner's certificate and file in the Department of the Interior at Ottawa a Dominion land surveyor's plan of the location. The term of the lease is twenty years, and the rental \$150 for each mile of frontage.

The same royalty shall be paid upon the output of gold as is provided or may hereafter be provided in the case of placer claims, except that there shall be exempted from such royalty \$25,000 of the annual output, the royalty to be paid in the manner provided in the regulations governing placer mining.

The lessee is required to expend in operating his location not less than \$5,000 during each year from the date of his lease.

The lessee may cut, free of dues, such of the timber on a location as may be necessary for working the same in connection with his mining operations, but not for sale or traffic, and provision is made that the Commissioner of the Yukon Territory may grant a permit to any person to cut and remove from a location cordwood for his own use when such cordwood cannot otherwise be had within reasonable distance, but no such permit shall convey the right to cut or remove wood required by the lessee for his mining operations.

## COAL MINING LANDS.

The number of applications received during the year was 860. The revenue for the year derived from the sale of coal lands was \$101,772. The total area of coal lands sold up to July 1, 1901, was 4,040.28 acres, and the total amount received therefor was \$266,843.

The regulations for the disposal of Dominion lands containing coal issued under the authority of an order in council of September 17, 1889, as amended by subsequent orders, provide that locations of an area not exceeding 320 acres may be reserved for an applicant for a period of sixty days to prospect for coal thereon, upon payment of a fee of \$10, provided an expenditure is made of \$2 per day, and a location of the same or a less area may be sold at the rate of \$10 per acre, cash, unless the coal is anthracite, in which case the price is \$20 per acre, cash.

In order that settlers and others who were living some distance from coal mines which were being worked by persons who purchased the same, either from the Crown or from some other source, might obtain their coal supply, the Governor in Council on November 11, 1895, authorized the issue of permits to mine coal for domestic purposes upon payment of a royalty of twenty cents per ton for anthracite coal, fifteen cents per ton for bituminous coal, and ten cents per ton for lignite coal.

Regulations for the issue of the permits were issued under the authority of an order in council dated February 9, 1897.

The regulations provide that the location shall be marked on the ground; that the frontage thereof shall not exceed three chains, and the length thereof shall not exceed ten chains, nor shall it be less than five chains except where the ground is covered by a prior location; that the applicant shall within thirty days after marking the location file his application with the agent, who shall issue a permit upon receipt of an annual rental of five dollars for any area less than one acre, and for an area of one acre or over at the rate of five dollars an acre; and that returns shall be made monthly to the agent and the royalty paid upon the quantity of coal mined.

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In the Yukon Territory all applications for coal lands are to be made to the Crown timber and land agent, who is empowered to sell such lands subject to the approval of the commissioner, at \$20 per acre, cash, if the coal is anthracite, and \$10 per acre, cash, for any other class of coal. A royalty at such rate per ton as may from time to time be specified by the Governor General in Council will be levied and collected on the gross output of the mine. The sale of such land to be subject to the other conditions imposed in the sale of other public lands in the said territory with reference to their maintenance for town site purposes.

#### IRRIGATION.

During the year sixteen applications for authority to divert water for irrigation and other purposes were received at the department, and fourteen applicants received permission to construct works in accordance with the provisions of the North-west Irrigation Act. Eighty-five licenses have been issued up to date to divert water.

The North-west Irrigation Act, under which the applications referred to in the preceding paragraph were made, was assented to by Parliament on June 13, 1898. The provisions of the Act and the regulations made thereunder may be briefly outlined as follows :—

An applicant for permission to construct works to divert a quantity of water exceeding ten cubic feet per second, shall file with the commissioner of public works at Regina, a memorial setting forth the particulars with respect to the application, and a plan of the proposed work. He shall also give notice of such filing in some newspaper published in the neighbourhood, to be named by the commissioner, not less than once a week for a period of thirty days.

So soon as these conditions have been complied with, the Minister of the Interior authorizes the construction of the works within a certain period. Upon the completion of the works an inspection thereof is made by the chief engineer and surveyor of the Department of Public Works of the North-west Territories, and upon receipt of a certificate from him that they have been built in accordance with the plans and specifications submitted by the applicant, a license is issued in his favour by the Minister of the Interior upon payment of a fee of \$10. It is, however, necessary that the applicant shall furnish proof that he is the owner of the land to be irrigated, or that he has arranged with the owners thereof to furnish them with water, before a license is issued in his favour.

The applicant for a less quantity of water than ten cubic feet per second is not required to file such full information in relation to his application as the Act prescribes in the case of an applicant who desires a larger quantity of water.

#### GRAZING.

Leases for grazing purposes are issued for a term of twenty-one years, and the rental is at the rate of two cents an acre per annum, payable half-yearly in advance.

Lands included in a grazing lease may be withdrawn for homestead entry, sale or railway purposes, but no rental is charged on such lands from the date upon which they are withdrawn from the lease.

Grazing leases of school lands in the province of Manitoba may be issued for a term of five years, at an annual rental of six cents an acre, payable in advance, but the department may terminate the lease at any time by giving the lessee three months' notice.

Grazing leases of school lands in the North-west Territories are for a term of five years, and the rental is at the rate of four cents an acre per annum, payable in advance. The department may terminate the lease at any time by giving the lessee three months' notice.

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Lessees of school lands are not allowed to break up or cultivate any portion of the lands leased.

A lessee of grazing lands is not entitled to the hay thereon, but he may, upon application to the agent of Dominion Lands, obtain each year the first permit to cut on his leasehold whatever quantity of hay he may require for his own use, free of dues, the department reserving the right to issue permits to other applicants to cut hay thereon.

## HAY.

A settler in the vicinity of unoccupied Dominion lands may obtain a lease to cut hay on an area thereof not exceeding forty acres. The term of the lease is five years and the rental twenty-five cents an acre per annum, payable in advance.

Leases for hay purposes of not more than 640 acres and not less than 160 acres of school lands in the North-west Territories may be issued upon payment in advance of the rental at the rate of twenty-five cents per acre per annum.

No one is prevented by the department from cutting hay without a permit, but any one desiring to have a certain area of land containing hay reserved for him may take out a permit covering the same.

Applications for permits to cut hay are made after January 1 in each year to the agent of Dominion lands in whose agency the land containing the hay is situated, and permits are issued on and after April 1 following, upon payment of a fee of fifty cents and the dues hereinafter prescribed.

If before April 1 more than one application is received for a permit covering the same tract of land, the agent, if he cannot arrange a division of the land to suit the applicants may post a notice in his office calling for tenders for the purchase of the hay, and the permit is awarded to the person offering the highest cash bonus.

No hay shall be cut prior to a date to be fixed each year by the Minister of the Interior.

The dues chargeable for permits to actual settlers who require the hay for their own use are ten cents an acre or ten cents per ton, and to all other persons the rates are fifty cents an acre or fifty cents per ton, payable in advance.

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## GRAZING LANDS.

Total number of leases of Dominion lands, other than school lands, in force on the 22nd day of August, 1901, was 715, covering an area of 605,794.75 acres.

The following schedule shows the names and addresses of the lessees, the numbers of their ranches, and the area covered by each lease:—

Ranche No.	Name.	Address.	Area in Acres.
377	John Cheeseman	Maple Creek, Assa.	320.00
378	John R. Craig	Fort Macleod, Alta.	2,560.00
380	R. G. Robinson	Calgary, Alta.	800.00
392	Jos. Dugan	Castleavery, Man.	347.75
398	John Harvey	Maple Creek, Assa.	597.50
401	J. P. Tully	Strathclair, Man.	320.00
402	Chas. E. Stevens	C. of W. B. Williams, Winnipeg, Man.	160.00
405	G. W. Quick	Maple Creek, Assa.	1,200.00
408	J. S. Rose	Battleford, Sask.	2,560.00
414	A. T. Wallace	Maple Creek, Assa.	640.00
419	A. T. Wallace	Maple Creek, Assa.	1,260.00
424	John Cumberland	Stella, Pro. Ont.	960.00
426	F. W. Fisher	Lundyville, Man.	289.00
427	H. A. Sibbald	Morley, Alta.	320.00
431	H. Couture	Battleford, Sask.	1,920.00
432	Henry Hamilton	Walsh Station, Assa.	2,240.00
433	Ed. Heffer	Maple Creek, Assa.	480.00
439	Wm. R. Ahcott	Maple Creek, Assa.	640.00
448	W. B. Elliott	Cochrane, Alta.	640.00
451	Thos. Monkman	Winnipeg, Man.	445.00
452	Lethbridge Sheep Rancho Co.	Lethridge, Alta.	2,400.00
454	Chas. W. May	Saskatoon, Assa.	160.00
457	Wm. Turner	Fletwode, Assa.	2,082.00
459	F. J. O'Hara Armstrong	Whitewood, Assa.	1,742.00
460	L. Q. Coleman	Morley, Alta.	1,286.00
463	Wm. Collie	Erinview, Man.	128.00
465	John G. Collins	Jumping Pond, Alta.	1,280.00
468	J. W. & F. W. Ings	High River, Alta.	720.00
472	R. G. Robinson	Calgary, Alta.	3,840.00
474	Edward Fearon	Maple Creek, Assa.	5,742.00
479	John Cheeseman	Maple Creek, Assa.	160.00
485	John Harvey	Maple Creek, Assa.	320.00
486	John Lawrence, sr.	Maple Creek, Assa.	1,440.00
490	B. Cheeseman	Maple Creek, Assa.	640.00
492	Emiel Griesback	Gleichen, Alta.	77.00
494	Jas. Martin	Maple Creek, Assa.	640.00
500	Thos. Hourd	Fletwode, Assa.	1,313.00
503	Donald Gunn	Whitesand, Assa.	1,280.00
505	Philip Williams	Maple Creek, Assa.	640.00
506	R. J. Christie	Hatfield, Alta.	450.00
510	Cornelius Peters	Chortitz, Man.	160.00
511	Cheeseman Bros.	Maple Creek, Assa.	640.00
514	Edward Henry	Fletwode, Assa.	1,280.00
516	Wm. Stothers	Maple Creek, Assa.	960.00
520	F. J. O'Hara Armstrong	Whitewood, Assa.	960.00
521	Jonathan Gillis	Whitewood, Assa.	1,853.00
524	Wm. Sinclair	Yorkton, Assa.	320.00
525	Patrick Burns	Calgary, Alta.	640.00
527	H. M. Morris-Reade	Whitewood, Assa.	619.00
528	Wm. Wilkins	Carlyle, Assa.	160.00
529	John Himsworth	Whitewood, Assa.	610.00
537	F. Shackleton	High View, Assa.	647.00
539	C. Kettles	Pincher Creek, Alta.	320.00
540	L. C. Brown	London, S.W., 40 Cadogan Place	480.00
543	D. McIntosh	Whitewood, Assa.	288.00
546	C. Duck	Chortitz, Man.	166.00
547	R. E. Bonar	High View, Assa.	640.00
549	P. Lechat	Battleford, Sask.	640.00
552	G. & J. Blackwood	Whitewood, Assa.	720.00
553	A. E. E. Dunn	Battleford, Sask.	450.00

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## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
554	H. Munro	Parkin P.O., Wapella, Assn	610-00
555	T. J. Armstrong	High View, Assa.	320-00
556	S. Jonsson	Westbourne, Man.	160-00
557	E. Greer	Innisfall, Alta.	640-00
558	W. T. Warner	Fletwode, Assa.	730-00
562	J. G. Farr	Maple Creek, Assa.	320-00
566	T. Minaugh	Whitewood, Assa.	1,063-00
570	David A. Best	High View, Assa.	640-00
571	R. J. Christie	Yarrow, Alta.	160-00
572	Robert Page	Innisfall, Alta.	610-00
575	D. Matheson	High View, Assa.	640-00
583	Wm. McMillan	High View, Assa.	648-00
584	Frank H. Hourd	Montgomery, Assa.	809-00
585	Thos. Kerr	High View, Assa.	640-00
586	David Wilson	Orange Ridge, Man.	640-00
590	D. A. Coleman	Whitewood, Assa.	828-00
592	E. H. Botterell	229 St. James St., Montreal, Que.	160-00
595	James Quigley	Cochrane, Alta.	639-00
600	James Tooke	High View, Assa.	640-00
601	William Archibald	Parkin, Assa.	1,653-00
604	The Boyd Ranching Co.	Carberry, Man.	4,880-00
606	Robert B. Warner	Fletwode, Assn.	975-00
608	H. M. Morris-Reade	Whitewood Station, Assa.	640-00
610	John McDonell	Lake Dauphin, Man.	2,040-00
615	B. Long	Clare, Assa.	160-00
616	Mrs. A. A. Doig	Kennell, Assn.	160-00
619	Chas. Blair	Maple Creek, Assa.	2,196-00
620	W. R. Jefferson	Carlyle, Assa.	480-00
622	G. L. Weatherald	Glen Adelaide, Assa.	320-00
628	Donald Murray	High View, Assa.	326-00
632	Sanford McNeil	Arcola, Assa.	320-00
640	Wm. Boyd	Fairmede, Assa.	320-00
643	Thos. Kerr	High View, Assa.	160-00
647	G. F. Hirst	Scandinavia, Man.	320-00
649	Wm. McCaw	Fitz Maurice, Assa.	640-00
652	A. Cumberland	Maple Creek, Assn.	320-00
658	Geo. Grassick	Weyburn, Assa.	640-00
660	John Dovell	Whitewood, Assa.	1,280-00
665	Ricardo & Bevan	Calgary, Alta.	303-00
667	Wm. McKinnon	Nee-pawa, Man.	320-00
674	Chas. Lees	Maple Creek, Assa.	320-00
680	Jos. Duhaime	Battleford, Sask.	800-00
681	J. T. Thompson	Arcola, Assa.	640-00
682	H. Bowen	Steep Creek, Sask.	251-00
686	Samuel Whiting	Maple Creek, Assa.	160-00
689	Donald McKenzie	Whitewood, Assa.	320-00
690	Wm. Moore	Maple Creek, Assa.	640-00
694	Hugh Munro	Poplar Grove, Wapella, Assa.	640-00
695	Wm. Brownlee	High View, Assa.	800-00
699	J. H. McNeil	Carlyle, Assa.	320-00
700	Wm. Turner	Fletwode, Assn.	320-00
703	R. Beatty	Millford, Sask.	160-00
705	R. W. Cowan	Big Hill C'k, Cochrane, Alta.	1,120-00
706	Jos. Lawford	Percy, Assa.	640-00
708	Jos. Burgess	Fletwode, Assa.	480-00
709	Thos. Harkness	Fletwode, Assa.	960-00
713	J. T. Krahn	Hochstadt, Man.	160-00
714	J. A. W. Fraser	Jumping Pond, Calgary, Alta.	480-00
715	Gordon & Ironsides	Prince Albert, Sask.	1,680-00
716	Dan. Whipps	Colley, Assa.	1,120-00
718	John McEachen	Clare, Assa.	610-00
720	Jas. Monkman	Peguis, Man.	119-00
722	M. T. Bambridge	Moose Jaw, Assa.	610-00
724	Alex. Middleton	Dunmore, Assa.	320-00
725	Jas. McDougall	Turnbull, Man.	295-00
726	Jas. Glichrist	Shellmouth, Man.	187-00
733	Jas. E. Wilson	Riding Mountain, Man.	725-00
740	J. B. Paré	Battleford, Sask.	260-00

## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
741	E. Loder.. . . . .	Kananaskis, Alta.. . . . .	640 00
744	Rev. J. McDougall.. . . . .	Morley, Alta.. . . . .	640 00
745	R. S. E. Harrison.. . . . .	Lake Dauphin, Man.. . . . .	862 00
746	P. Harder.. . . . .	Kleefeld, Man.. . . . .	80 00
748	J. Lawrence, jr.. . . . .	Maple Creek, Assa.. . . . .	1,440 00
749	J. D. Norrish.. . . . .	Nanton, Alta.. . . . .	480 00
753	John Harvey.. . . . .	Maple Creek, Assa.. . . . .	640 00
759	Jas. Jackson.. . . . .	Maple Creek, Assa.. . . . .	707 00
762	E. Clayton.. . . . .	Maple Creek, Assa.. . . . .	610 00
764	John Kidd, sr.. . . . .	Fairmede, Assa.. . . . .	320 00
765	D. C. Morrison.. . . . .	Cochrane, Alta.. . . . .	160 00
771	Gordon & Ironsides.. . . . .	Winnipeg, Man.. . . . .	320 00
773	Alex. Turnbull.. . . . .	Gleichen, Alta.. . . . .	378 00
774	Joseph Burgess.. . . . .	Fletwode, Assa.. . . . .	240 00
777	Raikes & Lawford.. . . . .	Pine Lake, Alta.. . . . .	160 00
785	T. H. Garry.. . . . .	Yorkton, Assa.. . . . .	800 00
794	D. M. T. Powell.. . . . .	Moosomin, Assa.. . . . .	160 00
797	W. C. Wells.. . . . .	Palliser, B.C.. . . . .	2,400 00
798	C. F. Pretty.. . . . .	New Westminster Dist., B.C.. . . . .	263 00
799	Rev. J. McDougall.. . . . .	Morley, Alta.. . . . .	1,280 00
801	F. Ricks.. . . . .	Morley, Alta.. . . . .	320 00
804	Donald McIver.. . . . .	Fairmede, Assa.. . . . .	320 00
809	A. B. McRae.. . . . .	Glenmorris, Assa.. . . . .	160 00
813	M. A. Murray.. . . . .	Jumping Pond, Alta.. . . . .	640 00
817	W. E. Schraeder.. . . . .	Red Deer, Alta.. . . . .	320 00
822	B. P. Alford.. . . . .	Pine Lake P.O., Alta.. . . . .	320 00
823	Alex. Martin.. . . . .	Mitford, Alta.. . . . .	320 00
825	M. J. Herbert.. . . . .	Pine Lake P.O., Alta.. . . . .	640 00
831	E. Bellevau.. . . . .	Battleford, Sask.. . . . .	610 00
837	R. E. Fisk & W. A. Thompson.. . . . .	Red Deer, Alta.. . . . .	640 00
840	Lusk Bros.. . . . .	Canmore, Alta.. . . . .	640 00
841	Wm. Edge.. . . . .	Mitford, Alta.. . . . .	640 00
843	Thomas Kerr.. . . . .	High View, Assa.. . . . .	160 00
845	C. E. Weatherald.. . . . .	Glen Adelaide, Assa.. . . . .	320 00
846	E. A. Wyndham.. . . . .	Pine Lake P.O., Alta.. . . . .	320 00
849	P. B. Alford.. . . . .	Pine Lake P.O., Alta.. . . . .	320 00
852	W. T. Clements.. . . . .	Fairmede, Assa.. . . . .	610 00
854	Levi Havens.. . . . .	Wawota, Assa.. . . . .	640 00
855	John McEachen.. . . . .	Clare, Assa.. . . . .	320 00
856	L. McKinnon.. . . . .	Dunbow, Alta.. . . . .	6 00
860	R. & E. Gray.. . . . .	Red Deer, Alta.. . . . .	1,280 00
862	J. J. Bruce.. . . . .	Radnor via Cochrane, Alta.. . . . .	307 00
863	F. H. Towers.. . . . .	Mitford, Alta.. . . . .	1,920 00
864	R. E. Bonar.. . . . .	High View, Assa.. . . . .	640 00
868	G. W. Quick.. . . . .	Maple Creek, Assa.. . . . .	960 00
869	D. White.. . . . .	Maple Creek, Assa.. . . . .	320 00
871	F. A. Jackson.. . . . .	Calgary, Alta.. . . . .	160 00
872	A. Sibbald.. . . . .	P.O. Box 286, Calgary, Alta.. . . . .	480 00
873	H. E. Sibbald.. . . . .	Jumping Pond, Alta.. . . . .	320 00
874	W. Bell-Irving.. . . . .	Mitford, Alta.. . . . .	2,080 00
877	W. D. Kirfoot.. . . . .	Mitford, Alta.. . . . .	3,040 00
878	James Jackson.. . . . .	Maple Creek, Assa.. . . . .	320 00
879	D. Finlayson.. . . . .	Battleford, Sask.. . . . .	672 00
880	J. M. Wilson.. . . . .	Maple Creek, Assa.. . . . .	1,920 00
881	V. F. Neis.. . . . .	Lamerton, Alta.. . . . .	85 00
882	H. F. Maunsell.. . . . .	Macleod, Alta.. . . . .	1,120 00
883	Joseph Fisher.. . . . .	Millarville, Alta.. . . . .	320 00
886	E. A. Healy.. . . . .	Yorkton, Assa.. . . . .	160 00
887	R. Campbell.. . . . .	Maple Creek, Assa.. . . . .	1,250 00
888	Wm. Nicol.. . . . .	Maple Creek, Assa.. . . . .	640 00
890	Thos. M. Weatherald.. . . . .	Glen Adelaide, Assa.. . . . .	640 00
891	H. F. Lawrence.. . . . .	Pine Lake, Alta.. . . . .	1,280 00
895	W. F. H. Collie.. . . . .	Moner, Man.. . . . .	320 00
899	A. B. McRae.. . . . .	Cannington Manor, Assa.. . . . .	91 00
901	J. McGarry.. . . . .	Maple Creek, Assa.. . . . .	1,920 00
902	J. A. Fleming.. . . . .	Maple Creek, Assa.. . . . .	640 00
903	R. Ronsay.. . . . .	Yorkton, Assa.. . . . .	320 00



SESSIONAL PAPER No. 25

## LESSEES of Grazing Lands—Continued.

Ranch No.	Name.	Address.	Area in Acres.
904	G. Tranter	Maple Creek, Assa.	640-00
906	Joha Marrot	Canmore, Alta.	316-00
909	A. Middleton	Dunmore, Assa.	160-00
910	J. L. Thompson	Arcola, Assa.	640-00
911	James Walsh	Cochrae, Alta.	320-00
915	Joseph Burgess	Fletwode, Assa.	320-00
916	H. R. A. Payue	Riga, Moosomin, Assa.	160-00
918	J. A. Black	Springbaak, Alta.	640-00
919	C. Blair	Maple Creek, Assa.	691-00
922	Wm. Stewart	Calgary, Alta.	640-00
923	W. J. Turton	Caanington Manor, Assa.	1,440-00
925	R. P. Alford	Pine Lake, Alta.	320-00
926	P. Jousson	Geyser, Man.	40-00
930	Isaac Fleming	Maple Creek, Assa.	320-00
933	C. E. Weatherald	Glen Adelaide, Assa.	640-00
935	J. C. Warren	Millarville, Alta.	320-00
939	E. Code	Red Deer, Alta.	320-00
940	A. Taylor	Bresaylor, Sask.	480-00
943	James Quinton	Cardston, Alta.	640-00
946	W. D. Cavan	Dunmore, Assa.	160-00
947	W. D. Cavan	Dunmore, Assa.	160-00
952	Hugh Kippen	Arcola, Assa.	320-00
953	F. A. Clements	Fairmede, Assa.	640-00
966	J. & R. Copithorne	Jumping Pond, Alta.	640-00
968	L. Haveas	Wawota, Assa.	320-00
971	W. J. Killeit	Maple Creek, Assa.	640-00
973	S. F. Fawsett	Maple Creek, Assa.	320-00
979	C. P. Healey	Jumping Pond, Alta.	480-00
980	J. A. W. Fraser	Jumping Pond, Alta.	2,560-00
986	C. Sanders	Maple Creek, Assa.	1,280-00
988	A. E. Cameron	High View, Assa.	320-00
991	J. S. Blake	Livingstone, Alta.	150-00
992	G. H. Love	Red Deer, Alta.	640-00
994	D. P. McDonald	Cochrane, Alta.	320-00
998	D. Oshorae	Fleming, Assa.	160-00
1001	H. Hickling	Calgary, Alta.	480-00
1017	Patrick Drummond	Jumping Pond, Alta.	160-00
1021	Jos. Clemens	Mitford, Alta.	640-00
1027	Ebenezer Healy	Calgary, Alta.	320-00
1029	Wm. W. Arnold	Lethbridge, Alta.	368-00
1030	Thos. Johnson	Maple Creek, Assa.	1,280-00
1037	J. A. W. Fraser	Jumping Pond, Alta.	640-00
1038	G. A. Love	Red Deer, Alta.	640-00
1041	C. H. Clements	Fairmede, Assa.	320-00
1042	W. R. Moseley	Priddis, Alta.	160-00
1047	C. H. Seymour	Red Deer, Alta.	320-00
1048	Sarnia Rancho Co.	Sarnia, Ont.	15,320-00
1052	H. Fraser	Canmore, Alta.	242-00
1053	G. & I. Blackwood & Co.	Whitewood, Assa.	161-00
1054	Bateman & Wood	Jumping Pond, Alta.	320-00
1055	John A. Kerr	High View, Assa.	160-00
1057	J. Garry	Yorkton, Assa.	320-00
1058	A. J. Shaw	Mitford, Alta.	320-00
1061	E. Harmaa	Fletwode, Assa.	480-00
1062	Peter Ronsay	Yorkton, Assa.	640-00
1064	P. Doyle	Moose Jaw, Assa.	640-00
1065	Leeson & Scott	Calgary, Alta.	320-00
1066	R. Cummlags	Fletwode, Assa.	800-00
1068	W. Huckvale	Many Berries Ck., Coutts, Alta.	4,800-00
1069	W. W. Wilson	Graburn, Assa.	320-00
1070	C. David	Duhamel, Alta.	160-00
1072	Hull Bros.	Calgary, Alta.	1,920-00
1073	A. Day	Battleford, Sask.	2,560-00
1074	F. Janet	Fletwode, Assa.	1,280-00
1075	C. Blair	Maple Creek, Assa.	960-00
1076	J. & R. Copithorne	Jumping Pond, Alta.	1,920-00
1079	J. Meehan	Rosebud, Alta.	160-00

## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1080	A. P. Welsh.. . . .	Millarville, Alta.. . . .	640-00
1082	Joseph Girard.. . . .	Fletwode, Assa.. . . .	1,920-00
1086	H. & J. Bourne.. . . .	Sheppard, Calgary, Alta.. . . .	639-00
1088	W. J. Lee.. . . .	Turnbull P.O., Shellmouth, Man.. . . .	640-00
1093	Chas. Davis.. . . .	Whitewood, Assa.. . . .	160-00
1095	J. B. Huddleston.. . . .	Josephburg, Assa.. . . .	320-00
1099	J. A. Turner.. . . .	Millarville, Alta.. . . .	270-00
1101	R. B. Warner.. . . .	Fletwode, Assa.. . . .	480-00
1107	John Lawrence.. . . .	Maple Creek, Assa.. . . .	960-00
1109	E. W. Rackstraw.. . . .	Whitewood, Assa.. . . .	2,080-00
1112	McLeay & Brown.. . . .	Irvine, Assa.. . . .	960-00
1113	Ovide Blouin.. . . .	Duhamel, Alta.. . . .	146-00
1114	J. D. Norrish.. . . .	Nanton, Alta.. . . .	1,280-00
1116	F. S. Blake.. . . .	Livingstone, Assa.. . . .	160-00
1117	L. C. Brown.. . . .	Josephburg, Assa.. . . .	480-00
1118	Chas. Lees.. . . .	Maple Creek, Assa.. . . .	480-00
1119	W. J. Latimer.. . . .	Calgary, Alta.. . . .	160-00
1120	Jas. Dupe.. . . .	Whitewood, Assa.. . . .	960-00
1121	J. Lantier.. . . .	Fletwode, Assa.. . . .	1,280-00
1122	J. B. Scott.. . . .	Wetaskiwin, Alta.. . . .	100-00
1123	W. J. Wilson.. . . .	Clare, Assa.. . . .	320-00
1125	Wm. Harkness.. . . .	Fletwode, Assa.. . . .	640-00
1126	Johann Oswald.. . . .	Steinbach, Man.. . . .	160-00
1127	G. F. Pownall.. . . .	Davisburg, Alta.. . . .	320-00
1128	J. G. Beedie.. . . .	Poplar Grove, Assa.. . . .	160-00
1129	C. G. Healey.. . . .	Jumping Pond, Alta.. . . .	640-00
1132	Thos. Reid.. . . .	Whitewood, Assa.. . . .	160-00
1135	Wm. Hinde.. . . .	Calgary, Alta.. . . .	640-00
1136	Murton & Ingham.. . . .	Calgary, Alta.. . . .	640-00
1137	T. H. Tinney.. . . .	Medicine Hat, Assa.. . . .	1,280-00
1138	R. Turner.. . . .	Calgary, Alta.. . . .	160-00
1139	D. McAlpine.. . . .	Walsh, Assa.. . . .	2,400-00
1140	McLaughlin Bros.. . . .	Medicine Hat, Assa.. . . .	640-00
1141	J. Cockbaine.. . . .	Cochrane, Alta.. . . .	2,018-00
1142	Wm. Archibald.. . . .	Poplar Grove, Assa.. . . .	480-00
1143	D. A. McCallum.. . . .	Nanton, Alta.. . . .	480-00
1144	J. Colard.. . . .	Wolsely, Assa.. . . .	320-00
1146	J. E. M. Leeds.. . . .	New Oxley, Alta.. . . .	1,280-00
1147	O. Blouin.. . . .	Duhamel, Alta.. . . .	114-00
1150	A. J. Prongua.. . . .	Battleford, Sask.. . . .	640-00
1154	J. H. Metcalfe.. . . .	Westbourne, Man.. . . .	320-00
1156	L. Perry.. . . .	Kleczkowski, Assa.. . . .	160-00
1158	J. Quesnelle.. . . .	Maple Creek, Assa.. . . .	640-00
1159	Mrs. Jane Abbott.. . . .	Graburn, Assa.. . . .	160-00
1160	S. G. Pardoe.. . . .	Devil's Pine Lake, Alta.. . . .	160-00
1161	T. Stewart.. . . .	Whitewood, Assa.. . . .	320-00
1162	C. Lyons.. . . .	Whitewood, Assa.. . . .	320-00
1170	W. Moodie.. . . .	Millarville, Alta.. . . .	640-00
1171	McLachlan Bros.. . . .	Medicine Hat, Assa.. . . .	320-00
1172	G. B. Cook.. . . .	Calgary, Alta.. . . .	640-00
1173	R. Hillhouse.. . . .	Broadview, Assa.. . . .	160-00
1174	Gordon Healy.. . . .	Calgary, Alta.. . . .	640-00
1177	J. D. Freeman.. . . .	Millarville, Alta.. . . .	640-00
1178	J. Lambie.. . . .	Maple Creek, Assa.. . . .	640-00
1180	H. Letts.. . . .	Edwill, Alta.. . . .	320-00
1181	Wm. Gier.. . . .	Okotoks, Alta.. . . .	480-00
1182	F. W. Butler.. . . .	Mitford, Alta.. . . .	160-00
1184	T. J. Pearson.. . . .	Regina, Assa.. . . .	160-00
1185	J. D. Cheesbrough.. . . .	Red Deer, Alta.. . . .	158-00
1186	R. E. Fiske.. . . .	Red Deer, Alta.. . . .	320-00
1187	P. St. Dennis.. . . .	Maple Creek, Assa.. . . .	1,120-00
1188	Young & Maier.. . . .	Seaburn, Man.. . . .	1,280-00
1191	S. Brown.. . . .	Millarville, Alta.. . . .	260-00
1192	E. J. Botterell.. . . .	Montreal, Prov. Que.. . . .	640-00
1193	F. A. Massack.. . . .	Millarville, Alta.. . . .	160-00
1194	T. H. Tinney.. . . .	Medicine Hat, Assa.. . . .	659-00
1195	A. Loudon.. . . .	Collelton, Sask.. . . .	160-00

## SESSIONAL PAPER No. 25

## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1196	R. F. Starke	Medicine Hat, Assa.	1,440 00
1198	A. H. Eckford	High River, Alta.	610 00
1199	T. Harkness	Fletwode, Assa.	1,120 00
1200	J. B. Scott	Wetaskiwin, Alta.	17 00
1201	Jas. Martin	Maple Creek, Assa.	1,280 00
1202	J. C. Hargrave	Walsh, Assa.	3,035 44
1203	F. S. Blake	LIVINGSTONE, Alta.	313 00
1205	T. E. Watson	Daleshoro, Assa.	640 00
1209	L. Simonin	Lake Chapleau, Assa.	640 00
1210	H. Erikson	Red Deer, Alta.	160 00
1213	F. W. Chamberlain	Whitewood, Assa.	610 00
1214	H. Hone	Priddis, Alta.	320 00
1217	D. Carter	Fish Creek, Alta.	160 00
1218	S. Grimson	Red Deer, Alta.	160 00
1220	Messrs. Spencer et al.	Sunnyside, Montana, U.S.A.	69,120 00
1221	Messrs. Farley & Wright	Red Deer, Alta.	320 00
1222	S. A. Harnett	Innisfail, Alta.	320 00
1223	J. Drader	Winnipeg, Man.	960 00
1225	J. Lawrence	Maple Creek, Assa.	640 00
1226	L. Chauvany	Fletwode, Assa.	610 00
1227	W. A. Douglas	Maple Creek, Assa.	640 00
1228	S. Brown	Okotoks, Alta.	160 00
1229	M. Dowker	Calgary, Alta.	320 00
1233	Blache Bros.	Springbank, Alta.	640 00
1237	P. C. Barnard-Hervey	Calgary, Alta.	320 00
1238	J. McG. Young	Calgary, Alta.	610 00
1240	C. Lees	Maple Creek, Assa.	160 00
1241	J. T. McKnight	Calgary, Alta.	57 00
1243	A. Wilton	Whitewood, Assa.	640 00
1244	W. C. Skrine	High River, Alta.	640 00
1245	W. G. Adams	Coulee, Maple C'k, Assa.	1,250 00
1246	J. Fisher	Millarville, Alta.	160 00
1249	N. Williams	Millarville, Alta.	480 00
1252	Samson & MacNaughton	Calgary, Alta.	640 00
1257	A. Young	Calgary, Alta.	320 00
1258	T. W. Johnston	Moffat, Assa.	610 00
1261	W. F. Wilson	Brandon, Man.	5,000 00
1262	N. Harper	Calgary, Alta.	480 00
1263	J. Rehoul	Fletwode, Assa.	320 00
1266	J. W. Isaac	Kleefeld, Man.	160 00
1267	A. White	Whitewood, Assa.	1,280 00
1268	O. Nicoll	Solsgrith, Man.	1,280 00
1269	E. H. Moore	Prince Albert, Sask.	1,100 00
1271	J. B. Scott	Dried Meat Lake, Duhamel, Alta.	118 00
1272	J. Martin	Maple Creek, Assa.	640 00
1273	W. M. Garment	Crowstand, Assa.	157 00
1274	W. B. Young	Maple Creek, Assa.	960 00
1276	W. H. Meyers	Prince Albert, Sask.	480 00
1277	W. Braikenridge	Maple Creek, Assa.	2,240 00
1278	A. Gauzee	Marguerite, Assa.	640 00
1279	F. Burton	Lyndon, Alta.	320 00
1280	Jean Martin	Fletwode, Assa.	960 00
1281	P. Currie	Whitewood, Assa.	960 00
1282	D. Kearns	Maple Creek, Assa.	1,280 00
1283	L. Perry	Montmartre, Man.	160 00
1284	W. Harkness	Fletwode, Assa.	320 00
1289	C. M. Wallace	Forest Farm, Assa.	160 00
1290	S. Carson	Forest Farm, Assa.	320 00
1293	R. H. Yoe	Brookside, Assa.	160 00
1296	W. Jackson	Millarville, Alta.	320 00
1299	James Duke	Whitewood, Assa.	640 00
1300	Chas. S. Eggleton	Lacombe, Alta.	480 00
1304	E. Healy	Calgary, Alta.	320 00
1310	Hunter Bros.	Cochrane, Alta.	640 00
1313	A. P. Welsh	Millarville, Alta.	160 00
1314	W. H. Thompson	Grenfell, Assa.	320 00
1315	W. R. Moseley	Priddis, Alta.	320 00

## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1316	A. Agrew	Red Deer, Alta.	315-00
1317	F. King	Cochrane, Alta.	640-00
1318	C. Chouinard	Cochrane, Alta.	1,280-00
1319	J. Cooper	Cochrane, Alta.	160-00
1321	Brown Rancho Co. (Ld.)	Rat Portage, Ont.	17,000-00
1324	G. W. Quick	Maple Creek, Assa.	640-00
1329	Smith & Lee	High River, Alta.	640-00
1330	W. J. Birney-Brown	Cochrane, Alta.	640-00
1335	G. A. Trent	Walsh, Assa.	1,120-00
1336	L. C. Brown	Josephburg, Assa.	320-00
1337	C. Turner	Wellwood, Man.	640-00
1338	W. Toppings	Fitzmaurice, Assa.	800-00
1339	E. J. Kieran	Calgary, Alta.	320-00
1340	C. Gorrell	Carberry, Man.	320-00
1341	J. Loptron	Westbourne, Man.	160-00
1342	R. Mitchell	Medicine Hat, Assa.	300-00
1344	J. Harvey	Maple Creek, Assa.	960-00
1345	J. H. McEwen	Nanton, Alta.	320-00
1349	D. Carter	Fish Creek, Alta.	320-00
1350	A. B. Carl	Medicine Hat, Assa.	320-00
1353	S. R. James	Red Deer, Alta.	640-00
1356	E. Walnes	Springbank, Alta.	320-00
1357	J. Arnell	Calgary, Alta.	640-00
1358	J. Hockin	Lacombe, Alta.	640-00
1359	J. Lynch	Calgary, Alta.	320-00
1360	J. Lawrence	Maple Creek, Assa.	320-00
1361	S. H. Mayhood	Calgary, Alta.	160-00
1362	D. Thorburn	Davishurg, Alta.	411-00
1363	W. Carson	Whitewood, Assa.	320-00
1366	G. F. Beere	Macleod, Alta.	400-00
1367	Dr. F. W. Shaw	Carberry, Man.	160-00
1370	C. Cumming	Fletwode, Assa.	1,280-00
1371	J. Reboul	Fletwode, Assa.	320-00
1372	T. Huckerby	Fletwode, Assa.	160-00
1373	A. Chennells	Maple Creek, Assa.	640-00
1374	H. C. Neis	Lamerton, Alta.	97-00
1375	L. Raincock	Westbourne, Man.	320-00
1379	W. E. Smith	Wild Cat, Livingstone, Alta.	320-00
1382	John Lincham	Okotoks, Alta.	320-00
1383	Jos. Edwards	Tumbell, Man.	640-00
1384	A. B. Hassett	Maple Creek, Assa.	160-00
1386	W. L. Christie	High River, Alta.	480-00
1387	R. Mitchell	Medicine Hat, Assa.	600-00
1388	A. Martin	Cochrane, Alta.	1,120-00
1390	C. D. Strong	Walsh, Assa.	160-00
1391	D. McEachen	Grand Valley, Cochrane, Alta.	320-00
1392	G. A. Reid	Cochrane, Alta.	1,325-00
1393	F. W. Peacock	Maple Creek, Assa.	175-05
1394	Mesars. Adams & King	Calgary, Alta.	800-00
1395	A. Wallis	Calgary, Alta.	129-00
1396	M. Lantier	Fletwode, Assa.	640-00
1398	H. Fraser	Canmore, Alta.	640-00
1399	A. Herr	Brice, Alta.	320-00
1400	J. Cheyne	Oxbow, Assa.	640-00
1401	J. Dixon	Maple Creek, Assa.	960-00
1403	C. Cullen	Calgary, Alta.	160-00
1404	B. S. Lloyd	Calgary, Alta.	320-00
1406	A. Munro	Whitewood, Assa.	640-00
1411	W. Wood	Broadview, Assa.	160-00
1412	J. F. Clements	Brookside, Assa.	160-00
1414	R. H. Yeo	Brookside, Assa.	320-00
1416	T. E. Jackson	Calgary, Alta.	320-00
1417	S. T. Clements	Brookside, Assa.	160-00
1421	A. Shaw	Medicine Hat, Assa.	640-00
1422	W. Hill	Medicine Hat, Assa.	160-00
1423	P. B. Cleland	Midnapore, Alta.	160-00
1426	A. N. Johnson	Jumping Pond, Alta.	160-00

## SESSIONAL PAPER No. 25

## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1427	C. M. Thrower	Oxbow, Assa.	320-00
1428	Chas. Perry	Cochrane, Alta.	320-00
1429	Jos. Dixon	Maple Creek, Assa.	320-00
1431	J. B. Lindsay	Medicine Hat, Assa.	640-00
1433	J. Stephens	Calgary, Alta.	320-00
1440	Jas. Anderson	Castleberry, Man.	320-00
1442	R. E. Starke	Medicine Hat, Assa.	1,760-00
1445	W. & A. Reid, R. E. Tynor, C. Tynor, J. Tynor	Pigeon C'k, Ponoka, Alta.	1,280-00
1446	W. F. Wilson	Brandon, Man.	17,000-00
1448	John Colard	Fletwode, Assa.	320-00
1452	J. H. Metcalfe	Westbourn, Man.	370-00
1453	J. R. Allan	Macleod, Alta.	320-00
1455	E. F. Cummings	Macleod, Alta.	52-00
1457	John Thordarson	Big Point, Wild Oak P.O., Man.	160-00
1458	The Lethbridge Sheep Co.	Lethbridge, Alta.	2,400-00
1461	Chas. A. Wood	Pine Lake, Alta.	1,280-00
1462	The Sheep Creek Ranching Co.	Calgary, Alta.	160-00
1463	D. McDougall	Millward, Alta.	1,440-00
1464	G. W. Wood	Pine Lake, Alta.	1,280-00
1465	Wm. Harkness	Fletwode, Assa.	1,120-00
1466	John Manson	Didsbury, Alta.	320-00
1467	J. B. Gaetz	Red Deer, Alta.	640-00
1469	H. Norman Sheppard	Pekisko, Alta.	640-00
1473	Jas. Markle	Kissina, Assa.	320-00
1474	J. A. W. Fraser	Calgary, Alta.	640-00
1476	John Dels	Balgonie, Assa.	160-00
1479	Jules Gagné	Battleford, Sask.	160-00
1482	J. C. Warner	Fletwode, Assa.	640-00
1483	A. Sikkenen	New Finland, Assa.	640-00
1488	B. B. Allen	Davisburg, Alta.	640-00
1490	J. McKay	Whitewood, Assa.	320-00
1491	A. S. Maloney	Davisburg, Alta.	320-00
1500	F. Clark	Dundurn, Assa.	320-00
1501	Yabaree Rancho Co.	Calgary, Alta.	640-00
1502	Mrs. A. Hammond	Winnipeg, Man.	480-00
1503	G. F. Pownall	Davisburg, Alta.	160-00
1505	G. Bell	Millarville, Alta.	100-00
1507	P. Le Chat	Battleford, Sask.	960-00
1508	R. A. Teskey	Calgary, Alta.	320-00
1509	J. Poltras	Battleford, Sask.	480-00
1511	W. B. Thorne	High River, Alta.	160-00
1512	W. J. McLaren	Okotoks, Alta.	480-00
1513	E. Healy	Calgary, Assa.	160-00
1515	W. Geo. Castle	Panama, Alta.	320-00
1517	Henry Clayton	Calgary, Alta.	1,120-00
1518	Alan Sproat	Innisfall, Alta.	640-00
1519	Geo. Ambrose	Maple Creek, Assa.	640-00
1520	John Gravy	Hyde, Assa.	160-00
1522	A. H. Salmon	Riga, Assa.	165-00
1523	E. P. Cronquist	Red Deer, Alta.	160-00
1525	S. J. Reinhardt	Calgary, Alta.	160-00
1526	D. J. Simpson	Calgary, Alta.	160-00
1527	J. Burke	Brookside, Assa.	610-00
1528	P. Sullivan	Calgary, Alta.	640-00
1529	P. Beveridge	Springbank, Alta.	480-00
1531	O. Johansson	Sunnymead, Assa.	320-00
1532	H. B. Cossar	Calgary, Alta.	318-00
1534	R. Fenwick	Graburn, Assa.	160-00
1535	Conrad Bros.	Lethbridge, Alta.	15-00
1537	E. Jonson	Calgary, Alta.	320-00
1538	Chas. Reis	Spence Grove, Alta.	160-00
1539	W. D. Lineham	Okotoks, Alta.	160-00
1540	Geo. W. Green	Red Deer, Alta.	640-00
1541	Myles McArthur	Whitewood, Assa.	320-00
1542	L. Hinkson	Pine Lake, Alta.	480-00
1543	H. Garlough	Pincher Creek, Alta.	640-00

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## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1544	Mrs. A. E. Hayes.. . . . .	Calgary, Alta.. . . . .	160-00
1546	Adams & Nuttall.. . . . .	Maple Creek, Assa.. . . . .	320-00
1547	Albert Todd.. . . . .	Wolseley, Assa.. . . . .	160-00
1554	Thos. Birnie.. . . . .	Calgary, Alta.. . . . .	640-00
1556	Jos. Hope.. . . . .	Calgary, Alta.. . . . .	160-00
1557	W. L. Christie.. . . . .	High River, Alta.. . . . .	640-00
1558	R. O. Sykes.. . . . .	Stand Off, Alta.. . . . .	480-00
1559	A. L. T. D'Eyncourt.. . . . .	Calgary, Alta.. . . . .	1,120-00
1560	R. G. Williamson.. . . . .	Swift Current, Assa.. . . . .	2,560-00
1561	Alex. Martin.. . . . .	Cochrane, Alta.. . . . .	640-00
1562	A. Hanson.. . . . .	Fletwode, Assa.. . . . .	160-00
1563	The Bow River Horse Rancho Props..	Mitford, Alta.. . . . .	1,912-00
1564	Jas. John Day.. . . . .	Battleford, Sask.. . . . .	640-00
1565	Thos. P. McHugh.. . . . .	Gleichen, Alta.. . . . .	1,280-00
1566	John Lineham.. . . . .	Okotoks, Alta.. . . . .	1,215-26
1568	R. G. Armstrong.. . . . .	Graburn, Assa.. . . . .	640-00
1569	W. N. Janes.. . . . .	Gladys, Alta.. . . . .	480-00
1575	W. H. A. Auger.. . . . .	Maple Creek, Assa.. . . . .	320-00
1577	Bernard McKeivitt.. . . . .	Calgary, Alta.. . . . .	160-00
1578	Donald Cameron.. . . . .	Medicine Hat, Assa.. . . . .	1,320-00
1583	R. T. Kidd.. . . . .	Fairmede, Assa.. . . . .	160-00
1587	G. Wetton & Son.. . . . .	Medicine Hat, Assa.. . . . .	320-00
1590	Messrs. Spencer et al.. . . . .	Medicine Hat, Assa.. . . . .	22,000-00
1591	Harold Mackintosh.. . . . .	Livingstone, Alta.. . . . .	160-00
1592	David Erickson.. . . . .	Fletwode, Assa.. . . . .	160-00
1594	Geo. Boston.. . . . .	Cochrane, Alta.. . . . .	160-00
1595	Geo. Ward.. . . . .	Calgary, Alta.. . . . .	320-00
1596	Bland Herring.. . . . .	Macleod, Alta.. . . . .	320-00
1597	Frank Collicutt.. . . . .	Calgary, Alta.. . . . .	640-00
1598	T. C. W. Riley & F. R. Riley.. . . . .	Calgary, Alta.. . . . .	480-00
1600	W. A. Lyndon.. . . . .	Lyndon, Alta.. . . . .	320-00
1603	G. Ward.. . . . .	High River, Alta.. . . . .	640-00
1604	A. B. Carle.. . . . .	Medicine Hat, Alta.. . . . .	320-00
1607	A. Young.. . . . .	Calgary, Alta.. . . . .	160-00
1608	T. E. Jackson.. . . . .	Calgary, Alta.. . . . .	160-00
1609	Thos. H. Webb.. . . . .	Medicine Hat, Alta.. . . . .	160-00
1610	Robert Mitchell.. . . . .	Russell, Man.. . . . .	640-00
1612	Alfred P. Welsh.. . . . .	Millarville, Alta.. . . . .	160-00
1613	Jos. H. Boston.. . . . .	Grand Valley, Alta.. . . . .	160-00
1618	C. A. Peterson.. . . . .	Maple Creek, Assa.. . . . .	300-00
1621	Harold W. H. Riley.. . . . .	Calgary, Alta.. . . . .	160-00
1622	Samuel Lindsay.. . . . .	Whitewood, Assa.. . . . .	160-00
1623	Wm. Bruce.. . . . .	Calgary, Alta.. . . . .	640-00
1625	Chas. Cummings.. . . . .	Fletwode, Assa.. . . . .	640-00
1628	W. Harkness.. . . . .	Hazelwood, Assa.. . . . .	320-00
1630	David Hamilton.. . . . .	Medicine Hat, Assa.. . . . .	640-00
1633	Walker & Creighton.. . . . .	Morley, Alta.. . . . .	320-00
1634	John Brewster.. . . . .	Banff, Alta.. . . . .	1,280-00
1635	Robt. M. T. Elson.. . . . .	Medicine Hat, Assa.. . . . .	2,240-00
1640	George Bell.. . . . .	Millarville, Alta.. . . . .	160-00
1648	Thos. Dodd.. . . . .	Kissina, Assa.. . . . .	320-00
1651	The Macmillan Rancho Co.. . . . .	Calgary, Alta.. . . . .	400-00
1653	Francis Wright.. . . . .	Dunmore, Assa.. . . . .	320-00
1654	W. H. Edge.. . . . .	Cochrane, Alta.. . . . .	640-00
1655	David C. McKenzie.. . . . .	Calgary, Alta.. . . . .	640-00
1660	L. Hinkson.. . . . .	Pine Lake, Alta.. . . . .	640-00
1661	Chas. F. McLeod.. . . . .	Red Deer, Alta.. . . . .	1,280-00
1662	C. B. McCallum.. . . . .	Innisfail, Alta.. . . . .	160-00
1663	W. H. Price.. . . . .	High River, Alta.. . . . .	160-00
1664	Wm. Harkness.. . . . .	Hazelwood, Assa.. . . . .	320-00
1665	C. W. E. Gardiner.. . . . .	Macleod, Alta.. . . . .	320-00
1666	Thos. H. Cullen.. . . . .	Calgary, Alta.. . . . .	160-00
1667	Thos. W. Robertson.. . . . .	High River, Alta.. . . . .	960-00
1668	Wm. Moodie.. . . . .	Millarville, Alta.. . . . .	320-00
1669	P. J. Nelson.. . . . .	Maple Creek, Assa.. . . . .	800-00
1670	Messrs. F. C. Vigar & J. Knudson..	Gleichen, Alta.. . . . .	160-00
1671	William Kerr.. . . . .	Maple Creek, Assa.. . . . .	320-00

## SESSIONAL PAPER No. 25

## LESSEES of Grazing Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1673	John Murray..	Maple Creek, Assa	320 00
1677	John Hulgh..	Cochrane, Alta..	812 00
1678	John Lytle..	Bulgonie, Assn..	160 00
1681	Jacob Boessler..	Grenfell, Assa..	320 00
1685	Richard Newby..	Maple Creek, Assa..	320 00
1686	G. H. Munsell..	Calgary, Alta..	640 00
1688	H. A. Crofton..	Calgary, Alta..	1,280 00
1692	Alexander Eddy..	Medicine Hat, Assa..	320 00
1693	Jas. W. Dimmick..	Medicine Hat, Assa..	320 00
1695	R. A. McDonnld..	Calgary, Alta..	640 00
1698	J. Cook..	Cochrane, Alta..	160 00
1699	Levi Harker..	Magrath, Alta..	5,241 00
1700	Inasper J. Head..	Magrath, Alta..	5,881 00
1701	D. M. Murray..	High View, Assn..	160 00
1702	W. H. Turner..	Fletwode, Assa..	160 00
1703	Alcide Marcotte..	Duck Lake, Sask..	800 00
1704	Wm. J. Latimer..	Calgary, Alta..	160 00
1705	Samuel McCaw..	Hazelwood, Assa..	640 00
1706	J. R. Perry..	Calgary, Alta..	1,280 00
1707	Supt. Gen'l of Indian Affairs..	Ottawa, Ont..	1,280 00
1708	Chas. Lee..	Tumbell, Man..	1,520 00
1709	Albert Wilton..	Whitewood, Assa..	320 00
1710	Edward Curss..	Lumsden, Assa..	320 00
1711	Robert Armstrong..	High View, Assa..	160 00
1712	James Martin..	Maple Creek, Assa..	960 00
1713	Thos. Harkness..	Hazelwood, Assa..	320 00
1714	W. Anderson..	Lineham, Alta..	70 00
1717	W. Hodgkinson..	Calgary, Alta..	640 00
1719	F. McRae..	Brookside, Assa..	320 00
1721	J. Peddie & J. T. Rogers..	Russell, Man..	5,120 00
1722	Isaac Mick..	Whitewood, Assa..	640 00
1724	Mrs. A. Hammond..	Winnipeg, Man..	640 00
1725	David Bristow..	Grierson, Alta..	160 00
1730	Wm. Harkness..	Fletwode, Assa..	320 00
1738	S. Gibson..	Napanee, Ont..	640 00
1739	John Lintner..	Coulee, Assa..	160 00
1740	J. J. Quill..	Medicine Hat, Assa..	1,280 00
1741	Geo. W. Johnson..	Horse C'k, Cochrane, Alta..	640 00
1742	Edward Clark..	Medicine Hat, Assa..	2,400 00
1743	Geo. A. Trent..	Graburn, Assa..	1,760 00
1744	Guy F. Pownall..	Davisburg, Alta..	640 00
1745	C. A. Magrath..	Lethbridge, Alta..	5,760 00
1746	J. I. Geissenger..	Red Deer, Alta..	1,280 00
1747	Alex. Gow..	Graburn, Assa..	5,600 00
1749	A. E. Cameron..	High View, Assa..	320 00
1750	Geo. Trenter..	Maple Creek, Assa..	320 00
1751	Fred A. Jackson..	Millarville, Alta..	220 00
1752	Jas. McBean..	Graburn, Assa..	320 00
1755	Herbert G. Dunn..	Maple Creek, Assa..	320 00
1758	Joshua Davies..	Lethbridge, Alta..	320 00
1759	Isaac Fleming..	Maple Creek, Assa..	320 00
1760	N. D. Keeley..	Manitou, Man..	160 00
1763	Wm. Houghton..	Medicine Hnt, Assa..	480 00
1764	Robt. W. Baker..	Hazelwood, Assa..	160 00
1765	Finlay Kennedy..	Whitewood, Assa..	320 00
1767	Fred. Smith..	Medicine Hnt, Assa..	86 00
1774	H. Ebenal..	Davin, Assa..	220 00
1775	Wm. Gemmell..	Whitewood, Assa..	320 00
1777	Jas. Thurber..	Calgary, Alta..	320 00
1785	Geo. Allison..	Burnbank, Man..	640 00
1786	Lewis F. Pundy..	Medicine Hat, Assa..	160 00
1789	E. Harker..	Cardston, Alta..	5,880 00
1790	C. Briggs..	Graburn, Alta..	2,082 00
1791	P. Bourhis..	Golden Plain, Assa..	160 00
1792	F. O. Sissons..	Medicine Hat, Assa..	640 00
1793	R. P. Comer..	Woolhester, Assa..	640 00
1794	W. S. Tait..	Calgary, Alta..	377 00

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LESSEES of Grazing Lands—*Concluded.*

Ranche No.	Name.	Address.	Area in Acres.
1795	J. Hilton.. . . . .	Heron, Assa.. . . . .	160-00
1796	Wm. Croft.. . . . .	Maple Creek, Assa.. . . . .	1,600-00
1797	E. H. Botterell . . . . .	Montreal, P.Q.. . . . .	640-00
1798	C. D. Strong.. . . . .	Walsh, Assa.. . . . .	996-00
1806	John Irving.. . . . .	Disley, Assa.. . . . .	160-00
1808	George Morrison.. . . . .	Calgary, Alta.. . . . .	160-00
1810	W. H. Dodd.. . . . .	Kissina, Assa.. . . . .	160-00
1817	E. A. DeNevers.. . . . .	Fairmede, Assa.. . . . .	160-00
1819	C. Briggs.. . . . .	Graburn, Assa.. . . . .	320-00
1820	T. H. Cullen.. . . . .	Calgary, Alta.. . . . .	800-00
1822	David Sheppard.. . . . .	Oxbow, Assa.. . . . .	160-00
1823	Edward Schneider.. . . . .	Cochrane, Alta.. . . . .	640-00
1824	Thomas Riley.. . . . .	Calgary, Alta.. . . . .	320-00
1825	William Smith . . . . .	Lumsden, Assa.. . . . .	320-00
1826	Thomas O'Flynn.. . . . .	DeWinton, Alta.. . . . .	160-00
1827	W. B. Dixon.. . . . .	Maple Creek, Assa.. . . . .	320-00
1828	Walter S. Sparks.. . . . .	American Falls, Idaho, U.S.A.. . . . .	640-00
1829	Robert Scott.. . . . .	Eagle Butte, Assa.. . . . .	2,240-00
1830	James McKenzie.. . . . .	Coutts, Alta.. . . . .	1,280-00
1831	James Mann.. . . . .	Maple Creek, Assa.. . . . .	160-00
1832	C. Schulz.. . . . .	Calgary, Alta.. . . . .	1,280-00
1833	Wm. Harkness.. . . . .	Hazelwood, Assa.. . . . .	160-00
1834	Ernest J. Peachy.. . . . .	Medicine Hat, Assa.. . . . .	960-00
1835	John C. Hargrave.. . . . .	Medicine Hat, Assa.. . . . .	824-80
1836	Robert Cummings.. . . . .	Fletwode, Assa.. . . . .	640-00
1837	John H. Spencer.. . . . .	Medicine Hat, Assa.. . . . .	235-00
1838	Robert Greenwood.. . . . .	Pine Lake, Alta.. . . . .	640-00
1839	Robert McGaw.. . . . .	Hazelwood, Assa.. . . . .	960-00
1840	F. H. Wolly-Dod.. . . . .	Calgary, Alta.. . . . .	320-00
1841	Arthur Blythman.. . . . .	Maple Creek, Assa.. . . . .	480-00
1842	J. F. Minor.. . . . .	Maple Creek, Assa.. . . . .	320-00
1843	Frank C. Haydork.. . . . .	Maple Creek, Assa.. . . . .	320-00
1844	Andrew Young.. . . . .	Calgary, Alta.. . . . .	160-00
1845	Wm. Chapman.. . . . .	Fitzmaurice, Assa.. . . . .	320-00
1846	J. J. Clements.. . . . .	Fairmede, Assa.. . . . .	320-00
1847	Wm. Scott.. . . . .	Woolchester, Assa.. . . . .	320-00
1848	A. B. Carle.. . . . .	Medicine Hat, Assa.. . . . .	320-00
1849	Heikki Maki.. . . . .	Wapelia, Assa.. . . . .	160-00
1850	George Marlin.. . . . .	Wolseley, Assa.. . . . .	160-00
1851	J. Brynitsen.. . . . .	Pine Lake, Alta.. . . . .	160-00
1852	T. C. Allan.. . . . .	Medicine Hat, Assa.. . . . .	160-00
1853	W. T. Gibson.. . . . .	Coulee, Assa.. . . . .	160-00
1854	Amos Rowe.. . . . .	Calgary, Alta.. . . . .	320-00
1855	Herbert Gobett.. . . . .	Medicine Hat, Assa.. . . . .	320-00
1856	Mrs. Lizzie Hamilton.. . . . .	Woolchester, Assa.. . . . .	320-00
1857	Albert Dash.. . . . .	Hillesden, Assa.. . . . .	160-00
1858	E. Latellier.. . . . .	Sintaluta, Assa.. . . . .	640-00
1859	Vigar & Knudson.. . . . .	Gleichen, Alta.. . . . .	480-00
1860	C. C. Cooke.. . . . .	Grenfell, Assa.. . . . .	160-00
1861	William Small.. . . . .	Maple Creek, Assa.. . . . .	320-00
1862	R. P. Comer.. . . . .	Eagle Butte, Med. Hat, Assa.. . . . .	640-00
1863	F. Moorehouse.. . . . .	Calgary, Alta.. . . . .	640-00
1864	Dr. A. R. Turnbull.. . . . .	Moose Jaw, Assa.. . . . .	640-00
1865	W. E. Pepper.. . . . .	Cochrane, Alta.. . . . .	640-00
	Total area.. . . . .		605,794-75



## SESSIONAL PAPER No. 25

The total number of leases of school lands in the province of Manitoba for grazing purposes, in force on the 22nd day of August, 1901, was 45, containing an area of 11,263.85 acres, the names of the lessees, their addresses and the numbers of their ranches being as follows, viz. :—

Ranch No.	Name.	Address.	Area in Acres.
637	H. & A. Delf.....	Indian Ford, Man.....	160.00
672	Jos. S. Yeomans.....	Napinka, Man.....	68.00
723	Simon Clark.....	Rounthwalte, Man.....	320.00
769	John Clarke.....	Fairhill, Man.....	480.00
789	John Kehoe.....	Neshlitt, Man.....	160.00
934	W. G. Pollock.....	Neepawa, Man.....	430.00
945	Wm. McKinnon.....	Oheron, Man.....	320.00
955	P. Bourque & Alex. Birnie.....	Pilot Mound, Man.....	320.00
964	Chas. Goldstone.....	Brandon, Man.....	160.00
974	C. Boes.....	Winnipeg, Man.....	160.00
977	Wm. Hasselfield.....	Manitou, Man.....	160.00
1006	G. S. Delf, jr.....	Indian Ford, Man.....	160.00
1009	W. A. Robinson.....	Marlappolls, Man.....	160.00
1098	P. Hiebert et al.....	Chortitz, Man.....	320.00
1602	R. M. Wilson.....	Marringhurst, Man.....	160.00
1615	J. R. Paul.....	Manitou, Man.....	160.00
1619	Simpson Bros.....	Rosser, Man.....	320.00
1645	Napoleon Filteau.....	Grande Clairiere, Man.....	160.00
1646	K. Benjaminsson & P. Larusson.....	Gimli, Man.....	160.00
1647	H. R. Tolton.....	Oak Lake, Man.....	160.00
1657	James McIntyre.....	Westhourne, Man.....	51.00
1672	George Motheral.....	Manitou, Man.....	160.00
1676	Messrs. Peddle & Rogers.....	Russell, Man.....	640.00
1697	Jens E. Laxdal.....	Care A. R. McDougall, Shoal L'k, M.....	610.00
1715	Carson Glenn.....	Strathclair, Man.....	160.00
1716	Robert Forke.....	Pipestone, Man.....	640.00
1718	W. Sanderson.....	Souris, Man.....	160.00
1736	A. McFarlane.....	Kerfoot, Man.....	160.00
1748	James Jones.....	Elkhorn, Man.....	640.00
1756	Johann Toews.....	Chortitz, Man.....	160.00
1769	A. H. Gibbs.....	Pilot Mound, Man.....	160.00
1778	Messrs Dow & Curry.....	Pilot Mound, Man.....	320.00
1780	Andrew C. Houghton.....	Belmont, Man.....	160.00
1781	Robert Blackburn.....	Pilot Mound, Man.....	160.00
1783	Chas. McKenzie.....	LaRiviere, Man.....	160.00
1787	Foster Hagyard.....	Pilot Mound, Man.....	153.35
1788	F. W. Cleeve.....	Wood Bay, Man.....	160.00
1801	H. W. Horner.....	Minnedosa, Man.....	160.00
1802	Robert Hall.....	Brandon, Man.....	131.00
1811	J. W. Williamson.....	Pilot Mound, Man.....	160.00
1812	Adred J. Tempest & Aiden J. Tempest.....	Austin, Man.....	320.00
1813	John Sigfusson.....	Mary Hill, Man.....	640.00
1814	Kenneth Scharf.....	LaRiviere, Man.....	160.00
1816	J. W. Hagyard.....	Routledge, Man.....	140.50
1818	Daniel Emes.....	St. Paul's Parish, Man.....	320.00
	Total area.....		11,263.85

1-2 EDWARD VII., A. 1902

The total number of leases of school lands in the North-west Territories for grazing purposes, in force on the 26th day of August, 1901, was 227 containing an area of 77,127·98 acres, the names of the lessees, their addresses and the numbers of the ranches being as follows:—

Ranche No.	Name.	Address.	Area in Acres.
478	F. W. Godsall..	Pincher Creek, Alta..	605·00
493	Hull Bros. & Co..	Calgary, Alta..	640·00
497	J. H. Beam..	Cochrane, Alta..	640·00
504	W. C. H. Parhby..	Lacombe, Alta..	160·00
509	W. E. Smith..	Livingstone, Alta..	320·00
518	Wm. Brealey..	Cochrane, Alta..	640·00
526	Patrick Burns..	Calgary, Alta..	640·00
548	W. H. Minbinnick..	Kinbrae, Assa..	40·00
550	John N. West..	Mountain View, Alta..	160·00
564	Wm. N. Janes..	Calgary, Alta..	320·00
587	W. Julius Hyde..	Macleod, Alta..	640·00
588	A. Caswell..	Maple Creek, Alta..	320·00
593	Hull Bros. & Co..	Calgary, Alta..	640·00
594	D. McIntosh..	Whitewood, Assa..	320·00
623	Dept. of Indian Affairs..	Ottawa, Ont..	640·00
626	D. McIntosh..	Whitewood, Assa..	320·00
696	A. C. Fraser, jr..	Calgary, Alta..	640·00
697	Chas. Spalding..	High River, Alta..	160·00
739	Herbert Anderson..	Millarville, Alta..	760·00
766	S. Mitchell..	Qu'Appelle Station, Assa..	170·00
778	Martin Griening..	Wolseley, Assa..	160·00
780	Alberta Rancho Co..	Pincher Creek, Alta..	372·00
784	Augustus Bersea..	Qu'Appelle, Assa..	150·00
786	W. H. Ball..	Grenfell, Assa..	640·00
795	W. E. Smith..	Livingstone, Assa..	320·00
806	L. McKinnon..	Dunhow, Alta..	540·00
808	F. H. Towers..	Mitford, Alta..	160·00
847	Robt. Miller..	Lumsden, Assa..	160·00
870	J. Cinnamon..	Agricola, Alta..	160·00
931	Robt. Scott..	Medicine Hat, Assa..	320·00
941	Harold C. Hewitt..	Spring Lake, Innisfail, Alta..	640·00
950	John R. Dinnin..	Abernethy, Assa..	160·00
951	D. McDougall..	Coteau, Assa..	160·00
954	H. Heckling..	Calgary, Alta..	604·00
958	J. C. Wilson..	Wetaskiwin, Alta..	74·00
959	S. Swart..	Strathcona, Alta..	160·00
993	G. A. Love..	Red Deer, Alta..	640·00
1010	Sven E. Sordeberg..	Obien, Assa..	122·00
1011	F. Dunand..	Whitewood, Assa..	160·00
1014	Amos C. Mauser..	Strathcona, Alta..	160·00
1022	John Hewitt..	Grenfell, Assa..	108·00
1025	W. T. & F. S. Clements..	Fairmede, Assa..	320·00
1028	Wm. W. Arnold..	Lethbridge, Alta..	46·00
1039	Hull Bros & Co..	Calgary, Alta..	640·00
1044	Von Strauss Bros..	Okotoks, Alta..	89·00
1045	J. Kemmis..	Livingstone, Alta..	640·00
1077	J. D. Caswell..	Rosthern, Sask..	320·00
1081	W. A. Rowles..	Gladys, Alta..	160·00
1094	J. W. Dunn..	Calgary, Alta..	640·00
1096	James Dick..	Abernethy, Assa..	160·00
1097	M. Catley..	Kennell, Assa..	160·00
1102	John N. West..	Mountain View, Alta..	80·00
1104	Thomas Banks..	Indian Head, Assa..	320·00
1105	John Lineham..	Okotoks, Alta..	154·00
1130	George Hutton..	Edmonton, Alta..	160·00
1156	L. Perry..	Kleczkowski, Assa..	160·00
1158	J. Quesnelle..	Maple Creek, Assa..	640·00
1163	J. Owens..	De Winton, Alta..	160·00
1164	J. W. Ockley..	Priddis, Alta..	320·00
1165	J. Harrold..	Namao, Alta..	160·00
1167	W. Owen & E. S. Kent..	Edgeley Farm, Assa..	284·00
1169	A. Jorgensen..	Red Deer, Alta..	40·00

SESSIONAL PAPER No. 25

## LESSEES of School Lands—Continued.

Rancher No.	Name.	Address.	Area in Acres.
1176	M. Dowker..	Calgary, Alta..	640-00
1204	F. S. Blake ..	Livingstone, Alta..	59-00
1208	C. Sherriff..	Lumsden, Assa..	320-00
1212	A. Atcheson..	Brookside, Assa..	320-00
1224	J. Mnggan..	Calgary, Alta..	160-00
1230	T. G. Parkinson & H. & J. Davies	Forest Farm, Assa..	640-00
1231	P. Bourhis..	Whitewood, Assa..	160-00
1232	J. J. Sage..	Whitewood, Assa..	320-00
1234	F. Houghton..	Calgary, Alta..	264-00
1235	A. Chenells..	Four Mile Coulee, Maple C'k, Assa..	160-00
1253	R. Wickham..	Fairmeade, Assa..	160-00
1254	W. R. Jamieson..	Lumsden, Assa..	127-00
1255	A. Prince..	Moosomin, Assa..	320-00
1259	W. Pell..	Qu'Appelle Station, Assa..	160-00
1260	A. J. T. Peach..	Gladys, Alta..	36-00
1285	J. Mitchell..	Moosomin, Assa..	640-00
1286	C. David..	Duhamel, Alta..	173-00
1287	W. J. Bingham..	Mountain View, Alta..	640-00
1291	J. Harvey..	Maple Creek, Assa..	480-00
1292	N. W. Gould..	Wetaskiwin, Alta..	640-00
1295	R. Wilson..	Dundurn, Assa..	320-00
1297	R. Hamilton..	Okotoks, Alta..	320-00
1298	F. C. Carss..	Lumsden, Assa..	160-00
1303	John W. Campbell..	Lumsden, Assa..	160-00
1306	C. D. Strong..	Walsh, Assa..	738-50
1307	R. Smith..	Cochrane, Alta..	640-00
1308	S. Mathieson..	Lumsden, Assa..	129-00
1309	M. R. Stewart..	Meadow Creek, Alta..	640-00
1312	S. Barber, sr..	Wolsley, Assa..	160-00
1320	J. Foster..	Glen Ewen, Assa..	155-50
1322	R. A. Wallace..	High River, Alta..	480-00
1327	W. I. Clark..	Lumsden, Assa..	154-00
1243	R. Mitchell..	Medicine Hnt, Assa..	480-00
1346	F. Jackson..	Wapella, Assa..	160-00
1347	W. R. Ogler..	Montmartre, Assa..	160-00
1348	W. A. Jackson..	Macleod, Alta..	640-00
1355	J. Greenfield..	Grierson, Alta..	640-00
1365	G. Puckham..	Pincher Creek, Alta..	23-00
1397	J. J. Sullivan..	Lineham, Alta..	160-00
1402	J. Dixon..	Maple Creek, Assa..	480-00
1405	Sheep Creek Ranching Co..	Calgary, Alta..	160-00
1407	R. de Melherbe..	Millarville, Alta..	640-00
1408	Jas. Pearce..	Moosomin, Assa..	320-00
1410	T. Bullocks..	Wetaskiwin, Alta..	640-00
1415	P. B. Cleland..	Midnapore, Alta..	320-00
1424	Thos. W. Fetherston..	Leduc, Alta..	480-00
1430	G. Murrny..	Josephburg, Alta..	640-00
1432	H. Thomson..	Cardston, Alta..	640-00
1438	C. Eyre..	Yorkton, Assa..	160-00
1439	L. D. Elliott..	Belleville, Ont..	160-00
1470	Thos. G. Wilson..	Livingstone, Alta..	480-00
1471	J. F. Bates..	Calgary, Alta..	640-00
1472	Edward Bye..	Wetaskiwin, Alta..	166-78
1475	Edward Connor..	Moosomin, Assa..	160-00
1477	Jas. Mitchell..	Springbank, Alta..	100-00
1478	J. D. Cumming..	Grenfell, Assa..	160-00
1480	T. Douglas..	DeWinton, Alta..	160-00
1481	Matilda M. Bredin..	Lumsden, Assa..	320-00
1484	J. Wnburger..	Mountain View, Alta..	160-00
1485	F. Drager..	Wetaskiwin, Alta..	640-00
1486	F. Bourcet & J. Perry..	Montmartre, Assa..	320-00
1487	L. Rlty..	Lacombe, Alta..	315-50
1492	C. Simpson..	Regina, Assa..	160-00
1493	A. Switzer..	Grenfell, Assa..	160-00
1494	P. Bourhis..	Whitewood, Assa..	160-00
1495	J. B. Hunter..	Lacombe, Alta..	420-00
1514	T. D. Hind..	Cottonwood, Assa..	160-00

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## LESSEES of School Lands—Continued.

Ranche No.	Name.	Address.	Area in Acres.
1516	W. J. Gedge & H. Purdy.. . . . .	Moosomin, Assa.. . . . .	320-00
1524	D. McDonald.. . . . .	Priddis, Alta.. . . . .	320-00
1530	W. Ireton.. . . . .	Moosomin, Assa.. . . . .	160-00
1533	Mrs. B. Kingsley.. . . . .	South Vancouver, B.C.. . . . .	320-00
1536	F. Sykora.. . . . .	Millet, Alta.. . . . .	160-00
1545	Fred. J. Johnstone.. . . . .	Gainsboro, Assa.. . . . .	480-00
1548	P. B. Cleland.. . . . .	Midnapore, Alta.. . . . .	160-00
1549	Harold Symons.. . . . .	Wapella, Assa.. . . . .	80-00
1550	J. W. W. Clancy.. . . . .	Regina, Assa.. . . . .	160-00
1551	Chas. Dudda.. . . . .	Wolseley, Assa.. . . . .	160-00
1552	Alex. Barbeau.. . . . .	Pincher Creek, Alta.. . . . .	176-00
1553	Jos. Dixon.. . . . .	Maple Creek, Assa.. . . . .	160-00
1571	P. Weller.. . . . .	Wetaskiwin, Alta.. . . . .	640-00
1572	Chas. Keith.. . . . .	Lumsden, Assa.. . . . .	160-00
1573	Jas. Clendenning.. . . . .	High River, Alta.. . . . .	640-00
1574	Dan Brox.. . . . .	Spruce Grove, Alta.. . . . .	480-00
1576	A. N. Hull.. . . . .	Lacombe, Alta.. . . . .	160-00
1579	R. E. Johnston.. . . . .	Lacombe, Alta.. . . . .	320-00
1580	Wm. Lewis.. . . . .	Moose Jaw, Assa.. . . . .	320-00
1581	John Finkle.. . . . .	Workman, Assa.. . . . .	160-00
1582	R. J. Christie.. . . . .	Yarrow, Alta.. . . . .	320-00
1584	Frank Leavitt.. . . . .	Leavitt, Alta.. . . . .	640-00
1585	W. L. Gillet.. . . . .	Knee Hill Valley, Alta.. . . . .	320-00
1589	W. J. Bingham.. . . . .	Mountain View, Alta.. . . . .	320-00
1601	B. Hutchinson.. . . . .	Lumsden, Assa.. . . . .	298-00
1605	Wm. Reid.. . . . .	Yarrow, Alta.. . . . .	480-00
1606	F. Gottel.. . . . .	Grenfell, Assa.. . . . .	320-00
1614	C. F. Sealund.. . . . .	Lewisville, Alta.. . . . .	160-00
1616	Geo. Gordon.. . . . .	Medicine Hat, Assa.. . . . .	320-00
1617	W. J. Birnie-Brown.. . . . .	Cochrane, Alta.. . . . .	640-00
1620	Henry D. Mills.. . . . .	Wetaskiwin, Alta.. . . . .	160-00
1624	Frank Crampien.. . . . .	Fairmede, Assa.. . . . .	160-00
1626	H. Hill.. . . . .	Wolseley, Assa.. . . . .	160-00
1627	J. Marsh & J. I. Levigne.. . . . .	Beaumont, Alta.. . . . .	345-20
1629	H. S. Nicol.. . . . .	Maple Creek, Assa.. . . . .	160-00
1631	Miss R. J. Scaman.. . . . .	Wetaskiwin, Alta.. . . . .	627-50
1636	Henry Bowers.. . . . .	Duhamel, Alta.. . . . .	320-00
1667	Robt. Scott.. . . . .	Eagle Butte, Alta.. . . . .	640-00
1668	W. O. Chapman.. . . . .	Bentley, Alta.. . . . .	160-00
1669	Chas. Grager.. . . . .	Lethbridge, Alta.. . . . .	63-00
1641	C. J. Dawson.. . . . .	Cardston, Alta.. . . . .	160-00
1642	Jared Paisley.. . . . .	Macleod, Alta.. . . . .	400-00
1643	John McVicar.. . . . .	Fairmede, Assa.. . . . .	320-00
1644	Adam M. Baptie.. . . . .	Cochrane, Alta.. . . . .	320-00
1649	J. D. Edwards.. . . . .	Olds, Alta.. . . . .	160-00
1650	George Douglas.. . . . .	Priddis, Alta.. . . . .	160-00
1652	John Chemeika.. . . . .	Olds, Alta.. . . . .	640-00
1656	James Robertson.. . . . .	Cochrane, Alta.. . . . .	320-00
1658	Walter Glenn.. . . . .	Leavitt, Alta.. . . . .	605-00
1659	Wm. J. Martin.. . . . .	Rosemont, Ont.. . . . .	640-00
1674	S. A. Anderson et al.. . . . .	Wetaskiwin, Alta.. . . . .	480-00
1675	Thos. Harkness.. . . . .	Fletwode, Assa.. . . . .	320-00
1679	Dolphis Cyr.. . . . .	Pincher Creek, Alta.. . . . .	640-00
1680	E. J. Weatherby.. . . . .	Prince Albert, Sask.. . . . .	320-00
1682	Fred. Walherger.. . . . .	Leavitt, Alta.. . . . .	279-00
1683	John C. Rathhun.. . . . .	Ponoka, Alta.. . . . .	640-00
1684	W. C. Jamieson.. . . . .	Calgary, Alta.. . . . .	160-00
1687	Carl C. Johnston.. . . . .	Wetaskiwin, Alta.. . . . .	160-00
1689	Joshua Davies.. . . . .	Lethbridge, Alta.. . . . .	160-00
1690	Thomas A. Steven.. . . . .	Edmonton, Alta.. . . . .	88-00
1691	A. L. Ramsay.. . . . .	Olds, Alta.. . . . .	320-00
1694	Jas. Robertson.. . . . .	Medicine Hat, Assa.. . . . .	640-00
1696	Messrs. Cartier & Belguin.. . . . .	Wetaskiwin, Alta.. . . . .	320-00
1720	C. D. Plunkett.. . . . .	Pincher Creek, Alta.. . . . .	640-00
1723	John Llnham.. . . . .	Okotoks, Alta.. . . . .	640-00
1726	Charles Binnie.. . . . .	Longlakeon, Assa.. . . . .	160-00
1727	H. Hood.. . . . .	Grenfell, Assa.. . . . .	640-00

SESSIONAL PAPER No. 25

LESSEES of School Lands—*Concluded.*

Range No.	Name.	Address.	Area in Acres.
1728	Pierre Bourbls.. . . . .	Golden Plain, Assa.. . . . .	160-00
1729	John T. Parkor.. . . . .	Lethbrido, Alta.. . . . .	640-00
1731	David L. Hughes.. . . . .	Wayne Co., Nebraska, U.S.A.. . . . .	640-00
1732	Daniel Branlff.. . . . .	Grane Lake, Assa.. . . . .	160-00
1733	H. M. Hatfield.. . . . .	Yarrow, Alta.. . . . .	160-00
1734	G. H. Boyer . . . . .	Wapella, Assa.. . . . .	320-00
1735	Thomas Riley.. . . . .	Calgary, Alta.. . . . .	640-00
1737	Walter S. Sparks.. . . . .	American Falls, Idaho, U.S.A.. . . . .	640-00
1753	Peter C. D. Unruh.. . . . .	Rosthern, Sask.. . . . .	40-00
1754	Robert Gilmore.. . . . .	Macleod, Alta.. . . . .	640-00
1757	Thos. McNutt.. . . . .	Saltcoats, Assa.. . . . .	525-00
1761	Jos. N. Porter.. . . . .	Stony Beach, Assa.. . . . .	640-00
1762	William Houghton.. . . . .	Medicine Hat, Assa.. . . . .	160-00
1766	R. O. Sykes.. . . . .	Stand Off, Alta.. . . . .	640-00
1768	James F. Garrow.. . . . .	Macleod, Alta.. . . . .	142-00
1770	J. W. Ennis.. . . . .	Lacombe, Alta.. . . . .	160-00
1771	C. C. Clausen & G. Suvs.. . . . .	Wetaskiwin, Alta.. . . . .	640-00
1772	Richard Broderick.. . . . .	High River, Alta.. . . . .	320-00
1773	Wm. G. Hutchinson.. . . . .	Lamerton, Alta.. . . . .	160-00
1776	B. F. Pearson.. . . . .	Oxbow, Assa.. . . . .	160-00
1779	George Simpson.. . . . .	Ellisboro, Assa.. . . . .	638-00
1782	William Davis.. . . . .	Yorkton, Assa.. . . . .	640-00
1784	R. M. de Lapierre.. . . . .	Alma, Assa.. . . . .	160-00
1799	G. Segar.. . . . .	Whitewood, Assa.. . . . .	160-00
1800	H. R. Norrls.. . . . .	Wapella, Assa.. . . . .	158-00
1803	George Mollard.. . . . .	Foxleigh, Assa.. . . . .	640-00
1804	Mrs. K. E. Easton.. . . . .	Edmonton, Alta.. . . . .	160-00
1805	William Murray.. . . . .	Alameda, Assa.. . . . .	320-00
1807	C. Trelease.. . . . .	Cardston, Alta.. . . . .	640-00
1809	J. Wiran & P. Wagner.. . . . .	Balgonie, Assa.. . . . .	640-00
1815	Dugald McGregor.. . . . .	Okotoks, Alta.. . . . .	320-00
1821	Mrs. Helen Birney.. . . . .	Calgary, Alta.. . . . .	480-00
	Total area.. . . . .		77,127-98

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## HAY.

The following statement shows the names of persons who hold leases of Dominion lands for hay purposes :—

			Acres.
450	J. Gilchrist.. . . . .	Castleavery, Man.. . . . .	20·00
483	Wm. Thompson.. . . . .	Virden, Man.. . . . .	20·00
489	Frank L. Engman.. . . . .	Scandinavia, Man.. . . . .	40·00
960	Chas. A. Peaker.. . . . .	Yorkton, Assa.. . . . .	40·00
961	Jas. E. Peaker.. . . . .	Yorkton, Assa.. . . . .	40·00
1023	J. W. Thoroughgood.. . . . .	Moose Jaw, Assa.. . . . .	40·00
1035	John A. Brooks.. . . . .	Tumbell, Man.. . . . .	40·00
1043	F. C. Hawkins.. . . . .	Moose Jaw, Assa.. . . . .	12·00
1083	A. McKeown.. . . . .	Caron, Assa.. . . . .	40·00
1087	C. V. Carlson.. . . . .	Scandinavia, Man.. . . . .	37·00
1288	J. F. McVey.. . . . .	Tamarisk, Man.. . . . .	40·00
Total area.. . . . .			379·00

Statement giving the names of persons who hold leases of school lands for hay purposes.

			Acres.
261	H. Anticknap.... . . . .	Regina, Assa.. . . . .	160·00
404	Gagen & a Court.. . . . .	Moose Jaw, Assa.. . . . .	160·00
462	W. A. Thompson.. . . . .	Pine Lake, Alta.. . . . .	160·00
1435	G. R. McCartray.. . . . .	Moose Jaw, Assa.. . . . .	160·00
Total area.. . . . .			640·00

The following is a statement of the office work performed from July 1, 1900, to July 1, 1901:—

	Number.
Letters sent.. . . . .	25,840
Pages of memoranda and schedules . . . . .	7,697
Plans and sketches prepared.. . . . .	456

*Timber—*

Berths applied for . . . . .	253
“ granted . . . . .	118
“ cancelled . . . . .	43
Licenses for timber berths prepared (in duplicate) . . . . .	371
Instructions issued for survey of timber berths . . . . .	29
Returns of surveys of timber berths examined . . . . .	8
Returns of saw-mills received and verified.. . . . .	1,791
Permits to cut timber issued by agents also entered and checked	5,276
Accounts kept posted.. . . . .	484
Timber seizures entered and checked.. . . . .	223

## SESSIONAL PAPER No. 25

*Grazing—*

Applications for grazing lands received . . . . .	862
Leases of grazing lands authorized to be issued . . . . .	339
Leases of grazing lands issued . . . . .	241
Applications for hay lands . . . . .	56
Accounts kept posted: Grazing . . . . .	987
"    "    Hay . . . . .	15
Hay permit forms used by the Dominion Lands agents, also entered and checked over at this office. . . . .	5,171

*Mining—*

Accounts kept posted . . . . .	1,551
Applications for coal locations received. . . . .	860
Returns of survey hydraulic mining locations examined . . . . .	31
Applications for mining locations other than coal . . . . .	41
New entries and renewals for mining locations granted in Manitoba and North-west . . . . .	46
New entries and renewals for mining locations granted in Yukon Territory . . . . .	11,871
Applications for petroleum . . . . .	41
Water power. . . . .	4
Bed-rock flumes . . . . .	1
Applications for hydraulic mining locations . . . . .	140
Applications for gold dredging . . . . .	26
Hydraulic mining leases prepared. . . . .	20
Gold dredging leases prepared . . . . .	60

*Irrigation—*

Applications <i>re</i> irrigation recorded . . . . .	16
Memorials examined . . . . .	39
Plans examined . . . . .	27
Authorizations for construction of ditches issued . . . . .	14
Assignments of irrigation applications examined and recorded . . . . .	4
Certificates issued by inspector, examined and recorded . . . . .	27
Cancellation of irrigation applications issued and recorded. . . . .	19
Irrigation licenses issued (in triplicate) . . . . .	23
Drafts of patent for free right of way across Dominion and school lands prepared . . . . .	2

*Miscellaneous—*

Applications to purchase or lease land in the Yukon Territory received and dealt with during the course of the year. . . . .	103
Leases for water frontage and for other purposes prepared and sent to the Commissioner of the Yukon Territory. . . . .	27

G. U. RYLEY,  
Chief Clerk.

1-2 EDWARD VII., A. 1902

## DOMINION LANDS REVENUE

## STATEMENT of Receipts on account of Timber, Grazing, Hay,

Month.	Timber Dues.	GRAZING LANDS.		HAY LANDS.	
		Scrip.	Cash.	Scrip.	Cash.
1900.	8 cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
July . . . . .	12,793 19	396 71	594 26	.....	4,673 45
August . . . . .	21,968 61	538 74	356 37	.....	1,439 50
September . . . . .	15,514 22	288 43	248 42	20 00	295 40
October . . . . .	23,966 90	9,684 99	353 97	.....	345 72
November . . . . .	16,800 62	157 75	312 42	.....	15 00
December . . . . .	14,630 57	580 63	592 46	.....	31 30
1901.					
January . . . . .	9,224 30	818 71	603 91	.....	511 70
February . . . . .	11,555 85	416 85	389 22	.....	186 65
March . . . . .	10,669 50	598 65	494 48	.....	285 15
April . . . . .	10,926 12	536 34	398 54	.....	987 20
May . . . . .	41,939 13	309 74	252 71	.....	1,905 55
June . . . . .	19,350 23	335 45	219 52	.....	3,298 75
Over deposit	0 02	.....	.....	.....	.....
	209,399 32	14,671 99	4,726 28	20 00	13,994 77

TIMBER AND MINES BRANCH,  
OTTAWA, August 26, 1901.



## SESSIONAL PAPER No. 25

(YUKON REVENUE INCLUDED).

## Mineral and Irrigation for the fiscal year 1900-1901.

Coal.	Irrigation.	Mining fees.	Dredging, N.W.T.	Dredging, Yukon.	Hydraulic, Yukon.	Royalty on Gold.	Free Miner's Certificates.	Total.
¢ cts.	¢ cts.	¢ cts.	¢ cts.	¢ cts.	¢ cts.	¢ cts.	¢ cts.	¢ cts.
10 00	30 00	23,829 50				196,364 96	10,830 00	249,522 07
5 15		38,424 65	600 00		1,548 26	121,914 81	9,361 00	196,177 09
6 10		25,314 45			1,809 00	92,163 09	10,081 00	145,731 11
31 80	10 00	34,761 00			1,906 25	31,772 73	13,436 00	116,269 36
10 45	20 00	36,486 55	100 00		1,506 00	2,509 15	7,134 00	65,111 94
114 50		49,926 10	100 00		875 00	1,459 54	5,355 00	73,584 10
13 50	40 00	14,409 40	50 00	1,000 00	1,850 00	1,832 65	4,715 00	35,069 17
1 90	100 00	18,264 50	50 00		500 00	2,641 79	8,854 00	43,260 16
130 00	70 00	33,967 75	50 00		401 81	1,115 23	13,464 00	61,246 63
225 00	20 00	31,404 00	1,450 00	1,200 00	500 00	6,915 63	14,935 00	69,497 83
217 50	20 00	18,712 75	600 00	450 00		10,728 39	16,124 00	91,259 77
160 00	3 00	23,717 15			525 00	126,950 06	11,572 00	186,131 16
		0 50						0 52
925 90	313 00	349,518 30	3,000 00	2,650 00	11,412 32	596,368 03	125,861 00	1,332,860 91

1-2 EDWARD VII., A. 1902

## SCHOOL LANDS REVENUE.

B.—STATEMENT of Receipts on account of Timber, Grazing, Hay and Coal, on School Lands for the fiscal year 1900-1901.

Month.	Timber Dues.	Grazing Lands.	Hay Lands, Coal Lands	Totals.	Manitoba School Lands.	Assinibolia School Lands.	Alberta School Lands.	Saskatche- wan School Lands.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1900.									
July.....		287 85	1,290 95	1,508 80	1,180 40	143 25	180 25	4 80	1,508 80
August.....	21 25	237 56	293 43	552 24	281 16	123 06	143 47	2 35	532 24
September.....	88 50	361 85	13 00	463 35	112 88	103 97	246 56		463 35
October.....	54 75	231 50	1 80	288 05	112 45	17 30	138 30		288 05
November.....	74 00	216 93	10	291 03	108 14	12 91	166 23	3 75	291 03
December.....	111 31	473 08	1 90	586 29	184 89	93 60	307 80		586 29
1901.									
January.....	56 25	336 31	140 55	533 11	299 94	106 12	216 05	15 00	538 11
February.....	97 00	319 59	96 90	473 49	199 72	112 72	138 05	3 00	473 49
March.....	153 43	450 97	56 80	661 20	293 63	292 54	247 03	8 00	661 20
April.....	0 75	575 21	443 20	1,029 16	374 95	296 55	347 66	10 00	1,029 16
May.....	10 65	469 73	591 45	921 83	518 60	170 87	229 36	3 00	921 83
June.....	130 75	221 97	785 90	1,138 62	718 67	265 56	154 29		1,138 62
	788 64	4,132 55	3,485 98	8,432 17	4,196 43	1,650 45	2,535 09	50 20	8,432 17

TIMBER AND MINES BRANCH.  
AUGUST 26, 1901.

SESSIONAL PAPER No. 25

DOMINION LANDS REVENUE. (YUKON REVENUE INCLUDED.)

C.—REVENUE on account of Timber, Grazing, Hay, Minerals and Irrigation on Dominion Lands from July 1, 1872, to June 30, 1901, inclusive.

Fiscal Year.	Timber Dates.	GRAZING LANDS.		HAY LANDS.		Coal Lands.	Stone Quarries.	Rent of Mill Site.	Irrigation Revenue.
		Cash.	scrip.	Cash.	scrip.				
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1872 73	109 25								
1873 74	2,710 55					40 00	33 91		
1874 75	2,335 25					880 00	105 00		
1875 76	387 00			23 00		408 90	46 98		
1876 77	330 00			297 25		252 40	21 78		
1877 78	1,639 00			965 55		40 00	6 00		
1878 79	325 00			39,487 07			4 21		
1879 80	25,121 46			2,043 52		14 00	51 75		
1880 81	32,028 34			3,621 10		39 80	136 52		
1881 82	58,753 14	2,245 00		8,832 06		87 50	150 39		
1882 83	90,066 46	1,305 37		5,021 63		150 39	51 36		
1883 84	147,983 10	11,370 60		16,193 77		67 70	41 85	169 00	
1884 85	87,474 90	17,080 75		17,222 60					
1885 86	64,830 31	29,562 51	3,131 08	5,616 95					
1886 87	63,111 74	14,242 77	39,487 07	5,562 00					
1887 88	94,964 35	5,322 47	23,023 28	5,071 49					
1888 89	94,250 00	2,207 09	16,802 63	8,628 00					
1889 90	84,642 95	1,305 37	5,021 63	5,507 64					
1890 91	102,902 71	3,079 55	16,193 77	5,243 68					
1891 92	106,461 35	3,726 80	17,222 60	11,087 28					
1892 93	105,865 24	6,389 80	11,542 39	13,145 15					
1893 94	81,290 51	5,740 79	7,687 86	13,994 77					
1894 95	74,079 20	5,353 72	8,628 00	200 00					
1895 96	61,923 47	7,071 86	6,255 90	200 00					
1896 97	68,992 82	4,715 01	2,500 00	200 00					
1897 98	119,313 78	4,728 58	510 39	200 00					
1898 99	155,369 63	5,245 86	4,083 30	200 00					
1899 19 00	126,345 82	8,382 86	13,269 70	200 00					
1900 01	293,399 82	4,726 25	14,671 99	200 00					
Total	2,060,998 34	165,942 92	180,762 49	103,923 22	200 00	4,490 14	1,161 94	169 00	941 00

1-2 EDWARD VII., A. 1902

DOMINION LANDS REVENUE. (YUKON REVENUE INCLUDED.)  
 C.—REVENUE on account of Timber, Grazing, Hay, Minerals and Irrigation on Dominion Lands from July 1, 1872, to  
 June 30, 1901, inclusive—*Concluded.*

Fiscal Year.	MINING LANDS.							Royalty on Gold, Yukon Territory.	Fees Miner's Certificates.	Yearly Totals.	Yearly Totals Added from Beginning to June 30, 1901.			
	Fees, Man. and N. W. T.		Fees, British Columbia.		Fees, Yukon Territory.		Dredging Leases, Yukon Ter.					Hydraulic Leases, Yukon Ter.		
	\$	cts.	\$	cts.	\$	cts.	\$					cts.	\$	cts.
1872-73.										169 25	169 25			
1873-74.										2,710 55	2,879 80			
1874-75.										2,835 25	5,715 05			
1875-76.										887 60	6,602 65			
1876-77.										329 00	6,931 65			
1877-78.										1,629 00	8,560 65			
1878-79.										325 00	8,885 65			
1879-80.										25,121 46	11,407 11			
1880-81.										32,078 34	14,735 45			
1881-82.										61,638 14	15,354 59			
1882-83.										113,824 80	16,488 39			
1883-84.	14 00									159,904 60	17,088 99			
1884-85.	329 00									105,389 37	17,644 36			
1885-86.	157 00									98,708 73	18,632 09			
1886-87.	135 00	100 00								120,492 38	19,834 47			
1887-88.	212 00									126,264 03	20,098 50			
1888-89.	212 00									113,246 87	20,211 37			
1889-90.	77 00									130,964 47	20,342 84			
1890-91.	538 00									133,027 00	20,475 84			
1891-92.	420 00									130,054 56	20,605 83			
1892-93.	274 65									100,962 31	20,706 14			
1893-94.	34 00									93,290 46	20,800 60			
1894-95.	115 00									81,064 74	20,915 34			
1895-96.	205 00									84,824 01	21,000 35			
1896-97.	1,899 00									823,927 51	21,824 86			
1897-98.	1,397 00	8,812 71								1,293,836 82	23,118 68			
1898-99.	1,184 51	1,560 00								1,184,470 52	24,303 20			
1899-1900.	1,241 50	6,800 00								1,382,869 91	25,686 11			
1900-01.	860 00	3,000 00								6,457,495 11	6,457,495 11			
Total.....	9,306 16	20,262 71	348 80	953,221 59	139,655 50	27,305 47	2,192,645 41	596,168 82						

## SESSIONAL PAPER No. 25

## SCHOOL LANDS.

D.—STATEMENT showing the Revenue derived from Timber, Grazing, Hay, Stone Quarries and Coal Lands, commencing with the Fiscal Year 1883-4 and ending June 30, 1901.

Fiscal Year.	Timber Dues.	Grazing Lands.	Hay Lands.	Coal Lands.	Stone Quarries.	Total.	Province of Manitoba.	District of Assiniboia.	District of Alberta.	District of Saskatche- wan.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1883-84.	36 50	..	..	..	..	36 50	36 50	..	..	..	36 50
1884-85.	136 00	..	..	..	..	136 00	136 00	..	..	..	136 00
1885-86.	1,238 11	..	..	..	..	1,238 11	141 50	1,096 61	..	..	1,238 11
1886-87.	940 26	..	..	..	..	940 26	497 15	336 84	..	..	940 26
1887-88.	1,333 99	..	..	..	..	1,333 99	695 86	..	..	..	1,333 99
1888-89.	695 86	..	..	..	..	695 86	..	..	..	..	695 86
1889-90.	919 10	..	..	..	17 50	936 60	496 60	..	..	..	936 60
1890-91.	489 22	..	2,578 72	..	..	3,067 94	2,478 39	313 35	195 05	81 15	3,067 94
1891-92.	270 81	..	1,650 41	..	..	1,920 22	1,539 17	251 80	99 80	39 45	1,920 22
1892-93.	831 50	..	1,769 45	..	..	2,600 95	2,080 85	335 30	135 60	49 29	2,600 95
1893-94.	530 13	32 38	2,115 15	..	..	2,677 66	1,836 88	447 55	338 48	54 75	2,677 66
1894-95.	617 72	293 14	2,063 41	..	..	2,974 27	2,061 17	372 11	407 59	40 40	2,974 27
1895-96.	279 63	724 99	2,295 18	..	..	3,299 80	2,014 74	619 16	574 30	91 60	3,299 80
1896-97.	501 36	1,111 33	1,842 75	..	..	3,455 44	2,268 42	475 16	673 76	68 55	3,455 44
1897-98.	435 25	1,655 45	2,302 80	..	..	4,393 50	3,169 35	620 89	660 76	52 50	4,393 50
1898-99.	404 62	1,579 35	2,282 54	..	30 80	4,297 31	3,917 65	1,084 11	1,139 28	136 27	4,297 31
1899-1900.	545 53	2,911 98	2,699 18	10 00	0 45	6,040 14	2,860 16	1,229 31	1,936 17	74 50	6,040 14
1900-1901.	788 64	4,152 55	3,485 98	..	5 00	8,432 17	4,196 43	1,650 45	2,535 09	50 20	8,432 17
Total	10,974 23	12,404 21	25,064 57	45 80	17 95	48,536 77	30,249 68	8,832 64	8,715 88	738 57	48,536 77

1-2 EDWARD VII., A. 1902

## REVENUE ON ACCOUNT THE YUKON TERRITORY.

E.—STATEMENT of Receipts from Timber, Grazing, Hay, Hydraulic Mining, Royalty on Gold and Mining Fees for the Fiscal Year 1900-1901.

Month.	Timber Dues.		Grazing Lands.		Hay Lands.		Mining Fees.		Dredging.		Hydraulic.		Free Miner's Certificates.		Royalty on Gold.		Amount.		
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.			
1900.																			
July.....	6,652	33			1,923	00		23,357	50				10,830	00	196,364	96	239,367	79	
August.....	8,411	32			945	00		38,316	90		1,548	25	19,361	00	121,914	81	180,497	29	
September.....	9,068	26			203	50		25,231	85		1,800	00	10,081	00	92,163	69	138,547	80	
October.....	14,862	44			317	92		34,716	00		1,306	25	13,436	00	31,772	73	97,011	34	
November.....	8,291	71			15	00		36,366	30		1,506	00	17,134	00	2,506	15	55,792	16	
December.....	5,632	07						49,808	60		873	00	5,353	00	1,459	51	63,230	21	
1901.																			
January.....		492						14,371	00	1,000	00	1,850	00	4,715	00	1,832	65	24,312	75
February.....		5,358		51	20			18,554	50			500	00	8,854	00	2,611	79	35,008	86
March.....		3,056						33,830	25			401	81	13,464	00	1,115	23	51,867	49
April.....		2,141						31,389	00	1,300	00	500	00	14,835	00	6,915	53	57,091	42
May.....		8,323			100	00		18,680	25	450	00			16,124	00	10,738	39	54,406	06
June.....		2,633			553	00		23,094	65			525	00	11,572	00	126,950	66	165,928	40
Over paid.....								0	50							0	50		
Total.....		74,893		51	20			348,658	30	2,650	00	11,412	32	125,861	00	596,368	03	1,163,952	07

TIMBER AND MINES BRANCH.  
August 22, 1901.

SESSIONAL PAPER No. 25

REVENUE ON ACCOUNT THE YUKON TERRITORY.

F.—STATEMENT of Receipts from Timber, Grazing, Hay, Hydraulic Mining, Royalty on Gold and Mining Fees for each fiscal year from July 1, 1894, to June 30, 1901.

Revenue from	1894-1895.	1895-1896.	1896-1897.	1897-1898.	1898-1899.	1899-1900.	1900-1901.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Timber Dues				43,911 71	54,997 64	33,468 46	74,893 80	208,371 61
Grazing Lands				29 50	1,733 50	100 00	51 90	151 90
Hay Lands				132,565 50	3,500 00	7,596 75	4,057 42	13,417 17
Gold Drilling Leases				500 00	8,525 00	1,000 00	2,650 00	130,635 50
Hydraulic Mining Leases				297,423 55	575,812 79	733,041 04	11,412 82	27,393 47
Royalty on Gold				108,396 00	1,140 00	28,240 00	79,358 00	388,949 00
Mining Fees—Placer				33,324 94	64,980 10	62,280 00	49,905 00	210,690 04
Renovals				17,625 00	3,270 00	11,070 00	45,137 00	78,882 00
Relocations				243 00	115 00	4,385 09	6,260 00	14,445 00
Grants—Quartz	5 00	22 00	60 00	3,060 00	28,419 00	3,416 50	7,651 00	11,182 50
Certificate of Work.				3,060 00	3,750 95	12,644 50	11,531 00	50,654 50
Assignments.					305 00	5,551 00	2,730 25	12,641 20
Abstracts.					1,000 00			285 00
Abandonments								1,000 00
Bed Rock Flumes				30 00		291 50	681 50	1,005 50
Certificate of Partnership			20 00			620 00		1,420 00
Boat Fees					780 00		9,518 00	9,518 00
Forfeited Fees								507 50
Lay Overs					507 50	7,000 00	28,469 40	36,109 40
Payment in lieu of assessment work					100 00	3,000 00	10,500 00	13,500 00
Payment in lieu of assessment work with penalty						8,032 50	7,343 40	25,944 50
Registration of Licenses				633 00	7,935 69		550 00	1,472 50
Water Rights					160 00	762 50		1,472 50
Sale of Government Reserve on Bonanza Creek.						13,503 20	1,056 00	14,559 20
Stale of Government Claims						150 00		87,391 50
Infringements						125 00		525 00
Changing the name of a Claim						25 00	60 00	85 00
Inspection Certificates							30 00	30 00
Court Fees							686 75	686 75
Over deposit							0 50	0 50
Free Miners' Certificates.	5 00	22 00	1,220 00	610,257 20	947,334 58	938,461 10	1,038,091 07	3,535,790 85
Grand total								506,168 82
								4,131,959 77

TIMBER AND MINES BRANCH, OTTAWA, August 26, 1901.

1-2 EDWARD VII., A. 1902

## YUKON REVENUE.

G.—STATEMENT showing the total Gold production, the total exemption, the total amount upon which the 10 p. c. royalty was collected, and the amount of royalty paid as shown by returns from May 1, 1898, to June 30, 1898.

Month.	Total Gold Production.	Total Exemption.	Royalty 10 p.c. Collected on	Royalty 10 p.c. Paid.
1898.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
May.....	45,277 00	10,850 00	34,427 00	3,442 70
June.....	3,027,496 20	342,550 00	2,688,501 20	269,850 12
	3,072,773 20	353,400 00	2,732,928 20	273,292 82

TIMBER AND MINES BRANCH,  
OTTAWA, August 26, 1901.

## YUKON REVENUE.

H.—STATEMENT showing the total Gold production, the total exemption, the total amount upon which the 10 p. c. royalty was collected and the amount of royalty paid as shown by returns from July 1, 1898, to June 30, 1899.

Month.	Total Gold production.	Total Exemption.	Royalty 10 p.c. Collected on	Royalty 10 p.c. Paid.
1898.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
July.....	928,818 00	135,000 00	793,818 00	79,381 80
August.....	395,045 50	140,000 00	255,045 50	25,504 55
September.....	251,547 70	64,540 00	187,007 70	18,700 75
October.....	13,669 65	2,496 00	11,173 65	1,117 37
November.....	4,851 56	2,912 00	1,939 56	193 95
December.....	8,719 55	624 00	8,095 55	809 55
1899.				
January.....	6,552 76	4,784 00	1,768 76	176 94
February.....	4,868 29	624 00	4,244 29	424 41
March.....	15,431 40	3,952 00	11,479 40	1,147 93
April.....	43,889 57	15,400 00	28,489 57	2,848 92
May.....	844,606 18	180,703 00	663,903 18	66,390 28
June.....	5,064,282 86	1,148,622 02	3,915,660 84	391,565 92
	7,582,283 02	1,690,657 02	5,882,626 00	588,262 37

Royalty paid into Court.....	1,301 24
Gold mined by Government from claim No. 8 A, Dominion Creek.....	195 41
" " " between 3 and 4 " " .....	184 50
	589,943 52

TIMBER AND MINES BRANCH,  
OTTAWA, August 26, 1901.



SESSIONAL PAPER No. 25

## YUKON REVENUE.

I.—STATEMENT showing the total Gold production, the total exemption, the total amount upon which the 10 p. c. royalty was collected, and the amount of royalty paid as shown by the returns from July 1, 1899, to June 30, 1900.

Month.	Total Gold Production.	Total Exemption.	Royalty 10 p. c. Collected on	Royalty 10 p. c. Paid.
1899.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
July.....	664,205 72	208,389 82	455,824 90	45,582 49
August.....	1,521,708 96	311,740 16	1,209,968 80	120,996 88
September.....	924,907 09	187,413 99	737,493 10	73,749 31
October.....	371,947 82	63,863 02	308,084 80	30,808 48
November.....	176,599 48	29,988 48	147,511 00	14,751 10
December.....	84,531 76	31,976 26	52,555 50	5,255 55
1900.				
January.....				
February.....	42,179 62	19,333 22	22,846 40	2,284 64
March.....	96,968 23	42,500 33	54,467 90	5,446 79
April.....	59,839 70	21,667 80	38,171 90	3,817 19
May.....	796,866 25	313,642 65	483,223 60	48,322 36
June.....	5,069,710 01	1,272,137 91	3,797,572 10	379,757 20
	9,809,464 64	2,501,744 64	7,307,720 00	730,771 99
Trespass on Government claims.....				2,269 00
				733,041 04

TIMBER AND MINES BRANCH,  
OTTAWA, August 26, 1901

1-2 EDWARD VII., A. 1902

## YUKON REVENUE.

J.—STATEMENT showing the total Gold production, the total exemption, the total amount upon which the royalty was collected, and the amount of royalty paid as shown by returns from July 1, 1900, to June 30, 1901.

Month.	Total Gold Production.	Total Exemption.	Royalty payable on.	Royalty Paid.
1900.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
July.....	2,346,440 64	410,389 99	1,936,040 65	193,707 36
August.....	1,354,543 88	137,500 00	1,219,148 10	121,914 81
September.....	1,012,731 48	91,100 00	921,630 90	92,163 09
October.....	378,991 50	40,000 00	338,990 17	31,772 73
November.....	63,591 79	38,500 00	25,091 79	2,509 15
December.....	14,595 47	.....	14,595 47	1,459 54
1901.				
January.....	28,486 81	10,000 00	18,486 81	1,832 65
February.....	34,923 53	10,000 00	24,923 53	2,492 34
March.....	13,651 91	2,500 00	11,151 91	1,115 23
April.....	65,156 32	5,000 00	60,156 32	6,015 63
May.....	183,953 75	40,833 33	143,119 67	10,728 39
June.....	3,665,015 71	1,141,833 30	2 523,182 41	126,950 06
	9,162,082 79	1,927,666 62	7,236,517 73	592,660 98
Trespass on Government claims.....				3,707 05
				596,368 03

TIMBER AND MINES BRANCH,  
OTTAWA August 26, 1901.

SESSIONAL PAPER No. 25

## YUKON REVENUE.

K.—STATEMENT showing the Revenue collected on Free Miner's Certificates issued at the following places in Great Britain and the Dominion of Canada, during the years 1898, to June 30, 1901.

Agency.	1897-1898.	1898-1899.	1899-1900.	1900-1901.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Agent of Dominion Lands:—					
Braudon, Man. . . . .		10 00	30 00		40 00
Calgary, Alta. . . . .	650 00	100 00	260 00	215 00	1,225 00
Dauphin, Man. . . . .		10 00			10 00
Edmonton, Alta. . . . .	8,394 00	490 00	1,000 00	213 00	10,097 00
Kanloops, B.C. . . . .	50 00	20 00	10 00	10 00	90 00
Lethbridge, Alta. . . . .			10 00	30 00	40 00
New Westminster, B.C. . . . .	130 00		30 00		160 00
Prince Albert, Sask. . . . .	710 00	10 00	10 00		730 00
Winnipeg, Man. . . . .	570 00	900 00	320 00	280 00	2,070 00
Agencies within the Yukon:—					
Dawson . . . . .		169,152 00	79,526 00	76,260 00	324,938 00
Dalton Trail . . . . .		710 00	300 00	30 00	1,040 00
Dominion Creek . . . . .		3,950 00	8,284 00	7,219 00	19,453 00
Fort Oudahy . . . . .		350 00	1,140 00	140 00	1,630 00
Grand Forks . . . . .		27,502 00	18,298 00	18,893 00	64,693 00
Gold Run . . . . .			170 00	4,367 00	4,537 00
Hunker Creek . . . . .			3,850 00	5,216 00	9,066 00
Hootalinqua . . . . .			90 00	930 00	1,020 00
Lake Bennett . . . . .	7,904 00	80 00			7,984 00
Metwaston . . . . .		102 00	10 00		112 00
Selkirk . . . . .			1,952 00	405 00	2,357 00
Stewart River . . . . .		5,734 00	1,512 00	1,919 00	9,165 00
Sulphur Creek . . . . .			610 00	1,984 00	2,594 00
Tagish (Wood) . . . . .		2,416 00			2,416 00
Tagish (Miller) . . . . .		642 00	4,646 00	2,600 00	7,888 00
Tagish Lake . . . . .		9,246 00			9,246 00
Forty Mile River . . . . .				600 00	600 00
Upper Stewart River . . . . .				130 00	130 00
Collectors of Customs:—					
Ashcroft, B.C. . . . .	410 00				410 00
Atlin, B.C. . . . .		1,000 00	760 00	750 00	2,510 00
Glenora, B.C. . . . .	410 00	600 00			1,010 00
Montreal, Que. . . . .	840 00	176 00	70 00	30 00	1,110 00
Nanaimo, B.C. . . . .	4,292 00				4,292 00
Rosland, B.C. . . . .	20 00				20 00
Toronto, Ont. . . . .	270 00				270 00
Vancouver, B.C. . . . .	30,484 00	1,340 00	610 00	280 00	32,714 00
Victoria, B.C. . . . .	58,910 00	1,528 00	520 00	370 00	61,328 00
Ottawa, Department of the Interior . . . . .	1,890 00	822 00	2,192 00	2,495 00	7,399 00
Rat Portage, P. H. Austin . . . . .		340 00	380 00	300 00	1,020 00
London, The High Commissioner . . . . .	29 98	120 00	119 80	195 00	464 78
Liverpool, The Immigration Agent . . . . .	219 93				219 93
Glasgow, The Immigration Agent . . . . .	59 98	10 13			70 11
Total . . . . .	116,243 89	227,354 13	126,709 80	125,861 00	596,168 82

TIMBER AND MINES BRANCH,  
OTTAWA, August 26, 1901.

1-2 EDWARD VII., A. 1902

## No. 20.

## REPORT OF THE CROWN TIMBER AGENT AT WINNIPEG.

DEPARTMENT OF THE INTERIOR,  
CROWN TIMBER OFFICE,  
WINNIPEG, July 1, 1901.

The Commissioner of Dominion Lands,  
Ottawa.

SIR,—I have the honour to submit my report of the Winnipeg Crown timber agency for the year ended June 30 last. Schedules 'A' and 'B,' containing the usual statistical information, are appended hereto.

The following statement may be accepted as showing approximately the quantities of lumber disposed of during the year in Manitoba :—

	Feet, B.M.
Rat Portage Lumber Co., Rat Portage, Ont. ....	55,000,000
Beaver Mills, Rainy River, Ont. ....	6,000,000
Keewatin Mills, Keewatin, Ont. ....	12,000,000
Savanne Mills, Savanne, Ont. ....	5,000,000
Port Arthur Mills, Port Arthur, Ont. ....	4,000,000
Fort William Mills, Fort William, Ont. ....	8,000,000
Imported from British Columbia. ....	16,000,000
Manufactured under government license in Manitoba. ....	23,532,300
Cut under Dominion government permits for sale. ....	4,000,000
Taken under settlers' free permits (approximately). ....	6,000,000
Manufactured lumber imported from the United States. . . . .	11,000,000
	150,532,300

Although of the above quantity about 25,000,000 feet B.M., in the log, were imported from the United States, it is satisfactory to observe that, as regards manufactured lumber, our importation from the States is decreasing year by year. In the period to June 30, 1900, the quantity imported was in excess of 24,000,000 feet, while for the year now reported the quantity is but 11,000,000.

There is also a noticeable reduction in the quantity of shingles imported from the United States :—

Imported for year ending June 30, 1900. . . . .	10,235,000
Imported for year ending June 30, 1901. ....	2,340,000

## SESSIONAL PAPER No. 25

The American shingle is evidently being forced out of the market by the British Columbia product.

The prices for the various classes of manufactured lumber, lath and shingles are pretty much the same as for the preceding year, ranging from \$14 to \$20 for spruce, and from \$19 to \$36 per thousand feet for high grade stocks of pine, fir and cedar, &c.; laths, \$4 to \$4.50, and British Columbia shingles, \$2.75 to \$3.75 per M.

## LAC DU BONNET RAILWAY.

The completion of this branch of the Canadian Pacific Railway has had the effect predicted for it in my annual report for last year, and has led to increased lumbering operations in the country tributary to Winnipeg river. Reference to a map of the region will show plainly the very extensive area of timbered lands which is now accessible to market by means of this road. I understand that five million feet, B.M., of logs were taken out by J. D. McArthur last winter, as well as 175,000 railway ties. His mill, which is situated at the river terminus of the railway, is a first-class one of 125 horse power, and a capacity of 30,000 feet, B.M., per diem, and is equipped with all the latest improved finishing machinery.

It is roughly estimated that two or three hundred million feet of merchantable timber, lying along the Winnipeg and English rivers, can be manufactured at Lac du Bonnet. There is alleged to be in the territory in which this merchantable timber is to be found a much greater supply of poplar and spruce suitable for pulp wood, which will no doubt come into demand in due course.

## THE LAC DU BONNET MINING, DEVELOPING AND MANUFACTURING COMPANY.

This company has established at Lac du Bonnet an elaborate brick plant, having acquired an extensive body of clay suitable for brick-making. It is said that although the present output is only 30,000 per diem, the machinery has a capacity of 75,000. The company has received a highly favourable report of samples of clay, brick and vitrified brick and drain tiles. This is also a steam power plant, using saw-mill refuse both for boiler fuel and brick burning.

## MANITOBA AND SOUTH-EASTERN RAILWAY.

The south-eastern branch of the Canadian Northern Railway transported to Winnipeg during the year under review, 50,000 cords of wood, all of which was cut along this branch, with the exception of about 4,000 cords which was cut in Northern Minnesota.

## RECEIPTS.

It is gratifying to note that notwithstanding the reduction in the area of the lands under our control, consequent upon the handing over of large blocks to the provincial government, the Canadian Northern Railway, and as homesteads, the revenue of this office from timber, &c., shows a progressive and very substantial increase, as will be seen from the following figures :—

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Receipts for the preceding year.....	\$43,000 27
For the year covered by this report.....	59,155 02
	<hr/>
Showing an excess of revenue.....	\$16,154 75

## FUEL.

The approximation of the quantity of coal and cord-wood consumed in Manitoba and the Territories, as far west as Regina, yields this result :—

	Tons.
American anthracite.....	37,500
American bituminous.....	4,200
Canadian anthracite.....	6,500
Canadian bituminous (Galt).....	10,000
Canadian lignite (Souris).....	43,000
	<hr/>
	101,200
Canadian cord-wood (Winnipeg only).....	125,000 cords.

*Prices of coal f.o.b. at Winnipeg.*

	Per ton.
American anthracite.....	\$9 50
American bituminous.....	7 00
Canadian anthracite.....	9 00
Canadian bituminous.....	7 50
Canadian lignite (at Winnipeg).....	3 75
Canadian lignite (at Melita).....	2 60
Canadian lignite (at Brandon).....	3 20
Canadian lignite (at Regina).....	3 30

	Per cord f.o.b. at Winnipeg.
Canadian poplar.....	\$2 40 to \$2 60
Canadian tamarack.....	3 25 to 4 00
Canadian spruce.....	2 60 to 3 00
Canadian jack pine.....	3 00 to 3 50
American oak.....	3 75 to 4 25
American maple.....	5 00 to 5 50

The quantity of American fire-wood imported is very small and almost inappreciable.

## SESSIONAL PAPER No. 25

## IMPROVEMENT WORKS, ST. ANDREW'S RAPIDS.

As soon as these works shall have been completed (the date for completion is fixed in the contract as July 1, 1903), it is anticipated that the large areas of land contiguous to Lake Winnipeg and the lower portion of the Winnipeg and other rivers which discharge in the lake, and which are believed to carry vast quantities of spruce and other timber suitable for lumber and fuel, will be rendered accessible and capable of development. As I have in my land agency report alluded to the importance of rendering the Red river navigable (between the lake and Emerson), it is unnecessary to detail here the many valuable and beneficial results which may be expected to flow from this achievement. Not the least important of these results will be to open up some of the quarries to which the lake gives access, and to improve and cheapen our supply of building stone.

## MINING.

Of the large number of quartz claims filed in 1898, 1899 and 1900, not more than fifty are to-day in existence, the great majority of them having been allowed to lapse. Of the 50 claims now extant, I can report no substantial development in regard to any of them. There is no doubt about the presence of highly mineralised veins, but no great body of ore has as yet been uncovered. While the existing conditions are unfavourable it is to be noted that in many other mining camps a like hesitation has occurred, and that properties now richly productive were, in their early history, staked and abandoned repeatedly. It is not improbable that the application of sufficient capital to our own field may in time lead to profitable operations.

## GYPSUM AND CEMENT.

In my report as agent of Dominion Lands, mention is made of the satisfactory establishment of works by the Manitoba Union Mining Company, Ltd., for the treatment of the gypsum deposit which occurs in the vicinity of the north-eastern arm of Lake Manitoba, and of the large body of natural cement in the Peabina valley. It is difficult to over-estimate the benefit to the general industries of the province of a cheap and bountiful supply of these valuable products.

## FOREST FIRES.

It is satisfactory to report that during the last autumn and spring climatic conditions prevented the origin and spread of fires which have wrought such deplorable havoc and loss in the forest areas of the Winnipeg district in past years. I am sanguine that hereafter, in seasons when climatic conditions may favour the origin and spread of fires, the guardian service inaugurated by the Forestry branch of the department may do effective preventive work. The opening of roads and drains which is being pushed forward by an aggregate high expenditure by the municipalities, assisted by the provincial government, may be expected to largely promote the efforts of the rangers in applying the necessary preventives and suppressive measures.

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## ROUTINE WORK.

The past year has been a very busy one, and the staff has experienced difficulty in keeping up with the work, which at times could only be accomplished by working overtime.

The statement of work performed at the respective offices, following my report made as Inspector of Agencies, shows the volume of business transacted at this office during the year.

The number of letters received (land and timber) for the year was 16,178, and those sent out 16,314, a large increase over the former year.

The total collections by the two branches of the office—timber and lands—during the year amounted to \$90,678.37, an increase of \$20,500.71 over the preceding year. These figures do not include payments made at the department at Ottawa on account of the agency.

Respectfully submitted,

E. F. STEPHENSON,  
*Crown Timber Agent.*



## SESSIONAL PAPER No. 25

## SCHEDULE A.

STATEMENT of Receipts from Timber, Grazing, Hay and Mining Lands, Collected at the Winnipeg Agency, for the Fiscal Year ended June 30, 1901.

Month.	Bonus.	TIMBER DUES.						GRAZING LANDS.			HAY LANDS.			Mining Fees and dues.	Totals.
		Ground Rent.	Royalty.	Permits.	Seizures.	School Lands.	Dominion Lands.	School Lands.	Dominion Lands.	School Lands.	Dominion Lands.	School Lands.			
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1900.															
July.		293 23	1,437 44	626 75	38 90									290 00	3,852 29
August.		560 71	1,422 58	5,799 56	25 93	21 25	9 73							50 00	8,265 53
September.		280 68	1,224 75	1,290 66	5 00	85 00								72 50	2,909 19
October.		1,172 43	443 38	3,638 25		31 25								45 00	4,795 41
November.		132 82	1,493 71	2,383 24	7 35	79 25								115 00	4,222 37
December.		145 33	1,547 41	4,133 24		103 66	4 80							27 50	5,363 27
1901.															
January.		187 66	441 92	1,106 45	386 92	38 25	2 95							22 50	2,211 45
February.		7 50	158 26	374 51	67 46	93 50	4 45							40 00	745 68
March.		176 25	418 34	2,759 22	625 19	23 43								127 50	4,129 93
April.		536 99	548 58	548 58	179 88	10 00								5 00	1,624 65
May.		221 29	303 56	1,115 43	1,635 80	10 62								52 50	3,063 33
June.		313 95	74 83	1,994 45	545 00	130 00								132 50	3,689 63
Totals.		3,452 05	9,503 00	25,050 34	2,917 43	618 64	21 93							890 00	45,355 64
Payments made at H. C.		3,067 00		776 29	12 00	130 00									13,799 38
Grand totals.		9,067 00	9,503 00	25,826 63	2,929 43	748 64	21 93							890 00	59,155 02

E. F. STEPHENSON,  
Crown Timber Agent.

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## SCHEDULE

SHOWING number of Saw-Mills in Province of Manitoba operating under Gov-

Name.	Situation of Mill.	Kind of Power	Location of Limit.	Lumber Manufactured.	Lumber sold, from quantity manufactured and from that on hand from the previous year.	Lumber on Hand.
Peter McArthur...	Lake Winnipegosis..	Steam	Lake Winnipegosis..	2,061,715	1,501,211	1,373,341
Wm. Robinson.....	Selkirk.....	"	Lake Winnipeg.....	1,156,800	66,800	1,090,000
Jas. Drake.....	Bad Throat River..	"	Bad Throat River..	686,604	706,390	35,000
John Hanbury.....	Brandon.....	"	Duck Mountains.....	7,982,147	6,293,109	2,160,676
Dauphin Lumber Co	Riding Mountain...	"	Riding Mountain....	80,000	155,764	126,611
Kristjon Finnsson..	Icelandic River.....	"	Icelandic River.....	389,365	319,365	70,000
Middleton & Aske..	Riding Mountain...	"	Riding Mountain....	75,000	75,000	
J. D. McArthur.....	Lac du Bonnet.....	"	Lac du Bonnet.....	43,000	43,000	
Thomas & Co.....	Tp. 18, R. 3 E.....	"	Tp. 18, R. 3 E.....	32,072	32,072	
Jos. T. Thomas.....	"	"	"	306,076	177,076	129,000
T. L. Morton.....	Riding Mountain...	"	Riding Mountain....	1,400,000	1,000,000	400,000
A. L. Wells.....	Washow Bay.....	"	Washow Bay.....	207,075		207,075
Wm. Peden.....	Rosburn.....	"	Riding Mountain....	155,529	225,449	
Thos. Fulton.....	Tp. 38, R. 5 W. 2..	"	Tp. 38, R. 5 W. 2..	261,300	51,459	209,839
Shaw Bros.....	Riding Mountain...	"	Riding Mountain....	1,210,000	929,340	1,099,171
D. E. Sprague.....	Winnipeg.....	"	Roseau River.....	1,500,000	2,112,829	949,089
D. H. Harrison.....	Ochre River.....	"	Riding Mountain....	830,000	457,795	481,518
David Ross.....	Whitemouth.....	"	Whitemouth River..	770,750	928,076	
Theo. A. Burrows...	Garland.....	"	Pine River.....	530,000	1,114,575	131,338
Lac du Bonnet.....	Lac du Bonnet.....	"	Lac du Bonnet.....	340,000		340,000
J. H. McClure.....	Tp. 19, R. 2 E.....	"	Tp. 19, R. 2 E.....	208,752	172,752	36,000
Hooker & Co.....	Pt. Grande Marais..	"	Pt. Grande Marais..	412,000	246,757	243,000
Mackenzie, Mann & Co	Fisher's Siding....	"	Sinclair River.....	2,894,175	2,144,175	750,000
			Totals.....	23,532,300	18,662,944	9,831,618

NOTE.—This statement does not include railway ties cut under permit, of which there would be

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B.

ernment License, for the year between June 30, 1900, and June 30, 1901.

Shingles Manufactured.	Shingles sold from quan. mfd. and from that on hand from prev. year.	Shingles on hand.	Lath Manufactured.	Lath sold from quan. mfd. and from that on hand from previous year.	Lath on hand.	R'y ties manufactured.	R'y ties sold.	Date of Last Return.	Remarks
140,000	135,250	4,750	141,000	115,800	25,200	.....	.....	June 30, 1901.	
.....	.....	.....	.....	.....	.....	3,811	.....	" "	
.....	.....	.....	.....	.....	.....	.....	.....	" "	
.....	.....	.....	.....	.....	.....	25,237	25,237	" "	
.....	.....	.....	.....	.....	.....	.....	.....	" "	
97,050	97,050	.....	.....	.....	.....	.....	.....	" "	
.....	.....	.....	.....	.....	.....	.....	.....	June 30, 1901.	
.....	.....	.....	.....	.....	.....	.....	.....	" "	
351,500	183,750	230,250	111,150	138,950	8,550	.....	.....	" "	
.....	.....	.....	.....	.....	.....	3,138	3,138	" "	
45,500	46,500	1,000	.....	.....	.....	1,907	1,907	" "	(The lumber and ties shown
47,500	396,250	.....	55,950	351,150	.....	30,304	30,304	" "	(as mfd. cut under permit.
.....	.....	.....	.....	.....	.....	66,487	35,205	" "	This lumber, as well as the
.....	.....	.....	.....	.....	.....	.....	.....	" "	ties, was cut under per-
.....	.....	.....	.....	.....	.....	.....	.....	" "	mits, before berths
.....	.....	.....	.....	.....	.....	.....	.....	" "	changed to license system.
681,550	858,800	236,000	308,100	605,900	33,750	130,884	95,791		

approximately, 485,000.

E. F. STEPHENSON,  
Crown Timber Agent.

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## No. 21.

## REPORT OF CROWN TIMBER AGENT AT NEW WESTMINSTER.

DEPARTMENT OF THE INTERIOR,  
CROWN TIMBER OFFICE,

NEW WESTMINSTER, B.C., August 22, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I beg to submit my annual report for the twelve months ended June 30, 1901.

The receipts of this agency for the fiscal year ended June 30, 1901, amounted to \$23,134.70.

I also enclose you schedule of mills situated within the Dominion railway belt in the province of British Columbia, which gives the usual statistics respecting the lumber market.

I may say that our collections do not appear to be as large as in any of the previous years, owing to a number of rebates having been paid on account of burnt timber, &c., which had been previously collected, but I take pleasure in stating that there is a prospect of increased revenue for the next fiscal year.

The lumbermen of the province are expecting a very largely increased business with the North-west Territories and Manitoba, owing to the excellent prospects of this year's crops. In fact, orders are coming in so rapidly at the present time that they are unable to keep up with them.

The export trade to foreign countries, namely, China, Japan, Australia, New Zealand and South America, has not been equal to that of previous years, but is showing a decided improvement.

The provincial government have decided on building a railway and traffic bridge across the Fraser river at the city of New Westminster, which will add very materially to the business of the community.

I may state that the salmon catch this season was unprecedented, which will likewise tend to greatly increase the trade of the province.

The inauguration of the fire wardency system has been of marked benefit so far. Numerous fires have started, which have been put out promptly by the fire wardens, who are actively patrolling their districts and paying strict attention to their duties. The present season being very dry, the danger of fire is very considerable as yet, and will require constant vigilance on the part of the wardens. I might respectfully suggest that the number of fire wardens be increased, as their territories are altogether too large, in consequence of which the rangers are not able to give the attention that they otherwise would, if confined to more limited areas.

I am, sir, your obedient servant,

JAMES LEAMY,  
*Crown Timber Agent.*

## SESSIONAL PAPER No. 25

## STATEMENT of Receipts of New Westminster Crown Timber Agency for Fiscal Year ended June 30, 1901.

Month.	Ground Rent.	Royalty.	Permit Dues.	Seizure Dues.	Total.
1900.					
July.....	\$ 162 92	8 988 61	79 45	13 26	1,244 24
August.....	25 53	1,873 09	18 00	.....	1,916 62
September.....	680 47	323 15	65 00	55 60	1,124 22
October.....	5 79	699 28	4 94	.....	710 01
November.....	.....	624 89	63 60	166 56	855 05
December.....	110 05	358 79	91 84	.....	560 68
1901.					
January.....	1 28	286 74	108 25	.....	396 27
February.....	.....	895 28	132 75	.....	1,028 03
March.....	0 65	1,158 64	115 84	.....	1,275 13
April.....	10 14	915 55	857 15	.....	1,782 84
May.....	1,221 23	167 10	122 05	510 24	1,960 62
June.....	639 12	773 77	96 25	500 00	2,009 14
	2,857 18	9,004 89	1,755 12	1,245 66	14,862 85

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## List of Mills operating in Dominion Railway Belt of British Columbia ended June

Name of Owner	Where Situated.	Capacity of Mill.	Kind of Power.	Operating on Limit No.	Where Situated.	Quantity of lumber manufactured.
		Ft.				Ft.
I. R. & T. S. Reilly	Ottertail	7,000	Steam	5	Kicking Horse river	526,800
W. C. Wells	Palliser	30,000	"	3 & 29	" & Tp. 25, 19, W 5. M	2,732,300
Columbia River Lumber Co	Golden	40,000	"	16, 17, 231 232	Columbia river	6,231,672
"	Beaver	100,000	"	14 & 15	" & Tp. 20, 10, W. 6 M	2,962,787
Fred. Robinson	Revelstoke Station	25,000	"	49, 207, 118 123	Columbia river	1,782,873
Yale-Columbia	Nakusp	30,000	"	114	"	551,620
Fred. Robinson	Revelstoke Station	25,000	"	116 & 117	"	
Columbia River Lumber Co	Kualt	25,000	"	71, 72, 78, 66, 45, 239	Tappen Sid'g., Notch Hill	1,581,844
Shuswap Milling Co.	Kamloops	10,000	"	171	Tp. 20, 13, W. 6 M.	
Harrison River Mills T. & T. Co	Harrison River	75,000	"	63 & 227	Harrison river	2,932,346
William Sulley	Ruskin	25,000	"	Not opertg	"	
McLaren Ross Lumber Co.	Millside Station	120,000	"	"	"	
Brunette Saw-mill Co.	Sapperton	70,000	"	33, bk. 2, 138	Stave river and lake Mud bay	348,232 6,598,423
B. C. Mills T. & T. Co.	New Westminster	90,000	"	B & 176	"	
"	Vancouver	225,000	"	Not opertg	"	
Grant & Kerr	Leadner	20,000	"	Q. 51, 103	Stave river & Mud bay	2,460,130
Pacific Coast Lumber Co.	Lulu Island	40,000	"	Not opertg	"	
E. H. Heaps & Co.	Vancouver	75,000	"	33, bks. 1, 3 & 4, 150, 185, 96	Stave river	110,392
Hastings Shingle Mfg. Co.	"	50,000	"	52	Port Moody	1,636,434
Shuswap Milling Co.	Greely Creek	75,000	Water	64	Greely creek	
Canadian Pacific Lum. Co.	Port Moody	75,000	Steam	111	Port Moody	687,600
G. W. Phipps	Vancouver			69 & 209	Deer lake	899,540
Peter Ryan						
Ashcroft Water, Electric and Improvement Co.	Kamloops	50,000		240 & 263		834,823
K. Mikuni	Vancouver			246	Burrard Inlet	
						32,877,216

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and Statement showing Quantity of Timber manufactured during fiscal year 30, 1901.

Quantity of lumber sold.	Quantity of lumber on hand.	Quantity of shingle manufactured.	Quantity of shingle sold.	Quantity of shingle on hand.	Quantity of laths manufactured.	Quantity of laths sold.	Quantity of railway ties manufactured.	Quantity of railway ties sold.	Quantity of railway ties on hand.	No. of Mill returns received.	Date of last return.
Ft.	Ft.	Cords of bolts.	Cords of bolts.	Cords of bolts.			Pcs.	Pcs.	Pcs.		1901.
439,458	157,342						7,000	7,000			4 June 30.
1,904,975	2,453,872									8	30.
2,908,491	4,250,983				5,500	5,500	90,101	90,101		18	30.
3,684,576	1,650,614						33,460	33,460		8	30.
1,422,442	590,000				318,000	318,000				16	30.
551,620										28	30.
										8	30.
1,674,474	2,892,070						86,764	86,764		18	30.
										4	30.
2,932,346	177,863									20	30.
										4	30.
										3	30.
348,232										24	30.
8,894,193	4,600,277									40	30.
1,568,101	892,026									4	30.
										28	30.
										4	30.
110,392		1,792½	985	807½						24	30.
1,112,886	450,000	2,195	1,945	250						4	30.
										4	30.
687,000										20	30.
899,540										8	30.
	834,823						7,531		7,531	4	30.
		1,246	785½	460½						3	30.
29,228,729	18,958,870	5,233½	3,715½	1,518½	323,500	323,500	224,806	217,326	7,531	306	

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## No. 22.

## REPORT OF CROWN TIMBER AGENT AT CALGARY.

DEPARTMENT OF THE INTERIOR,  
CROWN TIMBER OFFICE,  
CALGARY, ALTA., August 23, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to inclose the following statements for the 12 months ending June 30, 1901:—

Schedule 'A.'—Statement of receipts on account of Crown timber, &c., covering the period referred to, amounting to \$8,570.03.

Schedule 'B.'—General office work.

Schedule 'C.'—Showing the saw-mills within the Crown timber agency operating under government license, to June 30, 1901.

The lumber trade has been very brisk this year, a large quantity having to be brought in from points in British Columbia.

I am, sir, your obedient servant,

J. R. SUTHERLAND,  
*Crown Timber Agent.*



SESSIONAL PAPER No. 25

## SCHEDULE A.

STATEMENT of receipts for twelve months ending June 30, 1901.

Month.	Dominion Lands.	School Lands.	Total.
1900.	8 cts.	8 cts.	8 cts.
July.	1,423 96	19 40	1,443 36
August.	424 25	9 10	433 35
September.	555 82	50 31	606 13
October.	878 66	.....	878 66
November.	379 15	25 60	404 75
December.	230 84	38 40	269 24
1901.			
January.	968 02	6 40	974 42
February.	127 28	6 40	133 68
March.	687 59	.....	687 59
April.	594 67	25 60	620 27
May.	539 62	32 50	572 12
June.	1,523 01	23 45	1,546 46
	8,332 87	237 16	8,570 03

J. R. SUTHERLAND,  
*Agent.*

## SCHEDULE B.

GENERAL Office Return of the Calgary Crown Timber Agency for the year ending June 30, 1901.

Description of Return.	Number.	COMPARED WITH LAST YEAR'S REPORT.		Remarks.
		Increase.	Decrease.	
Number of letters written (including Dominion lands).	4,588	1,848		
" " received (including Dominion lands).	6,934	700		
" of permits issued subject to dues.	12	2		
" of free permits issued.	180	17		
" of mill returns received and verified.	24	2		

J. R. SUTHERLAND,  
*Agent.*

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## SCHEDULE C.

Showing the Saw-mills in the Calgary Crown Timber Agency operating under Government Licenses, for the year ending June 30, 1901.

No.	Owner or Owner and Assignee.	Mill Where Situated.	Kind of Power.	Horse Power.	Commenced operations.	Description of Timber.	Location of Limit.	Quantity of lumber manufactured during year ended June 30, 1901.	Quantity sold from and manufactured in 1900, and on hand July 1, 1901.	Quantity of lumber on hand June 30, 1901.	Quantity of shingles m <sup>td</sup> and sold since July 1, 1899.	Date of last return.	No. of returns.	Remarks.
1	Hon. Peter McLaren . . . . . Mountain Hill	Mill Creek . . . . .	Water	20	1882 S. and F. . . . .	S. and F. . . . .	Mill Creek . . . . .	55,448	120,895	19,196	1901. June 30	4		
2	Hon. Peter McLaren . . . . . McLeod Mill.	.....	Steam	40	1888 S. and F. . . . .	S. and F. . . . .	Old Man's River	2,745,810	2,655,534	693,274	..... " 30	4		
3	Ean Claire and Bow River Lumber Co. . . . .	Calgary . . . . .	Steam	65	1887 can wk 175	Fir, Spruce and Cypress pine	Kananaskis Riv.	3,353,302	2,572,972	2,527,677	..... " 30	4		
4	R. G. Belvedere, owner, operated by C. Terry.	Cardston . . . . .	Steam	25	1891 S. and F. . . . .	S. and F. . . . .	St. Mary's River	40,000	56,000	.....	1900. Dec. 31	2		
5	John Lineham . . . . .	Dewdney . . . . .	Steam	50	1890 S. and F. . . . .	S. and F. . . . .	Sheep Creek . . . . .	1,251,750	1,246,369	701,484	..... June 30	4		
6	H. B. DeWolf . . . . .	N <sup>th</sup> Fork Old Man's River.	Steam	25	1898 S. and F. . . . .	S. and F. . . . .	Old Man's River	9,000	30,800	5,213	..... " 30	4		
7	Wm. Sutherland . . . . .	Cypress Hills.	Steam	.....	.....	.....	.....	329,500	146,500	.....	..... M <sup>ch</sup> 31	3		
								7,786,810	6,823,070	3,946,844				

J. R. SUTHERLAND,  
Agent.

No. 23.

REPORT OF CROWN TIMBER AGENT AT PRINCE ALBERT.

DEPARTMENT OF THE INTERIOR,  
CROWN TIMBER OFFICE,  
PRINCE ALBERT, SASK., July 23, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to inclose herewith the following statements for the year ending June 30, 1901:—

Schedule 'A.'—Statement of receipts on account of Crown timber, grazing, mining and hay.

Schedule 'B.'—Statement showing saw-mills operating under government license.

Schedule 'C.'—Statement showing general official work during the year.

I am, sir, your obedient servant,

JNO. McTAGGART,  
*Crown Timber Agent.*

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## SCHEDULE A.

STATEMENT of Receipts from Timber, Grazing and Hay lands at the Crown Timber Office, Prince Albert, for the twelve months ending June 30, 1901.

Month.	Dominion Lands.	School Lands.	Total.
1900.	\$ cts.	\$ cts.	\$ cts.
July . . . . .	636 58	4 90	641 48
August . . . . .	27 17	2 55	29 72
September . . . . .	1,434 80		1,434 80
October . . . . .	1,354 43		1,354 43
November . . . . .	409 80		409 80
December . . . . .	48 82		48 82
1901.			
January . . . . .	1,095 48	15 00	1,110 48
February . . . . .	613 76	3 00	616 76
March . . . . .	196 88	6 40	203 28
April . . . . .	326 78	10 00	336 78
May . . . . .	1,270 04	3 00	1,273 04
June . . . . .	28 85		28 85
Total . . . . .	7,443 39	44 85	7,488 24
Collected at head office . . . . .			28,271 38
	Grand total . . . . .		35,759 62

Certified correct.

JOHN McTAGGART,  
*Crown Timber Agent.*

CROWN TIMBER OFFICE,  
PRINCE ALBERT, July 11, 1901.

SESSIONAL PAPER No. 25

SCHEDULE B.

STATEMENT showing Saw-mills in the Prince Albert district operating under Government License, during the year ending June 30, 1901.

Name of Owner.	Horse power and kind.	Capacity per 12 hours.	Commenced operations.	Description of timber.	Where cut.	Quantity of lumber manufactured during the year.	Quantity of lumber sold.	Number of singlets manufactured during the year.	Number of singlets sold during the year.	Date of last return.
James Sanderson.	50 steam	25,000	1890	Spruce.	Limits north of Stungeson Lake.	1,912,925	1,828,871	142,000	195,000	June 30, 1901.
Wm. Cowan & Co.	50 "	25,000	1890	"	Limits up Little River.	3,080,083	1,940,800	532,000	328,750	"
J. W. Shannon & Co.	30 "	10,000	1890	"	Limits up Little River.	567,515	264,994			"
							4,084,665			

JOHN McTAGGART,

Crown Timber Agent.

CROWN TIMBER OFFICE,  
PRINCE ALBERT, July 23, 1901.

1-2 EDWARD VII., A. 1902

## SCHEDULE C.

General return of the Crown timber office, Prince Albert, for the year ending June 30, 1901 :

Timber permits issued.....	343
Hay permits issued.....	65
Timber seizures.....	10
Free miner's certificates.....	—
Mill returns received.....	28

I am, sir, your obedient servant,

JNO. McTAGGART,  
*Crown Timber Agent.*

CROWN TIMBER OFFICE,  
PRINCE ALBERT, July 23, 1901.

## No. 24.

## REPORT OF CROWN TIMBER AGENT AT EDMONTON.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
EDMONTON, ALBERTA, September 9, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to inclose herewith schedules A and B, relating to the work of the timber and mines branch of this agency, for the year ending June 30 last.

The revenue collected at this office, and including payments made at head office, was \$10,262.01.

I am, sir, your obedient servant,

A. NORQUAY,  
*Acting Crown Timber Agent.*

1-2 EDWARD VII., A. 1902

## SCHEDULE 'A.'

STATEMENT of Receipts from Timber, Grazing, Hay and Mining at the Edmonton Office, and including payments made at Head Office, for the year ending June 30, 1901.

Month.	Amount.	Month.	Amount.
1900.	\$ cts.	1901.	\$ cts.
July.	247 67	January.	329 18
August	279 38	February.	1,410 84
September.	597 54	March.	661 03
October	434 41	April.	1,893 79
November.	380 45	May	3,431 17
December.	163 50	June.	433 05
		Total	10,262 01

## SCHEDULE 'B.'

RETURN of Saw-mills operating in Edmonton Crown Timber Agency under Government License during the year ending June 30, 1901.

Name of Owner or Owner and Assignee.	Where situated.	Kind of power.	No. of horse power.	Operations began.	Logs cut at limit No.	Quantity of lumber manufactured in period.	Quantity of lumber sold in period.	Date of last return forwarded to H.O.	Kind of timber.	No. of returns.
D. R. Fraser & Co.	Edmonton.	Steam	1899	788	712,373	1,177,319	June, 1901	Spruce	4	
Walter & Humberstone.	Strathcona	"	80	1898	799	545,596	1,032,534	March, 1901	"	3
"	"	"	80	1900	864	217,755	217,755	" 1901	"	3
Leopold E. Benz	Wetaskiwin	Not given.	1900	860	50,000	20,000	June, 1901	"	4	
Bank of Ottawa assigned to D. R. Fraser & Co.	Edmonton.	Steam	1900	496	855,060	245,601	" 1901	"	1	
G. A. Love	Red Deer	Not given.	1901	911	277,000	"	" 1901	"	2	
C. H. Swanson & L. Petersen.	Wetaskiwin	"	1901	949	9,872	9,872	" 1901	"	2	
J. F. Fetherstonhaugh.	Ft. Saskatchewan	"	1901	910	40,000	40,000	" 1901	"	2	
"	"	"	1901	956	"	"	" 1901	"	1	
D. W. McKenzie	Half Moon Lake, Tofteld.	"	1901	849	75,000	13,563	" 1901	"	2	
					2,782,656	2,756,664				



## No. 25.

## REPORT OF THE ORDNANCE AND ADMIRALTY LANDS BRANCH.

DEPARTMENT OF THE INTERIOR,  
ORDNANCE AND ADMIRALTY LANDS BRANCH,  
OTTAWA, August 10, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to submit the usual report on the transactions of this branch of the department for the fiscal year ending June 30, 1901.

The subjoined statements are similar to those prepared in previous years. They include :—

(A) Statement of sales made since the preparation of the last report. This includes lots redeemed by Ottawa tenants in accordance with the provisions contained in the leases originally granted by the Imperial authorities. Total amount, \$9,631.35, of which sum \$6,750.35 has been received on account.

At Toronto, lot No. 1, North Wellington avenue, containing 6,240 superficial feet, was sold at public auction for \$550, on the usual terms governing ordnance lands sales, namely : One-fifth to be paid at the time of sale and the balance in four equal annual instalments, with interest at 6 per cent per annum. The presence of a lumber yard and a cattle market in the near vicinity detracted from the value of the lot, so that the amount received being considerably in advance of the value placed on it by the department, the sale may be considered satisfactory.

At Niagara-on-the-Lake, six lots, each two-thirds of an acre in area, being a subdivision of the hospital lots, were sold at public competition for the sum of \$1,980, or an average price of \$330 per lot, or \$495 per acre, on the usual conditions governing ordnance lands sales, as above mentioned.

At Fort Erie, twenty-two lots, averaging about an acre in area, and five narrow strips of land surveyed off the abandoned right-of-way of the Buffalo, Brantford and Lake Huron Railway, were sold at public auction for the sum of \$4,611, or for an average price of \$206.11 per lot, or \$211.11 per acre, a considerable advance on the upset price, and when compared with the values obtained for the surrounding land, the amount received is one with which the department should be satisfied. Of the total amount realized by the sale, 86.66 per cent, or \$3,997.32 has been received on account. A small lot containing 2,553.88 superficial feet, the last of a number of small lots referred to in my last report, which were surveyed off the abandoned right-of-way aforementioned, and across which it was necessary for the owners of the adjoining lots to pass to attain the street, was sold for \$6.23, being at the same rate per acre as that paid for the adjoining lot, together with a proportionate part of the cost of survey.

In the township of Nepean, seven lots, forming part of lot K, concession C, being all the lots in that locality remaining undisposed of from the sale held there last year, were sold at public competition for \$387, or an average price of \$55.28 per lot, or \$1.160 per acre, on the usual conditions governing ordnance lands sales.

Lot No. 194, of the parish of Ste. Anne de Sorel, at Sorel, P.Q., comprising an area of 43.56 arpents, and being a continuation of land in the above mentioned parish, whose proprietors had occupied this lot for many years and made improvements

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thereon, was sold for \$87.12, or for \$2 per arpent, the rate at which similar land in the vicinity had been sold.

At Ottawa the consideration money for twelve lots in the city, amounting to \$1,994.48, has been paid, and letters-patent therefor have been issued, in accordance with the terms of the original leases granted by the Imperial authorities.

At Quebec the sale of two lots, disposed of at public auction in 1876, was completed by the payment of the balance of purchase money, and interest accrued thereon, amounting to \$1,512.80.

Permission to cut hay on the Longueuil farm (containing 190 acres) at Longueuil, P.Q., was disposed of by tender for the sum of \$120, and the farm was subsequently leased to Joseph Lapointe for five years, at \$300 per annum.

Lot No. 11 of the ordnance reserve at Grand Falls, N.B., was leased to Frederick A. Howard for a term of 21 years.

(B) Statement showing localities on account of which moneys have been received during the fiscal year. Total amount, \$14,604.47.

The contingent expenses of the branch for the period ending June 30, 1901, were \$923.12. Of this amount \$379.92 was paid for salaries, \$245.08 for professional services, \$217.03 for advertising, and \$81.09 for sundries.

(C) Statement showing the receipts month by month, divided into principal, rent or interest, and fees.

(D) Statement showing the amount due and remaining unpaid June 30, 1901, in the several localities where ordnance lands are situated, classified as rent or interest, and principal moneys. The total amount shown to be due is \$30,824.57—an increase, when compared with 1900, of \$1,454.31, to be accounted for by the number of sales held during the year, and by the \$800 additional rental due by the Quebec government. Of the amount remaining due and unpaid by tenants, \$18,150 is due by the government of the province of Quebec, and \$4,942.26 by lessees of ordnance lands in the city of Ottawa.

The routine work of the office compares favourably with that of previous years. During the year 413 letters were received, 540 letters were written, and upwards of 1,200 notices and statements of accounts mailed to tenants and purchasers in arrears; 24 assignments were registered, 29 drafts of letters-patent were prepared, and 89 warrants issued for the Bank of Montreal at Ottawa to receive moneys. In addition to this, upwards of 600 accounts now open with the respective purchasers and tenants of ordnance lands have been carefully kept.

I am, sir, your obedient servant,

JAS. N. FERGUSON,  
*Clerk in Charge.*

## SESSIONAL PAPER No. 25

'A.'—STATEMENT of Sales made during the year ending June 30, 1901.

Locality	Number of lots Sold or Redeemed.	Amount.	Amount Received on Account.
		8 cts.	8 cts.
Fort Erie .....	28 lots .....	4,632 75	4,063 75
Nepean .....	7 lots part of lot K., concession C .....	387 00	135 00
Niagara .....	6 lots .....	1,980 00	336 00
Ottawa .....	12 lots redeemed .....	1,994 48	1,994 48
Toronto .....	1 lot .....	550 00	110 00
Sorel .....	1 lot .....	87 12	87 12
		9,631 35	6,756 35

JAS. N. FERGUSON,  
*Clerk in Charge.*

DEPARTMENT OF THE INTERIOR,  
ORDNANCE AND ADMIRALTY LANDS BRANCH,  
OTTAWA, August 10, 1901.

'B.'—STATEMENT showing the several localities on account of which moneys have been received during the fiscal year ending June 30, 1901.

Locality.	Amount.	Locality.	Amount.
	8 cts.		8 cts.
Amherstburg .....	2 00	Brought forward .....	10,017 48
Burlington Beach .....	260 00	Oxford .....	9 20
Charlottetown .....	19 00	Point Edward .....	40 00
Dalhousie .....	34 23	Point Pelee .....	210 00
Edmundston .....	1 00	Prescott .....	1 00
Elmsley .....	9 70	Quebec .....	1,512 80
Fort Cumberland .....	80 00	Queenston .....	1 00
Fort Erie .....	4,043 23	Rondeau .....	10 00
Grand Falls .....	442 52	Shelburne .....	32 00
Grenville .....	2 20	Sorel .....	114 29
Kingston .....	327 50	St. Croix .....	1 00
Longueuil .....	422 00	Toronto .....	2,450 00
Montreal .....	1 00	Wolford .....	117 80
Nepean .....	511 53	Registration fees .....	57 90
Niagara .....	407 00		
Oromocto .....	0 25	Refund .....	10 00
Ottawa .....	3,385 32	Net receipts .....	14,504 47
Owen Sound .....	69 00		
Carried forward .....	10,017 48		

JAS. N. FERGUSON,  
*Clerk in Charge.*

DEPARTMENT OF THE INTERIOR,  
ORDNANCE AND ADMIRALTY LANDS BRANCH,  
OTTAWA, August 10, 1901.

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'C.'—STATEMENT of receipts on account of Ordnance and Admiralty Lands for the fiscal year ending June 30, 1901.

Date.	Fees.	Rent or Interest.	Principal.	Total.
	§ cts.	§ cts.	§ cts.	§ cts.
1900.				
July . . . . .	16 00	397 66	1,661 24	2,074 90
August . . . . .		919 42	256 50	1,175 92
September . . . . .		45 35	200 00	245 55
October . . . . .	10 00	160 46	408 78	579 24
November . . . . .		149 67		149 67
December . . . . .	8 00	1,008 87	1,110 00	2,126 87
1901.				
January . . . . .	4 00	1,453 96	217 50	1,675 46
February . . . . .	4 00	339 32	255 28	598 60
March . . . . .	2 00	40 01	77 43	119 44
April . . . . .	13 90	660 64	395 00	1,069 54
May . . . . .		992 77	3,226 00	4,218 77
June . . . . .		291 75	268 76	560 51
	57 90	6,460 08	8,076 49	14,594 47

JAS. N. FERGUSON,  
*Clerk in Charge.*

DEPARTMENT OF THE INTERIOR,  
ORDNANCE AND ADMIRALTY LANDS BRANCH,  
OTTAWA, August 10, 1901.

SESSIONAL PAPER No. 25

'D.—STATEMENT showing amounts due and unpaid on account of rent, instalments of purchase money and interest to June 30, 1901.

Locality	Rent or interest due and unpaid	Amount of instalments due and unpaid	Total due.
	June 30, 1901.	June 30, 1901.	
	s. cts.	s. cts.	s. cts.
Amherstburg	2 00		2 00
Burlington Beach	180 00		180 00
Carillon	3 60		3 60
Chambly	992 34	984 93	1,977 27
Dalhousie	7 29	76 50	83 79
Edmunston	282 69	312 38	595 07
Fort Cumberland	271 00		271 00
Fort Erie	20 00		20 00
Grand Falls	335 14	298 77	633 91
Kingston	467 91	190 96	658 87
Marlborough	48 00		48 00
Montreal	1 00		1 00
Nepean	282 80	1,352 40	1,635 20
Niagara	10 00		10 00
Ottawa	4,942 62	264 00	5,206 62
Owen Sound	37 75		37 75
Oxford	11 00		11 00
Pittsburg	2 52	6 00	8 52
Prescott	35 64	198 00	233 64
Point Pelee	800 00		800 00
Pomroy Bridge	5 00		5 00
Presque Isle	1 00		1 00
Quebec	18,240 00		18,240 00
Sorel	197 33		197 33
St. John's	2 00		2 00
Wolford	52 00		52 00
	27,230 63	3,593 94	30,824 57

JAS. N. FERGUSON,  
Clerk in Charge.

DEPARTMENT OF THE INTERIOR,  
ORDNANCE AND ADMIRALTY LANDS BRANCH,  
OTTAWA, August 10, 1901.

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## No. 26.

## REPORT OF THE LAND PATENTS BRANCH.

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 30, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior.

SIR,—I have the honour to submit herewith the following statements necessary in the preparation of the departmental report for the year ending June 30, 1901, and which are as follows:—

A.—Statement of entries affecting Dominion lands made at head office.

B.—Statement showing number of acres of swamp lands in Manitoba transferred by order in council to province of Manitoba.

C.—Statement showing number of patents forwarded to the several registrars; and the number of notifications mailed to patentees.

D.—Statement showing number of deeds of transfer recorded at head office.

E.—Statement showing number of entries cancelled.

F.—Statement abstract of letters-patent covering Dominion lands in Manitoba, North-west Territories, British Columbia and Yukon Territory, issued from the Department of the Interior during the first six months of 1900, and the year ended June 30, 1901.

I am, sir, your obedient servant,

WM. M. GOODEVE,  
*Chief Clerk, Land Patents Branch.*

A.—STATEMENT of Entries affecting Dominion Lands which were made at Head Office during the fiscal year ended June 30, 1901.

Special Grants.		Canadian Northern R'y Co.		Canadian Pacific R'y Co.		Manitoba & N. W. R'y Co.		Manitoba S. W. Col. R'y Co.		Calgary & Edmonton R'y Co.		Qu'Appelle Long Lake & Sask. R. & S. Co.		Railway Right of Way.		Total.	
No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
64	2,677	2	480	2459	6,243,490	789	304,027	148	35,917	33	5,813	54	104,857	33	266	3582	6,597,527

WM. M. GOODEVE,  
*Chief Clerk.*

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 28, 1901.

## SESSIONAL PAPER No. 25

B.—STATEMENT showing the number of acres of swamp lands in Manitoba transferred by Order in Council to the Province of Manitoba up to June 30, 1901.

Date of Order in Council.	Acres.
April 21, 1884 . . . . .	104,740
April 16, 1888 . . . . .	52,600
June 7, 1888 . . . . .	60,355
August 25, 1891 . . . . .	105,635
December 7, 1891 . . . . .	36,479
April 22, 1893 . . . . .	69,690
October 21, 1893 . . . . .	13,040
"    4, 1893 . . . . .	50,492
"    31, 1893 . . . . .	53,520
"    31, 1893 . . . . .	6,960
November 10, 1896 . . . . .	137,016
December 1, 1896 . . . . .	117,250
June 18, 1897 . . . . .	151,985
"    27, 1898 . . . . .	3,120
December 1, 1899 . . . . .	148,811
February 17, 1899 . . . . .	
August 18, 1899 . . . . .	48,470
May 26, 1900 . . . . .	
September 11, 1901 . . . . .	28,264
Total . . . . .	1,188,527

WM. M. GOODEVE,  
*Chief Clerk.*

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 28, 1901.

C.—STATEMENT showing the number of patents forwarded to the several Registrars of the Land Registration Districts of the North-west Territories, and the number of notifications mailed to patentees during the year ended June 30, 1901.

Registration Districts.	Number of Patents sent to Registrars.	Number of Notifications mailed to Patentees
Assinibota . . . . .	1,759	1,646
East Saskatchewan . . . . .	228	274
West Saskatchewan . . . . .	225	38
North Alberta . . . . .	513	629
South Alberta . . . . .	341	452
Yukon . . . . .	286	311
Totals . . . . .	3,445	3,420

WM. M. GOODEVE,  
*Chief Clerk.*

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 28, 1901.

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D.—STATEMENT showing the number of Deeds of Transfer recorded at head office during the year ended June 30, 1901 :—

Number of deeds registered..... 1,018  
Fees received in connection therewith..... \$2,036

WM. M. GOODEVE,  
*Chief Clerk.*

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 28, 1901.

E.—STATEMENT showing the number of Entries cancelled during the fiscal year ended June 30, 1901, also the year in which such entries were made.

Year.	Homestead.	Pre-emptions	Pre-emption sales	Time sale.	Sales.
1875	1				
1877	1	1			
1878	1				
1879	2		1		1
1880		1	4		
1881	2	3			
1882	10	17			
1883	17	44			
1884	12	30		2	
1885	6	9		3	
1886	10	11			
1887	9	9		1	
1888	22	16	1	1	
1889	39	59		2	
1890	49	1		4	1
1891	108		2	2	2
1892	87		2	1	
1893	45		1		
1894	69				
1895	53				
1896	18		1		
1897	40				
1898	155		3	2	
1899	538		4	1	
1900	357	1	5	2	1
1901	51		1		
	1,682	202	25	21	5

WM. M. GOODEVE,  
*Chief Clerk.*

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 28, 1901.



## SESSIONAL PAPER No. 25

F.—Abstract of Letters Patent covering Dominion Lands situate in Manitoba, the North-west Territories, British Columbia and the Yukon Territory, issued from Department of the Interior, during the first six months of 1900, and the fiscal year ended June 30, 1901.

No.	Nature of Grant	From July 1, 1900, to June 30, 1901.		From January 1, 1900, to June 30, 1900.	
		Patents.	Acres.	Patents.	Acres.
1	Homesteads	1,886	299,946	1,176	183,106
2	Sales	346	76,059	160	30,236
3	British Columbia homestead- sales	286	35,957	13	1,792
4		18	1,074	12	1,848
5	Canadian Pacific Railway nominees	569	122,815	219	16,251
6	Canadian Pacific Railway grants	1,757	5,751,546	62	11,823
7	Canadian Pacific Railway road bed and station grounds	6	265	4	106
8	Half-breed allotments	5	960	2	250
9	North-west half-breed grants	634	136,484	8	1,278
10	Manitoba Act grants	8	492	5	298
11	Special grants	94	26,777	24	9,572
12	Commutation grants	14	1,670	6	330
13	Manitoba North-western Railway	209	46,442	11	2,391
14	Manitoba South-western Colonization Railway	165	34,570		
15	Hudson's Bay Co.			1	64
16	Military homesteads	12	3,824	14	4,474
17	School land sales	41	4,010	9	1,684
18	Parish sales	16	1,639	7	1,916
19	Coal land sales	8	1,335	2	20
20	Foreshore rights				
21	Assignment of Mortgage	2			
22	North-western Coal and Navigation Company, Alberta Railway and Coal Co	54	192,277	8	4,048
23	Calgary and Edmonton Railway Co	27	5,996	18	3,671
24	Mineral rights			2	130
25	Mining lands sales	2	179		
26	Qu'Appelle, Long Lake and Saskatchewan Rail- road and Steamboat Company	72	101,585		
27	The University of Manitoba			1	3,791
28	Fruit-tree culture			1	
29	Leases	3	60	1	82
30	Free wood lot	1	20		
31	License of occupation	11		14	
32	Yukon Territory sale	148	594	147	
33	special	116		31	
34	Great North-west Central Railway Co	1	320	2	1,280
	Totals	6,461	6,846,857	1,970	310,501

WM. M. GOODEVE,  
*Chief Clerk.*

DEPARTMENT OF THE INTERIOR,  
LAND PATENTS BRANCH,  
OTTAWA, September 28, 1901.

1-2 EDWARD VII., A. 1902

## No. 27.

## REPORT OF THE ACCOUNTANT.

DEPARTMENT OF THE INTERIOR,  
 ACCOUNTS BRANCH,  
 OTTAWA, August 23, 1901.

JAMES A. SMART, Esq.,  
 Deputy Minister of the Interior,  
 Ottawa.

SIR,—I have the honour to submit statements of revenue collected from various sources during the fiscal year 1900-1901, as follows :—

A.—Dominion lands, including Yukon Territory....	\$1,874,159 09
B.—Ordnance lands.....	14,604 47
C.—School lands.....	48,049 83
D.—Registration fees.....	33,979 77
E.—Fines and forfeitures, N.W.T.....	1,977 96
F.—Casual revenue....	1,587 57
G.—Seed grain repayments.....	15,711 63

A statement of the revenue on account of Dominion lands (marked H) shows the receipts monthly, classified under sub-heads.

Statement (marked I) shows a comparison between the receipts on account of Dominion lands for 1900-1901 as compared with the revenue of the previous fiscal year.

I am, sir, your obedient servant,

CHAS. H. BEDDOE,  
*Accountant.*

## SESSIONAL PAPER No. 25

A.—DOMINION Lands Revenue (Cash and Scrip), for the fiscal year ended June 30, 1901.

	Cash.	Scrip.	Total.
<i>Yukon Territory.</i>	\$ cts.	\$ cts.	\$ cts.
Sales of lands . . . . .	14,451 89	21,147 11	35,599 00
Rentals of lands . . . . .	35,326 93		35,326 93
Survey fees . . . . .	3,219 50		3,219 50
Liquor permit fees. . . . .	201 00		200 00
Timber dues . . . . .	74,893 80		74,893 80
Hay lands . . . . .	4,057 42		4,057 42
Grazing lands . . . . .	51 29		51 29
Mining fees . . . . .	348,058 30		348,058 30
Royalty on gold . . . . .	596,368 03		596,368 03
Hydraulic. . . . .	11,412 32		11,412 32
Dredging leases . . . . .	2,050 00		2,050 00
Free miner's certificates. . . . .	125,861 00		125,861 00
Map sales, office fees, &c. . . . .	288 00		288 00
Unclassified revenue . . . . .	2,958 50		2,958 50
	1,220,396 89	21,147 11	1,241,544 00
Net loss by assay . . . . .	1,921 99		1,921 99
	1,218,474 90	21,147 11	1,239,622 01
<i>Dominion Lands Agencies.</i>			
Alameda . . . . .	5,804 65	8,350 56	14,155 21
Battleford. . . . .	156 00	160 00	316 00
Brandon . . . . .	6,485 29	18,168 02	24,653 31
Calgary . . . . .	10,069 38	49,042 18	59,111 56
Dauphin. . . . .	5,576 89	3,249 56	8,826 45
Edmonton . . . . .	18,763 51	6,642 30	25,405 81
Kamloops . . . . .	3,211 96	4,488 00	7,699 96
Lethbridge . . . . .	23,400 46	160,911 21	184,311 67
Minnedosa . . . . .	5,099 71	6,590 49	11,690 20
New Westminster . . . . .	831 00	485 19	1,316 19
Prince Albert . . . . .	5,706 57	3,163 81	8,870 38
Regina. . . . .	12,321 96	40,422 81	52,744 77
Red Deer. . . . .	10,106 93	7,119 45	17,226 38
Yorkton. . . . .	5,341 08	6,984 53	12,325 61
Winnipeg . . . . .	7,796 22	40,394 90	48,191 12
<i>Crown Timber Agencies.</i>			
Alameda . . . . .	91 75		91 75
Battleford. . . . .	165 00		165 00
Brandon . . . . .	395 10		395 10
Calgary . . . . .	6,075 86		6,075 86
Dauphin. . . . .	2,270 91		2,270 91
Edmonton . . . . .	9,628 57		9,628 57
Lethbridge . . . . .	134 04		134 04
Minnedosa . . . . .	1,706 18		1,706 18
New Westminster . . . . .	23,134 70		23,134 70
Prince Albert . . . . .	35,548 19		35,548 19
Regina. . . . .	243 46		243 46
Red Deer. . . . .	304 62		304 62
Winnipeg. . . . .	54,592 20		54,592 20
Yorkton . . . . .	225 00		225 00
<i>Miscellaneous.</i>			
Rocky Mountains Park of Canada. . . . .	4,047 31		4,047 31
Irrigation fees . . . . .	318 65		318 65
Map sales, office fees, &c. . . . .	3,076 79		3,076 79
Fees re applications for patents. . . . .	3,660 00		3,660 00
Survey fees. . . . .	28,113 90		28,113 90
Patent fees. . . . .	200 00		200 00
Rentals. . . . .	83 00		83 00
Examination fees, D L S . . . . .	165 00		165 00
Over-deposits . . . . .	25 60		25 60

A.—DOMINION Lands Revenue (Cash and Scrip)—*Concluded.*

	Cash.	Scrip.	Total.
<i>Miscellaneous—Concluded.</i>			
	\$ cts.	\$ cts.	\$ cts.
Commission on collections.....	23 56		23 56
Refunds of refunds.....	447 50		447 90
Mining fees.....	860 00		860 00
Hay lands.....	9,937 35	20 00	9,957 35
Dredging leases.....	3,000 00		3,000 00
Grazing lands.....	4,675 08	14,671 99	19,347 07
Coal lands.....	925 90		925 90
Refunds, account of scrip.....	75 00		75 00
	1,533,197 07	340,962 02	1,874,159 09
Refunds.....	15,877 55	2,491 30	18,368 85
	1,517,319 52	338,470 72	1,855,790 24

CHAS. H. BEDDOE,  
*Accountant.*

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

## B.—STATEMENT of Ordnance Lands Revenue for the fiscal year ended June 30, 1901.

1900.	Receipts.
July.....	\$2,074 90
August.....	1,175 92
September.....	245 55
October.....	589 24
November.....	149 67
December.....	2,126 87
1901.	
January.....	1,675 46
February.....	598 60
March.....	119 44
April.....	1,069 54
May.....	4,218 77
June.....	560 51
	\$14,604 47
Refunds.....	10 00
	\$14,594 47

CHAS. H. BEDDOE,  
*Accountant.*

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

SESSIONAL PAPER No. 25

## C.—STATEMENT of Receipts on account of School Lands for the fiscal year ended June 30, 1901.

School District.	Amount.	Total.
	8 cts.	8 cts.
Manitoba	40,944 25	
Assiniboia	4,416 71	
Alberta	2,638 67	
Saskatchewan	50 20	
		48,049 83

CHAS. H. BEDDOE,  
*Accountant.*

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

## D.—STATEMENT of Registration Fees for the fiscal year ended June 30, 1901.

District.	Registrar.	Total Registration Fees.
		8 cts.
Assiniboia	H. W. Newlands	14,317 20
North Alberta	George Roy	6,985 50
South	W. R. Winter	5,297 43
East Saskatchewan	S. Brewster	1,662 70
West	R. F. Chisholm	51 13
Yukon Territory	J. E. Girouard	5,745 81
		33,979 77

CHAS. H. BEDDOE,  
*Accountant.*

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

1-2 EDWARD VII., A. 1902

E.—STATEMENT of Fines and Forfeitures, North-west Territories, collected under Dominion Statutes (except 'The Indian Act' and 'The Fisheries Act') for the fiscal year ended June 30, 1901.

Date of Bank Receipt.	Name.	Amount.	Total.
1900.		\$ cts.	\$ cts.
Oct. 15. . . . .	The Attorney General, North-west Government, Regina..	520 60	
1901.			
Feb'y 1 . . . . .	" " "	533 60	
April 21 . . . . .	" " "	551 41	
July 13. . . . .	" " "	372 35	
			1,977 96

CHAS. H. BEDDOE,  
*Accountant.*

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

F.—STATEMENT of Casual Revenue for the fiscal year ended June 30, 1901.

Name.	Particulars.	Amount.
		\$ cts.
J. F. Girouard. . . . .	Refund, account travelling expenses. . . . .	91 00
J. Macarthur. . . . .	" proceeds of sale of grain. . . . .	620 20
W. F. McCreary. . . . .	" by H. Manweiler. . . . .	2 70
" . . . . .	" by Ellen Doyle, 87.50; and G. Lawrence, 84.90. . . . .	12 40
" . . . . .	" account bread re Galicians. . . . .	19 50
" . . . . .	" by McKay & Stephens. . . . .	2 25
" . . . . .	" by W. B. Nicholson. . . . .	4 10
" . . . . .	" by H. K. Webb. . . . .	50
" . . . . .	" account railway fares. . . . .	2 05
C. Stenshorn. . . . .	" balance on account immigration expenses. . . . .	2 05
H. S. Conroy. . . . .	" balance account travelling expenses. . . . .	5 20
J. T. Lithgow. . . . .	" proceeds of sale of scales. . . . .	15 00
Immigration Agt, Prince Albert.	" balance on account immigration expenses. . . . .	33
A. D. L., Red Deer. . . . .	" " contingencies. . . . .	25 00
Jas. Macarthur. . . . .	" " " . . . . .	7 70
W. B. Underhill. . . . .	" " " . . . . .	9 16
Wm. Ritchie. . . . .	" " immigration expenses. . . . .	50 00
W. F. McCreary. . . . .	" overpayment made to E. F. Betts, on June 27, 1900, cheque 1382. . . . .	4 00
" . . . . .	" immigration cheque, 187, of August 22, 1899, not used. . . . .	17 50
A. D. L., Battleford. . . . .	" balance contingencies. . . . .	12 53
H. Douglas. . . . .	" proceeds of sale of five tons of hay (Rocky Mountains Park). . . . .	20 00
G. Schlund. . . . .	" (purpose of remittance cannot be determined, post office address of sender not being known) . . . . .	2 69
A. D. L., Regina. . . . .	" proceeds of sale of frame house sold to Thomas Dodds. . . . .	99 40
J. J. McArthur. . . . .	" balance of advances on account travelling expenses, boundary surveys, cheque 45, of January 23, 1899. . . . .	50 00

## SESSIONAL PAPER No. 25

F.—STATEMENT of Casual Revenue, &c.—*Concluded.*

Name	Particulars.	Amount
		\$ cts.
R. E. Jameson	Refund, overpayment for bread, immigration expenses, 1899-1900	10 00
Immigration Commissioner	by A. Becker, cheque 1064, of January 31, 1900	16 50
	by Robinson & Co., cheque 254, of August 28, 1899	28 02
	by A. H. Palford, cheque 776, of Oct. 28, 1899	34 55
	by Edmonton Bulletin, cheque 1387, of June 27, 1900	1 00
	by McLean & Co., cheque 1385, of June 27, 1900	1 85
	by H. Harley, cheque 1134, of May 18, 1900, in favour of A. L. Ashdown	8 72
	by D. Morrison, cheque 1539, of June 30, 1900	10 00
	by Robinson & Co., cheque 438, of Sept. 20, 1899	41
	by Paul Wood, cheque 1219, of April 9, 1900	1 60
L. Rankin	balance account travelling expenses	25 31
E. F. Stephenson	"	3 10
H. A. Conroy	"	1 50
C. J. Thomson	overpayment made in April, 1900	3 00
J. L. Bell	account travelling expenses	14 75
R. Rinfret	"	25 00
H. A. Conroy	"	50
Levi Beck	overpayment	31 15
Immigration Commissioner	" to J. W. Taylor, cheque 77, August 17, 1899	2 10
H. Douglas	hay sold to A. S. Cobb, 828; and W. C. McCartney, 823.75	51 75
J. L. Bell	account travelling expenses	9 00
H. Douglas	sale of buckboard	7 50
Repayments	Account relief mortgages of 1876	1,781 18
	seed grain advances, 1894	4,908 01
	" 1896	1,710 92
	" 1898	47 00
	" 1900	199 84
		<hr/> 16,324 52

\*The above five items appear on statement (G) of repayments of seed grain advances.

CHAS. H. BEDDOE,  
Accountant.

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

G. STATEMENT showing Seed Grain and Relief Mortgage Repayments for the fiscal year ended June 30, 1901.

Seed Grain Advances.	Seed Grain Advances.	Seed Grain Advances.	Seed Grain Advances.	Seed Grain Advances.	Seed Grain to Settlers' Account.	Territorial Account.	Relief Mortgages.	Total.
1900.	1898.	1896.	1895.	1894.	1890.	1886-87-88.	1876.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
199 84	47 00	1,727 35 16 43	3,890 93 27 33	5,018 23 20 22	1,469 32	1,657 78 6 15	1,781 18	15,711 03 70 13
199 84	47 00	1,710 92	3,903 60	4,998 01	1,469 32	1,631 63	1,781 18	15,641 50
Refunds.								

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

CHAS. H. REDDIE,  
*Accountant.*



SESSIONAL PAPER No. 25

H. STATEMENT of Gross Receipts on account of Dominion Lands for the Fiscal Year ended June 30, 1901.

Month.	Homestead Fees.		Inspection Fees, &c.		Cancellation Fees.		Improvements.		General Sales of Lands.		Timber Dues.		Rents from Grazing Lands.		Royalty, Hay Permits, Mining Fees, Coal Lands, &c.		Rocky Mountains Park of Canada.		Surveyors' Examination Fees.		Map Sales, Office Fees.		Survey Fees.		Fees re applications for Patents.		Miscellaneous.		Total.		
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
1900.																															
July.	7,835 00	355 00	1,155 00	436 00	4,714 04	12,789 19	594 26	296,722 91	524 13	228 10	756 50	380 00	2,566 75	299,051 18																	
August.	6,715 00	220 00	1,065 00	165 00	1,321 11	21,968 61	356 37	173,296 37	520 05	258 65	111 13	406 00	2,564 00	299,307 58																	
September.	4,850 00	180 00	870 00	313 32	1,728 16	15,511 22	218 12	129,051 34	497 30	282 25	595 09	315 00	2,119 49	155,275 99																	
October.	6,130 00	185 00	850 00	342 25	3,062 39	25,966 90	353 97	82,253 50	214 75	280 25	1,674 34	337 50	6,057 69	126,827 45																	
November.	6,099 00	280 00	820 00	380 49	3,085 37	16,844 62	312 42	46,763 15	172 25	313 40	21,885 36	610 00	1,751 00	99,354 06																	
December.	4,925 00	190 00	640 00	487 00	1,598 18	14,630 57	502 46	57,799 44	92 00	332 91	137 32	527 50	325 90	82,158 58																	
1901.																															
January.	4,180 00	145 00	770 00	286 14	5,334 27	9,224 32	693 91	24,282 25	58 50	449 85	708 01	435 00	876 00	47,393 25																	
February.	3,925 00	190 00	595 00	485 72	3,022 41	11,554 85	389 22	30,784 74	366 67	306 37	381 09	330 00	2,631 45	55,037 32																	
March.	6,325 00	80 00	375 00	498 05	4,091 01	10,689 56	494 18	49,415 04	1,024 66	385 90	406 84	135 00	5,297 14	79,328 59																	
April.	8,855 00	10 00	10 00	687 65	2,067 29	10,927 12	398 54	57,732 83	37 00	315 26	2,356 06	35 00	8,326 00	92,087 75																	
May.	10,015 00	45 00	46 00	756 30	5,572 28	41,359 13	552 71	48,721 19	167 50	383 35	1,593 12	80 00	1,642 00	169,222 78																	
June.	10,035 00	20 00	369 00	529 00	6,264 12	19,350 13	219 52	166,256 45	292 00	338 63	424 54	25 00	6,369 81	269,904 33																	
Deduct assay charges	79,910 00	1,800 00	7,196 00	5,213 22	46,360 93	299,359 32	4,726 28	1,103,730 32	4,047 31	165 00	3,874 14	31,333 40	3,696 00	39,017 14	533,119 06																
								1,921 99							1,921 99																
	79,910 00	1,800 00	7,196 00	5,213 22	40,369 93	299,359 32	4,726 28	1,101,808 33	4,047 31	165 00	3,874 14	31,333 40	3,696 00	39,067 14	1,333,197 07																
								326,270 63	20 00						340,962 62																
	79,910 00	1,800 00	7,196 00	5,213 22	366,630 96	299,299 32	19,398 27	1,101,828 33	4,047 31	165 60	3,874 14	31,333 40	3,696 00	39,067 14	1,874,159 69																

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.  
  
CHAS. H. BEDIÖE,  
Accountant.

1-2 EDWARD VII. A 1902

## DOMINION LANDS REVENUE.

I.—STATEMENT of Gross Receipts (Cash and Scrip) on account of Dominion Lands Revenue for the fiscal year 1900-1 compared with the previous fiscal year.

Particulars.	Fiscal Year	Fiscal Year	Increase.
	1900-1901.	1899-1900.	
	\$ cts.	\$ cts.	\$ cts.
Dominion Lands Agencies	425,704 53	233,872 98	191,831 55
Crown Timber Agencies	134,505 52	90,877 36	43,628 16
Rocky Mountains Park of Canada	4,047 31	2,727 60	1,319 71
Hay, Mining, Coal, Stone & Grazing Lands	34,090 32	28,262 26	5,828 06
Miscellaneous	36,189 40	15,955 70	20,233 70
	634,537 08	371,695 90	262,841 18
Yukon Territory	1,239,622 01	1,132,047 10	107,574 91
	1,874,159 09	1,503,743 00	370,416 09

CHAS. H. BEDDOE,  
*Accountant.*

DEPARTMENT OF THE INTERIOR,  
ACCOUNTS BRANCH,  
OTTAWA, August 23, 1901.

## No. 28.

## REPORT OF THE SCHOOL LANDS BRANCH.

DEPARTMENT OF THE INTERIOR,

OTTAWA, October 1, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to submit the usual annual report on the transactions of the school lands office for the fiscal year ending June 30, 1901.

No general sales of school lands were held during the year. As so large an area had been disposed of at the auction sales held in March, 1900, in the North-west Territories, and in June of the same year in Manitoba, it was not considered advisable in the interests of the school lands endowment fund to place any more lands on the market.

In your report of last year you referred to certain charges which were made shortly after the auction sales of 1900, with respect to irregularities alleged to have occurred in connection with certain of the auction sales held in Manitoba in June of that year, and also to the commission issued to His Honour James E. P. Prendergast, under the Great Seal, to investigate and report in regard thereto.

The reports of Judge Prendergast on the result of his investigation were received before the close of last session, and a copy of each report was submitted to parliament. In addition to his report dealing with the general aspect of the sales, he made a full report on his investigation of each auction sale, giving the details disclosed by the evidence obtained.

Before Judge Prendergast began his investigation he was furnished, at his request, with full information relative to the arrangements made for carrying out the sales referred to, such as the names and addresses of the officials employed in connection with each auction sale; lists of the lands offered and of those sold, with the prices obtained in each case; a list of the newspapers in which the sales had been advertised and copies of all complaints filed in the department in regard to such sales.

Mr. Isaac Pitblado, barrister-at-law, of Winnipeg, was retained to assist Judge Prendergast in the examination of witnesses, and Mr. Alexander Haggart, K.C., was also employed, on behalf of the Manitoba government, at their request, and both these gentlemen were present at all the sittings of the commission.

Sittings were held at each of the twenty-two points in Manitoba at which the auction sales had been held, namely, Brandon, Virden, Carberry, Oak Lake, McGregor, Morden, Portage la Prairie, Miami, Souris, Gladstone, Emerson, Birtle, Minnedosa, Crystal City, Rapid City, Killarney, Boissevain, Deloraine, Melita, Baldur, Holland and Winnipeg.

Defaults and re-sales appear to have been the subject of the greater part of the inquiry, and in regard to this it would, perhaps, be as well to quote the judge's words, which are as follows :—

‘I may say in this respect that from an inspection of the original records of the sales, which I procured beforehand, I was enabled to ascertain in advance in what cases such defaults and re-sales had taken place, and to summon the parties connected therewith before the sittings of inquiry were held. I am in a position to state that every case of default and re-sale which has come to my notice, was investigated and reported upon.

1-2 EDWARD VII., A. 1902

‘Where defaulting was resorted to as a means of defrauding, the scheme consisted in a party bidding up the land until it was knocked down to him, and then leaving it to a friend to buy in at the re-sale for a lesser price, which could be done in most cases, as the attendance was then smaller in general, and the unsuccessful bidder or bidders in the first sale would often leave before the re-sale. Of course, where there was a community of purpose and concerted action between the defaulting purchaser at the first sale and the purchaser at the re-sale, there was fraud. On the other hand, it cannot be said that a purchaser at the first sale who defaulted did so with fraudulent intention, as there were some instances of purchasers who realized after the sale that they had mistaken the description and bid on land other than that which they required, and others, through misunderstanding, delay in the transmission of telegrams, and other causes, were unable to procure in time the necessary deposit money for which they had made arrangements. Nor was there impropriety in all cases for a party to bid in at a re-sale. The time when a re-sale was to be held was announced in advance in every case. It was but natural for parties to avail themselves of this further opportunity to procure the parcels they wanted, more particularly for those who, after bidding unsuccessfully at the first sale, suspecting that the purchaser would not settle for the exorbitantly high prices up to which the land was run in some places, expected that the parcel might be put up again.

‘For the same reason the price offered at the first sale for a parcel which was afterwards not settled for, is not always indicative of its true value, as it several times happened, two farmers, whose respective farms adjoined a particular parcel, bid it up until it reached fantastic prices without any intention of perfecting the purchase, but simply to prevent the other from acquiring it. Of course, where parcels had been settled for as they were sold, which was done at several sales, there could be no object in defaulting, and there was no re-sale.’

At some of the sales, however, the practice was to proceed without waiting for settlements until a number of parcels had been disposed of, when there would be an adjournment to receive payments for those sold, after which the sale would again be proceeded with. Judge Prendergast states that the reasons given by the auctioneers for this practice are as follows :—

‘That an uninterrupted offering of lots and bidding thereon brought in better prices in their opinion; that many parties who could procure their deposit money between the first sale and the re-sale felt averse to providing themselves with the same before they had definitely secured their parcel; and that this practice was the one followed at the previous school lands sales, and did not seem forbidden by the written conditions of sale supplied to them by the department.’

From the report it would appear that the complaints in regard to the officials in connection with the sales were seven in number, and with respect to these the judge states as follows :—

‘In two cases the complainants, when appearing before the commission, withdrew their charges with apologies or expressions of regret; in two others, one complainant not appearing and the other stating that his representations to the department were only from hearsay, the parties referred to by both when examined under oath disproved the charges. In a fifth case, the complainant was emphatically contradicted by the very witness he called in support of his allegations, and in the sixth one, the complainant, besides explaining that by collusion he meant the action of the auctioneer in allowing outsiders to bid, was moreover contradicted by no less than seven witnesses who had all attended the sale and separately kept a record of the same in writing.’

In regard to the seventh complaint, which was to the effect that one of the record clerks was in collusion with certain persons whereby certain lands were sold to fictitious persons, and then in default of payment were offered again and purchased at the re-sale at a lower price by himself and others, the report reads as follows :—

## SESSIONAL PAPER No. 25

'Four of the five witnesses supporting the complaint were themselves parties in combinations to keep down prices, and I do not believe, on the whole, that the charge is proven. At the same time, I must say, that not only was the clerk unwise in bidding at all at the sale, but there was a particular lack of discretion on his part in bidding under the special circumstances of the re-sale complained of.'

There appear to have been some complaints to the effect that the Brandon, Emerson, Crystal City, Boissevain and Deloraine sales were too fast, and with respect to this Judge Prendergast reports :—

'There is no doubt, as was expressed at the inquiry, that they were run a good deal quicker than ordinary sales of farmers' stock. It appears that in five cases where the would-be bidders were slow in realizing from the description that the parcel they were after was being put up, better prices could have been obtained had the bids been dwelt upon more leisurely. At the same time, the weight of evidence, even as to the five sales above mentioned, is decidedly to the effect that those who had well in mind the description of the parcels they wanted, had full opportunity to put in all their bids; and, as already stated, a farmer would rarely be interested in more than one parcel, and hardly ever in two or three. It is also conclusively shown that sales conducted with a degree of briskness yield the best results, by keeping up an interest, adding keenness to competition and preventing combinations. As the sales were, it seems impossible, from the evidence, that they could have brought in better prices. In fact, the complainant's grievance, in some instances was that through the fastness of the sale the bidders lost their heads in the excitement and were made to pay more than the land was worth.'

The judge adds : 'I would venture to say that a recommendation to auctioneers that sales be conducted so as to afford opportunities to bid, even to those of slower minds, would probably not be out of place, without, however, tending to bring better prices, on the whole.'

In regard to the prices realized, the judge considers that, compared with prices obtained for similar lands in the same districts, they were decidedly high, the average price obtained at each auction sale ranging from \$5.52 per acre, realized at the Birtle sale, to \$15.94 per acre at the Carberry sale, or an average of \$8.11 per acre for the twenty-two auction sales.

In summing up the result of his investigation, the judge states that the sales, considered in their general lines or formal parts, were all well conducted, and adds that the clerical work was well attended to, the recording being careful and accurate, and the moneys received being properly accounted for to the department. In fact, he states the record clerks seem to have particularly well performed their duties, which involved very considerable responsibilities.

The result of the investigation, as shown by the report of Judge Prendergast, is, in effect, that while at several of the sales there were instances of combination and collusion between the bidders at the first sales and re-sales, there was no wrong-doing or impropriety for which the department was responsible, and that the arrangements for the sales were found to have been satisfactory, and the sales themselves well conducted. Of the seven complaints made against officials of the sales, the investigation shows that six were without foundation, and that the seventh the judge does not consider proven, although he thinks the official was indiscreet in bidding at all, in view of his position.

In all cases in which the report shows that there was any collusion or combination between the bidders, or any indication of irregularity, the department declined to carry out the sale, either absolutely or except on the condition that the purchaser paid the price at which the land was knocked down at the first sale, according to the circumstances of the case.

In regard to this I may say that of 1,269 parcels disposed of at these auction sales, only 31 were in any way affected by the result of the investigation.

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The revenue from sales of school lands during the fiscal year was as follows :—

Manitoba.....	\$35,867 85
Assiniboia.....	2,726 09
Alberta.....	49 83
	\$38,643 77

The revenue from cultivation permits for the same period was as follows :—

Manitoba.....	\$261 50
Assiniboia.....	7 50
Alberta.....	53 75
	\$322 75

From timber, hay and grazing, the receipts were :—

Manitoba.....	\$4,142 29
Assiniboia.....	1,620 17
Alberta.....	2,447 53
	\$8,209 99

The total revenue from all sources for Manitoba and the Territories, was \$47,176.51.

The revenue from sales would have been much larger had the second instalments of the auction sales held in Assiniboia, in March, 1900, and in Manitoba, in June, 1900, been payable at the expiration of one year from the date of the sale, as is usually the case ; but, as you are aware, it was decided to extend the time of payment for the second instalment to November 1, 1901, so that the receipts from these instalments will go into the next financial year.

There is also a large reduction in the receipts from cultivation permits, owing to the fact that most of the lands for which cultivation permits had been issued in previous seasons were disposed of at the auction sales of 1900.

Appended hereto is the usual revenue and expenditure statement of the school lands funds of Manitoba and the several provisional districts of the North-west Territories, which shows the balance to the credit of the Manitoba school lands fund on June 30, 1901, to be \$757,328.09, and the balance to the credit of the North-west Territories on the same date, \$71,741.27.

I am, sir, your obedient servant,

FRANK S. CHECKLEY,

*Clerk in Charge.*

MANITOBA School Lands Fund.

	Dr.	Cr.
	\$ cts.	\$ cts.
Balance, July 1, 1900.....		728,266 41
Sales, 12 months ended June 30, 1901.....		35,867 85
Timber, hay and grazing, 12 months ended June 30, 1901.....		4,142 29
Rental for cultivation purposes, 12 months ended June 30, 1901.....		261 50
Interest, 12 months ended June 30, 1901.....		22,115 33
Cost of management at Ottawa, 12 months ended June 30, 1901.....	850 00	
Expenses, being examination, valuation, auctioneers' fees, printing, advertising, etc., 12 months ended June 30, 1901.....	10,359 96	
Interest paid to Manitoba Government to June 30, 1901.....	22,115 33	
Balance, June 30, 1901.....	757,328 09	
	790,658 38	790,658 38

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## ASSINIBOIA School Lands Fund.

	Dr.	Cr.
	\$ cts.	\$ cts.
Balance July 1, 1900		15,472 97
Sales, 12 months ended June 30, 1901		2,726 09
Timber, hay and grazing, 12 months ended June 30, 1901		1,620 17
Rental for cultivation purposes, 12 months ended June 30, 1901		7 50
Interest, 12 months ended June 30, 1901		502 66
Cost of management at Ottawa, 12 months ended June 30, 1901	425 00	
Interest paid Government of the North-west Territories to June 30, 1901	762 75	
Expenses for advertising, 12 months ended June 30, 1901	32 60	
Balance, June 30, 1901	19,169 64	
	20,329 39	20,329 39

## ALBERTA School Lands Fund.

	Dr.	Cr.
	\$ cts.	\$ cts.
Balance, July 1, 1900		49,806 54
Sales, 12 months ended June 30, 1901		49 83
Timber, hay and grazing, 12 months ended June 30, 1901		2,447 53
Rental for cultivation purposes, 12 months ended June 30, 1901		53 75
Interest, 12 months ended June 30, 1901		1,487 32
Cost of management at Ottawa, 12 months ended 30th June, 1901	425 00	
Interest paid Government of the North-west Territories to June 30, 1901	3,083 11	
Balance, June 30, 1901	50,336 86	
	53,844 97	53,844 97

## SASKATCHEWAN School Lands Fund.

	Dr.	Cr.
	\$ cts.	\$ cts.
Balance July 1, 1900		1,055 84
Timber, hay and grazing, 12 months ended June 30, 1901		50 20
Interest, 12 months ended June 30, 1901		31 62
Interest paid Government of the North-west Territories to June 30, 1901	62 64	
Balance, June 30, 1901	1,075 02	
	1,137 66	1,137 66

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## No. 29.

## REPORT OF THE REGISTRAR.

DEPARTMENT OF THE INTERIOR,  
CORRESPONDENCE REGISTRATION BRANCH,  
OTTAWA, September 26, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to submit a statement showing the work of this branch for the fiscal year ended June 30 last.

The amalgamating of the files brought to headquarters by the Commissioner of Dominion lands with those of the department is progressing, with the result that upwards of 67,500 have been so dealt with.

I am, sir, your obedient servant,

K. J. HENRY,  
*Registrar.*

STATEMENT of work done in the Correspondence Registration Branch during the year ended June 30, 1901.

	July 1, 1900 to June 30, 1901.
Letters received . . . . .	67,860
Letters sent . . . . .	94,386
Registered letters received . . . . .	5,007
Registered letters sent . . . . .	12,563
Total . . . . .	179,816

## Moneys received.

	July 1, 1900. to June 30, 1901
	\$ cts
Cash . . . . .	8,277 37
Cheques . . . . .	102,551 25
Scrap . . . . .	145,423 28
Scrap orders . . . . .	66,690 27
Money orders . . . . .	10,591 85
Total . . . . .	333,534 02





PART II.

IMMIGRATION



# IMMIGRATION

## REPORT OF THE SUPERINTENDENT OF IMMIGRATION.

DEPARTMENT OF THE INTERIOR,

OTTAWA October 19, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to submit to you, for publication in the Annual Report of the Department of the Interior, my own report and those of the several immigration agents in Canada, the United States and Europe, for the year ending June 30, 1901. These reports enter fully into the details of our immigration work, both at home and abroad during that period of time.

### CORRESPONDENCE.

The attachments to our files at the head office during the year were 44,051 as compared with 33,162 for the previous year. The applications received here for information numbered about 55,801, and the number of pamphlets, maps, &c., sent in response to these applications was 253,204. Increasing correspondence from all parts of the globe for information concerning Canada as a place for settlement has been promptly dealt with, and in many cases has been followed by the personal attention of the agents.

### DISTRIBUTION OF LITERATURE.

During the year 372 cases, containing 600,152 maps, pamphlets, &c., were sent to the agents in Great Britain, the United States and Canada for distribution; 140,500 copies of special editions of newspapers, containing valuable immigration matter were also distributed during the year, making a grand total distribution of 1,011,656. Nineteen separate publications were ordered comprising in the aggregate 1,193,565.

### EXHIBITS.

Samples of fruits, vegetables, grains and grasses have been prepared and forwarded to the United States agents for exhibition at the state and county fairs. Notwithstanding the difficulty of the trans-shipment of vegetables for long distances, the display made by these at the fairs was very creditable. Samples of corn on the cob, fruits, roots, vegetables, straws, grasses and minerals, including gold nuggets from the Klondike, have been forwarded to Great Britain for a similar purpose. The display at these annual exhibitions of the products of the country is one which meets with general cordination and proves a very attractive and influential advertisement.

### REPORTS.

The reports of the High Commissioner and of Mr. W. J. White, Inspector of United States Agencies, deal with the advertising carried on during the year in the United

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Kingdom and in the United States, respectively. The report of Mr. W. T. R. Preston, Inspector of European Agencies, deals with the work of the United Kingdom and the continent, and shows that an active propaganda has been carried on there during the year. The report of the Commissioner of Immigration, Mr. J. Obed Smith, deals in detail with the work of Manitoba and the Territories, as administered from his office, and shows that the largely increasing number of immigrants have been properly looked after and distributed by the officials under his direction. During the year the immigrants arriving via ocean ports and Winnipeg were met by officials of the department and were accompanied either to the centres of distribution or to their ultimate destination.

## DELEGATES.

During the year 261 delegates from the United States and Europe visited this country for purposes of inspection and obtaining information. Most of these delegates have either formally reported or corresponded with the department as to the result of their visit, and their statements and opinions are being made use of from time to time in the literature prepared and distributed by this branch.

## ARRIVALS.

The immigrant arrivals for the year ending June 30, are as follows:—

English and Welsh . . . . .	9,401
Scotch . . . . .	1,476
Irish . . . . .	933
Galicians . . . . .	4,702
Germans . . . . .	984
Hungarians . . . . .	546
Austrians . . . . .	228
Scandinavian . . . . .	1,750
French and Belgians . . . . .	492
Russians and Finlanders . . . . .	1,726
United States . . . . .	17,987
Miscellaneous . . . . .	8,924
Total . . . . .	49,149

During the year the agencies under the control of this branch have been very active in attending to the increasing work and the large number of arrivals. The reports from Manitoba and the Territories show that the arrivals are well up to the standard, and very few complaints, if any, have been received by the department as to the character of the immigrants. Most of these have gone to the land immediately on their arrival, and as fast as circumstances would permit, have become actual settlers and cultivators.

Your obedient servant,

FRANK PEDLEY.

## REPORTS OF HIGH COMMISSIONER AND EUROPEAN AGENTS

## No. 1.

REPORT OF THE RIGHT HONOURABLE LORD STRATHCONA AND  
MOUNT ROYAL, G.C.M.G., HIGH COMMISSIONER FOR CANADA.17 VICTORIA STREET,  
LONDON, S.W., July 31, 1901.The Honourable  
The Minister of the Interior,  
Ottawa.

SIR.—I have the honour to transmit the reports of the agents of your department on their work for the year ended June 30, 1901: Mr. Jury and Mr. Mitchell, of Liverpool; Mr. Devlin, of Dublin; Mr. O'Kelly, of Londonderry; Mr. W. L. Griffith, of Cardiff; Mr. Murray, of Glasgow; Mr. Dunean, of Carnoustie; Mr. Grant, of Dumfries; and Mr. Treau de Cœli, of Antwerp.

The reports of the agents explain the nature of their work during the year, and the efforts they have made to attract attention to Canada, and to promote desirable emigration to the different provinces.

The advantages of the Dominion to those contemplating emigration have been advertised very widely in the press of the United Kingdom. The leading agricultural and other gatherings where farmers congregate have been attended, exhibits of agricultural produce have been made whenever it has been practicable, and advantage taken of such opportunities to distribute pamphlets and information about Canada among the classes which are encouraged to emigrate.

In addition, the system of lecturing, both by the agents of your department, and by others, especially through the schools, has been carried on much the same as previously, and such gatherings have been utilized to interest people in Canada, and to distribute our literature.

The agents have also taken every opportunity during their travels, as far as possible, of seeing personally the more important of their correspondents.

The school competitions have been continued during the year. The readers and atlases sent over have had a wide circulation, and the same remark applies to the copy books. The matter has been taken up with much interest by schoolmasters throughout the country. They generally speak in high terms of the books which have been placed at their disposal, and of the additional interest taken in Canada in the geography lessons in consequence by the pupils, and also by their parents.

Nearly 1,500 schools have taken part in the competitions so far, and about that number of medals have been distributed. As there are a considerable number of the atlases and readers still on hand, it is proposed to continue the competitions during the coming winter.

Owing to the state of affairs in South Africa, it was considered that there might be much more difficulty than usual in directing the attention of the public to the advantages of emigration to Canada. I am glad to state, however, that the number of letters received in the London office has been greater than ever before. In the year from July 1, 1900, to June 30, 1901, the number of letters received was 9,532, an increase of nearly 50 per cent over the previous year. This is exclusive of the letters

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received (probably about 6,000) in connection with the medals competition, and the distribution of readers, atlases and copy books.

In addition to the usual advertising, I sent post cards, with reply-paid answers, to every farmer in several of the counties. The results were not as encouraging as I had anticipated, only about  $4\frac{1}{2}$  per cent of those with whom we communicated having sent back the reply-paid post cards asking for pamphlets and information on Canada. I propose, however, to make a further experiment in the remaining counties of England this autumn. There is no doubt that through this channel we get into communication with people of the right class, and if they take the trouble to write for pamphlets it shows that they are interested in the matter.

For the same reasons that seemed to render likely a falling off in our inquiries, it was expected that the actual emigration would show a marked diminution. This, however, has not been the case, as the figures indicate a not unsatisfactory advance over previous years.

During the past year inquiries have been received from most of the countries of the world about Canada. There have been a great many from South Africa, which shows that the settlers in that country have learned something of the advantages of the Dominion from the presence of the Canadian contingents. We have also had inquiries from most of the European countries, from India, from the Australasian colonies and from South America.

As explained on many previous occasions, the Board of Trade returns do not give any accurate idea of the emigration from the United Kingdom to Canada. All the 2nd class and steerage passengers on the various steamers are included as emigrants, whether they are going out for the first time or not, and the emigrants are classified as going to the United States or Canada according to the place at which they land. For instance, a great many emigrants go to Canada, especially eastern Canada, via the United States, but they are all regarded in the returns as emigrants to the States, while those who go to the States via a Canadian port are returned as emigrants to Canada. The disadvantage under which Canada labours in this respect has been accentuated this year, inasmuch as all the emigrants travelling by the Dominion steamers to Portland are classified as United States emigrants, while in former years when landed at Halifax and Montreal they were returned as settlers in Canada.

In addition to the government offices in this country, there are, as you know, several other agencies at work more or less actively in connection with the promotion of emigration. The Ontario government have an emigration agent in Liverpool. The New Brunswick government have had a special commissioner in the United Kingdom during the last year, and I have had much pleasure in placing our correspondence on emigration matters at his disposal. The Nova Scotia government also have an agent, as well as the British Columbia government. There is, besides, the Canadian Pacific Railway Company, and the steamship companies and their agents are also interested in securing as many people as possible. By all these means, and by the advertising that takes place, a good deal of machinery is utilized in calling attention to the advantages which Canada offers. There is also the Emigrants' Information Office, a large proportion of the correspondence of which relates to Canada.

It is not necessary to deal at length with the work on the continent, in this report, as you are fully aware of the steps that are being taken, in the interests of the Dominion, in the different countries of Europe.

The British steamship companies, including all the Canadian lines, except one, owing to their agreement with the continental lines, do not take any active part in the conveyance of emigration from the continent, excepting so far as Scandinavia is concerned, and they are not as active there in the interest of Canada as we could wish.

Apart from the understanding between the steamship companies, to which I have referred, Canada labours under a great disadvantage in the fact that there is little or no direct steamship communication from the continent or from Scandinavia to the Dominion, the result being that the emigration from these countries is largely con-

## SESSIONAL PAPER No. 25

trolled by the companies whose steamers ply to New York and other American ports. As the rates from New York to the western portions of the Dominion are higher than those from Quebec, the New York lines, it is to be feared, take very little interest in Canadian immigration. This applies also to the companies whose steamers ply between the United Kingdom and American ports.

The importance to Canada of securing the co-operation of the lines running steamers to New York will be seen by an examination of the following return giving the number of passengers carried to New York during the year 1900:—

*Passengers.*—A detailed statement is given of the number of cabin and steerage passengers landed at the port of New York during the last three years by the various steamship lines.

	Cabin.	Steerage.	Total.
Norddeutscher.....	26,577	89,143	115,720
Hamburg Line.....	23,657	72,245	95,902
White Star Line.....	14,948	29,370	44,318
Cunard Line.....	20,000	22,751	42,751
Cie. Générale Transat.....	8,795	30,643	39,438
Red Star Line.....	5,559	31,003	36,562
American Line.....	16,435	16,844	33,279
Holland American Line.....	5,590	25,940	31,530
Anchor Line.....	7,693	22,687	30,380
Navigazione G. Italiana.....	286	17,265	17,551
Fabre Line.....	26	15,653	15,679
Prince Line.....	247	13,847	14,094
Thingvalla.....	962	4,838	5,800
Allan State Line.....	2,727	1,399	4,126
Atlantic Transport.....	3,749	.....	3,749
Other lines.....	601	6,262	6,863
	137,852	403,491	541,343
	Total for 1900, 541,343.		

We have had some correspondence about Italian emigration. I am glad to know that the results of your inquiries into the alleged reports of destitution and starvation showed that there was little or no foundation for the alarming reports that appeared in the Italian press. No doubt some people have gone out who do not belong to the classes that are in demand, but they now appear to have all settled down, and I trust they will turn out to be good settlers.

It is not clear that we can do very much more in connection with the promotion of emigration from the United Kingdom to Canada, except on the lines at present followed, unless some scheme of state-aided emigration, or of assisted passages is adopted.

I am not at all sanguine that in the near future His Majesty's Government will be induced to take any action financially to assist emigration.

A commission was appointed by the Imperial Government a little while ago, to proceed to South Africa to report upon the possibility of a scheme by which men of the yeomanry, the volunteers and the reserves might be induced to settle in South Africa. This commission has made its report, and copies have been sent to you. The impression appears to prevail, however, that there is not much probability of any active measures being taken in the direction indicated owing to the expense involved in the recommendations of the commission.

It occurs to me that more might be done in Canada itself to promote emigration from the United Kingdom in co-operation with your agents.

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You are aware that both from Ireland, and from the continent, especially from Scandinavia, a not inconsiderable proportion of emigration that takes place consists of pre-paid passages—that is the passages of the emigrants going out are pre-paid by their friends and relatives already settled in the United States. There is practically nothing of this kind from Canada, and I am inclined to think that some system of assisted or nominated passages, which would enable settlers in the Dominion to send for their friends from the United Kingdom, might be attended with great advantage. This class of emigration affects those who are not going out to join friends. The success of people who send home for their relatives to join them, is a good advertisement in the neighbouring districts, for the country in which those sending the money may be living.

Then again, very much more might possibly be done by successful settlers in the different provinces of Canada, in keeping up communication with their friends, and in writing to the press in the districts from which they came in the United Kingdom, detailing their experiences, inviting correspondence and offering to assist new comers in any way they possibly could to ensure their successful settlement.

I should like to see the different provinces divided into immigration districts, in each of which an immigration committee could be formed for the purpose of corresponding with people interested in emigration, and of assisting settlers on their arrival in the country. It would not involve much expense, but it would certainly attract a good deal of notice, and would also place us in the possession of information about local districts which could be circulated with great advantage.

A very excellent means of attracting attention to Canada and its resources is by means of displays of agricultural produce. What we want are samples of produce, both in the grain and in the grass, as well as supplies of fruit and vegetables, all of which should be renewed frequently. We not only need a supply that can be utilized as required, but as a store from which the samples can be replaced as they become dirty or broken from continual use.

I do not know that the pamphlets that we have in use can be much improved upon, although it is desirable that they should be varied from time to time.

The best kind of pamphlet for use here is one which contains reliable information, and written from a knowledge of the inquiries usually made. It is important, however, that such a pamphlet should be kept well within the limits of 4 oz., with the wrapper, in order that it may be circulated for a penny per copy. If the pamphlets are heavier, it means a largely increased expenditure for postal purposes.

We might also, perhaps, do more to popularize Canada through the medium of the schools and school rooms even than we are now doing. I should like to see a good map prepared by our department specially for school use. There would be no difficulty in distributing thousands in an advantageous manner. They would be displayed on the school walls, and, prepared with a number of pictures round the map, would be a standing advertisement. They could also be circulated among clubs and reading rooms throughout the country.

The same remark applies to sheets of Canadian views. These could be prepared in an inexpensive but effective manner, and would prove of great value as an advertising medium. They might be surrounded with suitable letter-press to give information about the country and stimulate further inquiry.

Useful work still continues to be done at the Imperial Institute. The displays of Canadian produce of various kinds, while not kept up by the provinces as thoroughly as should be done, are yet very useful as object lessons. The curator takes considerable interest in commercial matters and in emigration, and distributes a large quantity of pamphlets and information dealing with these subjects.

I am glad that it is intended to take greater advantage of the Imperial Institute in the directions I have mentioned than has hitherto been the case.

Just as I am concluding this report information has reached us of the very satisfactory condition of the crops in the different provinces of Canada, and of the large



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number of additional hands that will be required to place the fruits of the harvest upon the market.

This promising state of things will, I trust, turn out to be of the greatest possible advantage to the farmers of the Dominion. Their success is always reflected in the letters they write home, and in their visits to the United Kingdom, and is calculated to do more than anything else to encourage a satisfactory omigration of the right classes to our country.

Your obedient servant,

STRATHCONA.

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## No. 2.

## REPORT OF W. T. R. PRESTON, INSPECTOR OF AGENCIES IN EUROPE.

LONDON, September 16, 1901.

The High Commissioner for Canada,  
London.

MY LORD,—On my return to London from Ottawa in the month of May, I was authorized by the Deputy Minister of the Interior, Mr. Jas. A. Smart, to communicate with the Education Department of Great Britain, and the publishers of school books throughout the kingdom, offering to have all maps of Canada, published in any of the geographies, revised and corrected by the Canadian geographer, and also to have the descriptive matter relating to Canada in the reading books edited in Canada by writers having personal knowledge of the subject matter. I communicated with the principal publishers in England and Scotland, and received from all replies expressive of their most cordial appreciation of the proposal; several have already sent in maps and books for revision, and others intend doing so with their new issues.

The most cursory examination of some of the books in question is quite convincing as to the wisdom of the course suggested by the deputy minister. The lamentable ignorance manifested upon Canadian subjects in many of these publications probably explains to a very great extent, the want of knowledge in this country about the enormous resources and the climatic conditions of the Dominion, to say nothing about the brilliant prospects awaiting the proper kind of emigrants to Canada.

It will not be out of place for me to refer to the publications, which had been furnished by the Department of the Interior to the emigration branch of the London office during the last two or three years. The advantages which will undoubtedly accrue to Canada from the extensive circulation which has been given to the descriptive text book by Mr. E. R. Peacock, M.A., of Upper Canada College, is incalculable. This publication proves to be an agreeable change from the ordinary emigration literature, and was most opportune. The attractive manner in which the book had been prepared, and the vast fund of information which it contains, make it a publication that can be distributed with immense advantage in all classes of the community. The circulation of this book accompanied by the book and the atlases, also supplied by the department, in very many of the schools in Great Britain, without doubt, furnishes the ground work, wherever it is read, for the dissipation of much ignorance that is only too painfully prevalent in England in regard to the Dominion.

The department also deserves to be congratulated upon the publication of a coloured pamphlet entitled 'Free Land,' a large number of which have been distributed throughout the British Isles. This has proved the most attractive and descriptive brochure, so far, printed for general circulation in the interest of emigration. In a few pages it presents, in a concise form, very many of the salient characteristics of all the provinces, as well as prominent paragraphs indicative of the general character of the inducements offered to emigrants to Canada. While presenting Manitoba and the North-west Territories as extensive and new fields for settlement, it also shows that the older provinces are not wanting in inducements to certain classes of emigrants. I have received from booking agents and centres for the circulation of Canadian emigration literature, hearty congratulations in respect to the appearance of this publication. I am confident an extensive circulation of this pamphlet will prove extremely advantageous to Canadian interests.

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In order to thoroughly understand the actual return that is secured for the expenditure of public money in promoting British emigration to Canada, it is advisable that some idea should be had of the number of persons who having made inquiries at the government offices about Canada, emigrate to the Dominion (within a reasonable time) after securing the information in question. While it is true that the question of emigration is frequently a subject for long and serious consideration, it is with the majority, I believe, only a question of a few months. Very many thousands have applied for information at the government offices in Great Britain during the last few years, with the view of emigrating to Canada. This is particularly the case in connection with the London and Liverpool offices. In the London office this year between the 1st of January and the 30th of June, over 7,700 applications for information were received, occasioned no doubt by notices and advertisements of one kind or another in the British press. I, therefore, respectfully submit to your lordship the necessity of taking steps in order to learn how far the information furnished by the government offices is satisfactory to prospective emigrants, and also the proportion of those who apply for information who eventually emigrate to Canada.

I am well aware that this cannot be done unless a slightly different clerical system is adopted from that now in operation, but in the interest of the work of emigration, and with a view to discovering whether any other policy is advisable than that now in vogue, a change in this respect might with advantage be effected. With the information at the disposal of the department, which may possibly be secured by the adoption of this suggestion, I respectfully submit that the concentration of official energy could be more advantageously carried on. The expense involved in a change of this character would be immaterial in comparison to the advantage to be gained, and the work could be carried on more effectively and with a greater degree of intelligence. In the continental work a policy of this character has been adopted in order to locate the most promising emigration districts, and the department is able to keep in touch with the localities from whence come a desirable class of emigrants. I am inclined to believe that by the partially successful working out of this suggestion in England, much of the emigration energy, for which at present the returns are not encouraging, can be centred more satisfactorily upon promising fields for active and personal work, than can possibly be found by a wholesale distribution of literature when no efforts are being directed with the expectation of learning in how far the propaganda which is being made serves the purpose for which it is intended.

One cannot avoid hearing the constant demand or agitation in Canada for a larger number of British emigrants. Large sums of money and a great deal of energy have been expended in endeavouring to attain that end. So far it can hardly be said that the desires of the people of Canada have been realized in this respect. Yet a careful survey of the situation here forces any intelligent observer to the conclusion that, while Great Britain possesses an enormous emigrating population, the condition of those who desire to seek a home elsewhere, is not as favourable as that in many of the emigrating centres upon the continent. I will not say that the proposed British emigrant is not thrifty, but I am safe in giving expression to the thought that the conditions are such that he is not able to anticipate the contingency of emigrating to the same extent as the continental peasant, and he is, therefore, not as well prepared for establishing himself in a new country as the vast majority of the Scandinavians, Germans, Belgians, Austrians, Hungarians, as well as others of the better class of the emigrating population of Europe. Great Britain is teeming with tens of thousands who would be desirable settlers in Canada in every respect, either in the older provinces or in the new territories, but who are hampered in the manner suggested. There are also hundreds of heads of families willing to invest the amount necessary to reach Canada if they could receive, on their arrival there, some form of assistance, say, equal to the amount that their transportation would cost, as a loan, to enable them to begin life as settlers upon the agricultural lands of the Dominion. During the last fourteen or fifteen years one organization in England—The Self Help Emigration Society, Farringdon Street, Lon-

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don—claim to have sent out to Canada, emigrants represented by these classes, over six thousand souls, and more than ninety per cent are now in the Dominion.

It is not necessary that I should quote at length the comments of the British press upon this question, but at the moment of writing this report a letter appears in the *London Times* upon this question from the Hon. G. W. Ross, Premier of Ontario, who has been spending some months in Great Britain. The letter is as follows:—

‘ To the Editor of the *Times* :

‘ SIR,—In discussing the question of emigration to Canada with the officers of the Dominion and Ontario governments in this country, I am greatly impressed with the fact that upwards of 70 per cent of the people who leave the British Isles go to the United States or to some foreign country.

‘ From figures placed in my hands it would appear that between 1891 and 1900, 726,000 persons emigrated from the United Kingdom, of which 520,000 (or 72 per cent) went to the United States; 90,000 (or 13 per cent) to British North America; 55,000 (or 7½ per cent) to the Cape and Natal; and 38,000 (or 5¼ per cent) to Australia. Assuming these figures to be accurate they have a two-fold significance: (1.) That 70 per cent of those whom you have educated in your day schools at great expense, and trained in industrial methods in your technical schools and factories, transfer their allegiance to a foreign power and thus contribute the intelligence and skill they acquired here to the industrial development of the greatest commercial rival with which the British Empire has to compete; and (2) that the colonies, which are capable of being a source of strength to the Empire, and whose growth is of the utmost importance to its future, are suffering for the want of the very material, which is now being transferred to foreign soil, without a serious effort being made, so far as I can gather, to divert it into more desirable channels. And this leads me to observe, parenthetically, how much more might be done in the future, under perfectly legitimate influence, to create a bias for British as against foreign dominions in the minds of the youth of these islands by laying greater stress upon the teaching of the geography and resources of the British Empire, particularly of the great self-governing colonies as such. Assuredly the emigration statistics would soon tell a different tale to what I have mentioned.

‘ From my intercourse, during the last two months, with many of the public men of the United Kingdom, I am greatly impressed with the growth of that imperialism which favours a closer alliance between the colonies and the Empire. Better trade relations are considered as one bond of alliance, joint contributions for the defence of the Empire are mentioned as another bond of union. To me it appears that a concerted movement on behalf of the colonies and the Empire for the preservation to the Empire of the surplus population of the United Kingdom, would be one of the most immediate and effective bonds of alliance which could be devised. Canada has now a population of nearly five and a half millions. Make it ten or twelve millions—as it might be made if we got a proper share of the emigration from the United Kingdom, and our defence, is with such a large population Canada would furnish a basis for the food supplies of the Empire, and an admirable recruiting ground for the army and navy. Moreover (and this is of great importance) with an addition to our population of such persons as would naturally emigrate from the United Kingdom the attachment of Canadians to the Empire would be greatly and permanently strengthened.

‘ Is such concerted action possible? It is certainly desirable, and is worthy the attention of the public men of this country.

‘ Yours truly,

‘ G. W. ROSS.

‘ London, Sept. 9, 1901.’

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The suggestions contained in the *Imperialist's* premises have with, I am sure, meet with as hearty an appreciation in Canada as they have already received in Great Britain. In an extended editorial reference to the correspondence the *Times* also said:—

'Nevertheless, we agree widely with Mr. Ross that it is desirable to encourage by all legitimate means the flow of British emigration to suitable parts of the British Empire rather than to foreign countries. The great problem of the coming year will be to consolidate the Empire, to bring its several parts into organic and vital relation with each other and with the old country, their common origin and home, to convert the noble impulse which has led the sons of all the colonies to help the Mother in its need into a working bond of indissoluble union. The solution of this problem is not to be propounded off-hand. It will be attained by the co-operation of many means, by the slow assimilation of many scattered ideas into the common work of impartial thought and sentiment, by the gradual reconciliation of many ideals now apparently divergent. In the meanwhile these slow and secular processes cannot lend to spontaneous or such concerted action as Mr. Ross suggests. The immediate problem to be faced lies in the fact that British emigration prefers the United States to the British colonies. Can we divert such part of this stream as is really fertilizing and make it flow into channels of the British Empire now thirsting to receive it? The answer does not, perhaps, lie upon the surface, but it is well worth looking for, and Mr. Ross is certainly entitled to no little credit for suggesting a practicable and hopeful way of looking for it.'

In addition to the reasons heretofore given to justify more enlarged projects to encourage British emigration to Canada the attitude of the now Australian Commonwealth on the question of emigration is one that should not be overlooked. It is a secret in official circles in this country, that a much more active emigration propaganda will be undertaken by the Commonwealth than has hitherto marked the policy of even the most aggressive of the Australian colonies in this respect. This idea has been voiced in the following paragraph in a late issue of an English paper, which is in very close touch with Australian interests:—

'A fresh effort is to be made to bring noticeably before the British public the advantages offered by Australia to intending emigrants from the old country. It is feared that for some years to come South Africa will absorb the bulk of England's surplus population, and in order to meet this competition the older colonies are proposing to adopt a more spirited emigration policy. The agents general of Australia have been communicated with on the subject, and they have been instructed to waste no opportunity of advertising the productive powers of the lands they represent. One of these officials remarked the other day that there is room for twenty millions in Australasia, the population of which now is less than that of Greater London. When the accredited representative of the federal government assumes his duties in England, the agents general will be able to devote more time to the advancement of the purely commercial interests of their countries, as their political duties will be taken over by the High Commissioner. They fully realize the importance of a spirited emigration policy, but consider that there must be money behind it. Hitherto this essential has been wanting.'

The demand for labourers in Manitoba and the North-west, on account of the prospective favourable harvest, furnished an occasion for widespread newspaper references to the magnificent agricultural resources of Canada which could scarcely have been secured under any other circumstances. The press were not only willing to give currency to this requirement of labour, but manifested unusual anxiety to furnish the reading public with the fullest possible information about the Dominion. A man and unlooked for interest was suddenly awakened in Canadian affairs. Interviews with myself in respect to the climatic conditions, resources and prospects, appeared in all the leading newspapers, and through this extensive publicity thousands of personal requests for information were made at the government agencies throughout the United Kingdom. Unfortunately the greater proportion of the inquiries were unable to pay

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the cost of ocean and railway transportation, but among them were a very large number who, had they possessed the necessary means to enter upon life in a new country, would have proved most acceptable settlers in Canada.

The continental governments formerly objected to the emigration of their subjects, and put serious obstacles in the way of intending emigrants. They have, in some measure, changed their policy in this respect, and while they continue to make the way hard in respect to countries which are not placed on their favourable lists, by the use of so-called 'benevolent aid for emigrants,' they have permitted certain societies a latitude in this respect in regard to particular colonizing countries which they profess to believe are best suited for their countrymen. In this manner certain of the European countries are interested in trying to divert emigration to such trans-oceanic countries where they have commercial interests or where they expect to have in the future.

Germany and Austria have lately commenced to endeavour to divert the emigration from these countries to the River Platte and other South American districts, while previously it was just to these American countries that the continental governments objected to allow their emigrants to go. The consequence is that South America is the most active competitor that Canada has upon the European continent, not only by the apparent favour of the government, but also owing to the very low rate at which emigrants are carried.

The difficulties in respect to ocean transportation and the heavy rates which are now charged from continental ports to Canada could, undoubtedly, partially be met by connection with a line of steamships from a southern port in Europe to Canada. On account of the difficulties enumerated and the cost of transport it can be fairly assumed that none but a desirable class, those who by thrift and industry have accumulated ample and sufficient means to settle in a new country, can possibly take advantage of the opportunities offered by Canada to become settlers in the Dominion.

In conclusion, I have only to add that I am forced to the conviction, by a careful consideration of all the contending influences at work, both upon the continent, in Scandinavia and in Great Britain, that it will not be possible to retain the volume of emigrants from this side of the Atlantic to Canada without the most persistent carrying on of an active and systematic propaganda. There are many other fields for emigrants to whom the most alluring inducements are offered; but in respect to no one of them, I believe, are there the same prospects for success, through industry and sobriety, as in Canada. Notwithstanding this, however, the inducements honestly offered to intending emigrants must be continually presented if the Dominion is to secure a population from Europe to assist in the cultivation of her vast areas of virgin soil and the promotion of the agricultural interests so earnestly desired by the people of the Dominion.

Your obedient servant,

W. T. R. PRESTON.

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## No. 3.

REPORT OF G. H. MITCHELL, ASSISTANT CANADIAN GOVERNMENT  
AGENT AT LIVERPOOL.15 WATER STREET,  
LIVERPOOL, July 15, 1901.The Right Honourable  
The High Commissioner for Canada,  
London.

SIR,—In presenting my annual report respecting the office work in connection with this agency, perhaps I may be permitted to refer to the fact that 21 years have elapsed since I entered the service as the sole assistant of Mr. Dyke, who was the agent here at that time. The increase in the work of the office since then has been very great, and the year which has just ended has been busier than any of its predecessors.

In addition to the large number of what may be generally termed trade inquiries, there have been between seven and eight thousand letters written in answer to correspondents presumably contemplating emigration. These have been people of all classes, from men possessing thousands of pounds down to those who have not sufficient money to pay for their passage. In all cases which appeared to be specially desirable from our point of view endeavours have been made, in many instances of course successfully, to arrange for personal interviews either here or at their homes, and good results have been achieved in this way, but this is a matter that has to be handled very delicately, and it is surprising to find how often the suggestion of a meeting appears to alarm the inquirer, and how frequently it is declined. Your other agents have possibly met the same difficulty, and I know of unarranged calls which have been resented. There are various reasons for this. Many are timid to commence with, and anything which to their mind appears like an attempt to 'rush' them or force the pace in any way arouses their suspicions and leads to the abandonment of their half-formed intention. Many others look upon emigration as a confession of failure here, and are not anxious to advertise the fact that they contemplate such a step; others have family or business reasons for not wishing their intentions to become prematurely known.

Acting under your instructions a rather larger newspaper advertising campaign was entered upon this year, and with the best results. A very large proportion of the applications for information came from men with considerable means, and it was the desire of probably nine-tenths of my correspondents to take up land or get employment at farm work. In my opinion there can be no question as to the advantages to be derived from constant and widespread newspaper advertising; it keeps the suggestion of emigration before the many thousands who are dissatisfied with their present position or prospects, accustoms their minds to the idea, and in course of time our aims are accomplished. I do not look upon the time or material as wasted even though a number of correspondents may write out of mere curiosity; the pamphlets are distributed and one never knows when they may strike their mark.

In regard to numbers the Board of Trade returns for the year 1900 give the total leaving Liverpool for Canada as 48,189, of which number 31,464 were foreigners, leaving 16,725 as the number of British. The United States figures from Liverpool during the same period were a total of 94,962, of which 65,573 represents foreigners, and 29,389 British. It is, however, well known to you that the Board of Trade figures are misleading, and the actual facts are that the British figures for the two countries should approximate much more closely, as a far larger number of British passengers go via

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the United States to Canada than go via Canada to the United States. The reverse is the case in respect to the foreigners. Particular inquiries made at the offices of the steamship companies show that a substantial increase in the British bookings to Canadian points has taken place during the first six months of the year compared with the corresponding period of 1900.

One of the data on which a calculation can be based as to whence our emigrants are drawn, is that furnished by the bonus lists, but even these are very incomplete. They only deal with emigrants to points in Manitoba and the North-west Territories, and do not include the bookings at the steamship companies, Canadian Pacific Railway, and certain other offices whose numbers comprise more than half the total, but such as they are they show that over 50 per cent of the emigration from England, and over 30 per cent of the total from the British Isles is from the northern part of England, served by this office, and any one regularly visiting the ships leaving Liverpool for Canada and the United States respectively can see that the Dominion is obtaining the finest of the emigrants who are leaving this country.

It is difficult to say how many emigrants an agent is responsible for, as in many cases the first impetus came—from it may be pressure of circumstances, from an advertisement, a newspaper paragraph, at a lecture or an agricultural show, from a friend who had acquired particulars for himself, or from one already in Canada. The intending emigrant gets what information he needs, either here or elsewhere, books his passage and sails in the great majority of cases, without giving any notification of his departure. The only plan is to keep on disseminating information in the sure conviction that it will eventually have its effect; make the idea of emigration a familiar one to everybody, and by advertising keep the public informed where particulars and reliable advice can be obtained. This is without question now being done more extensively than ever before, and from this office alone during the past six months there have been circulated some 40,000 publications of one kind or another. This has been done in response to individual application through the post, and by callers, to lecture audiences, to steamship agents, schools and agricultural shows; I have not the exact figures for the twelve months, but they cannot be less than 80,000. It will be readily understood that the manual and clerical labour involved in this work alone is very great.

A good deal of correspondence is necessary in connection with Mr. Jury's work—obtaining entry forms and making application for space at agricultural shows; making arrangements for lectures, arranging appointments for interviews, and so on. Then there are official and other letters which bring up the total outward correspondence for the year to 9,855 letters.

The work of the Rev. J. Bridger, the Organizing Secretary of the Emigration Committee of the Society for Promoting Christian Knowledge, continues to be done by the staff of the office, and in the frequent absence of Mr. Bridger and his colleagues, I take charge of the matter. The work is almost entirely connected with emigration to Canada, and as their system of putting chaplains on most of the Canadian ships and nautrons on many appeals to the clergy throughout the country, to whose notice it is brought by official and other widely-read publications, the consequence is that many emigrants, girls particularly, avail themselves of this organization.

The lantern-slide work continues to grow, and during the six months forming the last winter season my three sets of slides were in constant use, and at times a fourth set had to be borrowed to meet the demand. The dates were arranged so close together that they had to be passed on from one operator to another without a day's delay, and to keep things going without hitch throughout the season constant watchfulness and much letter writing are necessary, as a failure of the slides to arrive on the day fixed would be a seriously annoying thing to both lecturer and audience. Many appreciative letters are received in this connection describing the close attention of the audiences and the warm interest evinced in the proceedings. As there is no, or at any rate very little, expense attached to this work beyond the cost of the slides it must be admitted that this is a very cheap method of advertising, and even if perhaps the majority in



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many of the audiences have not reached an emigrating age, a pictorial representation besides adding interest to the lecture, carries conviction in regard to the statements made as to the country's extent and resources. Good work is thus being done in impressing correct ideas upon the minds of those who will form the emigrating class of the next generation, so that in future years there will not be the difficulty which we experience to-day to remove groundless, and because long-held, deeply-rooted prejudices. I am here referring to those lectures given by schoolmasters to the pupils and their parents and friends. Similar benefits will result from the distribution of the school-books for which there has been so much demand. It is very natural, however, that interest in the one set of views should become exhausted, and to maintain it and induce lecturers to continue to present Canada to audiences it is very desirable that new sets of slides should be prepared from time to time.

There have been 37 parties, comprising 1,535 children, sent out by philanthropic societies and others under the regulations of the department, all of whom have been inspected and certified in accordance with my instructions.

There has been a very good variety of pamphlets for distribution, but if it is permitted to refer to a suggestion I have made before I would again allude to the real benefit of having some publications referring in more detail than is possible in a general pamphlet, to distinct districts. Such a publication was that entitled 'Hard Wheat Belt,' which had proved very useful dealing as it does with the Edmonton and Moose Mountain districts, and giving particulars as to the nature of the country, the quality of the land, the communications which exist, the homestead land available, or the price of land which could be bought. At any rate great assistance could be rendered to the agents in this country if the immigration agents and land agents in Canada were to include in their annual reports to the department a brief description of their respective districts, noting the progress of settlement, giving an idea of the demand for labour, the land unoccupied, its nature and chief characteristics, prices, and any other particulars which would be of interest to intending emigrants. Reprints of these would perhaps serve as pamphlets and answer the purpose referred to above, but in any case they would keep your agents informed of many details which it is desirable that they should know. Something might also be done by them to induce successful settlers to write an account of their experiences to the newspapers in this country, especially those published in the districts in which they resided here.

Attending to correspondence and callers, visiting outgoing and incoming steamers, arranging for lectures and agricultural shows, the circulation of lantern slides, seeing to the distribution of printed matter, keeping in touch with the shipping companies, reporting matters of interest to your office, in addition to the many routine duties connected with the office, the time of myself and staff has been fully, and I venture to hope, profitably employed.

Your obedient servant,

G. H. MITCHELL.

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## No. 4.

REPORT OF ALFRED F. JURY, CANADIAN EMIGRATION AGENT FOR  
THE NORTH OF ENGLAND.15 WATER STREET,  
LIVERPOOL, July 15, 1901.

The Right Honourable  
The High Commissioner for Canada,  
London.

SIR,—My work for the year just closed consisted, as in previous years, of attending agricultural and fat stock shows, lecturing, visiting steamship agents and keeping them supplied with our literature, interviewing intending emigrants at their homes, when they required some special information about Canada or desired to talk the matter over before the whole family, and meeting people at this office who before finally making up their minds to break up their homes and leave this country, wished to discuss their prospects with some one who had lived for years in Canada. Detailed monthly reports of this work have been made to your office.

I still regard exhibiting at agricultural and fat stock shows as the most important feature of my work, because there one meets the classes which furnish the most desirable emigrants and also the most likely customers for our products; there we have a chance of showing the land hungry of these isles what the free grant lands of Canada will produce, and the products exhibited prove that our lands are of a very high quality and that our climate is good. Comparisons that may be made enable us to point out that our exhibits are grown on similar land to that of which we have millions of acres to give away. Then those shows afford a splendid opportunity of advertising Canada by the distribution of pamphlets, nearly 100,000 having been circulated in this way during the year. Most of this printed matter reaches the homes of the agricultural classes, and must inevitably show good results in the near future. Some private firms among the largest in their particular lines in the United Kingdom, attend these shows almost entirely for the opportunity afforded to exhibit their goods and distribute their advertising matter, and when this is done by good business firms desiring to get in touch with the same people we want I think it is almost conclusive evidence that we are working along the right lines. I am pleased to be able to say that through the energy of our own department and the kindness of the Department of Agriculture, I have been able to make a better exhibit of our products than hitherto, but as there is always room for improvement I trust that I shall receive such further support as will enable me to make an exhibit at these shows thoroughly representative of the varied products of Canada. There has scarcely been a show at which there has not been one or more inquiries from persons wishing to be put into communication with some exporters of Canadian products; hitherto this has been a rather difficult thing to do, but since the publication by the Department of Agriculture of a list of Canadian exporters of food products, the difficulty in this respect has been overcome. The Royal Agricultural Show held at Cardiff recently was the most successful show that has been held for years, and the best show from our point of view held in this country during my time here. We had fifty feet of space, which is about as much as any ordinary exhibitors have, and through the kindness of the Hon. Sydney Fisher we were supplied with a splendid exhibit of Canadian products from Glasgow; we had a very attractive stand built characteristic of Canada, and our display was universally voted among the most attractive on the grounds, and I think the results will repay the additional outlay.

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With regard to the lectures delivered by me during the year, I think they have about averaged with previous years, the largest attendance being at the Victoria Institute, Worcester, where the spacious hall used for the popular Saturday night lectures was full even to the utmost limit of standing room; the smallest audience I had was at the village of Metheringham, in Lincolnshire, where there were only 100 people in attendance, the number being influenced by a very heavy fall of snow two hours before the lecture commenced. In previous years I have had a few smaller audiences than the smallest last year, but I have had much larger, and I think I am safe in saying that my audiences have averaged one hundred and fifty, most of them adults, at all the lectures I have delivered since I have been in this country. One great difficulty I meet with in making arrangements to lecture in rural districts is the obtaining of a hall to speak in; the village school in most cases is the only place suitable, but this is not always available.

During the year I have visited quite a lot of people at their homes, and most of them I am glad to say are now in Canada or are about to leave. I have found the personal visit most successful; it is especially useful where people have some objection to Canada, as a personal discussion is the most effective method of removing it. I have also called upon a large number of steamship agents, whom I have found to be alive to the advantage of booking passengers to Canada; a large percentage of their clients go to western Canada, the steamship agents thereby getting the western bonus, which to them is a great incentive to work. No better class of men can be obtained to work for any country than the local steamship and excursion agents who make the booking of passengers a business, and who more than any one else are brought into contact with the travelling public. These agents are often asked their opinion by intending emigrants as to which is the best country or colony to go to, and consequently they have many opportunities of helping the place that pays them best. I am convinced that one of the best ways to increase the number of emigrants to Canada is to make it more to the interest of the local steamship agents to send them there.

I have been much surprised since coming to this country at the large number of Englishmen I meet who have already tried their fortune in Canada. I have seldom appeared anywhere in a public capacity on behalf of Canada that one or more have not approached me to tell their experience; those who have failed in realizing their anticipations in Canada and in consequence blame the country and not themselves, are composed almost exclusively of men who have been what is called 'well brought up' in this country, that is the sons of the wealthier middle class who satisfied of their own superiority and with a certain amount of capital, sometimes of very limited amount, have expected to make a fortune in the colony in short order; they never had the faintest idea of the kind of life they were going to, or the quality of the man required to succeed; their ideas being all in the sky, when they have to work on the earth they fail, and come back here and blame Canada, its people, its climate, or its means of transportation. I have met a number of men of this class, but during the whole of my time here I have not come across more than half a dozen who left this country poor to seek in Canada a field for their labour or the land on which they might become farmers, who have come back dissatisfied. Nearly all those who went out in such circumstances and have returned have done so on account of relations dependent on them who would not emigrate, or through some accident; they still have a warm place in their hearts for our country, and express a wish and often a determination to go back as soon as they are free to do so. I have also met others of this class who are visiting here, and when I am talking to people on behalf of Canada, their testimony is often volunteered in favour of the Dominion as being a good place for the struggling tenant farmer and the agricultural labourer to go to.

I am glad to be able to report a gratifying increase in the numbers of passengers leaving this country direct for Canada, in spite of the withdrawal of the Dominion Line from the St. Lawrence route; and in view of the state of trade here, I believe it to be a sure indication that the tide of emigration is setting towards Canada. I hope every

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means will be adopted to enable the agents here to take full advantage of the turn of the tide which I am convinced is taking place. One way of doing this would be to have small pamphlets (similar to the one entitled 'The Hard Wheat Belt' which describes the Moose Mountain district), dealing specially with the various districts where there are lands open for homesteading or cheap lands for sale. Prospective settlers are always asking for more definite information about particular localities, as before leaving here they would like to be able to settle on the locality they are going to in Canada. If these pamphlets dealt with the kind, quality, price and quantity of the land to be disposed of, its nearness to a railway station, to fuel, whether wood or coal, its water facilities, the game there is in the district, and the kind, quality and quantity of the crops that have been raised, the cost and supply of labour, (because that is one of the first questions a tenant farmer asks,) our work here would be very much simplified and assisted.

A publication which has been in great demand at the agricultural shows was the copybook, and I am inclined to think that more immediate good would be done by its distribution in this way than by its use in schools, as it would go straight to the houses of the people and to the notice of the parents, thousands of whom in fact themselves applied for copies.

Believing we are about to reap a good harvest from years of hard work under rather unfavourable circumstances, and assuring you that I shall leave no stone unturned to bring about so desirable a result, I subscribe myself,

Your obedient servant,

ALFRED F. JURY.

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## No. 5.

## REPORT OF W. L. GRIFFITH, AGENT IN WALES.

WESTERN MAIL BUILDINGS,

CARDIFF, WALES, July 12, 1901.

To the Right Honourable  
The High Commissioner for Canada,  
London.

My LORD,—I have the honour to submit my fifth annual report from this agency.

I am happy to be able to say that the favourable position which Canada has held in the minds of Welshmen generally, has not only been sustained, but has been improved upon.

During the past year there has been increasing disposition on the part of the public in the district which this agency deals with, to regard Canada as the colony offering the greatest attractions for intending emigrants. This has been shown by largely increased inquiry, both by letter and in a personal way. During the first six months of the present year, 1901, the inquiry by letters directed to this office has equalled the correspondence of the whole of the preceding year, 1900. This is not due to chance, nor to the operation of general conditions, but is the result of Canada being continuously and prominently kept before the public eye by judicious advertising, and also by the generous and never failing support which has been accorded to this agency by the Welsh press generally; where every one has been so kind it is awkward to make any distinction, but I must acknowledge the quite unusual support which has been continuously given by the *Western Mail*. So much is this the case, and so large a space has this paper devoted to Canadian matters, that it has become quite well known in the Dominion.

Newspaper advertising is one of the most potent means of promoting emigration, the result being that inquiries are elicited and our literature placed in the hands of the applicant.

The work in Wales has also received a valuable stimulus as the result of the visit to Canada, at the invitation of the Hon. Clifford Sifton, of three prominent Welshmen, namely, Mr. Lloyd George, M.P., Mr. W. J. Rees, ex-mayor of Swansea, and Mr. Llewelyn Williams, M.A., and the publication of their report. The prominent position which these gentlemen occupy has caused the press to refer very frequently to the report, the demand for which has been so large as to be extremely gratifying, and it cannot be denied that it has fastened the attention of the public in Wales upon Canada, in a most desirable way. The number of inquiries for this document which come to hand written in the Welsh language, is very much larger than anything I have previously known. At the Royal Agricultural Show the demand for this report was such that we disposed of over 15,000 copies. We also had a number of copies printed in the Welsh language. In addition to the value which has accrued to Canada from this report, the delegates have never missed an opportunity to promote the interests of the Dominion. Particularly has this been so in the case of Mr. W. J. Rees, J.P., of Swansea. From time to time he has been putting in a good word for Canada; not long ago the papers reported an address of this gentleman's made to a meeting of tenant farmers in Breconshire. At the Royal Show, held in Cardiff, Mr. Rees took the opportunity of interesting several hundred farmers in Canada. I attach a copy of a report of the matter to which I refer, and which proved an advertisement unique in value and in form. The following is from the *Western Mail*:—

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## ' SIR JOHN LLEWELYN'S TENANTS—INTERESTING SPEECH AT THE SHOW.

' During the day the show was visited by about 300 of the tenants from the estates of Sir J. T. D. Llewelyn, Bart., and Mr. Charles Venables Llewelyn. Their visit was due to the generosity of their landlords, and they were entertained at luncheon through the kindness of the Canadian authorities. At the luncheon Sir J. T. D. Llewelyn presided, supported by Mr. C. V. Llewelyn, Messrs. W. L. Griffith, Canadian Government agent for Wales; W. J. Rees, John Francis, J. C. Howell Thomas, F.S.I., Swansea, and H. M. Cook, Carmarthen.

' They were met in that tent, Sir John said, at the invitation of the Canadian government, and he thanked them on their behalf. As they knew, Mr. W. J. Rees was one of the set of commissioners who went out to Canada to report upon the progress of agriculture in what was one of the most important of the British colonies. In that colony there were large tracts of land wanting agriculturists. In Wales, it appeared from the report drawn up by the commissioners, they could learn a great deal from the Canadians, who had a good system of agriculture. In the past Canada had learned something from the mother country, and now she was able to show what could be done in Wales. In that colony there were large tracts of land to take up, and Canada invited Britishers to come out and help them to colonise those large tracts of land, and no doubt there were many good agriculturalists in this country looking out for new homes, and he commended the pamphlet prepared by Mr. Rees and the other members of the commission to their careful attention. They should see what was being done in Canada, and if they could not get on in this country they might be able to do so out there. His own and his son's hope and belief was that the tenants on their estates were satisfied and happy. Unfortunately, that was not the case everywhere. In some places, too, there were several sons, members of the same family, seeking holdings, as they could not all succeed to the holdings that their forefathers had held for generations before them. If they wanted homes where they would still be under the British flag they could find what they wanted in the colony of Canada. In conclusion, Sir John expressed his thanks for the hospitality extended, and also his appreciation and thankfulness at finding that so many of his tenants had accepted his invitation to attend the show.

' Mr. W. L. Griffith, who responded, regretted the absence of the Hon. Mr. Fisher, and said that one department of the work carried on under the Ministry of Agriculture in Canada was a series of experiments in almost everything that affected the farmer's welfare. Stock was maintained, seeds were tested, and samples of the best obtainable were given to the farmers free of charge.'

The following is a quotation from an editorial article from one of the Cardiff papers:—

## ' CANADA AND THE EMPIRE.

' Canada, to use an expressive Canadian phrase, has "cut a wide swathe" at the Royal Show. Its Minister of Agriculture, the Hon. Sydney Fisher, was one of the distinguished visitors attracted to Cardiff last week, the Canadian stall was about the prettiest and most effective at the show, and not the least interesting of the week-end events was a great gathering of tenant farmers from the estates of Sir John Llewelyn and Mr. Venables Llewelyn, who were the guests for the occasion of their landlords and the Canadian government conjointly. We had a practical manifestation of Imperialism, as well as of the consideration which is not selfish, in the spectacle of a typical imperialist and landlord like Sir John Llewelyn publicly attesting to the advantages which Canada offers to farmers of the right sort, and advising the adventurous among them to seek homes in a country of boundless opportunities which flies the Union Jack. The incident was altogether highly suggestive. That the Dominion is destined to play a big part in the world is unquestionable. It is progressing at a pace which only those

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can adequately realize who are brought into intimate contact with her oversea business. In five years Canada has increased her proportion of the enormous quantities of food-stuffs imported into this country from 7 to 16 per cent—in a word, more than doubled it in half a decade.

‘If our surplus manhood must seek a home elsewhere, it is desirable that it should not be entirely lost to the Empire. And Canada is not only daughter in her mother’s home, but also mistress in her own. Wales, where the oldest and most important of our colonies has in recent years been admirably represented is, we are pleased to learn, contributing on a rising scale towards the growth of the young giant who sprawls across a continent for nearly five thousand miles between Halifax and Vancouver. Last year established a record in the number of Cymric emigrants to Canada.’

During the year there has been a strike among the Penrhyn at Bethesda. Several thousand men left their employment, and it seemed possible that some of them might feel disposed to go in for farming in Canada. The matter received the requisite attention, but up to the present nothing has come of it. The opportunity, however, was embraced of placing the claims of Canada before a large industrial population, and this has resulted in a considerable inquiry from which good must result.

In July, 1900, the Minister of the Interior visited Cardiff, where he was accorded a very good reception. His visit undoubtedly resulted in placing the work here on a better basis than it had hitherto occupied.

During the year a show case was rented in the vestibule of this building and below this office. In this show case is a fresh and attractive exhibit of grains, grasses, minerals, and other products of Canada. The grains are both in the straw and in glass bottles. In the centre of the case is a casket containing a number of Klondike nuggets. There are also a number of photographs. This exhibit is changed from time to time and kept fresh and attractive. It is estimated that on a normal day about 22,000 people pass this exhibit between the hours of 8 a.m. and 10 p.m. During holiday time, or when anything occurs to cause an unusual influx to the town, of country people, these numbers are greatly exceeded, reaching probably 100,000 or more in a day. The building is in close proximity to the Great Western Station, the Cardiff Station of the Barry Railway, and of the Penarth Railway, so that a very large proportion of the passers by are non-residents of the town, either coming from or going to the railway station.

During the past spring Mr. Adamson, of Virden, visited Cardiff, for the purpose of procuring a number of competent farm hands for Manitoba. I did all in my power to further Mr. Adamson’s project, and a number of young men of a good class accompanied him out from Wales in June. I think that if Mr. Adamson would notify in advance that he was coming over it would be advantageous, as parties could be partially formed before he got here, and his work generally facilitated.

That results do not immediately spring from our propaganda is well known to those engaged in the work, but this spring I came across numerous instances within a short period of time, proving conclusively that it sometimes takes years before our work bears fruit. The cases I refer to are a family who have been corresponding with me for over four years. This family have settled in Kootenay on a homestead. The next family, including five persons, had been writing to me for over three years; they are now on a homestead near Calgary. Another family who had been considering the matter for four years, left for New Ontario. The last case occurring about this time was that of a young farmer, whose father was considering the subject of emigration to Canada some twelve years ago. Seeing a paragraph in the newspaper, his interest was renewed, and he wrote me for our pamphlet and sailed for Winnipeg on May 2. Instances could be quoted *ad lib.*, but those quoted go to show that no gauge of the work which does not allow for this kind of thing, is a fair one.

When the work of this agency was commenced, the annual emigration from Wales to Canada was something over a dozen, all from the town of Cardiff. Now, there is a considerable movement to which every county in Wales contributes a share, and the

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movement is a growing one. It is difficult to arrive at a precise statement in regard to the number of emigrants. The bonus returns furnish no test. The head offices of the steamship companies book the bulk of the passengers in Great Britain, and probably so far as Wales is concerned, book a larger proportion than elsewhere. Liverpool is known as the capital of Wales, and from its proximity to the principality, the majority of bookings are made at the head offices of the company in Liverpool. These bookings do not appear as no bonuses are allowed to the steamship companies.

In some of my previous reports I have referred to the condition of the Welsh colony in Patagonia. The interest in this colony has been greatly increased by the fact that the Rev. D. Richards, chaplain of H.M.S. *Flora*, has recently returned from Patagonia, and has delivered a report to the Foreign Office, in which it is believed he makes very strong representations as to the hardships which the colonists endure, from the fact that they most strenuously retain British feelings and citizenship, and the time appears to have arrived when, for a variety of causes the Welsh in Patagonia are prepared to emigrate en bloc. Their position is most interesting from our point of view. The colonists have had several meetings for the purpose of considering where and when to emigrate. By reason of its climate and position to South America, South Africa has been rather prominent in these deliberations. Mr. Cecil Rhodes, too, is reported to have offered large tracts of land in Rhodesia. There is also a feeling that the British government views with favour the idea of transporting the colony to South Africa. On the other hand, the press of Wales, which is that read by the Welsh Patagonians, has exerted a powerful influence in favour of Canada. That these people would make splendid settlers for Canada, seems to be without doubt. Some thirty years ago, deluded and disappointed, they arrived in Patagonia in an absolutely destitute condition. Facing almost incredibly difficult conditions, in a barren country, where the food supply was inadequate, and the water supply unwholesome, the colonists have transformed, by undaunted bravery and industry, what was a few years ago literally a desert into a fairly fertile region. Living on nothing but dry bread and water, the supply of which was sometimes putrid, and absolutely without the aid of capital, they have built up a settlement, which under the circumstances, has commanded much admiration from unbiassed judges. The development of the colony is altogether the result of the system of irrigation adopted. In the early days of the settlement, the colonists, having nothing better than spades, dug ditches to convey water on to their land. The result of this was, on a very limited scale, very fine crops were produced. Later on the Welshmen constructed an irrigation canal, and all that need be said in regard to this, is that a few years ago the value of this work was estimated at £217,000. Beginning these works with only spades at their disposal, they have developed a great capacity for irrigation work, which they now carry on with what they call 'horse shovels,' or what I presume are known in Canada as 'horse scrapers.' The soil in the Chubut Valley rests upon a rock, and recent developments indicate that in order to continue the production of crops, it will be necessary to adopt a system of drainage which will be more expensive even than the irrigation; the reason being that the water is retained upon the sub-stratum of rock, and brings salt to the surface of the soil, this salt rendering the growth of crops impossible. This is a feature which is causing the greatest concern to the settlers. Under present conditions they feel adverse to facing the toil involved in the necessary drainage works. Not only as possible immigrants are these Welsh people interesting to Canadians, but there is much alleged as to their political condition, of which it may be unwise to give details, which must elicit the sympathy of every British citizen.

The meeting of the Royal Agricultural Society at the show in Cardiff, this year, was one of the most successful on record. Special steps were taken to make a creditable Canadian exhibit. The press notices were very appreciative. One editorial referred to our stall in the following words: 'The Canadian stall was about the prettiest and most effective at the show.' An illustration of the exhibit was produced by the *Western Mail* with the following notice:—



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## 'THE CANADIAN STALL.

'One of the most interesting exhibits on the Royal Show ground is in the name of the Dominion of Canada. From an art point of view it is extremely effective, an elliptical bridge headboard divided into several panels. On one is a large oil colour painting of the rising sun, representing the prospects of the Dominion of Canada. On the right hand side is a harvesting scene in Manitoba, also in oil, and it makes a very bold and attractive picture. The left hand panel shows a fruit farm in Ontario. On either side of these pictures are two panels in white, on which is boldly lettered in gold: "The nearest British Colony," and "Free grants of 160 acres of land." Surmounting the structure are seven shields, each one having the coat of arms of one of the provinces forming the great confederation, and giving a capital idea of the enormous extent of Canadian territory. Crowning the central arch is the coat of arms of the Dominion of Canada, and above this is a crown, suggesting the loyalty of the colony. The whole of the outside of the stand is enamelled in white and the pillars are fluted, giving a most pleasing effect. In contrast with the exterior the inside of the stand is upholstered in turkey red, upon which are placed numerous samples of the products of Canada. Here are to be seen in great variety the grains, woods, minerals, and fruits, gold nuggets from the Klondike; minerals from Manitoba, and farther west; samples of timber from the Pacific coast; fruits and minerals from Ontario and Nova Scotia, and other places of eastern Canada. We feel that our Canadian visitors will view with approval the steps which the Canadian officials of the department presided over by the Hon. Clifford Sifton, Minister of the Interior of Canada, have taken to give Canada a prominent place in the Royal Agricultural Show of England. The enterprise which the Canadians exhibit in thus availing themselves of the opportunities which the show gives for attracting the attention of the British agriculturalist may raise some fears in British breasts, when the scarcity of good farmers and of good labourers is remembered; but there is, at any rate, this consolation, that no one emigrating to Canada is lost to the British Empire. Prominent notices on the stand are to the effect that all government publications, and also the report of Mr. Llyod George, M.P., Mr. W. J. Rees (ex-mayor of Swansea), and Mr. Llewelyn Williams, M.A., upon the suitability of Canada as a field for British settlement, may be had free. The designer and builder of the stand is a young Welshman, Mr. B. Jones, who resides in Liverpool. The stand is in charge of Mr. A. F. Jury, of Liverpool, who was for many years in eastern Canada, and Mr. W. L. Griffith, of Cardiff, who was for a considerable time in western Canada.'

As I have noticed earlier in my report, Sir John Llewelyn delivered a speech in which he dealt most generously with the attractions of Canada to the British agriculturalist. If there is any value in advertising, and in placing claims directly in front of those we desire to influence, then the affair I refer to must be of the best value.

The Canadian exhibit at the Royal this year was on a much more elaborate scale than anything I have known us to arrange since we engaged in the work. The flattering remarks in the newspapers seemed to find endorsement in the crowd of persons of exactly the class whom we desire to influence, who pressed around the stand, and who kept the staff busy in providing the pamphlets, which were more eagerly asked for than I have previously seen. There is no doubt in my mind that it is truer economy to spend a moderate amount of money on a representative exhibit of a reasonably elaborate character, than to spend a small amount of money on a display which creates but little interest, and upon which many of the charges are as great as in the case of the bigger show.

The experience of Mr. A. F. Jury, gained in continually attending for several years past the large agricultural shows all over England, contributed materially in making our stall the centre of attraction which it was. Private firms who have built up large and profitable concerns, by advertising at these shows, employ men who by long experience practically become experts to display their goods. Mr. Jury's position

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is somewhat similar, and possessing as he does a knowledge of Canada, not often equalled, it rendered his work at this show invaluable.

The visit of the Hon. Sydney Fisher to Cardiff, his contribution of a special article to the press, and also his speech before the ship owners, importers, and other representative men in this district upon the resources of Canada has attracted much attention, and has been of great value in making more widely known the resources of the Dominion. The comments which have been made upon Mr. Fisher's speech by responsible business men, go to show the great value which is placed upon the utterances of Canadians of first rank when visiting this country. Their value to the Dominion cannot be overstated.

In conclusion, I have very much pleasure in bearing witness to the growing efficacy of this agency; although only a few years old it has attained a standing in the community. As previously remarked, when the work was commenced here, the emigration from Wales to Canada amounted to very little, and that little all from the town of Cardiff. Now there is a very considerable movement in which every county in Wales shares. My thanks are due to the Welsh press for their generous and unfailing support, and also to Mr. Archer Baker and to Mr. John Ennis for their unfailing courtesy.

Your obedient servant,

W. L. GRIFFITH.

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## No. 6.

## REPORT OF H. M. MURRAY, PRINCIPAL AGENT FOR SCOTLAND.

52 ST. ENOCH SQUARE,  
GLASGOW, June 30, 1901.The High Commissioner for Canada,  
London.

MY LORD,—I have the honour to submit my report in connection with the work of emigration in Scotland and the border counties of England for the year ending June, 1901.

It is satisfactory for me to be able to put on record the fact that notwithstanding many adverse influences the number of emigrants from Scotland has not in any way decreased, but rather the opposite. This in the face of the large numbers of agriculturalists, who were drawn to the ranks of yeomanry and militia to serve in South Africa, and the inevitable scarcity of farm labour in the rural towns, is to my mind most satisfactory. Scottish farmers are hard put to it this season to find sufficient labour and will require to import a greater number of men and women from Ireland for harvesting purposes. This scarcity in the labour market has brought about a natural increase in the wages, so that experienced ploughmen can now readily command £40 to £50 per annum with partial, and in many cases, whole board and lodgings. Keeping this in view, it is, as I have said, satisfactory to know that Scotland has during the past fiscal year sent to the different provinces of the Dominion, 1,900 good hard-headed, healthy men and women, nearly all of whom were connected with either agriculture or mining. A large proportion of those who went out were possessed of a moderate capital. Several had sold off farms and stock and took out with them sufficient to make for themselves and families a good start in one or other of the provinces of the Dominion.

In so far as the emigration of the farming classes is concerned, I do not think that the advancing of whole or part passage money would have much effect. Many young men might undoubtedly take advantage of it, but to my mind they would only be persons who had already decided upon going out, and who might accept temporary assistance so as to have more ready cash on hand against their arrival. I make exception in the case of men with large families, where their little capital would be largely curtailed by the expenses incident to the journey. Then again there is the domestic servant who finds it hard to scrape together the necessary funds to transport herself, it may be to the west. In the case of these people I would earnestly advocate a little judicious help. If a properly administered system was arranged either to regulate assisted passages, or to erect dwellings on homesteads prior to the landing of families, much good and a desirable increase in the agricultural population of Canada would, I am certain, be the result.

The well to do condition and appearance of those who have gone out, both male and female, has been remarked by all government inspectors; they being in marked contrast to the usual run of people going to the United States, and I am hopeful that all will meet with success and send encouraging reports to their friends over here, a course which if systematically carried out would prove one of the most beneficial aids to emigration.

By your lordship's request, I have adjudicated the papers that were sent in from the Scottish schools whose scholars competed for the medal offered by the department

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for the best essay on Canada. No better way of educating the young on the history, geography and possibilities of Canada could well be found, more especially at present when the spirit of imperialism is so much in evidence. The papers were well written and showed that the writers had taken both interest and pleasure in the contest for priority of position.

During the year 2,955 letters were received from various correspondents and 3,512 sent out, being a large increase over last year. Canadian affairs in general are coming more and more to the front every day, hence an increased demand for information, and I sincerely trust with like results.

The accommodation provided by the Allan Line has been very satisfactory, the berths being clean, tidy, and wholesome. There being only £1 (one pound) difference in the passage money as between second and third class, 90 per cent of the number travel by the former class; the rates being £5 10s. third, or £6 10s. second, from Glasgow to Quebec, and to Winnipeg £8 and £9 respectively. Cards of introduction to the government agents in Canada have been given in the majority of cases, and as before gratefully accepted. The people feel more at ease and settled in their minds knowing that on their arrival their individual interests will be, as far as possible, cared for by an officer of the government.

Might I be permitted to bring before you the case of the 1,200 children who are annually cared for in Mr. Quarrier's Homes at Bridge of Weir. Your lordship, as also the Deputy Minister of the Interior, are fully cognizant of Mr. Quarrier's objections on principle to several of the clauses of the Ontario Children Immigration Act. The deputy minister visited these homes two years ago, and saw for himself the condition of the inmates. He is, I am sure, in full accord both with Mr. Quarrier and myself, that some modification might be made in the Act so that the children could again find homes in Canada and have a share in developing its vast resources, both to their own and the country's benefit. I may say that these children, especially the girls, are eagerly sought after here owing to the great scarcity of female help.

The number of bona fide emigrants who sailed from the Clyde to Canada during the twelve months amounted to 1,256, against 1,095 last year; 180 also sailed from Glasgow via New York, and 520 by Liverpool steamers, being a grand total, so far as known, of 1,956 souls. I append a statement made up from my correspondence, personal arrangements with the passengers and information obtained from the steamship companies as to where the emigrants were drawn from. I should say that fully 60 per cent went to Manitoba and the North-west, about 250 miners to British Columbia, and the balance principally to Ontario.

The work of lecturing with the aid of lantern views in the rural districts has during the winter season been well carried out by Messrs. Duncan and Grant in their respective districts, Mr. Grant in the south and west of Scotland and north of England, and Mr. Duncan in the north and east of Scotland. Many voluntary lectures were also given, our three sets of slides being daily in use for a period of over four months. Many clergymen and schoolmasters take a delight in this work, and lend valuable aid in instilling into the young mind facts and figures regarding Canada, which without the lantern views might not be so readily absorbed. As quite a number of the schools in Scotland had already been supplied with text and copy books the young people were in a sense prepared to look upon scenes they had previously read about. In the same way our own agents and others interested in Canada have lectured to the farm labourer and towns people, and I think with satisfactory results.

More and better pictures are still wanted. Each agent should be provided with a complete set of the finest photographs that can be taken showing the principal cities and towns from the Atlantic to the Pacific seaboard, and from a commercial as well as an emigration point of view, pictures should be shown of our large foundries, engineering works, agricultural implement works, cotton and woollen mills, &c. The people of this country have no conception of the wealth of Canada in this respect, and everything possible ought to be done to bring the facts home to them. Farming scenes

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from the breaking up of the land to harvesting, the condition of the farmer in his stock and dwellings, &c.; all this arranged and carried out in a practical manner would do much good in showing the farmer and farm servant as well as those engaged in commercial pursuits what Canada really is and the wealth that is in her mines, lands, forests, and waters.

A large number of the shows held in different parts of Scotland and north of England have been attended. As a rule good weather favoured the meetings, the Highland at Inverness, and those at Glasgow and Ayr being specially well patronized. I know from experience that many good people have gone out as the result of conversations held with the agents at these shows.

The practical demonstration of Canada's wealth cannot be over-estimated.

The display made by Canada at the Glasgow International exhibition is one of, if not, the finest and most practical in the grounds. As said by the London *Times*: "The agricultural trophy and exhibits was in itself worth the paying of a fare from London to Glasgow to see them." The *Scottish Farmer* says: "Canada is our premier colony, and it makes a display in this exhibition of which the mother country may well be proud. The account of the Dominion embodied in the official catalogue makes a useful introduction to a survey of the contents of the Canadian house. If young active fellows who are without encumbrance, and desire to strike out for themselves, do not after reading this embark by an early steamer for the Dominion, the attractions of Scottish agriculture must be still strong. The rapid growth of the Dominion as an agricultural realm is seen in the fact that the area under wheat in 1900 was double what it was in 1890. Canada offers exceptional facilities to the farmer, and her unclaimed homesteads are open to all who desire to make for themselves a home and an honest living. The enterprise of the Dominion is magnificently illustrated in the house devoted to her exhibits, and it is a remarkable tribute to the engineering skill of the new colony that with but a dozen large factories making agricultural implements, she sends across the ocean such a display of these as is to be seen in "Canada."

'Prominent among these exhibits is the great central trophy, devised and erected under the supervision of Mr. Hay, and out of sight the finest thing at Kelvingrove. This trophy shows samples of all kinds of Canadian farm cereal produce, contributed by 250 farmers in different parts of the Dominion, and illustrating the truth that while she extends northwards so as to merit the title "Our Lady of the Snows" she has a sunny clime and vast expanses of fruitful fields whereon are grown an abundance of food for the millions of man and beast. As an artistic design this trophy is not more remarkable than as a visible representation of the splendid wealth of our greatest colony.'

All other newspapers throughout the country are equally favourable to us. The display is certainly well worthy of such comments. The daily average attendance since the opening has been over 50,000, among whom are many of the sort of people Canada requires. Emigration literature is freely given to those who appear anxious to acquire a knowledge of the Dominion, and either one or other of the department's agents are always present to give information. I have not the slightest doubt but what this exhibition will help materially in the sending out of young men and women of the right class to fill up our vacant lands and share in the prosperity which Canada undoubtedly offers to willing hands.

Advertising in the best portion of the Scottish press has been consistently carried out during the past seven months, and in some of the more important, all the year round. Paragraphs have been written from time to time, and through the courtesy of the editors, a place has always been found for them. In the *People's Journal*, a newspaper that has a circulation all over Great Britain and the colonies, scarcely a week passes without some mention being made of Canada and her vast possibilities, and as a direct result, many of our best emigrants have corresponded and gone out through seeing those articles.

Regular supplies of our literature are sent to booking agents, libraries and farmers' clubs. Old copies of Canadian newspapers being utilized in the same manner, we

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get directly in touch with numbers of people who perhaps would not otherwise be made aware of the possibilities Canada offers to the agricultural settler.

In conclusion, the great prominence now given to Canada and Canadian affairs makes me very hopeful of future prospects. Never a day but what in some form or other Canada is mentioned in our newspapers; what was at one time called a country of snow and ice is now becoming better known as the land of plenty.

During the season I have received much help from the steamship booking agents, men who are invaluable aids to our work, and with whom I do all possible by frequent visits, &c., to keep them in close touch with Canada.

I have again to thank your lordship and immediate staff for the invariable courtesy received, and the continuous help and encouragement given me in carrying out my work.

Your obedient servant,

H. M. MURRAY,

*Principal Agent for Scotland.*

CORRESPONDENCE ON Emigration matters received at Glasgow from January 1 till June 30, and number of emigrants who sailed from the Clyde direct to Canada during the same period.

County.	Number of letters received.	Approximate Number of passengers sailed.
Aberdeen.....	145	60
Argyle.....	25	18
AYF.....	99	35
Banff.....	12	12
Berwick.....	18	11
Bute.....	5	4
Caithness.....	19	4
Clackmannan.....	7	7
Dumharton.....	48	37
Dumfries.....	146	8
Edinburgh.....	173	144
Elgin.....	22	7
Fife.....	58	34
Forfar.....	151	48
Haddington.....	4	6
Inverness.....	39	16
Kincardine.....	5	4
Kinross.....	2	2
Kirkcudbright.....	1	14
Lanark.....	588	556
Linlithgow.....	11	5
Nairn.....	3	11
Orkney & Shetland.....	24	19
Peebles.....	8	5
Perth.....	64	17
Renfrew.....	120	54
Ross & Cromarty.....	14	5
Roxburgh.....	27	21
Selkirk.....	2	7
Stirling.....	46	17
Sutherland.....	12	12
Wigtown.....	9	2
Western Isles.....	10	8
North of England.....	109	46
	2,026	1,256
From Glasgow via New York.....		180
" Liverpool to Quebec.....		520
Total.....		1,956

## No. 7.

## REPORT OF JOHN GRANT, AGENT IN SCOTLAND.

PARKHURST, DUMFRIES, June 30, 1901.

The High Commissioner for Canada,  
London.

MY LORD,—I have the honour to submit the following report dealing with the work of this agency for the year ending June 30, 1901.

This work has been carried on systematically throughout the year, the summer months being devoted to attending shows, fairs, markets, and personal visitation, and the winter months to lecturing.

At all the leading agricultural shows in the south of Scotland and the north of England I was in attendance and exhibited Canadian products in the tent provided for that purpose.

Our exhibit, which is representative of the whole Dominion, is becoming yearly more popular at these shows, for the farmers are beginning to realize that, as the Minister of Agriculture pointed out when speaking at the reception recently held in the Canadian pavilion at the Glasgow International Exhibition: 'We are not in competition with the home farmer, but with the foreigner.' And we consequently have many thousands of visitors during the season, a large percentage of them being agriculturists. We are thus afforded many opportunities which could not otherwise be obtained of engaging them in conversation and distributing literature to advantage.

At the larger and more important shows, such as the Highland Society's, the National Fat Stock Show, and the Ayrshire, the stand was used and we were enabled to make a much more comprehensive display, our exhibit being considered the principal attraction at all the above shows. At the National Fat Stock Show, which was held in the Waverley Market, Edinburgh, a huge Ontario squash which was part of our vegetable display, was certainly the leading feature of the whole show, attracting by its enormous size and weight (250 lbs.) the attention of every visitor to the show in the direction of the Canadian government stand. Here I would venture to suggest that we should be supplied from time to time with exhibits of this nature, as they never fail to draw attention and are really the best kind of advertisement we could have to help us in our work.

The winter months, as already stated, were devoted to lecturing, principally in the rural districts and villages of this agency, where I delivered several lectures weekly. I also fulfilled several engagements, made by Mr. Murray, in large industrial centres, such as Glasgow, Greenock and Paisley.

My lectures in the rural districts were always well attended, and in many instances the halls and schools were crowded to the doors. In the towns I had very large audiences, averaging from 400 to 1,400. My course of lectures extended over the counties of Dumfries, Kirkeudbright, Wigtown, Ayr, Lanark, Renfrew and Cumberland.

Here I would like to suggest that more attention should be paid to the large industrial centres as a field for lecturing, these centres are continually attracting and absorbing a large percentage of the surrounding rural population, many of whom after a year or two of town life would be glad to get back to the land again; and with the development of Canadian industries there is certain to be a large movement of the industrial classes to Canada. I have much pleasure here in stating that my lectures during the past winter season have been attended by larger audiences than on any former occasion since I came to this country.

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During part of the present month I was in attendance at the Glasgow International Exhibition, being stationed in the Canadian pavilion for the purpose of giving information regarding Canada and distributing emigration literature. The literature supplied for distribution was eagerly sought after, both by the general public and by the many schools visiting the exhibition in charge of teachers; to the latter the descriptive text book and atlas, specially prepared for use in schools, were handed, and will doubtless prove of great service in giving the rising generation a better knowledge of Canada than their fathers seem to possess. This is a step in the right direction, for it must be borne in mind that the boys and girls of to-day are, figuratively speaking, the men and women of to-morrow, and it is to them we must look for any extensive movement from this country to Canada in the near future.

While stationed at the exhibition I had many inquiries regarding the Dominion.

It is gratifying to see how splendidly Canada is represented at the exhibition, her exhibit, which is second to none, being quite an object lesson, and a revelation to most visitors, and to hear only expressions of appreciation of and surprise at the many and varied evidences to be seen on every hand of the wonderful resources of the Dominion.

The commissioners are to be highly congratulated on the magnificent display they have made, their efforts in this direction cannot fail to be of great service in the interests of commerce and emigration between this country and Canada.

It is pleasing to note that the war, contrary to general expectation, has been rather favourable to Canadian emigration than otherwise. The returning volunteers and yeomen do not seem to be much impressed with South Africa, and their opinions will largely regulate the movement of others who were only waiting for the close of the war to rush off to the Cape. I feel confident, from many conversations I have had with intending emigrants, that it will be some considerable time before South Africa can hope to enter into active competition with Canada as a field for settlement. Meantime I hope to see as the result of our efforts in behalf of Canada, a yearly increasing stream of migration to the Dominion, which was never more popular in this country than it is at the present time.

In concluding this report I would venture to suggest that as the motor car seems likely to be in general use at no distant date, the agents working in the rural districts should be provided with them as they would be of great service in visiting places remote from the railways.

Your obedient servant,

JOHN GRANT.



## No. 8.

## REPORT OF THOMAS DUNCAN, AGENT IN SCOTLAND.

CAROLSTIE, July 1, 1901.

The High Commissioner for Canada,  
London.

MY LORD,—I have the honour to submit to you the following report of my work as emigration agent for the northern and eastern counties of Scotland for the year ending June 30, 1901.

As the best means of bringing the claims of Canada as a field for immigration before the people of this country, I have attended as many of the cattle markets, hiring fairs and agricultural society shows as possible, distributing a large quantity of literature and personally talking and giving information to a great many people. Our exhibit of cereals, wood and minerals is much admired, and especially in the case of our grains and grasses, a considerable quantity of which I carry with me to all shows, the rich beautiful colour of the straw showing that it has been matured in a land of sunshine, and giving a very favourable impression of the climate.

For the purpose of keeping up the interest in our exhibit, I may be allowed to suggest that a large quantity of this class of exhibit should be supplied to Mr. Murray. As it often happens that we have to display our stuff in very bad weather, when it is impossible to keep it dry, then while it is still wet pack it away in boxes and send on to the next show, of course in a very short time under treatment of this kind the straw becomes dirty and discoloured, and the impression gained from it is unfavourable. To obviate this difficulty a small quantity kept in store would remedy the matter as we could freshen up our exhibit from time to time during the season.

At the agricultural shows we have a splendid opportunity of distributing our literature and conversing with people who are daily taking a deeper interest in our country, and I am often gratified by hearing the remark that Canada must be a country of wonderful resources.

Another most important branch of our work is the lecturing. During the past season, with few exceptions, I have confined myself to lecturing in country schools. As a rule my audiences were large, people often coming miles to attend. Judging from the attention given to my remarks, the interest taken in the limelight views shown, the many questions asked, and the quantity of literature distributed at the close of the lectures they were most successful.

The district covered during the winter by lectures extended from the Lothians in the south to Elgin in the north.

I have given the usual attention to correspondence and personal visitation, and I might here remark that I frequently meet men with families very anxious to go to Canada, but not having the means wherewith to pay their passage money and enough left to start them on homesteads. In view of the large number of people from foreign countries who are settling in western Canada, I cannot help thinking that the settlement of English-speaking families in the west would be of so much more value to the country that the department would be more than justified in devising some scheme of assistance whereby such men would be enabled to go out and make a start upon the land.

Since the opening of the Glasgow exhibition I have spent part of my time in the Canadian pavilion supplying literature to inquirers. I have had the pleasure of meeting a number of people in the pavilion who had attended my lectures, and some

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of them after looking at our splendid exhibit in that building said they had thought I had painted Canada in very bright terms in my lectures, but one look at our exhibit more than justified all that I had said, one gentleman remarking: 'Truly you have come from a land of plenty;' another remarking: 'Who would not be proud of Canada when you compare it to the other foreign exhibitions on the ground.'

There can be no doubt that the agricultural and fruit exhibits will prove a great stimulant to emigration to Canada from this country.

The Canadian text book and atlases are in great demand. In the exhibition there are many school teachers with their classes who visit our building, and are supplied with these books, while many others who have not the opportunity of attending the exhibition are asking to have them sent.

In concluding my report, I would just say that while the emigration from Scotland is not all that could be wished for, it is very gratifying to know that for this season so far the number who have left Glasgow for Canada is considerably in excess of last year, and in view of the fact that agricultural labourers are becoming more scarce in Scotland every year, and wages have now reached a point never before reached in the history of this country; these and other matters point to a decrease rather than to an increase.

Your obedient servant,

THOS. DUNCAN.

## No. 9.

## REPORT OF C. R. DEVLIN, CANADIAN COMMISSIONER, IRELAND.

14 WESTMORELAND STREET,

DUBLIN, July 8, 1901.

The High Commissioner for Canada.

MY LORD,—Fortunately for Ireland the Board of Trade returns to date show an extraordinary decrease, 1901, in the numbers emigrating; fortunately for Canada the same returns disclose that during the month of May this year we secured for Canada exactly three times the number we did during the month of May, 1900; and during the month of June of this year we have had twice the number we had during the month of June last year.

During the first six months of 1901, the numbers going to Canada from Ireland constitute an increase of eighty per cent over the numbers who went during the corresponding months of last year.

Your agents in Ireland are happy indeed to be able to present such a gratifying statement.

On more than one occasion the attention of the government has been invited to the consideration of the difficulty of obtaining anything approaching accurate statistics. We do not know, nobody knows, how many leave Ireland for Canada. The statistics to which I have just referred deal solely with those who embark at Irish ports. But, by far the greater number of Irish emigrants to Canada embark at English ports, and I have reason to believe that they are then more frequently than otherwise classed as English emigrants.

Let me explain. Just now the only steamers going to Canada and which call at an Irish port are those of the Allan Line. The steamers of the Elder-Dempster and Beaver Lines do not now call at an Irish port, and during many months of the year the Allan steamers proceeded direct from Liverpool to Halifax or Portland. The Dominion steamers all go to the United States.

To resume the situation, when the Irish emigrant embarks at an English port, he is most generally classed as an English emigrant. When the steamer proceeds direct to a port of the United States, he is put down as an emigrant to that country, although as a matter of fact he may be going to Canada. And so much is this the case that I have personal knowledge of numbers from the south of Ireland bound for Canada, and who as a matter of convenience or for other reasons have taken the steamers of the White Star, Cunard and Dominion Lines.

In the early part of the year, and indeed at the time when most of our emigrants were going to Canada, these difficulties forced themselves before us.

Again, the rates from most parts of Ireland are higher than the rates from many parts of England. There is a preferential tariff in existence. The English emigrant is carried from London and other points to Liverpool free; the Irish emigrant must pay his way to Liverpool or to Londonderry.

But I am happy to be able to report that all mail steamers of the Allan Line now call at Londonderry, and every facility as well as comfort await the emigrant.

Next year in the month of May the Cork Industrial Exhibition will open. I have submitted to the government my views in connection with this exhibition which promises to be one of unusual proportions. Already the contracts for the construction of the buildings are awarded. The exhibition will last six months, and it is expected

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that the attendance will average at least one hundred thousand per week. Lately I have had interviews with the lord mayor of Cork and the executive, and they assure me that they would be delighted to see Canada represented at the exhibition. All Ireland is one in regard to this exhibition, determined to make it a success. National and Unionist forces have joined hands, have liberally contributed, are working together to make this event an immense success.

I cannot too strongly dwell upon the importance of and the advantages offered by the Cork Industrial Exhibition of 1902. It is years since an event of such magnitude occurred in Ireland, and it may be years before anything like it will take place again.

It is for the government to decide what action, if any, in the matter would be suitable. It would not be a serious difficulty to move many of the exhibits from Glasgow to Cork, and those with whom I have conversed on the subject believe that a good exhibit of Canadian products, natural and manufactured, would bring before the people of Ireland in a striking manner the wealth and the resources of Canada.

Canadian manufacturers, exporters and business men generally would do well to seriously consider every aspect connected with this show.

It is quite true that we have had many large exhibitions, notably those of Chicago, Paris, Glasgow and Buffalo.

But then the conditions here are so different. I admire the motives governing the noble and patriotic men who denounce emigration. I agree with many of the views they hold. But I am a Canadian, and I see that every year numbers leave, and for many years to come numbers will leave. I am anxious to get them for Canada. It is just as fair and as reasonable that Canada should get them as the United States, South America, Australia, South Africa, &c. People then leave and will be drawn to Canada when they fully understand the advantages which the Dominion offers. Again, Ireland is not presently a manufacturing country. The importations of manufactured goods are enormous. What an opportunity, therefore, for our manufacturers and merchants!

Now, a word about the work of the year. I have attended a number of fairs, meeting the people, &c. In Dublin, Cork, Limerick, and at many other points during the year I have made—or my assistants have made—extensive exhibits of agricultural, mineral and other products which have attracted attention and been noticed favourably by more than one newspaper.

The newspapers of Ireland have had many most flattering articles on Canada which compensate handsomely for any occasional mistakes that may be made.

Our lectures have been more numerous, and have always been largely attended. They have been given before agricultural societies, literary clubs, &c., and I have had the honour to be invited to speak upon Canada in some of the most distinguished institutions of the land.

During the year our offices have been visited by numbers of Canadians who call for their correspondence, or seek such information as it is in our power to give and which may be useful to them.

Indeed it was only the other day, without cost or inconvenience to either party, that a large sale of property in Canada was made through the office.

On all occasions I have done my best to serve the interests of the business community in Canada, and the number of inquiries which we receive is a matter of much satisfaction.

I re-affirm, after four years' experience, everything which I have said in previous reports. Our Canadian manufacturers and exporters have opportunities in Ireland which are not surpassed by any other country. Ireland buys and for years must buy.

I do not believe that there is any other feeling than one of indifference on the subject of the cattle embargo. I have met those qualified to speak for the masses of the people, and they say that the removal would not bring injury. I should add that the cattle business is not over-popular here, and this will be understood when I state that the good land in many cases is reserved for the cattle, and the poor land given to the

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people. During the half year ending June 30, we received at the office 3,117 letters and inquiries; we sent out 3,208 letters and parcels of literature.

In addition literature, blue-books and papers have been sent to the public libraries, reading rooms, schools, colleges, public offices, many large hotels; and posters have been sent in all directions. We have advertised in every way possible. I have done my best to do my full duty in this as in other respects.

It is impossible to obtain such large results as we would wish. We are three agents in Ireland, and occasionally we get help from able and devoted men sent over from time to time. But after all it must not be lost sight of that everything which goes to make Canada popular in Great Britain has an opposite effect with the great majority of the people in Ireland.

In Great Britain are the head offices of the steamship companies and there they advertise largely, which I wish they would do here. In Great Britain are many agents of the provincial governments, offices with able men of the Canadian Pacific Railway, the Grand Trunk Railway; here, none. To Great Britain Canadians constantly go; here few come, and the Canadian visitor always does so much good. In Great Britain emigration is encouraged by religious societies, and indeed by all kinds of societies, by the leading statesmen of the country and supported by public opinion, and in every way; here it is denounced as a curse. In Great Britain every agency is favourable; here not one. Notwithstanding all this we are able for the work which offers, and I do not ask for the appointment of other agents.

But our Canadian railway companies could with profit, I am sure, have at least one agency in Ireland. This would be an advantage to Canada, and in a short time a source of very considerable revenue.

Another subject and I have done. Some few weeks ago in a Canadian newspaper I read the following, to me most interesting item:—

'Any farmer desiring to secure the services of good Scotch farm labourers can do so by forwarding at once to the Commissioner of Immigration at Winnipeg an application stating the number of such labourers he requires, and inclosing for each such labourer the sum of \$25 to assist in prepaying the passage. This advance will be retained from the wages of the labourers who are being hired at from \$180 a year upwards, according to their ability. As it is intended the party will leave Scotland early in June, those farmers who desire to secure an experienced farm hand for the temporary advance of a portion of the passage money should communicate at once with the Commissioner of Immigration as mentioned.'

We are constantly besieged by agricultural labourers for information as to the best way of obtaining an assisted or free passage to Canada, and who would be most willing to go in the same way and on the same conditions. Much of the agricultural work in England is done by Irish labourers who go in thousands every year from the west of Ireland.

Sometimes, and indeed often, application is made to the office for domestic servants, and the fares are in many instances advanced; but when those applying decide to deduct from the wages afterwards the money thus advanced, it is only fair that the rate of wages should be made as liberal as possible.

I have every reason to anticipate at least as large a measure of success during the coming year as we have had during the year ended June 30.

Your obedient servant,

C. R. DEVLIN.

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## No. 10.

## REPORT OF E. O'KELLY, AGENT IN IRELAND.

HARBOUR BOARD BUILDINGS,  
LONDONDERRY, June 30, 1901.The High Commissioner for Canada,  
London.

MY LORD,—I beg to submit to your lordship my annual report on emigration from Ulster for the year ending June, 1901. I am pleased to be able to state that emigration has been fairly satisfactory with regard to numbers, and conspicuously so having regard to class, of which I can be a better judge than of numbers as I see almost all who correspond with me; but I do not see numbers who leave via Belfast, Glasgow and Liverpool, in fact an agent has no accurate way of estimating the numbers who leave his district for Canada under present circumstances.

The demand for our pamphlets and maps has increased enormously since I opened an office here four years ago, and interest in Canada proportionally so; but not the number of emigrants to a like extent, because of the prepaid passages to the United States, and of the free and assisted passages to Queensland.

Here in Ulster the great bulk of the people would much prefer making homes in Canada to either the United States or Queensland, to the former from a feeling of loyalty, to the latter because of what they read, and are told about Canada; but more still from Canada's proximity so clearly brought home to them by the map of the world in our descriptive atlas now in thousands of Irish homesteads.

Time may, and no doubt will, enable us to turn the great tide of emigration from the United Kingdom to Canada; but in the meantime we are losing thousands of desirable settlers, the most desirable in fact, because they are of the hard-working farming class who would bring sufficient means to start in Canada with a vigorous young family about them, if they had a house ready to go into, which they would be willing and able to pay for by yearly instalments. Meeting this class of man, the head of a family, which altered conditions of things do not allow of their living as their fathers did, and who would emigrate to Canada with a small but sufficient capital, if such could be spent entirely on cost of outfit, stock and living for the first year, is the hardest thing in the life of an emigration agent, because he feels both parties would gain by such a scheme, which would also, I believe, do away for ever with any claim for assisted passages. As heretofore I have had exhibits at all the great and local shows in Ulster, and also attended fairs and markets throughout the province; but have been most busy in Belfast and vicinity where the farmers dispossessed by the Belfast Water Commissioners live.

About half of the claims for compensation by these people are listed for the summer assizes held in Belfast in July, but Mr. Ryan, the government arbitrator, tells me more than half will not come on before next spring.

Your obedient servant,

EDWARD O'KELLY.

No. 11.

REPORT OF JOHN WEBSTER, AGENT IN IRELAND.

14 WESTMORELAND STREET,  
DUBLIN, August 23, 1901.

The High Commissioner for Canada,  
London.

MY LORD,—In compliance with instructions received I beg to submit a report of my work for the twelve months ending June 30.

During the summer months I have been, as in other years, engaged in attending fairs and making display of our Canadian products at the agricultural shows.

The Irish cattle fair is a monthly event for every large or small town in the country, and here the farming classes assemble in very large numbers. I have attractive posters displayed drawing attention to Canada as a field for emigration, also announcing my presence in town, with an invitation that people should call upon me. I find this a useful method of advertisement, as many take advantage of the opportunity at these fairs. I am able to have distributed, with advantage, a large amount of our literature. I endeavour to arrange that I can attend the fairs in same county on consecutive days.

The displays of Canadian products which we make at the county and royal agricultural shows, afford a splendid demonstration regarding some of the resources of the Dominion. We make the best possible use of the material at our disposal. I would respectfully suggest that in addition to cereals, grasses and minerals, we should receive from time to time supplies of roots and fruits, also good wood samples.

I have often wished for a sample of the black loam from the prairies. To the agriculturist this would prove most interesting.

I trust it is the intention of the department to have Canada represented at next year's Cork International Exhibition. I am sure a representation there would materially help the Dominion. I presume that at the conclusion of the exhibitions, some of the exhibits will be divided up among the Canadian government agents. As regards representations of Canadian products I consider it is unwise to make an exhibit at all, unless we can make one worthy of the Dominion.

During the winter months I was occupied filling lecturing engagements. Applications for these lectures come from agricultural and other societies, also from clergy of every denomination. I think that without exception every invitation received was accepted. This kept me busy, in some cases having to lecture five times in one week. In my opinion the lecture is one of the most useful methods for bringing Canada forcibly before the people; we, therefore, spare no effort in securing and responding to as many applications as possible. After lecture there are often many questions to be answered from people desirous of further information. I take the opportunity offered for distribution of literature among the audience. I carry with me my own outfit for illustration of lecture, it consists of a powerful acetylene lantern, portable screen, &c. The slides are supplied from the London office.

I have at times to lecture in the large halls of big towns, but as the agriculturist is the man most needed for Canada, I much prefer to secure engagements in the rural districts, where, of course, I can speak to an appreciative audience on the subject of agriculture as carried on in Canada.

The newspaper advertisements which commenced about November, largely increased the amount of our correspondence; it also considerably increased the number of callers at the office. I think it would be an advantage to our work that the adver-

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tising ~~should~~ be more continuous, and that the amount expended on same should be spread into a period extending well into the summer months.

On receipt from your lordship of copy of cablegram received from Canada relative to splendid crop prospects in Manitoba, and consequent demand for hired help with good wages, we immediately had this cable printed on postcards and posted throughout the country. The result was satisfactory, and led to much inquiry.

Most of the Irish emigrants, indeed I might say nearly all, who every year leave for the United States, travel on a prepaid ticket sent to them by some friend in the country. I often think what a help to our work it would be if some system of assisted emigration could be formulated.

The Board of Trade returns do not give a fair idea of those who leave Ireland for Canada, the bulk of our emigrants leave via Liverpool, and unless they buy their tickets in Ireland they are registered as English emigrants. It is, therefore, impossible to get accurate returns. I am glad to note that in comparison to the figures as given for last year, our returns for this year's work show a marked improvement.

Your obedient servant,

JOHN WEBSTER.

### No. 12.

#### REPORT OF D. TREAU DE CÉLI, AGENT IN BELGIUM.

ANTWERP, July 2, 1901.

The High Commissioner for Canada,  
London.

MY LORD.—I have the honour to present you my annual report on the work done in Belgium during the year 1900-1.

I employed this year the same methods to place before the public the advantages offered by Canada as in the two previous years, namely: Free distribution of literature, lectures on Canada in the winter season, that is from October 1 to May 1, and visits to fairs and shows during the summer months. At these fairs and shows I cause a large number of leaflets on Canada to be distributed, and I keep myself at the disposal of any farmer wishing for information.

The last three months of 1900 were passed mostly in the Flanders giving lectures in every locality from where parties had already left or intended to leave for Canada.

The first three months of 1901 I lectured mostly in the province of Luxembourg, when MM. Ed. Colleaux and Sebastien Deleau, from Deleau, Manitoba, and Mr. Jules Maron, from Morinville, Alberta, assisted me greatly in bringing to my notice the localities where they had friends. These gentlemen accompanied me generally to the place of lecture and were irrefutable proof of what a farmer might expect in Canada, as two of them, Mr. M. E. Colleaux and Jules Maron went there penniless and are now well-to-do farmers.

The success of my work was felt early in the spring, as in the month of March last 40 Flemish and 20 French Belgians registered in Winnipeg, according to the report of the immigration office there, while a certain number stayed in the province of Quebec, where they secured work with the Belgo-Canadian Pulp Co.

I would like to give a correct return of Belgians leaving for Canada, but it is quite impossible, as many who intend to leave at once have to wait for one reason or another for weeks and sometimes months, and as soon as they think they have all neces-



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sary information, they do not, as a rule, communicate any longer with the office, but are looked after by the shipping agents. I beg leave to remark that as far as our Belgian emigrants are concerned an erroneous classification is often made; those who speak nothing but French are generally returned as French, while others speaking only German are invariably classed as Germans. Notwithstanding this I am confident 1901 will prove a very good year for the Belgian emigration.

I am happy to state that in the beginning of this month four or five families will leave for Manitoba to join their friends who left here on March 16 last, and who are so well pleased with the country that they settled at once.

I am also pleased to inform your lordship that besides the 38 lectures given in the country places, I accepted invitations to lecture on Canada, from "La Société Générale d'Agriculture de Belgique" at Brussels, Les Anciens Elèves de l'Institut agricole de l'Etat à Gembloux and l'Institut Commercial du Hainaut à Mons. These three lectures were well attended and the keenest interest was shown in the advantages offered by Canada, and although the audience at these lectures was not composed of persons who would likely emigrate themselves, I have positive proof that they caused others to choose Canada as their future home, and that the knowledge of our country amongst the leading class will greatly facilitate the spreading of this knowledge amongst the people.

By the retirement of Mr. A. Bodard, as agent for France, I have received many inquiries from that country, and in every case have supplied the writer with the French literature at my disposal, and have given the necessary information as I did for Belgium.

Your obedient servant,

D. TREAU DE CELL.

# REPORTS OF AGENTS IN EASTERN CANADA.

## No. 1.

### REPORT OF THE IMMIGRATION AGENT AT ST. JOHN, N.B.

(J. V. LANTALUM.)

St. JOHN, N.B., June 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit for your information a report of the arrival of passengers at this agency for the year ending June 30, 1901.

The total number of arrivals being:

Cabin . . . . .	111
Steerage . . . . .	4,721
	<hr/>
	4,832

Their destination being as follows:—

Cabin, Canada . . . . .	108
“ United States . . . . .	3
Steerage, Canada . . . . .	903
“ United States . . . . .	3,818

and they were divided into sexes as follows:—

Cabin, Canada, males . . . . .	50
“ “ females . . . . .	33
“ “ children . . . . .	25
	<hr/>
“ United States, males . . . . .	3
“ “ females . . . . .	
“ “ children . . . . .	
	<hr/>
	3
Steerage, Canada, males . . . . .	779
“ “ females . . . . .	41
“ “ children . . . . .	83
	<hr/>
“ United States, males . . . . .	2,305
“ “ females . . . . .	689
“ “ children . . . . .	824
	<hr/>
	3,818
	<hr/>
	4,832

The steamships of the International Line plying between Boston, Portland, Eastport and St. John, landed 12,059 passengers, being principally returning Canadians and tourists.

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A great amount of correspondenc is received from parties in want of boys and girls to work on farms, and many inquiries are received from the United States from people who wish to settle in New Brunswick.

Statements are annexed hereto, as follows:—

Statement A—Monthly arrival of cabin passengers for Canada.

Statement B—Monthly arrival of cabin passengers for United States.

Statement C—Monthly arrival of steerage passengers for Canada.

Statement D—Monthly arrival of steerage passengers for United States.

Statement E—Showing sexes, occupations and destinations of different nationalities remaining in Canada.

Statement F—Showing sexes and occupations of the different nationalities destined for the United States.

Your obedient servant,

JAMES V. LANTALUM,  
*Dominion Government Immigration Agent.*

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STATEMENT A.—Showing monthly arrivals of Cabin Passengers for Canada and Sexes of Nationalities.

Nationalities.	SEXES.				Months.	SEXES.				NATIONALITIES.				DESTINATIONS.							Totals.																					
	Adults, Children.					Totals.	Adults, Children.				Totals.	Returned Canadians.	Tourists.	English.	Scotch.	Totals.	Lower Provinces.	Quebec.	Ontario.	Manitoba.		North-west Territories.	British Columbia.	Yukon.	Returned Canadians.	Tourists.																
	Males.	Females.	Males.	Females.			Males.	Females.	Males.	Females.																	Males.	Females.	Returned Canadians.	Tourists.	English.	Scotch.	Totals.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	Returned Canadians.	Tourists.
1900.																																										
Returned Canadians	14	10	3	2	29	5	5	33	7	2	25	2	33	18							5			1	3	33																
Tourists	26	12	9	3	50	6	6	21	21	21	21	2	21											21	21																	
English	7	11	4	4	26	3	1	11	11	11	11		11											11	11																	
Scotch	2	1			3	2		2	2				2											2	2																	
U. S. Citizens	1				1	3	2	1	4	3	3		4											4	6																	
1901.																																										
Returned Canadians								1	1	1	1		1												1	1																
Tourists								5	3	2	1		5												2	5																
English								1	1	2	1		2												2	4																
Scotch								1	1	2	1		2												2	4																
U. S. Citizens								1	1	2	1		2												2	4																
Totals	50	33	16	9	108	34	16	9	108	30	51	25	108	26	3						5	1	27	32	108																	

JAMES V. LANTALUM,

Dominion Government Immigration Agent.

St. John, N.B., June 30, 1901.

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STATEMENT B.—Showing Monthly Arrivals of Cabin Passengers for United States and Sexes of Nationalities.

Months.	FRENCH					TOURISTS.				
	Adults.		Children.			Adults.		Children.		
	Males.	Females.	Males.	Females.	Totals.	Males.	Females.	Males.	Females.	Totals.
1900.										
July										
August										
September										
October..										
November.										
December..	1				1					
1901										
January..										
February										
March.										
April.										
May.						2				2
June										
Total..	1				1	2				2

JAMES V. LANTALUM,

*Dominion Government Immigration Agent.*

ST. JOHN, N.B., June 30, 1901.

STATEMENT C.—Showing Monthly Steerage Passengers for Canada.

Months.	SEXES.				NATIONALITIES.										OCCUPATIONS.							DESTINATIONS.																								
	Adults.		Children		Totals.		Irish.	English.	Scottish.	German and Dutch.	French.	Scandinavians.	Russian and Finnish.	Italians.	Austrians.	Returned Canadians.	Tourists.	Other Countries.	Totals.	Agriculturalists.	Labourers.	Mechanics.	Clerks.	Miners.	Domestic.	Not Classified.	Totals.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	N. W. Territories.	British Columbia.	Yukon.	Returned Canadians.	Tourists.	Totals.									
	Males.	Females.	Males.	Females.	Males.	Females.																																								
<b>1900.</b>																																														
July	5	30	2	57	32	2	3								1											32	37	37																		
August	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
September	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
October	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
November	5	2	1	6	5	5									1											7	8	8	1																	
December	23	1	2	4	30	2					1	17	9	1	17	9	1	1	1	1	1	1	1	1	1	9	30	5	16																	
<b>1901.</b>																																														
January	45	1	7	46	2	2					3	38	3		3											4	45	4	39																	
February	64	4	7	75	15	15					2	53	1		3											19	82	28	51																	
March	483	23	11	528	47	3					1	404	25		1											49	528	114	315	46	42	11														
April	150	10	7	167	18	1					1	135	4		5											19	168	22	135	2																
May	2	2	2	4	2	1					1	1	1		1											1	2	1	2																	
June																											1	2																		
Totals	779	41	58	934	121	6	9	16	38	647	25	19	7	4	903	22	20	1	1	1	141	903	211	556	49	49	31	1	1	19	7	463	35	683	35	683										

JAMES V. LANTALUM,  
*Dominion Government Immigration Agent.*

Sr. JOHN, N.B., June 30, 1901.

## SESSIONAL PAPER No. 25

STATEMENT D.—Showing Monthly Steerage Passengers for United States.

Months.	SEXES.				NATIONALITIES.										OCCUPATIONS.										
	Adults.		Children.		Totals.	English.	Irish.	Dutch and German.	French.	Scandinavian.	Finnish and Russian.	Italians.	Australians.	Poles.	Other Countries.	Totals.	Agriculturalists.	Labourers.	Mechanics.	Clerks.	Miners.	Domestics.	Not Classified.	Totals.	
	Males.	Females.	Males.	Females.																					
1900.																									
July .....	5				5											5									5
August .....																									
September .....																									
October .....	4				4											4									4
November .....																									
December .....	314	183	122	115	734	7	4	14	2	7	420	55	16	5	204	734	5	89	218	29	4	8	381	734	
1901.																									
January .....	403	150	82	96	731	3	1	8	3	11	539	31	35	6	94	731	6	64	313	26	12	1	319	731	
February .....	450	137	57	79	723	12	2	14	16	434	100	27	2	122	723	41	83	281	46	12	5	19	370	723	
March .....	826	183	114	116	1,239	10	1	8	2	49	622	305	40	7	1,065	1,239	46	548	216	17	5	19	386	1,239	
April .....	303	35	25	18	381	5		4	1	81	82	128	24	16	40	381	9	242	51	9		1	69	381	
May .....																									
June .....																									
Total.	2,305	689	400	424	3,818	42	8	48	8	158	2,017	709	142	36	570	3,818	107	1,031	1,084	131	11	29	1,425	3,818	

JAMES V. LANTALUM,  
*Dominion Government Immigration Agent.*

St. John, N.B., June 30, 1901.

1-2 EDWARD VII., A. 1902

STATEMENT E. Showing Sexes, Occupations and Destinations of the different Nationalities remaining in Canada.

Nationalities	SEXES		OCCUPATIONS										DESTINATIONS								
	Total		Totals										Totals								
	Males	Females	Males	Females	Agriculturalists	Labourers	Mechanics	Teachers	Miners	Domestics	Not classified	Lower Provinces	Quebec	Ontario	Manitoba	N. W. Territories	British Columbia	Yukon	Returned Canadians	Tourists	
Returned Canadians	11	2	4	19	12	15	16	1	1	1	1	93	5	2	20	1			10		19
English	54	18	36	121	14	12	15	16	1	1	62	4	1	1	1						121
Irish	2	3	5	6	2	2					3	5									6
Scottish	6	8	14	6	2	1					2	5									6
Italian	624	8	3	647	631	3	3	1			13	84	548	15	1						647
Russian	10	8	7	4	29	4	1	1			22	18	7	1							29
Chinese	1			1							1	1									1
Tourists	6	6	1	1							1	1									1
United States Citizens	1			1							1	1									1
Swedish	3			3	1	2					3	3									3
Turkish	1			1							1	1									1
Danish	3			3	2	4					3	1									3
French	1			1							1	1									1
Armenian	1			1							1	1									1
Austrian	25			25	1	25					25	3	12	3	4						25
Finnish	3	1	2	9	5	3					1	9	9	3	3						9
German	3	2	1	8	1	3					5	8	8	1	8						8
Hollander	1			1	1	1					1	1									1
Norwegian	6	2	2	10	5	1	1				4	10			2	8					10
Totals	779	41	68	25	903	35	683	22	20	1	141	211	556	49	49	11	1	1	19	1	903

JAMES V. LANTALUM,  
*Dominion Government Immigration Agent.*

St. John, N.B., June 30, 1901.



## SESSIONAL PAPER No. 25

## STATEMENT F.—Showing Sexes and Occupations of the different Nationalities destined for United States.

Nationalities.	SEXES.				OCCUPATIONS.							Totals.	
	Adults.		Children.		Totals.	Agriculturalists	Labourers.	Mechanics	Clerks.	Miners	Domestics		Not classified
	Males.	Females.	Males.	Females.									
English . . .	29	5	3	5	42	3	5	11	6	4		15	42
Bohemians . . .	3				3		4	1					3
United States Citizens	22	5	2	1	30	1	3	10	6	1		9	50
Armenians . . .	48	1	1		50	8	16	8	5			3	56
Germans . . .	31	9	2		42		6	10	13	1	1	11	42
Greeks . . .	14				14		12	2					14
Irish . . .	7	1			8	1	5	1			1		8
Hungarians . . .	21				21		8	11	2				21
Italians . . .	688	15	5	1	709	41	625	16	6	2		19	709
Polish . . .	30	1	2	3	36	1	21	8				6	36
Russians . . .	1,038	479	281	293	2,091	19	297	798	51	1	25	990	2,091
Arabians . . .	2				2		2						2
Austrians . . .	96	22	12	12	142		26	54	20			42	142
Roumanians . . .	102	126	85	100	413	4	4	101	8	1		295	413
Norwegians . . .	43	6	3	4	56	13	13	16	1			12	56
Swedish . . .	81	8	2	2	93	8	57	12	4		1	11	93
French . . .	5	3			8			1	4			3	8
Hollanders . . .	4	1	1		6		1	2		1		2	6
Swiss . . .	3	1		1	5		1	1	1			2	5
Canadian . . .	1				1		1						1
Syrians . . .	7				7		7						7
Danish . . .	4	2	1	2	9	1		2	1			5	9
Belgians . . .	5	1			6		2	3	1				6
Galician . . .	1				1			1					1
Negroes . . .	4	1			5			4	1				5
Turks . . .	11	1			12	5	4	2				1	12
Finnish . . .	5	1			6	2	3					1	6
	2,395	689	400	424	3,818	107	1,031	1,084	131	11	29	1,427	3,818

JAMES V. LANTALUM,  
*Dominion Government Immigration Agent.*

ST. JOHN, N.B., June 30, 1901.

## No. 2.

## REPORT OF THE HALIFAX AGENT.

(F. W. ANNAND.)

HALIFAX, N.S., July 1, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit a report of the arrival of passengers at this agency for the year beginning July 1, 1900, and ending June 30, 1901. During the period above mentioned the arrivals have been as follows:—

Cabin . . . . .	5,375	
Steerage . . . . .	11,338	
Total . . . . .		16,713

These were divided as to destinations:

Cabin—		
Canada . . . . .		5,350
United States . . . . .		25
Steerage—		
Canada . . . . .		8,597
United States . . . . .		2,741

while they were divided as to sexes, as follows:—

Cabin, Canada—		
Males . . . . .		2,573
Females . . . . .		2,446
Children . . . . .		331
Cabin, United States—		
Males . . . . .		18
Females . . . . .		7
Children . . . . .		...
Steerage, Canada—		
Males . . . . .		4,698
Females . . . . .		1,681
Children . . . . .		2,218
Steerage, United States—		
Males . . . . .		1,754
Females . . . . .		625
Children . . . . .		362

## SESSIONAL PAPER No. 25

In comparison with the corresponding period of the previous year this shows a decrease in cabin of 1,531; a net increase in steerage of 854, or a total decrease of 677.

The increase in the steerage arrivals was divided almost equally between Canada and the United States, there being 442 of an increase for Canada and 412 for the United States.

During this past season both the Allan and Dominion Lines of steamers withdrew their usual winter services from this port and landed all their passengers at Portland instead.

There has also been a falling off in the arrivals of Galicians. Neither have there passed through this agency any of the usual parties of children during the past season, excepting Mr. Middlemore's party for the maritime provinces, and a party of 17 in charge of Miss Foster landed at Sydney, ex the wrecked ss. *Lusitania*, and booked for St. John.

During the period being reported on we have met and received passengers from 249 steamers, being exactly the same number as for the corresponding period of the previous year.

The health of the immigrants arriving has been exceptionally good, and little or no sickness has been reported.

Through the withdrawal of the quarantine department from our building we have been able to secure the use of much needed space for handling luggage, and have experienced considerably more satisfaction in our work as a result.

The immigrants have received the best of attention and care while passing through this agency en route to their new Canadian homes.

I would beg again to draw your attention to the large number of excellent settlers passing through this port destined for points in the United States, and to urge that steps be taken for the directing of their attention to Canada while they are with us passing through.

Acting under instructions from the department, I visited the Northwest last August, and shortly after my return made a report thereon.

I beg also to attach hereto the usual statements, as follows:—

Statement A.—Monthly arrivals of cabin passengers for Canada.

Statement B.—Monthly arrivals of cabin passengers for United States.

Statement C.—Monthly arrivals of steerage passengers for Canada.

Statement D.—Monthly arrivals of steerage passengers for United States.

Statement E.—Sexes, occupations and destinations of nationalities for Canada.

Statement F.—Sexes, occupations and destinations of nationalities for United States.

Statement G.—Sexes, nationalities and destinations of steerage by different lines.

Statement H.—Comparative statement of monthly arrivals, 1899-1900 and 1900-1.

Statement I.—Comparative statement of nationalities.

Statement J.—Showing arrivals according to ports of departure.

Your obedient servant,

F. W. ANNAND,

*Dominion Government Immigration Agent.*



## SESSIONAL PAPER No. 25

STATEMENT B.—Showing monthly arrivals of Cabin Passengers for the United States, and Sexes of Nationalities.

Months.	ENGLISH.					UNITED STATES CITIZENS.					FRENCH.				
	Adults.		Children.			Adults.		Children.			Adults.		Children.		
	Males.	Females.	Males.	Females.	Totals.	Males.	Females.	Males.	Females.	Totals.	Males.	Females.	Males.	Females.	Totals.
	1900.														
July . . . . .															
August . . . . .	1				1										
September . . . . .															
October . . . . .						1	1			2					
November . . . . .															
December . . . . .	1	1			2										
1901.															
January . . . . .	3				3	1	1			2	2				2
February . . . . .	1				1	5				5	2	1			3
March . . . . .															
April . . . . .															
May . . . . .	1	3			4										
June . . . . .															
Totals . . . . .	7	4			11	7	2			9	4	1			5

F. W. ANNAND,

*Dominion Government Immigration Agent.*

HALIFAX, N.S.,  
June 30, 1901

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STATEMENT C.—Showing Monthly Arrivals of

Months.	SEXES.					NATIONALITIES.																	
	Adults.		Children.			English.	Welsh.	Irish.	Scottish.	German and Dutch.	French and Belgians.	Scandinavians.	Russian and Finnish.	Hebrew.	Romanians.	Italians.	Syrians.	Galicians.	Austrian and Hungarian.	Returned Canadians.	Tourists.	U. S. Citizens.	
	Males.	Females.	Males.	Females.	Totals.																		
1900.																							
July.....	428	315	279	250	1,272	49						4	2	7				1,181	20	3	5		
August ..	86	35	7	13	141	73		49													6	2	1
September...	30	14	3	5	52	47		2	10													3	
October...	64	62	9	9	144	97	1	5	23												9	5	4
November...	136	82	20	21	259	133	1	2	5	9	12	14	9	20	6	4	1	6	5	18	2		
December...	235	131	58	41	465	124	5	9	2	7	10	87	82	15	24	27	1	11	31	7			
1901.																							
January...	160	49	16	24	249	117		2	6	2	3	10	32	12	4	39			5	7		3	
February..	181	47	8	12	248	67	3	5	4	4	5	11	27	6	88	2			4	15	3	1	
March.....	1,035	91	62	45	1,233	152	13	5	13	44	14	110	14	3	718	10	1	52	40	24	1		
April...	1,463	263	196	169	2,091	282	1	16	137	8	12	14	111		77	793	59	403	101	42	2		
May.....	473	327	254	248	1,302	93	1	9	1	1	1	10		13	5		1,096	37	14		3		
June.....	497	265	255	214	1,141	250	3	5	2	4	2	19	12	4	19	6	773	15	4	11			
Totals...	4,698	1,681	1,167	1,051	8,597	1,484	2	44	233	45	119	67	367	189	143	1,635	144	3,461	250	189	64	13	

## SESSIONAL PAPER No. 25

## Steerage Passengers for Canada.

Other Countries.	OCCUPATIONS.							DESTINATIONS.											
	Totals.	Agriculturalists.	Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not Classed.	Totals.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	Returned Canadians.	Tourists.	Totals.
1	1,272	365	52	3	1	13	838	1,272	50	3	5	936	270				3	5	1,272
	141	1	19	49	6	6	10	50	141	133							6	2	141
	52		26		1		6	19	52	47		1		1			3		52
	144	1	42	7	8	24	62	144	126	1			1	2			9	5	144
12	259	9	75	19	16	3	36	101	259	78	47	39	46	11	18		18	2	259
23	465	34	89	28	54	2	26	232	465	123	109	73	84	14	24		31	7	465
7	249	11	75	22	35	10	16	80	249	85	65	45	24	11	12		7		249
3	248	16	101	17	28	4	11	71	248	67	94	52	4	6	7		15	3	248
19	1,233	92	848	24	21	2	16	230	1,233	234	594	78	201	44	16	2	40	24	1,233
33	2,091	316	1,034	43	39	6	19	634	2,091	345	691	178	531	283	19		42	2	2,091
18	1,302	380	49	13	21		9	830	1,302	106	19	17	677	498	1		14		1,302
12	1,141	274	16	13	9	2	28	715	1,141	237	52	27	264	542	4		4	11	1,141
128	8,597	1,499	2,510	238	239	35	214	3,862	8,597	1,631	1,675	515	2,767	1,651	163	2	189	64	8,597

F. W. ANNAND,

*Dominion Government Immigration Agent.*

HALIFAX, N.S., June 30, 1901.

1-2 EDWARD VII., A. 1902

STATEMENT E.  
Showing Sexes, Occupations and Destinations of the Different Nationalities Remaining in Canada.

Nationalities.	SEXES.				OCCUPATIONS.										DESTINATIONS.								
	Adults.		Children.		Totals.	Agriculturists.	Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not Classed.	Totals.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	Returned Canadians.	Tourists.	Totals.
	Males.	Females.	Males.	Females.																			
English	768	418	190	138	1,484	99	418	102	126	23	169	547	1,484	957	86	146	129	72	63	1			1,484
Welsh	1	1			2							1	2	1			1						2
Scottish	171	45	9	8	233	54	26	61	22	8	18	44	233	95	9	34	54	29	12			233	
Irish	31	12	1		44	17	2	4	1		8	8	44	13	6	9	1	1	5				44
Norwegians	15	3			18	13	1	1			3	10	18	2	1	5		4	1				18
Swedish	26	5	4	3	38	6	14	4	2		2	10	38	5	20	12		1					38
Danish	9	2			11	4	2	1			2	7	11	4		4		1			1		11
Russian	95	66	65	59	272	70	15	1	3		6	177	272	10	6	245		11					272
Finnish	77	11	4	3	95	31	44	6	1		6	122	95		6	56		1					95
Polish	11	4	3		18	9	2				1	7	18	1	5			6					18
French	94	11	2	1	108	9	40	5			3	11	108	38	14	2	11	1		2			108
Belgian	33	7	4	7	51	25	1	1	3			18	51	10	3	1	28	9					51
German	31	4	3	2	40	5	13	1			1	8	40		10	13	14	3					40
Dutch	1	1	1	2	5							4	5										5
Austrian	61	4	3	2	70	2	50	5	1			9	70	1	8	49	12						70
Hungarian	65	47	35	33	180	52	8	5				115	180	4	3	45	126						180
Galician	1,152	851	746	712	3,461	1,001	89	8	2		1	2,398	3,461	4	7	4	2,062	1,368					3,461
Romanian	80	15	18	113	198	58	6	3	13		1	62	143	6	31	18	88						143
Serbian	22	22	26	4	144	6	37	2	3			52	144	64	73	5							144
Hebrew	42	83	34	34	189	5	26	19	33		1	105	189	30	129	26	6						189
Italian	1,988	25	32	16	1,655	1	1,862	4	1			67	1,655	345	1,198	106	2						1,655
Greek	33	1	1		35		33	4				2	35		35								35
Slovak	3	3	3	5	14	2	1	1				11	14	4	8	10	3						14
Armenian	6	3	3	1	13		1	1				5	13	4	1	1							13
Turkish	2				2		1					2	2	1	1	1							2
Swiss	2	1	9	1	6	1	1	1	1			4	6			1							6



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United States Citizens	8	4	1	13	1	6	13	10	1	2	13	4	13
Chinese	4			4	4		4	4			4		4
Arabs	19	7	8	36	14	3	36	11	25		36		36
Returned Canadians	131	42	10	189			189				189		189
Tourists	46	9	2	64			64				64		64
Totals	4,628	1,681	1,167	8,597	1,490	2,510	8,597	1,631	1,675	515	2,757	1,651	8,597

F. W. ANNAND,  
*Dominion Government Immigration Agent.*

HALIFAX, N.S., June 30, 1901.

1-2 EDWARD VII., A. 1902

STATEMENT D.—Showing monthly arrivals of Steerage Passengers for the United States.

Months.	SEXES.				NATIONALITIES.													OCCUPATIONS.																						
	Adults.		Children.		Totals.	English.	Irish.	Scotch.	German and Dutch.	French and Belgians.	Scandinavian.	Russian and Finnish.	Hebrews.	Rumanians.	Italians.	Galicians.	Austrian & Hungarian.	Greek.	U. S. Citizens.	Other Countries.	Totals.	Agriculturalists.	Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not Classified.	Totals.											
	Males.	Females.	Males.	Females.																										Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.
1900.																																								
July.....	8	7	4	22	22	1	6	1	22	1	4	1	22	1	6	1	22	1	6	1	22	1	6	1	22	1	6	1	22	1	6	1	22	1	6	1	22	1	6	1
August.....	14	16	1	32	32	25	1	1	32	25	1	1	32	25	1	1	32	25	1	1	32	25	1	1	32	25	1	1	32	25	1	1	32	25	1	1	32	25	1	1
September.....	35	28	4	70	70	53	3	3	70	53	3	3	70	53	3	3	70	53	3	3	70	53	3	3	70	53	3	3	70	53	3	3	70	53	3	3	70	53	3	3
October.....	15	20	4	41	41	37	3	3	41	37	3	3	41	37	3	3	41	37	3	3	41	37	3	3	41	37	3	3	41	37	3	3	41	37	3	3	41	37	3	3
November.....	85	57	30	196	196	20	6	6	196	20	6	6	196	20	6	6	196	20	6	6	196	20	6	6	196	20	6	6	196	20	6	6	196	20	6	6	196	20	6	6
December.....	156	90	35	317	317	28	4	4	317	28	4	4	317	28	4	4	317	28	4	4	317	28	4	4	317	28	4	4	317	28	4	4	317	28	4	4	317	28	4	4
1901.																																								
January.....	78	47	24	170	170	4	13	2	170	4	13	2	170	4	13	2	170	4	13	2	170	4	13	2	170	4	13	2	170	4	13	2	170	4	13	2	170	4	13	2
February.....	325	41	27	407	407	14	14	1	407	14	14	1	407	14	14	1	407	14	14	1	407	14	14	1	407	14	14	1	407	14	14	1	407	14	14	1	407	14	14	1
March.....	339	76	35	480	480	50	8	1	480	50	8	1	480	50	8	1	480	50	8	1	480	50	8	1	480	50	8	1	480	50	8	1	480	50	8	1	480	50	8	1
April.....	403	94	30	527	527	30	9	2	527	30	9	2	527	30	9	2	527	30	9	2	527	30	9	2	527	30	9	2	527	30	9	2	527	30	9	2	527	30	9	2
May.....	18	12	2	30	30	24	1	1	30	24	1	1	30	24	1	1	30	24	1	1	30	24	1	1	30	24	1	1	30	24	1	1	30	24	1	1	30	24	1	1
June.....	229	137	2	360	360	19	12	3	360	19	12	3	360	19	12	3	360	19	12	3	360	19	12	3	360	19	12	3	360	19	12	3	360	19	12	3	360	19	12	3
Totals.....	1,754	625	135	2,741	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10	2,741	356	15	10

E. W. ANNAND,  
Dominion Government Immigration Agent.

HALFPIAX, N.S., June 30, 1901.

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## STATEMENT F.—Showing Sexes and Occupations of the different Nationalities for United States.

Nationalities.	SEXES.				OCCUPATIONS.								
	Adults.		Children		Totals.	Agriculturalists.	Labourers.	Mechanics.	Clerks & Traders.	Miners.	Female Servants.	Not classed.	Totals.
	Males.	Females.	Males.	Females.									
English.	167	148	29	21	356	9	110	20	24	1	71	118	356
Scotch.	1	4	4	1	10			1			1	8	10
Irish.	11	4			15	1	9		1			4	15
Norwegians.	157	42	12	11	222	26	110	14	7		26	45	222
Swedish.	179	61	11	16	267	41	111	19	8		23	65	267
Danish.	28	10	5	2	45	6	16	4	2		3	14	45
Russian.	241	166	65	51	523	17	151	20	53		4	278	523
Finnish.	307	55	8	13	383	107	195			5	25	51	383
Polish.	5	2			7		3	1	1			2	7
French.	10	7	2	1	20	1	7	1	1			10	20
Belgian.	3	1			4	1	1	1			1	4	4
German.	45	22	13	3	83	12	22	8	3		5	33	83
Dutch.	1	2	2		5	1						4	5
Austrian.	75	6	6	3	90	1	66	4	3	1	1	14	90
Hungarian.	1	1			2			1				1	2
Galician.	3	1	1	2	7	3						4	7
Roumanian.	13	16	9	4	42	1	4	5	3			29	42
Hebrew.	73	60	26	30	189	1	44	20	8			116	189
Greek.	100		2		102		100					2	102
Italian.	265	5	5	2	277	1	264					12	277
Syrian.	7	5	3	1	16	6			1			9	16
Turkish.	2				2		2						2
Swiss.	1				1		1						1
Armenian.	2				2		1		1				2
Portuguese.	17				17		17						17
U. S. citizens.	40	7	1	6	54	10	21	3	6			14	54
Totals.	1,754	625	195	167	2,741	245	1,256	122	122	10	154	833	2,741

F. W. ANNAND,

Dominion Government Immigration Agent.

HALIFAX, N.S., June 30, 1901.

1-2 EDWARD VII., A. 1902

STATEMENT G.—Showing Sexes, Nationalities and Destina-

Lines.	SEXES.										NATION				
	Adults.		Children.		Totals.	English.	Welsh.	Irish.	Scottish.	German and Dutch.	French and Belgians.	Scandinavians.	Russians and Finnish.	Hebrews.	Roumanians.
	Males.	Females.	Males.	Females.											
Allan Line	873	349	162	129	1,513	642	132	226	19	26	205	203	9	10	
Dominion Line	19	13	4	4	40	25	1	..	..	..	..	..	2	4	
Elder Dempster Line.	3,744	653	353	258	5,008	334	126	10	111	69	384	1,046	363	73	
Furness Line..	84	29	18	18	149	139	..	..	..	1	..	..	..	..	
Hamburg American Line	1,288	907	789	756	3,740	..	..	..	3	..	..	24	4	98	
Other Lines	444	355	36	53	888	700	..	7	..	47	12	..	..	..	
Totals	6,452	2,306	1,362	1,218	11,338	1,840	259	243	133	143	601	1,273	378	185	

## SESSIONAL PAPER No. 25

tions of Steerage Passengers via different Lines.

ORIGINS.										DESTINATIONS.									
Italians.	Syrians.	Galicians.	Austrians and Hungarians.	Returned Canadians.	Tourists.	U. S. Citizens.	Other Countries.	Totals.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	Returned Canadian Tourists.	United States.	Totals.	
3	2	13	28	52	8	11	23	1,513	467	55	168	218	85	60	52	8	391	1,513	
		6		1			1	40	6	13	14	4		2	1			40	
1,925	157	2	189	80	24	39	184	5,008	539	1,577	314	361	66	29	2	80	24	2,016	5,008
			1	4	3		1	149	138	1			1			4	3	2	149
3		3,447	129	3			29	3,740	1	24	19	2,184	1,499	3	3		7	3,740	
1	1			4	49	29	17	21	888	480	5					49	29	325	888
1,932	160	3,468	342	189	64	67	250	11,338	1,631	1,675	515	2,767	1,651	103	2	189	64	2,741	11,338

F. W. ANNAND,  
*Dominion Government Immigration Agent.*

HALIFAX, N.S., June 30, 1901

1-2 EDWARD VII., A. 1902

## STATEMENT H.—Comparative Statement of Monthly Arrivals, 1899-1900 and 1900-1901.

Months.	CANADA.				STATES.				TOTALS.				
	1899-1900.		Increase.	Decrease.	1899-1900.		Increase.	Decrease.	1899-1900.		Increase.	Decrease.	
	1899.	1900.			1899.	1900.			1899.	1900.			
July.	424	1,272	848		23	22			1	447	1,294	847	
August.	169	141	32		37	32			5	146	173	27	
September.	51	52	1		78	70			8	129	122		7
October.	168	144	36		36	41		5		144	185	41	
November.	227	259	32		199	196			3	426	455	29	
December.	286	465	179		202	317	115			488	782	294	
January.	255	240		6	131	179	39			386	419	33	
February.	343	248		95	312	407	95			655	655		
March.	1,095	1,233	138		653	489		173		1,748	1,713		35
April.	1,955	2,091	136		601	616	15			2,556	2,707	151	
May.	1,666	1,302		364	39	30		9		1,705	1,332		373
June.	1,636	1,141		495	18	360	342			1,654	1,501		153
Totals.	8,155	8,597	442	960	2,329	2,741	412	199		10,484	11,338	854	568

F. W. ANNAND,

Dominion Government Immigration Agent.

HALIFAX, N.S., June 30, 1901.

## STATEMENT I.—Comparative Statement of Nationalities, 1899-1900 and 1900-1901.

Nationalities.	1899-1900.	1900-1901.	Increase.	Decrease.
English.	1,987	1,484		503
Welsh.	16	2		14
Irish.	116	44		72
Scotch.	198	233		
German and Dutch.	221	45	35	176
Scandinavians.	147	67		80
French and Belgians.	91	119	28	
Russian and Finnish.	503	367		136
Hebrew.	119	189	70	
Galician.	4,004	3,461		543
Other countries.	446	2,333	1,887	
Returned Canadians.	184	189	5	
Tourists.	123	64		59
Totals.	8,155	8,597	442	1,583

F. W. ANNAND,

Dominion Government Immigration Agent.

HALIFAX, N.S., June 30, 1901.

## SESSIONAL PAPER No. 25

STATEMENT J.—Showing the number of Arrivals according to Ports of Departure.

Ports of Embarkation.	Number.
England, Liverpool . . . . .	6,891
"    London . . . . .	115
Scotland, Glasgow . . . . .	181
Ireland, Londonderry . . . . .	25
Germany, Hamburg . . . . .	3,749
Newfoundland, St. John's . . . . .	866
United States, Boston . . . . .	3,985
"    New York . . . . .	205
St. Pierre . . . . .	119
West Indies and Bermuda . . . . .	295
Totals . . . . .	16,713

F. W. ANNAND,  
*Dominion Government Immigration Agent.*

HALIFAX, N.S., June 30, 1901.

1-2 EDWARD VII. A. 1902

## No. 3.

## REPORT OF THE QUEBEC AGENT.

(P. DOYLE.)

DOMINION GOVERNMENT IMMIGRATION OFFICE,  
QUEBEC, June 30, 1901.The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit a report of the arrivals of immigrants at this port for the year ended June 30, 1901, with tables showing the numbers and nationalities of the immigrants brought out by each line of steamers, and the general destinations of the steerage passengers.

I take pleasure in stating that the general health of the immigrants was exceptionally good.

Among the arrivals during the year were a number of families of the better class, who, besides their intelligence and industry, brought with them a considerable amount of capital. I also received visits from several parties who had been deputed to visit this country and collect information concerning it by a number of friends, who, if the report of their agents prove favourable, intend to emigrate during the ensuing season.

We may congratulate ourselves on having received a valuable accession to our population in a considerable number of persons of wealth and intelligence, who have sought investment of their capital in Canada, and become permanent settlers among us.

The French, Belgian, Scandinavian and German immigrants, bound for Manitoba and the North-west, were very good specimens of their races, and the continental immigrants make an especially desirable class of settlers. Thrifty and hard-working, they are well adapted to roughing it on arrival, and after a few years' residence, they attain in almost every case an independence which they never could have expected in their native country.

The older provinces offer many advantages to people of moderate means seeking comfortable homesteads. In all of them, improved farms, with good buildings, convenient to markets, churches, schools, &c., can be purchased at a moderate price, offering great advantage to people having children of school age.

The demand for agricultural labourers and female domestic servants continued throughout the whole season very great, and far in excess of the supply. All of these classes are sure to find employment on arrival.

The whole respectfully submitted.

Your obedient servant,

P. DOYLE,

*Dominion Government Immigration Agent.*



## SESSIONAL PAPER No. 25

The arrivals for the year, compared with those of the same period in 1900, were as follows :—

	1900.		1901.		Increase.	Decrease.
	Cabin.	Steerage.	Cabin.	Steerage.		
England	4,100	26,611	4,618	31,356	5,263	...
Ireland	31	327	31	424	97	...
Scotland	46	991	47	1,043	63	...
Russia	...	2,311	...	...	...	3,311
France	2	576	...	313	...	265
	4,179	30,806	4,696	33,136	5,423	2,576
	...	4,179	...	4,696	2,576	...
Grand total.	...	34,985	...	37,832	2,847	...

Showing an increase of 2,847.

The total number of steamships arrived with passengers was 80 ; tonnage, 261,159.

The average passage of the Allan Line was : weekly steamers from Liverpool, 9½ days ; Londonderry, 8 days. Glasgow steamers from Glasgow, 12 days. Beaver Line weekly steamers from Liverpool, 11 days ; Londonderry, 9½ days ; Queenstown, 11 days. Dominion Line weekly steamers from Liverpool, 9½ days. Franco-Canadienne Line from Bordeaux, 16 days.

The number of Cabin and Steerage by each line was as follows :—

	Cabin.	Steerage.	Total.
<i>Allan Line.</i>			
Weekly steamers from Liverpool	2,405	11,562	13,967
" " Londonderry	24	375	399
" " Glasgow	47	1,047	1,094
	2,476	12,984	15,460
<i>Dominion Line.</i>			
Weekly steamers from Liverpool	1,164	3,083	4,247
<i>Beaver Line.</i>			
Weekly steamers from Liverpool	1,049	16,797	17,796
" " Londonderry	4	7	11
" " Queenstown	3	42	45
	1,056	16,796	17,812
<i>Franco-Canadienne.</i>			
Steamers from Bordeaux	...	313	313
Grand total.	4,696	33,136	37,832

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## The Nationalities of the Passengers

		Returned Canadians.	Tourists.	Arabs.	Armenian.	Australian.	Austrian.	Belgian.	Bakowinian.	Chinese.	Croatian.	Dutch.	Egyptian.	Finnish.	French.	Galician.	German.	Greek.
<i>Alan Line.</i>																		
Weekly	Liverpool.....	966	211	7	14	32	16	65	2	7	13	1	1583	73	511	124	6	
"	Londonderry.....	12	8															
"	Glasgow.....	28	28									2						
		1006	247	7	14	32	16	65	2	7	15	1	1583	73	511	124	6	
<i>Dominion Line.</i>																		
Weekly,	Liverpool.....	160	18	7	26		3		1			2	312	108	114	77	7	
		160	18	7	26		3		1			2	312	108	114	77	7	
<i>Beaver Line.</i>																		
Weekly,	Liverpool.....	891	96	22	72	3	119	38	47		45	26	363	114	394	214	54	
"	Londonderry.....	1															3	
"	Queenstown.....	6																
		898	96	22	72	3	119	38	47		45	26	363	114	394	217	54	
<i>Franco-Canadienne Line.</i>																		
Bordeaux	.....				2													
					2													
		2064	361	36	114	3	151	57	112	3	52	43	1 2258	296	1019	418	67	

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brought out by each Line were as follows:—

English.	GREAT BRITAIN.													SCANDINAVIAN.				United States Citizens.	Total.			
	Welsh.	Scottish.	Irish.	Hebrew.	Hungarian.	Italian.	Japanese.	Polish.	Portuguese.	Roumanian.	Russian.	Servian.	Spanish.	Swiss.	Syrian.	Danish.	Icelandic.			Swedish.	Norwegian.	Turkish.
5671	45	362	449	323	59	10	6	29	25	266				9	9	132	101	677	1654	509	13,967	
14		362																			3	399
		893			7			2	4								110				20	1,094
5685	45	1255	811	330	59	10	6	31	4	25	266			9	9	132	211	677	1654	532	15,460	
2087	10	18	26	171	4	44		2		48				41	4	31	3	499	115		311	4,249
2087	10	18	26	171	4	44		2		48				41	4	31	3	499	115		311	4,249
1330	14	28	139	8833	21	2374		61		331	23	14	4	73	76	751	507	249		2	426	17,754
1			3																		3	11
			39																			45
1331	14	28	181	8833	21	2374		61		331	23	14	4	73	76	751	507	249		2	429	17,810
						9									277					25		313
						9									277					25		313
9103	69	1301	1018	9334	84	2437	6	94	4	25	645	23	14	54	363	239	965	1683	2018	27	1272	37,832

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The following tables give the number of male and female adults, and the sexes of children and infants of each nationality arrived in 1901.

	Adults.		Children.		Infants.	Total.
	Male.	Female.	Male.	Female.		
Returned Canadians .....	1,161	705	85	83	30	2,064
Tourists.....	208	136	4	10	3	361
Immigrants.....						
Arabs.....	22	6	3	5		36
Armenians.....	60	28	10	9	7	114
Australians.....	1	1	1			3
Austrian.....	119	16	10	6		151
Belgian.....	28	17	4	6	2	57
Bukowinian.....	42	25	23	17	5	112
Chinese.....	2	1				3
Croatian.....	52					52
Dutch.....	19	9	6	7	2	43
Egyptian.....	1					1
Finnish.....	1,296	641	135	132	54	2,258
French.....	195	78	9	12	1	295
Galician.....	327	247	178	176	91	1,019
Germans.....	193	106	56	42	21	418
Greek.....	57	5	3	2		67
Great Britain—English.....	4,429	2,908	867	764	135	9,103
"    Welsh.....	23	29	6	10	1	69
"    Scotch.....	785	340	95	66	15	1,301
"    Irish.....	490	335	96	78	19	1,018
Hebrew.....	5,064	1,919	1,078	957	316	9,334
Hungarian.....	20	20	23	18	3	84
Italian.....	2,290	72	41	27	7	2,437
Japanese.....	4		2			6
Polish.....	35	26	16	11	6	94
Portuguese.....	4					4
Roumanian.....	10	5	6	3	1	25
Russian.....	200	166	124	107	48	645
Servian.....	6	8	4	4	1	23
Spanish.....	14					14
Swiss.....	26	17	6	4	1	54
Syrian.....	215	71	50	13	14	363
Scandinavian—Danish.....	126	61	24	20	8	239
"    Icelanders.....	317	315	168	100	65	965
"    Swedish.....	832	532	116	120	22	1,683
"    Norwegian.....	1,112	582	149	119	56	2,018
Turkish.....	13	1	12	1		27
United States Citizens.....	659	487	60	58	8	1,272
Totals.....	20,518	9,915	3,470	2,987	942	37,832

The trades and callings of the male steerage passengers, as per passenger lists, were as follows:—

Agriculturists.....	2,116
General labourers.....	10,590
Mechanics.....	3,817
Clerks and traders.....	610
Miners.....	397

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 17,530

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TABLE showing the number of immigrants landed at Quebec, assisted to emigrate by various societies, during the year ending June 30, 1901.

By Whom Sent Out.	ADULTS.		CHILDREN.		INFANTS.		Total.	Destinations.
	Male.	Female.	Male.	Female.	Male.	Female.		
Dr. Barnardo, London			316	296			612	Toronto, Peterboro' and Russell, Man.
The Canadian Catholic Emigration Society, London, Rev. E. St. John, Secretary			89	33			122	Montreal and Ottawa.
United British Women's Emigration Association, London, Hon. Mrs. Joyce	3	55	3		1		62	General.
Liverpool Catholic Children's Protection Society			21	22			43	Montreal.
Home of Industry, Bethnal Green Road, London, Miss Macpherson			22	20			42	Stratford.
Church of England Waifs and Strays Association, London			32	10			42	Shelbrooke and Niagara.
Bristol Emigration Society			29	2			31	St. John, N.B.
Kibble Farm School, Paisley, Scotland			3				3	"
Working Boys' Home of Great George Street, Liverpool			3				3	Lennoxville, P.Q.
Philanthropic Society Farm School, Redhill, Surrey			1				1	Wapella, N.W.T.
Children's Aid Society, 32 Charing Cross, London			1				1	Winnipeg.
Sheltering Home, Myrtle Street, Liverpool			1				1	Knowlton.
	3	55	521	383	1		963	

STATEMENT of the number of Immigrants arrived at the port of Quebec, distinguishing the countries from whence they sailed, up to June 30, 1900 and 1901.

	1900.	1901.
England—		
Liverpool	29,557	35,970
London	15	
Manchester	9	
Bristol	1,130	
Ireland—		
Londonderry	358	410
Queenstown		45
Scotland—		
Glasgow	1,027	1,094
France—		
Bordeaux	578	313
Russia—		
Batoum	2,311	
	34,985	37,832

1-2 EDWARD VII., A. 1902

STEERAGE PASSENGERS.

STATEMENT of Immigration Arrivals and Departures at Quebec Immigration Agency for the twelve months ending June 30, 1901.

Months.	SEXES.				DESTINATIONS.										NATIONALITIES.																						
	Adults.		Children.		Returned Canadians.	Tourists.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	United States.	Totals.	Returned Canadians.	Tourists.	Arabs.	Armenians.	Australians.	Austrians.	Belgians.	Bukowinians.	Chinese.	Croatian.	Dutch.	French.	Finnish.	Galicans.	Germans.	Greek.						
	Male.	Female.	Male.	Female.																																	
	Arrived via Ocean Travel.	Male.	Female.	Total Number of Souls.	Returned Canadians.	Tourists.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	United States.	Totals.	Returned Canadians.	Tourists.	Arabs.	Armenians.	Australians.	Austrians.	Belgians.	Bukowinians.	Chinese.	Croatian.	Dutch.	French.	Finnish.	Galicans.	Germans.	Greek.						
1900.																																					
July.....	6,773	3,484	1,537	971	781	6,773	117	15	86	978	754	1,180	122	88	3,444	6,773	117	15	1	3	3	29	11	12	7	3	15	437	170	60	7						
August....	5,498	2,990	1,440	1,558	501	5,498	247	44	54	1,583	449	308	100	81	2,531	5,498	247	44	15	4	1	41	2	7	37	297	23	89	6								
Sept.....	4,433	2,226	1,289	471	447	4,433	188	40	23	934	421	149	89	216	2,373	4,433	188	40	11	28	11	10	5	5	45	152	17	43	6								
October...	3,115	1,481	879	403	332	3,115	147	19	543	515	283	64	100	1,384	3,115	147	12	33	15	1	7	2	34	200	87	68											
Nov.....	1,311	630	363	171	147	1,311	40	1	319	70	178	19	23	661	1,311	40	1	18	11	3	7	2	13	79	15	16	1										
Dec.....																																					
1901.																																					
January....																																					
February...																																					
March.....																																					
April.....	1,385	1,040	196	83	66	1,385	26	2	8	458	164	162	22	18	525	1,385	26	2	5	10	1	10	1	1	5	17	116	357	56	6							
May.....	5,176	3,413	915	441	407	5,176	75	7	24	1,624	579	821	201	106	2,839	5,176	75	7	1	12	55	7	30	38	12	15	473	357	56	6							
June.....	5,445	2,955	1,234	633	623	5,445	122	26	58	734	764	923	972	111	2,437	5,445	122	26	10	40	9	23	17	24	594	350	60	12									
Totals....	33,136	18,228	7,833	3,731	3,324	33,136	962	134	273	6,573	3,696	4,011	880	803	115,794	33,136	962	134	36	114	310	57	112	2	52	41	2,238	1,019	411	67							

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STEERAGE PASSENGERS—Concluded.

STATEMENT of Immigration Arrivals and Departures at Quebec Immigration Agency for the twelve months ending June 30, 1901.—*Con.*

Months.	NATIONALITIES.— <i>Con.</i>													OCCUPATIONS										For United States—Not Reported	For Canada—Not Reported Elsewhere.	Not Classified.						
	Great Britain.				Scandinavian.									Total.	United States Citizens.	Agriculturists.	General Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.											
	English.	Welsh.	Scotch.	Irish.	Hebrew.	Hungarian.	Italian.	Japanese.	Portuguese.	Romanian.	Russians.	Serbians.	Zyambh.									Syrian.	Swiss.				Danish.	Icelandic.	Swedish.	Norwegians.	Turkish.	
1900.	1,660	6	148	96	2,814	12	293	10,10	176	2	26	17,701	224	311	74	6,773	502	1,906	840	117	26	388	6,904	3,329	3,444							
July . . .	862	12	132	106	2,184	1	131	10	43	23	281	17	12	22	278	962	23	350	5,498	304	1,306	34	261	2,428	2,807	2,631						
August . . .	907		227	138	1,741	24	143	24	6	8	15	20	28	238	153	208	4,433	191	1,039	612	91	163	259	2,066	2,060	2,373						
Sept. . . .	963		151	129	410	22	181	38		38	29	9	206	150	192	3,115	161	744	303	97	92	296	1,449	1,731	1,384							
October . .	189		27	25	384	1	153	6	113		23	4	13	89		46	1,311	86	325	136	33	48	656	650	661							
Nov.																																
Dec.																																
1901.																																
January . .																																
February . .																																
March . . .	577	1	3	69	25		298	4	19	83	12	14	1	64	17	1	163	142	2	1,385	49	785	144	17	23	59	308	860	525			
April . . .	955	25	129	268	784	21	940	4	19	83	12	14	1	64	17	1	208	514	2	45	5,176	358	2,537	357	66	28	275	1,553	2,339			
May . . . .	1,008	21	350	197	992		888	25	133		30	6	37	204	277	452	38	5,445	471	1,994	389	81	50	284	2,286	3,068	2,437					
June . . . .																																
Totals . . .	6,351	65	1,167	963	9,834	84	2,437	6	4	94	25	645	23	14	362	54	239	965	1,683	2,018	27	955	33,136	2,116	10,500	3,817	610	397	1,823	13,783	17,342	15,794

P. DOYLE,  
Dominion Government Immigration Agent.

QUEBEC, June 30, 1901.





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STORAGE PASSENGERS REMAINING IN CANADA—Continued.

STATEMENT of Arrivals and Departures at Quebec Agency for the twelve months ending June 30, 1901—Continued.

Months.	NATIONALITIES.—Con.													OCCUPATIONS.																			
	Galician.	German.	Greek.	English.	Welsh.	Scotch.	Irish.	Hebrew.	Hungarian.	Italian.	Japanese.	Polish.	Romanian.	Russian.	Serbian.	Spanish.	Swiss.	Syrian.	Danish.	Icelandic.	Swedish.	Norwegian.	T. S. Citizens.	Agriculturists.	General Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not Classified.	Totals.		
1900.																																	
July.	167	49	5	953		143	75	718	12	124		3	3	144				3	648	31	22			400	685	362	95	25	159	1,605	3,329		
August.	23	40		721	12	126	98	922	1	104				35	23				4	22	27	42	25	263	655	559	55	22	121	1,252	2,867		
September.	15	20	2	706		211	89	477	15	118		16	6						1	21	30	4		121	431	225	58	152	163	970	2,090		
October.	87	50		838		148	115	89	22	121				15					4	9	30	6		113	343	112	62	85	125	891	1,731		
November.										50				113							8	1			68	141	51	29	6	11	344	650	
December.	15	2	1	144		23	20	117	1																								
1901.																																	
January.																																	
February.																																	
March.				350	1		3	7		298				51					4	1	3	7			38	493	85	15	9	25	194	869	
April.				962	12	126	182	51	24	712	9			83	12				7	10	35	39	2		288	1,278	150	57	25	138	901	2,857	
May.	357	32	9	929	17	341	160	96		323	4			133		6			3	194	41	50		416	821	197	69	20	113	1,372	3,068		
June.																																	
Totals.	1,014	267	24	5,963	92	1,121	783	2,477	79	1,887	632	9	575	23	12	26	289	30	895	295	171	27	1,647	1,847	1,741	440	342	796	7,929	17,342			

P. DOYLE,

Dominion Government Immigration Agent.

QUEBEC, June 30, 1901.

1-2 EDWARD VII., A. 1902

## STEERAGE PASSENGERS DESTINED

STATEMENT of Arrivals and Departures at Quebec Agency,

Months.	SEXES.				Total Number of Souls.	NATION																
						Arrived via Ocean Travel.				Great Britain.												
	Male.	Female.	Male.	Female.		Arabs.	Armenian.	Austrians.	Belgians.	Croatians.	Dutch.	French.	Finnish.	Galician.	German.	Greek.	English.	Welsh.	Scottish.	Irish.	Hebrew.	
1900.																						
July.....	3444	1826	859	416	343	3444	3	11	..	..	2	3	389	3	11	2	107	6	5	21	2096	
August.....	2631	1314	768	276	273	2631	2	2	..	..	3	3	184	..	49	..	141	..	6	8	1262	
September...	2373	1111	694	287	281	2373	..	28	..	10	..	5	133	2	23	4	201	..	16	44	1264	
October.....	1384	682	435	130	137	1384	1	33	..	15	..	2	177	..	38	..	155	..	3	14	321	
November...	661	312	191	86	72	661	..	17	..	..	..	..	70	..	14	..	45	..	4	5	267	
December.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
1901.																						
January..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
February..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
March.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
April.....	525	378	80	39	28	525	..	5	1	..	..	..	103	..	8	28	27	..	..	25	18	
May.....	2339	1548	422	183	186	2339	..	7	1	..	..	12	3	421	..	24	6	93	13	3	26	733
June.....	2437	1342	589	272	234	2437	2	..	22	3	..	12	..	524	..	35	3	79	4	9	37	896
	15794	8513	4038	1689	1554	15794	3	95	35	28	1	28	14	2001	5	202	42	848	23	46	180	6857

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FOR THE UNITED STATES.

for the twelve months ending June 30, 1901.

NATIONALITIES.													OCCUPATIONS.									
Hungarian.	Italian.	Polish.	Romanian.	Russian.	Spanish.	Syrian.	Swiss.	Portuguese.	Scandinavians.			United States Citizens.	Totals.	Agriculturalists.	General Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not Classified.	Totals.	
									Danish.	Icelandic.	Swedish.	Norwegian.										
79	716	32	2	26	14	53	193	289	74	3444	102	1221	478	22	3	229	1389	3444				
27	10	8	8	65	7	38	251	220	350	2631	101	691	457	53	12	140	1177	2631				
25	8	32	4	7	19	7	208	151	208	2273	70	608	387	33	13	136	1126	2273				
60					25		176	150	192	1384	48	401	191	35	7	144	558	1384				
63	6		5		12		81	25	46	661	12	188	105	4	3	37	312	661				
									13	160	135	2	525	11	292	59	2	14	33	114	525	
	228	10					54	173	475	45	2339	70	1259	297	9	3	137	654	2339			
	68	21					34	10	236	402	38	2437	55	1083	192	12		171	924	2437		
5	550	62	16	70	2	83	34	4	200	70	1478	1847	955	15794	469	5743	2076	179	55	1027	6254	15794

P. DOYLE,  
Dominion Government Immigration Agent.

QUEBEC, June 30, 1901.

1-2 EDWARD VII., A. 1902

CABIN PASSENGERS REMAINING IN CANADA.  
 STATEMENT of Arrivals and Departures at Quebec Agency for the twelve months ending June 30, 1901.

Months.	SEXES.				DESTINATIONS.								NATIONALITIES.								OCCUPATIONS.																						
	Adults.		Child-ren.		Returned Canadians.	Tourists.	Lower Provinces.	Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	Total.	Returned Canadians.	Tourists.	Chinese.	Dutch.	French.	German.	English.	Welsh.	Scotch.	Irish.	Total.	Agriculturists.	Mechanics.	Clerks and Traders.	Female Servants.	Not classified.	Total.												
	Males.	Females.	Males.	Females.																												Males.	Females.										
	Arrived via Ocean Travel.				Total Number of Souls.																																						
1900.	301	201	8	8	139	16	2	316	27	2	3	13	518	139	16	7	7	7	7	308	36	12	518	518	518	1,057	1,057	1,121	1,121	1,121	1,121	1,121	660	660	143	143	518	518					
July.....	518																																										
August.....	1,057	960	435	34	243	60	24	658	50	3	13	6	1,057	243	60	57	57	57	57	633	4	47	13	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057		
September.....	1,121	530	560	44	250	15	9	790	48	1	8		1,121	250	15	1	1	1	1	848				1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	1,121	
October.....	660	265	316	49	177	15	13	439	14	2	2		660	177	13	24	24	24	24	366	50	26	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660
November.....	143				66	2		42	12	1	6	14	143	66	2	2	2	2	2	72	1		143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	
December.....																																											
1901.																																											
January.....																																											
February.....																																											
March.....																																											
April.....	100	47	38	10	33	22	3	49	1	9	2	6	100	33	22					67				100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
May.....	283	150	118	14	85	22	3	152	7	6	4	4	283	85	22					173				283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	
June.....	421	191	203	12	109	99	8	186	2	8	4	5	421	109	99					209				421	421	421	421	421	421	421	421	421	421	421	421	421	421	421	421	421	421		
Total.....	4,303	2,118	1,864	178	1,102	229	59	2,632	161	31	33	58	4,303	1,102	227	1	2	95	7	2,676	4	134	55	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303	4,303		

P. DOYLE,  
 Dominion Government Immigration Agent.

Quebec, June 30, 1901.

SESSIONAL PAPER No. 25

## CABIN PASSENGERS FOR UNITED STATES.

STATEMENT of Arrivals and Departures at Quebec Agency, for the twelve months ending June 30, 1901.

Months.	SEXES.					Total Number of Souls.	NATIONALITIES.			OCCUPATIONS.								
	Arrived via Ocean Travel.		Adults.	Children	Total		Great Britain.			United States Citizens.		Agriculturists.	General Labourers.	Mechanics.	Clerks and Traders.	Female Domestics.	Not classified.	Total.
	Males.	Females.	Males.	Females.			English.	Scotch.	Irish.	Total	Total							
1900.																		
July	49	23	18	5	3	49	14			35	49						49	49
August	209	87	114	4	4	209	34			175	209						209	209
September	82	38	41	2	1	82	19			63	82						82	82
October	34	17	13	2	2	34	6			28	34						34	34
November	16	6	10			16	3			13	16						16	16
December																		
1901.																		
January																		
February																		
March																		
April	1		1			1				1	1						1	1
May																		
June	2	1	1			2				2	2						2	2
	303	172	198	13	10	303	76			317	393						393	393

P. DOYLE.

Dominion Government Immigration Agent.

QUEBEC, June 30, 1901.

## No. 4.

## REPORT OF THE MONTREAL AGENT.

(JOHN HOOLAHAN.)

DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit the report of this agency for the financial year ending June 30, 1901, and attached thereto statistical information covering this period.

Statement A shows the number of immigrant arrivals at Montreal, per ocean travel, via the United States ports of New York, Boston and Portland, their nationalities, occupations and destinations.

Statement B shows the number of immigrant arrivals at Montreal from the United States, their nationalities, occupations and destinations.

Statement C shows the number of juvenile immigrant arrivals at Montreal and their destinations, person in charge, and by whom sent.

Statement D shows the number of applications for help received at this agency.

Statement E gives the retail prices of food, fuel, &c., for the working classes in Montreal.

Statement F gives the retail prices of clothing, &c., for the working classes in Montreal.

Statement G gives the average rate of wages for mechanics, labourers and domestic servants.

The return at this agency of the number of immigrant arrivals at Montreal from the United States will be found in the statements A and B, with full particulars.

Those steerage passengers who arrive from Europe by the various steamships at the ports of Quebec, Halifax, N.S., and St. John, N.B., and who are compelled to disembark there are accounted for at these ports, being transferred to the different railways there.

The first and second-class passengers, who arrive from Europe, as a general rule during the season of the St. Lawrence river navigation, remain on board until the steamships reach Montreal and disembark here.

This agency has followed the system of checking immigrant arrivals and departures as usual. It is applied only to those immigrants that come from Europe via ports in the United States and bound for Canadian western points. Our officers go through the trains and take down name, sex, age, occupation, nationality, name of steamer travelled

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on, and destination of the newly arrived immigrant. A monthly list of the names and other particulars thus obtained is prepared, and in due course forwarded to the department at Ottawa.

I also notify the Commissioner of Immigration at Winnipeg, and the department at Ottawa, by wire, of the number and nationality of the immigrants going forward, as well as the time of departure of trains bearing them from Montreal.

The total number of immigrant arrivals at Montreal, per ocean travel, via ports of New York, Boston and Portland, as per Statement A, during the financial year ending June 30, 1901, was . . . . . 5,768

The total number of immigrant arrivals at Montreal from the United States, as per Statement B, during the financial year ending June 30, 1901, was . . . . . 2,364

Grand total . . . . . 8,132

The total number of immigrant arrivals at Montreal from United States, and per ocean travel via ports in United States, during the corresponding twelve months of the years 1899 and 1900, was . . . . . 4,162

An increase of . . . . . 3,970

During the twelve months referred to, I have issued to immigrants going to Manitoba, the North-west Territories and British Columbia, ninety-six certificates.

The plan of changing these certificates for immigrant tickets, as issued by the Canadian Pacific Railway officials, works more satisfactorily every year. The certificates enable intending settlers to convey their families to their final destination at a greatly reduced cost.

Large quantities of pamphlets and maps issued by the department have been distributed, not only among the immigrants for Canada, but to those going to the United States; and have also been mailed on application to prospective emigrants all over the world.

There has been a good local demand for unskilled labour. In the city and district of Montreal, general labourers have been in great request, owing more particularly to the works in progress in connection with the local harbour improvements, the shipping, the new railway constructions, the street railway repairs and extension, the building trade, &c., with an increase in the rate of wages as compared with last year, which is due to the remarkable condition of prosperity that prevails throughout the Dominion.

Moreover, Montreal has become the distributing point where all large employers of labour seek to secure men. The result is, that every man able and willing to work can obtain it at once at fair wages during the open season.

The demand for agricultural labourers is constantly increasing, and any able-bodied male or female immigrant possessing a knowledge of farm work or even a desire to learn it, can always find employment. Single young men are eagerly sought for, and also a man and his wife who are accustomed to farm life, are in good demand.

There is a good demand for gardeners, provided they reach here in the spring.

Employment for grooms and coachmen continues good.

There is a constantly growing demand for competent female domestic servants. No female immigrant, possessing certificates as to competency and character, need have any fear of not finding a suitable position with remunerative wages in Montreal

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and the district of Montreal. Such immigrants can find employment no matter at what season of the year they may arrive.

The demand for domestic servants has been increasing year by year. The large commercial and industrial establishments, stores and offices open a field for Canadian young women which in many cases they prefer to housework.

Montreal and district are at present fully supplied with all the mechanics, printers, book-keepers, clerks, &c., that are required.

I am pleased to be able to state that the immigrants arriving here during the fiscal year covered by this report, have been a suitable and desirable class for Canada. My statement is not only based on personal observation, but is corroborated by the leading officials of the different national and benevolent societies of the city of Montreal.

The large majority of the new arrivals were of the agricultural class and went forward to Manitoba, North-west Territories and British Columbia, the remainder being distributed throughout Ontario and Quebec.

The opinions of the officials of the various national and benevolent societies, are as follows:—

Mr. Frederick W. Richards, Acting Chairman of the Charitable Committee of the St. George's Society, being interviewed on the subject of immigration, said :

'The number of immigrants admitted into the St. George's Home during the twelve months ending June 30, 1901, was about the same as for the corresponding period of 1899 and 1900, and the expenditure on immigration account has been about a similar sum as for the said period of twelve months.

'The immigration was very satisfactory—the immigrants being a desirable class for Canada. The large majority were farm labourers, for whose services there was a good demand during the season. Most of them were bound for Manitoba and the North-west Territories. They stayed in the home for a day or two for rest and recuperation before resuming the journey for their respective destinations. Those remaining in this province found employment with farmers in the district of Montreal and the eastern townships. A few families stayed in the city, the head of the family having secured employment here. . . .

'It is no doubt owing to the strict scrutiny of the Canadian emigration agents in England and Wales that Canada has been able to secure such a desirable class of immigrants. The excellent work of these agents is to be commended as they have carefully prevented undesirable persons from coming to Canada.'

Mr. James Wright, Chairman of the Charitable Committee of the St. Andrew's Society, said:

'The number of immigrants admitted into the St. Andrew's Home was not a large one, and the expenditure on immigration account was small. Those who came to the home received a cordial welcome and good treatment during their sojourn there. The immigrants were of a good class, and appeared to be healthy and self-reliant. They had some means and were well able to look after their own interests. Employment was secured for those who required it, and we paid the railway fares of others going to work on farms in the country districts.'

Mr. B. Campbell, Chairman of the Charitable Committee of the St. Patrick's Society, said:

'There was only a small amount of money spent to help the immigrants this year. We paid the railway fares of some going to work on farms in the vicinity of the city, and the board and lodging of a few persons whilst waiting for work. Employment was secured for others. As to the class of immigrants the society has had dealings with, I may say that they were undoubtedly a suitable class for Canada. They appar-



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ently were healthy, robust, self-reliant and industrious people who declared their intention of making Canada their permanent home. The Canadian government emigration agents in Ireland have done admirable work in their selection of suitable immigrants for the Dominion.'

Mr. William Seale, Chairman of the Charitable Committee of the Irish Protestant Benevolent Society, said:

'The immigrants with whom the society has had dealings were a suitable class for Canada. They were mostly mechanics and clerks, seeking employment here, which was secured for them by the members of the committee. The majority of the immigrants had sufficient funds to pay for their maintenance until such time as they found employment. They were an industrious, self-reliant people, and would make a valuable addition to the population of the city of Montreal.

'I think Canada has received a better class of immigrant settlers from the British Isles during the past few years than was the case formerly.'

Mr. Alberto Dini, President of the Italian Benevolent Society, said:

'There were large numbers of Italian immigrant arrivals in Montreal during the early months of the current year, 1901. They were mostly workmen of the labouring class, being healthy and industrious. They came here too early in the year when outdoor work was scarce, consequently there was little or no demand for their services, but as the season advanced the demand for the men increased until finally the supply became exhausted. At the present time there are none of these immigrants unemployed.

'The local Italian Benevolent Society has done good work in the matter of looking after the interests and welfare of these people during the time of their involuntary idleness, providing board and lodging for them until they secured employment. Not one of them became a public charge.'

Mr. James Wilson, Superintendent of the Protestant House of Industry and Refuge, in answer to the questions put to him, replied as follows:—

'Our records for the twelve months ending June 30, 1901, show that there has not been one application made by an immigrant for admission to the house; therefore, there has been no money spent on account of immigration. This is good proof that pauper immigration is a thing of the past, and that the Dominion government emigration agents in the British Isles have been successful in debarring the pauper element from emigrating to Canada.'

Mr. Antoine Berardo, President of the Italian National Society, of Montreal, said:—

'The emigrant arrivals of the current year were a superior class of workmen. They were all able-bodied men, in the prime of life, able and willing to work. Employment has been secured for all of them. There are none without work at the present time, and they receive a fair wage. A paragraph was published in one of the city papers, stating there was a number of Italian families in the city in distress. This statement is not true. There are none of the Italian colony in want of the necessaries of life. As a rule they are a hard-working, economical, self-reliant people, who require no assistance from any one.'

He is thankful there is sufficient work for everybody able and willing to do it. The labour market is booming, and his compatriots have taken full advantage of the good times at present existing throughout the Dominion. All are perfectly contented with the present situation of affairs in this country.

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Mr. A. Dubonlay, Secretary of L'Union Nationale Française de Montréal, Société de Bienfaisance, Maison de Refuge, fondée le 20 octobre, 1886, said:—

'The number of French and Belgian immigrants admitted in the society's home, 42 Cadieux street, during the year ending June 30, 1901, was about the same as the preceding year, and the expenses for immigration work would also be about a similar amount as in the year ending June 30, 1900. The large majority of the immigrants went direct to their destinations in Manitoba and the North-west Territories, whilst others remained in Montreal, having secured employment in the city and vicinity. The immigrants were a desirable class for Canada, having sufficient means to pay their living and travelling expenses. They stayed at the home only a short time before going to their destinations.'

Mr. George Hassan, who has a Syrian boarding house at No. 1441 Notre Dame street, Montreal, 'Restaurant of Beyrout,' said: That the majority of the twenty-one Syrian immigrants, who arrived here last summer per the steamship *Louisiano*, went to his house, the rest to the homes of their fellow-countrymen in this city. They were a suitable class for this country, being young, strong and healthy. The men secured employment in Montreal as traders and labourers, and the women as domestic servants.

He adds: They are at the present time respectable citizens of Montreal, which they have selected as their permanent home.

In the course of the year a large number of French and English-speaking Canadians, who have been living in the United States, have returned to Canada to make it their permanent home. Many went to Manitoba and the North-west Territories, others to the Lake St. John district, and other parts of this province.

I have good reason to believe that, within the next twelve months, the number of repatriated French and English-speaking Canadians will reach many thousands.

The medical and general staffs of the various city hospitals, the Montreal General, Royal Victoria, Notre Dame, Hotel Dieu, and Western, have shown their usual spirit of kindness in the treatment of the immigrants committed to their care. In every instance where their services were required, the managements of the hospitals have always nobly and quickly responded.

During the course of the year the office of the agency at Montreal received official visits from Mr. James A. Smart, Deputy Minister of the Interior, and from yourself.

I have great pleasure to be able to state that during the whole year the general health of the immigrants arriving here has been exceptionally good. The cases in Montreal calling for medical treatment and hospital accommodation were very few, and were of a mild form of indisposition, and the patients were in due course discharged and cured.

There was not a solitary case of contagious disease among the new arrivals. The medical staff at the Grosse Isle station are to be congratulated upon the strict supervision of the immigrants, which led to such satisfactory results.

During the year much correspondence has been answered. The questions dealt with mostly referred to the value of farm lands in the different provinces, inquiries as to rate of wages, steamship and railway fares, &c. All inquiries were answered thoroughly, and every information given it was possible to give.

I would desire, through the department, to express appreciation of the kindness and attention that have been shown by the officials and employees of both the steamship and railway companies to the immigrants arriving here during the year. I have not heard a single complaint of ill-treatment from any one immigrant; but, on the con-

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trary, every one with whom I have spoken on the subject, expressed themselves as well satisfied with their experience on board the steamships and on the railroads. I may add that the immigrants travelled both by sea and land without serious accident, mishap or detention.

Permit me, in conclusion, to tender my thanks to the officials of the department at headquarters for the many kind acts of courtesy rendered to me in the course of my official duties.

Your obedient servant,

JOHN HOOLAHAN,  
*Dominion Government Immigration Agent.*

1-2 EDWARD VII., A. 1902

STATEMENT A.—List of Arrivals and Departures at the Montreal Agency,

Months.	SOCLS.				Total Number of Souls.	NATION																			
	Adults.		Children			Arab.	Austrian.	Belgian.	Bohemian.	Bukowinian.	Dutch.	Finnish.	French.	Galician.	German.	Greek.	Great Britain.				Hungarian.	Italian.	Polish.	Russian.	
	Males.	Females.	Males.	Females.													English.	Irish.	Scottish.	Welsh.					Hebrew.
1900.																									
July.....	92	43	21	26	182		3					1	111	4		8	2			3	6	32	8	1	
August....	50	30	16	16	112	1					1	3	57	4		4				1	3	17	1	18	
September	50	29	19	14	112		1					2	41	7		3	3	1		3	33	1	4	12	
October....	72	50	35	31	188		5			1	3	1	83	30	3	1		1			18	22	3	14	
November..	61	45	32	29	167			5				12	48	11		1					13	28	3	43	
December..	84	47	22	21	174						16	6	23	10		37	2	15		8	3	11	5	21	
1901.																									
January....	92	27	6	7	132	2	1	2		7		6	2			57	4	5		5	11	12	2	3	
February...	183	51	16	13	263		3				32	1	4	2		152	5	18	9	1	2	22	3		
March....	800	184	316	100	1400	6	27		5	48	10	18	42			988	56	36	14	3	62	9	11	14	
April....	657	193	127	85	1062		2	6		62	30	26	64	12		589	14	7	2	5	68	22	10	16	
May.....	340	174	73	120	707	11	7	5	3	18	25	193	24			235	1	11		1	43	44		10	
June.....	219	114	67	44	444	1	3	7		6	10	125	57	3		110	4	14	1	10	17	34		16	
Total...	2700	987	750	506	4943	21	17	42	9	16	6	193	101	735	257	18	2185	91	108	26	40	279	254	47	168

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via ports in the United States, for the year ending June 30, 1901.

ALIQUITIES.										OCCUPATIONS.										DESTINATIONS.					
Scandinavian.										Farmer.	Farm Labourer.	General Labourer.	Mechanic.	Clerk and Trader.	Miner.	Female Servant.	Not classified.	Total.	Lower Provinces.	Province of Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Total.
Danish.	Icelandic.	Norwegian.	Swedish.	Slavonian.	Spanish.	Swiss.	Syrian.	Total.																	
3	...							182	27	24	28	3	2	2	15	75	182		33	7	110	23	9	182	
			12					112	29	14	14	2	...	...	12	56	112		18	3	56	29	6	112	
			1					112	29	11	1	1	4	4	10	52	112		18	3	81	16	7	112	
			3	2			1	188	27	16	23	2	2	2	18	92	188		13	3	102	54	16	188	
			1				2	167	28	17	13	...	...	...	3	12	94	167		9	2	77	54	25	167
1			1				7	174	19	12	30	8	11	4	14	76	174		34	23	61	18	28	174	
1			2	10				132	8	29	34	7	9	5	12	28	132	1	25	37	18	19	32	132	
3			4					263	41	92	80	12	18	10	24	56	263	5	44	97	55	24	38	263	
13		16	19	2			1	1400	171	144	248	122	83	32	77	523	1400	11	156	164	527	140	102	1400	
5	16		25	79				1062	119	173	289	30	25	21	87	318	1062	3	200	343	299	125	92	1062	
9		16	43				1	707	89	58	149	13	14	17	87	286	707	3	171	133	206	133	61	707	
3			21		2			444	59	55	77	8	15	5	47	178	444	2	108	40	197	55	42	444	
38	16	59	182	14	2	4	15	4943	637	575	986	208	183	111	415	1828	4943	25	811	1170	1789	690	458	4943	

JOHN HOOLAHAN,

*Dominion Government Immigration Agent.*

DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.

STATEMENT B.—Immigrant Arrivals and Departures at the Montreal Agency from the United States, for the year ending June 30, 1901.

Months.	SOULS.						NATIONALITIES.												OCCUPATIONS.										DESTINATIONS.											
	Adults.		Child- ren.		Total number of Souls.		Great Brit'n.						Scandi- navians.						United States Citizens.						Total.										Total.					
	Males.	Females.	Males.	Females.	Males.	Females.	Irish.	Scottish.	Hebrew.	Hungarian.	Italian.	Polish.	Danish.	Norwegian.	Swedish.	Icelandic.	Syrian.	Total.	Farmers.	Farm labourers.	General labourers.	Mechanics and Traders.	Miners.	Female servants.	Not classified.	Total.	Province of Quebec.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Returned Canadians.	Total.							
1900.																																								
July	118	41	32	27	218	130	7	14	4	8	41	3	11	218	12	2	218	12	2	57	2	1	4	6	146	218	54	21	4	5	130	218								
August	113	46	27	20	206	104	10	15	1	47	30	1	219	206	3	4	206	3	4	49	1	1	3	9	133	206	55	49	1	25	164	206								
September	94	41	28	23	186	125	7	2	3	10	30	1	5	186	1	37	186	1	37	3	3	3	1	3	138	186	20	36	1	2	125	186								
October	79	33	28	21	161	102	5	12	1	8	23	1	2	161	4	161	3	132	3	13	3	1	5	5	120	161	23	20	6	3	102	161								
November	64	34	27	27	152	103	5	7	1	3	12	2	2	152	2	152	3	152	3	13	3	1	5	5	120	152	23	20	6	3	103	152								
December	87	38	24	19	168	121	10	10	2	21	22	2	2	168	2	168	6	168	3	34	3	1	5	5	125	168	35	12	6	3	121	168								
1901.																																								
January	45	13	17	10	85	67	3	3	4	6	1	1	2	85	2	85	2	85	8	11	2	1	1	71	85	8	8	8	2	67	85									
February	54	18	14	10	96	63	8	8	5	3	18	3	1	96	1	96	1	96	1	1	8	5	5	3	73	96	1	19	9	1	3	63	96							
March	89	25	22	17	133	89	15	3	3	3	18	3	3	133	3	133	3	133	11	21	2	2	2	115	133	22	6	2	31	3	89	133								
April	211	81	55	51	308	331	19	19	1	6	3	6	3	308	7	308	16	308	16	1	2	3	6	6	343	308	17	22	5	19	4	331	308							
May	131	55	35	31	252	193	2	16	2	4	12	1	4	252	2	252	2	252	2	25	3	1	11	11	210	252	20	26	3	6	4	193	252							
June	159	58	45	27	289	184	6	2	5	4	45	5	4	289	14	289	10	289	10	3	47	9	5	5	204	289	61	22	4	18	184	289								
Total.	1,244	483	354	283	2,364	1,612	8	20	6	132	12	4	38	9	8	361	1,256	2,364	49	10	358	38	16	55	48	1,790	2,364	315	208	25	112	32	1,612	2,364						

DOMINION GOVERNMENT IMMIGRATION AGENCY,

MONTREAL, June 30, 1901.

JOHN HOULAHAN,

*Dominion Government Immigration Agent.*

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STATEMENT C.—Showing the number of Children received at the Montreal Agency, whom in charge of and destination, for the year ending June 30, 1901.

Date.	Name of Person in Charge.	Number of Children.	Destination.	By whom Sent.
1900.				
July 7	Mrs. Forster.	35	St. John, N.B.	Mrs. Forster.
" 28	A. B. Owen	120	Peterboro', Ont.	Dr. Barnardo.
" 28	"	104	Toronto, Ont.	"
" 29	D. White.	52	Winnipeg, Man.	"
" 29	E. A. Struthers.	16	Russell, Man.	"
" 29	"	10	Ontario.	"
" 29	Miss Urquhart.	30	Ottawa, Ont.	Canadian Catholic Emigration Com.
" 29	"	14	Montreal, Que.	"
Aug. 13.	Miss Gallaway.	10	Niagara on the Lake, O.	Church of England Waifs and Strays S'y.
Oct. 7.	A. B. Owen.	83	Peterboro', Ont.	Dr. Barnardo.
" 7.	"	101	Toronto, Ont.	"
" 7.	D. White.	27	Winnipeg, Man.	"
" 7.	"	15	Russell, Man.	"
" 7.	"	10	Ontario.	"
" 15.	Miss Rawling.	22	Ottawa, Ont.	Canadian Catholic Emigration Com.
" 15.	"	2	Montreal, Que.	"
1901.				
Mar. 19.	Mr. Drummond.	63	Knowlton, Que.	Mrs. Birt.
" 31	A. B. Owen.	193	Toronto, Ont.	Dr. Barnardo.
" 31	"	6	Peterboro', Ont.	"
" 31	D. White.	60	Russell, Man.	"
" 31	Mrs. Bailey.	18	Niagara on the Lake, O.	Church of England Waifs and Strays S'y.
April 8.	E. Curnock.	38	Hamilton, Ont.	Dr. Stephenson.
" 23	Rev. Wallace.	50	Belleville, Ont.	Rev. Wallace.
May 11	Mr. Th. Parker.	37	Ottawa, Ont.	Canadian Catholic Emigration Com.
" 13	Miss Snitherst	19	Belleville, Ont.	Rev. Wallace.
" 20	Mr. Merry.	47	Stratford, Ont.	Miss McPherson.
" 27	Mrs. Birt.	75	Knowlton, Que.	Mrs. Birt.
June 10	Mr. Th. Parker	25	Ottawa, Ont.	Canadian Catholic Emigration Com.
" 15.	A. B. Owen.	102	Peterboro', Ont.	Dr. Barnardo.
" 15.	"	1	Toronto, Ont.	"
" 15.	Miss Yates.	43	Montreal, Que.	Canadian Catholic Protective Society.
	Total	1,428		

JOHN HOOLAHAN,

*Dominion Government Immigration Agent.*

DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.

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STATEMENT D.—List of Immigrants Wanted at the Montreal Agency, for the year ending June 30, 1901.

Class of Labour.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.	Remarks.
Bakers . . . . .											2	1	3	Local supply sufficient.
Blacksmiths . . . . .							1	1	1	1	1	1	6	" "
Carpenters . . . . .	2	4	5	4	7	4	7	5	7	10	9	8	72	" "
Clerks . . . . .													2	No demand.
Express drivers . . . . .											2		2	" "
Female—general servants . . . . .	17	19	17	20	24	20	18	16	19	23	27	22	242	Good demand.
" cooks . . . . .	7	6	7	9	10	7	5	7	8	10	12	9	97	" "
" housemaids . . . . .	8	7	5	7	5	4	8	9	11	9	8	5	85	" "
" laundresses . . . . .	2	1	2	3	2	3	2	3	4	3	5	3	33	" "
" waitresses . . . . .											5		5	Fair demand.
Farm hands . . . . .	30	25	19	15	12	8	7	8	15	30	38	35	242	Good demand.
Gardeners . . . . .	1	2	3							3	3	6	18	Fair demand (in season).
General labourers . . . . .	75	60	45	30	26	10	9	12	25	40	80	160	566	Good demand.
Grooms and coachmen . . . . .	1	2								2	2	2	7	Local supply sufficient.
Miners . . . . .	5	3	2	3	4					12	50	79	79	Good demand (Western Ontario).
Tailors . . . . .										2	4	6	6	Local supply sufficient.
Plumbers . . . . .	2	1											3	" "
Waiters . . . . .	3	2	1								2	5	13	" "
Boys—messenger . . . . .	2	2											2	" "
" bell . . . . .	2	2											2	" "
" care of horses . . . . .	3	5	5	7	5	4	5	7	9	7	8	5	70	Fair demand.

JOHN HOOLAHAN,

*Dominion Government Immigration Agent.*DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.



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STATEMENT E.—List of retail prices of ordinary articles of food required by the working classes of Montreal for 1901.

Provisions.	Prices		Provisions.	Prices	
	from	to		from	to
	8 cts.	8 cts.		8 cts.	8 cts.
Bacon, per lb.....	0 15	0 20	Mustard, per lb.....	0 25	0 40
Beef " ".....	0 5	0 15	Mutton, per lb.....	0 10	0 15
Beer, per quart.....	0 10	..	Oatmeal, per 100 lbs.....	2 00	2 50
Bread, best white, 4 lbs. loaf.....	0 16	..	Pepper, per lb.....	0 20	0 40
" brown, 6 lbs. loaf.....	0 16	..	Pork, per lb.....	0 12	0 15
Butter, salt, per lb.....	0 18	0 25	Potatoes, per bushel.....	0 30	0 60
" fresh, per lb.....	0 22	0 30	Rice, per lb.....	0 4	0 6
Cheese, per lb.....	0 12	0 15	Salt, per lb.....	0 1	..
Coffee, per lb.....	0 20	0 40	Sugar, white, per lb.....	0 4 $\frac{1}{2}$	0 5
Cornmeal, per 100 lbs.....	2 00	2 50	" brown, per lb.....	0 3 $\frac{1}{2}$	0 4
Eggs, per doz.....	0 12	0 30	Tea, black, per lb.....	0 15	0 50
Fish, dry or green cod, per cwt.....	3 00	4 50	" green, per lb.....	0 15	0 50
Flour, 1st quality, per bri.....	5 00	5 50	Veal, per lb.....	0 10	0 15
" 2nd quality, per bri.....	4 00	5 00	Candles, per lb.....	0 12	0 20
" buckwheat, per 100 lbs.....	2 00	2 50	Coal, per ton.....	5 75	6 50
Ham, shoulder, per lb.....	0 9	0 11	Coal oil, per gal.....	0 20	0 30
" per lb.....	0 13	0 15	Firewood, per cord.....	4 00	7 00
Herrings, per bri.....	5 00	6 00	Soap, yellow, per lb.....	0 5	0 7
Milk, per quart.....	0 5	0 8	Tobacco, per lb.....	0 15	1 00

JOHN HOOLAHAN,

*Dominion Government Immigration Agent.*

DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.

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STATEMENT F.—List of retail prices of ordinary articles of raiment required by the working classes of Montreal for 1901.

Clothing, &c.	Prices	
	from	to
	8 cts.	8 cts.
Coats, under, tweed.....	4 00	6 00
"    over, tweed.....	8 00	15 00
Trousers, tweed.....	2 00	5 00
Vests, tweed.....	1 00	2 00
Shirts, flannel.....	0 50	1 00
"    cotton.....	0 50	1 00
"    under, wove.....	0 40	0 75
Drawers, woollen, wove.....	0 40	0 75
Hats, felt.....	1 00	2 50
Socks, worsted.....	0 15	0 40
"    cotton.....	0 10	0 25
Blankets.....	2 00	5 00
Rugs.....	0 75	2 50
Flannel, per yard.....	0 20	0 40
Cotton, shirting, per yard.....	0 8	0 12
Sheeting, per yard.....	0 8	0 15
Canadian cloth, per yard.....	0 40	0 75
Shoes, men's.....	1 50	2 50
"    women's.....	1 00	2 00
Boots, men's.....	2 00	3 50
"    women's.....	1 50	2 50
India rubber over shoes, men's.....	0 60	1 00
"    "    women's.....	0 50	1 00

JOHN HOOLAHAN,

*Dominion Government Immigration Agent.*DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.

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STATEMENT G.—Average rate of wages at Montreal, 1901.

Employment.	Wages		Remarks.
	from	to	
	\$ cts.	\$ cts.	
Farm labourers, per month and board .....	10 00	20 00	
Females, farm servants, per month and board..	6 00	12 00	The average cost of board and lodging for workingmen is from \$3 to \$4 per week.
"    cooks, per month and board.....	10 00	20 00	
"    domestics, per month and board.....	8 00	15 00	
Gardeners, per month and board.....	12 00	20 00	
Lumbermen, per month and board.....	18 00	30 00	
Bricklayers, per day.....	2 50	3 50	
Carpenters, per day.....	2 00	2 50	
Electricians, per day.....	2 00	2 50	The rent of workingmen's dwelling (three to four rooms) is from \$6 to \$9 per month. In the suburbs cheaper rent can be had.
Engine drivers, stationary.....	2 00	2 50	
General labourers, per day.....	1 25	1 75	
Laundresses, per day.....	0 75	1 00	
Masons, per day.....	2 00	3 00	
Mechanics, per day.....	2 00	2 50	
Mill hands, per day.....	1 25	1 75	
Miners, per day.....	1 50	2 00	
Saddlers, per day.....	1 50	2 00	
Shipwrights, per day.....	2 00	2 50	
Shoemakers, per day.....	1 50	2 50	
Smiths, per day.....	1 50	2 00	
Tailors, per day.....	1 50	2 50	
Plumbers, per day.....	1 50	2 50	
Wheelwrights, per day.....	2 00	2 50	

JOHN HOOLAHAN,

*Dominion Government Immigration Agent.*DOMINION GOVERNMENT IMMIGRATION AGENCY,  
MONTREAL, June 30, 1901.

1-2 EDWARD VII., A. 1902

## REPORT OF THE ANDREWS HOME, MONTREAL.

*(Appended to Agent Hoolahan's Report.)*

THE ANDREWS HOME,  
46 BELMONT PARK, MONTREAL, July 14, 1901.

The Dominion Immigration Agent,  
Montreal.

SIR,—In accordance with a circular received from your department I have much pleasure in handing you the annual report of immigration work at the Andrews Home. Although there has been an increase in foreign immigration there has been a decrease in English immigration with which we are more immediately connected. However, we consider that a good and helpful work has been done. We would take this opportunity of acknowledging the cheerful assistance rendered us at all times by yourself and assistants. Statistics for the year:—

Visits individual to the office . . . . .	1,230
Total visits to the office . . . . .	2,040
Newly arrived men and lads . . . . .	625
English letters received . . . . .	136
English letters written . . . . .	142
Canadian letters written . . . . .	449
Canadian letters received . . . . .	441
Letters received for immigrants . . . . .	628
Lads under 20 . . . . .	184
Situations obtained . . . . .	324
Moneys received for tickets and in trust . . . . .	\$3,044 90
Moneys expended and refunded . . . . .	2,850 49

## WOMEN'S BRANCH.

Visits to matron's office . . . . .	1,420
Applications for girls . . . . .	535
Girls applying for situations . . . . .	102
Situations obtained for girls . . . . .	83
Newly arrived women . . . . .	99
Newly arrived female children . . . . .	70
Women passed through the home . . . . .	493
Total number of visits to both offices . . . . .	2,928
Total number of situations obtained . . . . .	412
Total number of newly arrived . . . . .	794

This institution was founded primarily by His Grace the Archbishop of Montreal for the benefit of Church of England immigrants, but all are welcome who claim our assistance.

Yours faithfully,

J. FREDERICK RENAUD,  
*Secretary.*

SESSIONAL PAPER No. 25

## REPORT OF THE WOMEN'S NATIONAL IMMIGRATION SOCIETY.

*(Appended to Agent Hoolahan's Report.)*

87 OSBORNE STREET, MONTREAL, July 10, 1901.

The Dominion Immigration Agent,  
Montreal.

SIR,—I beg to forward to you the report of the above society, since July 1, 1900, to June 30, 1901.

Two hundred and fifty-one immigrants have been registered during the year as follows :—

English.....	153	Church of England.....	140
Irish.....	47	Roman Catholics.....	35
Scotch.....	25	Presbyterians.....	30
Swedes.....	10	Lutherans.....	16
Canadians returned.....	6	Church of Ireland.....	13
Welsh.....	2	Congregationalists.....	9
Norwegians.....	2	Baptists.....	5
Finlanders.....	1	Unitarians.....	1
Icelanders.....	2	Methodists.....	1
Germans.....	2	Wesleyans.....	1
Danes.....	1		
	251		251

One hundred and thirty-six came out from the United British Women's Association.

Forty-three remained in Montreal.

Ninety-three went to Ontario and the north-west provinces.

I am glad to call to your notice an increase of about 50 female immigrants, as compared with the years 1899 and 1900.

The society have organized a scheme for still further increasing the number of English young women for domestic service.

Twenty-four Irish servant girls arrived last week from Mr. Devlin, the government agent in Dublin, who obtained excellent references of character from their former employers. Their passage money is guaranteed to the steamship company by this society, who will collect the same in monthly instalments from their wages. They are bound to remain in Montreal until the money is refunded. These will be included in the numbers for the current year. If the society find this arrangement satisfactory, they hope to carry it out on a larger scale in the future, and they earnestly hope the Dominion government will show their appreciation of the effort by increasing the amount of the annual grant next year, if possible.

Your obedient servant,

MARY GILLESPIE,  
*President W.N.I. Society.*

1-2 EDWARD VII., A. 1902

## No. 5.

## REPORT OF G. BOGUE SMART, INSPECTOR OF BRITISH IMMIGRANT CHILDREN AND RECEIVING HOMES.

DEPARTMENT OF THE INTERIOR,

OTTAWA, JUNE 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit my second annual report as Inspector of British Immigrant Children and Receiving Homes in Canada.

I am pleased to be able to report that during the past year this important branch of immigration has been very satisfactorily promoted. The opinion expressed in my former report, that the duties of my office would materially increase each year, owing to the great demand for British immigrant children, has been fully borne out.

My report will refer more especially to such facts, in connection with this branch of immigration work, as are of general public interest.

Acting under departmental instructions, Mr. C. W. Speers, general colonization agent, reported upon the children placed throughout the province of Manitoba and the North-west Territories. Mr. Speers' reports were carefully prepared, and, on the whole, indicated that the children had been placed in very satisfactory homes, and were making good progress.

Included herein will be found condensed reports on the various receiving and distributing homes personally inspected by me in the course of the year. In this connection, I may say that the superintendence of the homes and the interests of the societies have been placed in very capable hands, and that, without exception, these institutions are satisfactorily conducted, and the best interests of the children are carefully guarded.

The work of the various societies during the past year has been undiminished, and in nearly every case their annual immigration parties have shown an increase in numbers.

The following statement will show the number of British immigrant children emigrated to Canada during the past five years by the principal societies, &c. :—

Year.	Private Societies.	Boards of Guardians.	Total.
1895. . . . .	1,603	227	1,830
1896. . . . .	1,719	201	1,920
1897. . . . .	1,549	99	1,648
1898. . . . .	1,101	74	1,175
1899. . . . .	1,144	145	1,289
1900. . . . .	1,393	185	1,578

It will be observed that there was a falling off in the numbers subsequent to the year 1897. This was attributable, in a large measure, to Mr. Quarrier's discontinuance of his work in Canada, which occurred about the year 1898. There has, however, been a noticeable increase during 1900 and the first half of the present year.

I regret that there are no data available to enable me to furnish an accurate statement showing the total number of children emigrated from Great Britain by the

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different societies since the inauguration of the work some thirty odd years ago. My researches in this regard, however, justify me in placing the number in the neighbourhood of forty thousand.

I find that a large percentage of the children carry on a regular correspondence with their friends in the old country, and in some instances I have been advised that the success of the children has induced their friends to follow them to this country, where they have settled permanently.

The unprecedented demand for immigrant children, which I noted in my former report, still continues, and this condition of things must be accepted as a proof of the general satisfaction which the children have given their employers or foster parents.

The following statement will show the number of children emigrated to Canada during the past fiscal year by some of the principal societies, and the number of applications received for children :—

Society or Agency.	Children Immigrated.	Applications Received For Children.
Bristol Emigration Society, St. John, N. B.	38	96
Girls' Home of Welcome, Winnipeg	4	8
Shaftesbury Home, Winnipeg	2	55
*Canadian Catholic Emigration Society, Ottawa	132	
Dr. T. Bowman Stephenson, Hamilton	38	319
Miss McPherson, Stratford.	45	579
Church of England Incorporated Society for Providing Homes for Waifs and Strays, Sherbrooke and Niagara-on-the-Lake	85	423
Mr. Fegan's Home, Toronto. (Annual emigration party had not arrived.)		200
Rev. Robert Wallace, 'Marchmont,' Belleville	71	1,342
Mrs. Birt, Knowlton.	137	950
Mr. Middlemore, Halifax	99	200
Dr. Barnardo's Homes, Toronto, Peterborough, Winnipeg and Russell, Manitoba	889	4,415

The aim of those engaged in this branch of emigration work, which is purely philanthropic, is to give each child a start in life under conditions more favourable than could be obtained for such children in the thickly populated districts of Great Britain.

The friends and promoters of the various homes prefer that the children should be placed in country districts with farmers, that they may obtain a knowledge of agriculture, with a view to their ultimately becoming farmers; consequently, very few are found in other than farming districts. However, the demand for domestic servants has been so great during the past year that a comparatively small number of girls, of fifteen years and upwards, have been placed in towns and cities.

Statement showing the location, by province and county, of the children reported upon during the year ended June 30, 1901 :—

\*No record of applications kept.

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## ONTARIO.

*Placed by Dr. Barnardo.*

	Boys.	Girls.	Total.
County of Carleton.....	3	2	5
“ Dufferin.....	4	2	6
“ Durham.....	—	4	4
“ Elgin.....	5	—	5
“ Grey.....	11	1	12
“ Halton.....	1	—	1
“ Huron.....	1	1	2
“ Brant.....	1	—	1
“ Bruce.....	7	2	9
“ Lincoln.....	1	—	1
“ Lanark.....	1	2	3
“ Lambton.....	7	1	8
“ Middlesex.....	15	2	17
“ Muskoka.....	4	5	9
“ Oxford.....	2	—	2
“ Peel.....	2	—	2
“ Peterborough.....	1	1	2
“ Russell.....	1	—	1
“ Wellington.....	4	1	5
“ Simcoe.....	3	2	5
City of Toronto.....	1	—	1
Total.....			91

*Placed by Canadian Catholic Emigration Society.*

	Boys.	Girls.	Total.
County of Brant.....	2	—	2
“ Carleton.....	15	—	15
“ Grey.....	3	—	3
“ Lanark.....	2	—	2
“ Renfrew.....	1	—	1
“ Russell.....	2	—	2
“ Wellington.....	6	1	7
“ Welland.....	—	1	1
District of Nipissing.....	—	1	1
City of Ottawa.....	1	—	1
“ Toronto.....	—	1	1
Total.....			36

*Placed by Rev. Mr. Wallace.*

	Boys.	Girls.	Total.
County of Hastings.....	2	—	2
“ Leeds.....	2	—	2
“ Lanark.....	1	—	1
“ Oxford.....	1	—	1
“ Dundas.....	—	1	1
City of Toronto.....	2	—	2
Total.....			9



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*Placed by the Church of England Waifs and Strays Society.*

	Boys.	Girls.	Total
County of Lincoln.....	—	2	2
“ Kent.....	—	1	1
“ Bruce.....	—	1	1
“ Brant.....	—	4	4
“ Middlesex.....	—	1	1
City of St. Catharines.....	—	2	2
Total.....	—	—	11

## QUEBEC.

*Placed by the Canadian Catholic Emigration Society.*

	Boys.	Girls.	Total.
City of Montreal.....	2	5	7
County of Ottawa.....	11	—	11
“ Huntingdon.....	2	—	2
“ Pontiac.....	1	—	1
“ Chateauguay.....	1	—	1
“ Jacques Cartier.....	4	—	4
“ Laprairie and Napierville.....	11	—	11
“ Beauharnois.....	4	—	4
“ Stanstead.....	1	—	1
Total.....	—	—	42

*Placed by the Church of England Waifs and Strays Society.*

	Boys.	Girls.	Total.
County of Stanstead.....	1	—	1
“ Sherbrooke.....	9	—	9
“ Richmond.....	2	—	2
“ Magog.....	—	1	1
Total.....	—	—	13

## MANITOBA AND NORTH-WEST TERRITORIES.

*Placed by Rev. Mr. Wallace.*

	Boys.	Girls.	Total.
Indian Head.....	2	—	2
Total.....	—	—	2

*Placed by Dr. Barnardo's agents.*

	Boys.	Girls.	Total
Austin.....	1	—	1
Glenella.....	1	—	1
Stony Beach.....	1	—	1
Total.....	—	—	3

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*Placed by Hon. Mrs. Joyce.*

	Boys.	Girls.	Total.
Brandon.....	—	2	2
Newdale.....	1	—	1
Wolseley.....	—	1	1
Total.....			4

## NEW BRUNSWICK.

*Placed by the Bristol Emigration Society.*

	Boys.	Girls.	Total.
County of King's.....	20	—	20
“ Westmoreland.....	5	—	5
“ Charlotte.....	2	2	4
“ Queen's.....	5	3	8
“ York.....	1	—	1
“ St. John.....	7	—	7
Total.....			45

I am glad to be able to report that good judgment appears to have been exercised in the selection of homes and situations for these children. Applicants are required to furnish the agency with a reference as to their character and general standing in their respective communities, before a child is entrusted to their care. As a result of this precaution on the part of the agencies, I can say that, with comparatively few exceptions, the children receive proper treatment at the hands of their employers. The future prosperity of the child has been found to depend largely upon the character and suitability of the first home in which the boy or girl is placed. I have been pleased to learn from the various agencies that there have been very few cases in which children have had to be removed from their first homes and replaced.

The regulations of the different societies vary but little and may be briefly stated to be as follows : The prospective employer undertakes to properly clothe the child and to provide schooling for, at least, four months during the year, until the child reaches a stated age. Their religious education is likewise provided for, and their attendance at church and Sunday school is stipulated in the agreement which is entered into between the agents of the homes and the employer.

Many of the children are treated as members of their employer's family and participate in the comforts enjoyed by them.

Very few complaints have reached me from employers concerning the general character and behaviour of the children, and these have been of a trivial nature. In justice to the agents of the societies represented in Canada, I wish to say that in no instance have I found them to act as apologists for the children, but they are anxious to investigate and satisfy any complaints that may reach them concerning the behaviour of any of the children. It is occasionally necessary for some of the societies to return to England those of the children who have proved to be unsuitable, either physically or mentally.

In the course of my inspections during the last year I have found the children to be, on the whole, sufficiently healthy and robust in appearance to warrant me in saying that I believe them to be a desirable class of immigrants for the country districts, and that, provided the same standard of health and morals is maintained, their immigration in still greater numbers should be encouraged by the government.

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It is understood that the children receive a careful primary education in Great Britain prior to emigration, and I am able to say that on the closest investigation, I have never yet found a case of illiteracy amongst them.

There is no doubt that in the minds of the English philanthropists, Canada is regarded as a most desirable colony for the settlement of their poor and dependent children. At the annual meeting of the friends of Mrs. Birt (a report of which I have before me), Mr. Archibald Williamson, in the course of his address, is reported to have said:—'It is no depreciation of the strength of our country when we take children from Liverpool and place them in Canada, as it is part of the Empire, and I am told by Mrs. Birt that some of the boys have manfully come forward and joined the Canadian contingent which has been doing such good service in South Africa, and part of which we have been welcoming to Liverpool to-day with that enthusiasm that possesses our hearts. In the closing part of the century there is no doubt this nation has realized to a greater extent than ever before its duty towards destitute children. It is one of the high duties of citizenship and patriotism to look after the children.'

During the year 1899 a number of children were sent to Canada from Edmonton, near London, and in order to ascertain their progress in their new homes the Reverend David Fotheringham, Chairman of the Edmonton Board of Guardians, visited the Dominion and spent some time among them. The local government journal of the issue of the 10th of November, published a report on his observations, in part, as follows:—'Altogether from what I saw and what I heard, I am of the opinion that the guardians could not do better for the children who desire to emigrate than to send them to Canada. They might rest assured that their future home would be respectable, and that they would be trained in the habits of industry and instructed in religion, and if there is not before them a prospect of great riches, they would, at least, be certain of their gaining a comfortable livelihood by honest labour. I shall be glad if this somewhat lengthy report has the same effect on the Board of Guardians as my visit had on my own mind regarding Canada as a desirable country to which our children should be sent.'

In a recent letter received from Mr. Fotheringham, he states that he was delighted to see the good homes in which the children were placed in Canada.

In consequence of the arrangement entered into with the British government, to which particular reference was made in my previous report, recurrent inspections have been provided for 348 children, and to defray the cost of such re-inspections the British government has deposited with this department the sum of \$5,843.66.

## PROTESTANT ORPHAN ASYLUM, MONTREAL.

The work of this institution is confined exclusively to the care and training of orphan children resident in the province of Quebec.

## GIRLS' INDUSTRIAL HOME, TORONTO.

This is a branch of the Young Women's Christian Association, and its purpose is to provide a suitable home for girls who come from different parts of the province of Ontario to obtain situations in the city.

## CHURCH OF ENGLAND WAIFS' AND STRAYS' SOCIETY, 'GIBB HOME,' SHERBROOKE, QUEBEC.

This home, which is located in the midst of large grounds overlooking the St. Francis river, has recently been renovated throughout and presents a very neat appear-

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ance. The accommodation provided for the children is quite satisfactory, the dormitories being large and well ventilated and kept in good order. I found three boys here at the date of my visit; one of the older boys is permanently employed about the premises; the other is recuperating, having met with an accident in a saw-mill, where he was employed; the third, a very young boy, will remain in the matron's charge for some time before being placed. No difficulty is found in providing situations and homes for the boys, in fact, the demand far exceeds the supply. The general work of the home is relegated to a committee of citizens of Sherbrooke. At the date of my visit the annual party of boys had not reached Canada, but it was expected that they would arrive during the month of June. The general health of those placed is said to have been remarkably good. For the most part situations and homes are provided in the eastern townships. Persons engaging boys are required, in addition to providing a testimonial as to their character, to execute an agreement with the matron, which provides, briefly, as follows:—The employer is required to pay the expenses of the child from and to the home, if returned; to keep an accurate account of all wages spent in clothing; to report yearly to the home the progress made by the child on a form supplied for that purpose. The indenture also provides for regular church and Sunday school attendance, and when it is necessary for the child to be returned to the home, notice must be sent two weeks in advance; the matron of the home having the right, at any time, to withdraw the child, should she see fit, on the employer failing to fulfil any of the above conditions.

‘OUR WESTERN HOME,’ NIAGARA-ON-THE-LAKE, ONTARIO.

To Miss Rye belongs the distinction of having been the first to engage in the work of juvenile emigration to Canada from Great Britain. The records of the government indicate that her first party of girls arrived at Quebec during the year 1868. As a result of her labours parties of children have annually been sent to Canada. It was pointed out by her to friends in England that if children were removed from the dangers which exist in the over-crowded centres and thickly populated districts in England, and placed in good environments, many an otherwise wasted life would be saved. Much interest appears to have been awakened as a result of her appeals, and the handsome sum of five thousand pounds was subscribed to aid her in her commendable work. A distributing home was then established in Canada, and Niagara-on-the-Lake was selected as a suitable point; the celebrated English historian, Froude, being one of the first trustees. The building selected is well adapted for the work, and may be said to be one of the most interesting structures, from an historical point of view, at the present date remaining in Ontario. It is mentioned in Dent's History of the Rebellion of Upper Canada, as having been the scene of an extraordinary trial, in the earlier years of the century, 1817-18, arising out of those stirring times which marked the early history of Ontario. The house was originally the district court-house; the wide stairway, the position of the judges' and jurors' seats, the prisoner's box and condemned cell, may still be seen as they were in the early days. I have been unable to obtain the exact figures showing the number of children brought to Canada during the past thirty or more years by Miss Rye, but from the information available, I can safely place the number at between four and five thousand. A few years ago Miss Rye relaxed her former activity in the work, and the home at Niagara passed into the hands of 'The Church of England Incorporated Society for Providing Homes for Waifs and Strays,' and is known as 'Our Western Home.' During the past year twenty-nine girls arrived in Canada—a slight decrease from the numbers of 1899. Applications have been very much in excess of the number of children emigrated. Only one girl, fourteen years of age, was returned to England during the year as unsuitable. The general state of health has been very satisfactory, apart from a few cases of scarlet fever. Two deaths

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were reported among their number from hemorrhage and consumption, respectively. The children are visited in their homes once each year by a lady connected with the society. At the date of my visit there were twenty-eight girls, in all, at the home, twenty-two of whom were for adoption, and ten years was the average age. There were also six older girls at the cottage. These girls were changing their places and were waiting to go to new ones. The Children were very bright and contented; well clad, and bore every evidence of being well cared for. During the time they remain at the home their educational and general training is not neglected. A private school is held every week day and they receive instruction in elementary subjects. In addition to this they are taught general house work. They attend the Church of England regularly. The school room, dormitory and the house throughout were very neat. The superintendent is assisted by an advisory board chosen from the citizens of the town. The society has a branch home for boys at Sherbrooke, Que.

MR. J. T. MIDDLEMORE'S HOME, FAIRVIEW, HALIFAX.

Mr. Middlemore established this home at Fairview, a suburb of Halifax, N.S., in 1893. The location, as far as health and convenience are concerned, is all that could be desired. Since the establishment of the home the work has gone steadily forward, and on an average 100 boys and girls have been received and distributed. The work of the home is confined to the maritime provinces. The number of children whose names appear on their visitors' list, and their location by province, is as follows:—New Brunswick, 250; Nova Scotia, 150, and Prince Edward Island, 86. Four visitors are employed throughout the provinces, whose duties are to visit the children annually at their homes. A careful supervision appears to be maintained over the children. This year's emigration party arrived on the 5th of June, and the superintendent informed me that no difficulty was found in providing homes for the entire number; applications having been received for four times as many as arrived. Ninety-seven of these children were from philanthropic institutions, and two were from English unions. There were three children at the home on the date of my inspection, one boy, five years of age, and two girls, six and fifteen years, respectively. These children had already been provided with homes, and were waiting to be sent to their destinations. The general health reports have been very satisfactory, and only two deaths have occurred during the year; these were the result of ordinary ailments. The superintendent advises me that no complaints of a serious nature were reported at the home during the past twelve months. Cases of harsh treatment by employers have been remarkably few, in fact, only one such case had been brought to his notice; the result being that the child was promptly removed and replaced with advantage. The visitors' reports and letters from employers have been very satisfactory. The work is undenominational, but Protestant. Parties making application for children are required to furnish a recommendation by a minister to the effect that he can conscientiously recommend the applicant as a suitable person to be entrusted with the care of the child, and thoroughly competent to train it to become a useful member of society, and to maintain a supervision over it, and to furnish a report of the child's progress and general condition once a year, if required. In conclusion, I may say that after a careful inspection of the home, I am satisfied that the work is conducted creditably and efficiently by the superintendent.

MARCHMONT HOME, BELLEVILLE, ONTARIO.

Through the death of Mrs. Wallace, wife of the Rev. Robert Wallace, of Marchmont Home, this philanthropic work has sustained a severe loss. Mrs. Wallace was

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amongst the first to take up the work of juvenile emigration from Great Britain to Canada. In the year 1869, Mrs. Wallace, then Miss Agnes Bilbrough, directed her attention to the needs of orphan and neglected children of East London, and in the following year her first party of boys and girls were emigrated to Canada. She at once realized the necessity of establishing a receiving and distributing home in Canada, and Belleville was finally selected as a convenient locality. After the destruction, by fire, of two houses, the present Marchmont Home was erected. Nearly seven thousand children have passed under her care, and of this large number not more than two per cent are said to have been failures. I am glad to be able to state that the Rev. Mr. Wallace purposes continuing the work on the same lines under which it was inaugurated some thirty years ago. For the purpose of selecting a suitable class of children for emigration, Mr. Wallace has made special journeys to England and Scotland annually. The work is carried on independently of any similar institution in the old country. Many of the older boys, whom I have met, are now occupying good positions, and are held in high esteem in the communities in which they reside. In addition to the annual visits which are made, they endeavour to keep in touch with the children by correspondence, and at Christmas a special letter, with a Christmas card and a good class of reading matter, is sent to each child. The applications for children have been largely in excess of the number of children brought out during the year, and many of these were from persons who had received children from Marchmont Home before, the former children having grown up and started out for themselves. At this date there were two children in the home, a boy of fifteen years and a girl of the same age; both were waiting to fill situations already provided for them. One girl of sixteen years was returned to England, as it was feared that her mind was affected. The general health reports have been very satisfactory, a single case of typhoid fever being the most serious illness reported. Mr. Wallace states that their boys are to be found in nearly all the walks of life, and that while the majority of them remain on the farm, others after a while learn different trades, in which many of them have had some training previous to their emigration, and others having saved money, take a course at a business college and enter mercantile life.

#### MR. FEGAN'S HOMES.

Mr. J. W. G. Fegan inaugurated his work on behalf of waifs and strays in south-east London in 1870, and in 1872, assisted by a few friends, a home for boys was opened at Deptford, since which time this work has greatly increased. The work of the various homes is under the supervision of a council bearing Mr. Fegan's name, and embraces the following institutions:—

- The Boys' Home, 95 Southwark Street, S.E.
- Orphanage and Training Home, Stony Stratford.
- Ramsgate Orphanage, Ramsgate.
- Southwark Home Mission, Blackfriars, S.E.
- The Medical Mission, Blackfriars, S.E.
- Factory Girls' Institute, Blackfriars, S.E.
- Working Youths' Institute, 91 Southwark Street, S.E.
- The Canadian Distributing Home, George Street, Toronto, Ontario.

The work is undenominational, while definitely Protestant, its scope not being confined to London alone, but children from any part of the United Kingdom are welcomed; any needy boy being eligible for admission to the homes. Applications for boys during the past year have greatly exceeded the supply. The ages of those received

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here vary from ten to eighteen years. Boys of ages ranging from ten to twelve years are indentured for periods of three, four and five years, and receive board, clothing and schooling during winter. Boys of thirteen, fourteen and upwards are engaged by the year, at wages ranging from \$24 to \$54, based, of course, in accordance with their size and ability—clothing to be provided out of their wages. To encourage the boys to be thrifty, a savings bank is provided, and they are allowed the current rate of interest on their savings. The children are visited each year by a person connected with the home, and a general correspondence is maintained with the children. There were no boys at the home at the date of my visit.

## DR. T. BOWMAN STEPHENSON'S HOME.

Dr. Stephenson's Distributing Home is located in the township of Barton, within a short distance of Hamilton, Ontario. The grounds are large and spacious, and ornamented with various varieties of fruit trees. For a children's home the location is in every way suitable. The reports received from the employers and visitors as to the progress, &c., of the children are said to have been generally of a satisfactory character. The demand for children this year has been very great, and the governor states that never since he has assumed charge of the work has he been so inundated with applications from all parts of the province. The governor, in his annual report to Dr. Stephenson, states, in part:—"I hope that the time will come when the system of distribution will send us more boys to Canada, for the more I see of the work the more I am convinced that the average boy has done splendidly in Canada." Until a few years ago, Dr. Stephenson emigrated both boys and girls to Canada, but during the last few years his emigration parties have been confined exclusively to boys. The children emigrated to Canada receive their preliminary training in Dr. Stephenson's English homes. The health reports have generally been excellent, and no deaths were reported during the year. At the date of my visit there were two little lads in the home, of five and eight years, respectively. Owing to their age, and the fact of their being brothers, the governor considered it inadvisable to separate them at present, and they will be kept at the home. The number of children in the home at any time other than immediately following the arrival of a party from England, seldom, if ever, exceeds six, and their stay at the home is usually very brief. The house is well arranged for the purpose for which it is used, although not especially built for a receiving home. The dining-room, bath-room, dormitories, &c., are all conveniently arranged, and I found the home throughout very comfortable indeed. The reports and books are neatly and systematically kept, and any information concerning the children is easily available.

## MISS MACPHERSON'S HOME.

Miss Macpherson was amongst the first to engage in the emigration of boys and girls from Great Britain to Canada. For some time she was associated in the work with Mrs. Birt and Miss Bilbrough. These philanthropic ladies have been most untiring in their efforts on behalf of poor and neglected children. I am informed that, with comparatively few exceptions, the children sent to Canada by Miss Macpherson have become good citizens, and many of them have occupied positions of trust in various parts of the Dominion. The work is carried on independently of any society in England or Scotland. The children are personally selected for emigration by Miss Macpherson, and such selections are made with a view to general adaptability for Canadian farm life. During the past year their emigration parties numbered sixty boys and girls, and with the exception of three of the children, who were under six years of age, all have been placed. The work is confined, for the most part, to the western peninsula

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of Ontario, and very few of the children are to be found further east than the county of Wellington. The situation of the home is convenient and the surroundings agreeable. The interior is very commodious and will accommodate a large number of children. The accommodation, however, is seldom taxed, unless immediately after the arrival of a party. As soon as the children reach Stratford, they are at once despatched to their foster homes, and in the case of the larger boys and girls, to situations already provided. As has been the case for some years the supply of children has been inadequate to meet the demand. The home is under the management of a superintendent, who, in my opinion, discharges his duties very efficiently.

## THE BRISTOL EMIGRATION SOCIETY.

This society has for many years been engaged in the emigration of children from England to the province of New Brunswick. During the year just ended thirty-one boys and two girls were sent to Canada under the society's auspices, the demand for children exceeding the supply. The conditions under which the children are placed are verbal, and provide for the board and clothing of the child. I would strongly recommend that in the future this plan be changed and persons receiving children be required to enter into a written agreement. The general condition of health amongst their number has, I am advised, been very satisfactory. The ages of the children emigrated are minimum, eight, and maximum, sixteen years. The agent considers that at eighteen years of age his oversight and responsibility with regard to the children cease.

## THE SHERBROOKE REFORMATORY FOR BOYS.

This institution is under the control of the government of the province of Quebec. The terms range from two to five years, and no boy over sixteen years is received. At this date there were thirteen lads in the institution. They attend school from one to four o'clock each week day, except Saturday, and during the forenoons from 8 to 12 they work in the saddlery workshops under an instructor; they also attend one of the city Anglican churches every Sunday, and in the afternoon a Sunday school is held in the institution, conducted by residents of the city. The boys are frequently taken to various local attractions in the city, such as fairs and games, and are exceptionally well treated by the superintendent, who appears to be much interested in his charge. The sleeping apartments, school room and dining room were in splendid order, and were an evidence of the efficiency of Mr. Reed, the superintendent. It is unfortunate that this institution is located in such close proximity to the district jail, and the provincial inspector very properly states that: 'The fact that the children's abode, their school room and their work shop, is situated in a prison does not harmonize with the idea that it is a reformatory school.' The object of the first is to punish; that of the second to reform children, who for want of parents or other persons to control them, are on their way to vice. Apparently every comfort is afforded the boys; they are well clothed, neat and clean, and have every appearance of being well cared for. I found only one British immigrant lad in the institution. He is hardly nine years of age, and altogether too young to learn a trade. The superintendent appears to be much interested in the child, and hopes to find a good home for him in the near future.

## DR. BARNARDO'S GIRLS' HOME, PETERBOROUGH, ONTARIO.

It is now some years since Dr. Barnardo selected Peterborough as his distributing point for girls, and a more suitable or convenient location could hardly have been



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chosen. 'Hazel Brae' is the name by which the home is known. It is very pleasantly located at the outskirts of the town of Peterborough. The home is surrounded by a large garden and lawn, the latter affording ample play ground for the smaller children. The house appears to be very well adapted for its present purpose, the rooms being large and airy. I made a careful inspection of the building throughout and found it complete in all its appointments. It is well supplied with water, and the sanitary arrangements appeared to me to be very satisfactory. Fire escapes and a good supply of hose are provided throughout the house, and every precaution appears to have been taken for safety in case of an emergency. The dormitories, dining room, kitchen, play room, school room, &c., are all conveniently arranged. The infirmary is capable of accommodating, I should judge, six cots. At the date of my visit three patients were receiving treatment here, but their illnesses were not of a serious character, and two of them were convalescent. The general health of the girls has been very satisfactory during the past year, and considering the large number of these children who are scattered throughout the province, the fact that only two deaths have been reported during 1900 is certainly a testimony to their physical soundness. In case of ill-health they are permitted to return to 'Hazel Brae' and are afforded the best of care and treatment. Good discipline prevails throughout the home. The training received by the younger girls stands to good advantage when they go out into service, as I have observed during the course of my inspection. A private school has been provided for the benefit of such of the children as remain at the home for any length of time. Classes are held daily and a competent teacher is employed, and the children are also taught to do various kinds of domestic work. Particular care is paid to their religious instruction. They attend service at one of the town churches regularly, in addition to the daily services which are held at the home. There were twenty-five little girls in the home at the date of my visit, who were considered rather young to be placed out on their arrival in Canada. Three hundred and twenty girls were received from Dr. Barnardo's English homes during 1900, which in comparison with the figures of 1899 shows an increase of eighty, and yet, I am advised that the demand for these children is far from being met. The ages of the children are, maximum, sixteen, and minimum, six years. Two lady visitors are almost constantly engaged visiting the girls at their homes. Each child is the subject of a special report, which is recorded at the office, and as these visits are for the purpose of a general inquiry with reference to the progress, &c., of the child, the results are of benefit to both child and employer.

## DR. BARNARDO'S BOYS' HOME, TORONTO.

Dr. Barnardo's interest on behalf of the poor and neglected children of London (England) dates back some thirty-five years. From a small beginning the work has assumed extraordinary proportions. No less than ninety-six homes are at this date under his direction in Great Britain and the colonies. From a recent report published by the committee, I have taken the following statistics, which may afford some idea of the magnitude and scope of the work being carried on under Dr. Barnardo's auspices:—'Total number of children supported, trained and placed out in life by the home up to December 31, 1899, 38,785; average number of children admitted every 24 hours, 9.62; largest number of admissions in one day, 56; total number of trained boys and girls emigrated to the colonies to the present time, 11,590.'

Dr. Barnardo's first parties of boys and girls arrived in Canada between the years 1867-83. Up to the latter year the work does not seem to have been carried on with any degree of regularity, but in 1883, the organization for the emigration of children appears to have been perfected, and since that year parties have continued to arrive regularly each year in Canada, and with the exception of the years 1890-91, in gradually increasing numbers. Dr. Barnardo has four distributing centres in Canada: two in Ontario, and two in Manitoba, as follows:—

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Boys' Home, 214 Farley Avenue, Toronto.

Girls' Home, 'Hazel Brae,' Peterborough, Ont.

Branch Home for Boys, 115 Pacific Avenue, Toronto.

Industrial Farm Home for Youths, Barnardo, near Russell, Manitoba.

The headquarters for the general superintendent for the Dominion are at 214 Farley Avenue, Toronto.

The general state of health of the children has been very satisfactory.

A savings bank account has been established for the purpose of encouraging the boys to save a portion of their earnings in order that they may, when of age, have sufficient capital to make a start in life on their own account. This arrangement has been found to be a very good one, and a large number of the boys have taken advantage of it. Thirteen boys, all of whom were quite small, were in the home at the date of my visit, and, with one exception, were waiting to go to places. The home throughout is commodious, and kept in good order. It is capable of accommodating with comfort, I should judge, one hundred or more children, if found necessary. The courtyard affords a good play-ground for the children, and the place is, generally, adapted for its present occupation.

CANADIAN CATHOLIC EMIGRATION SOCIETY, 'NEW ORPINGTON LODGE,' HINTONBURGH, ONTARIO.

*(Incorporated.)*

The aim of this society is the emigration of boys and girls from Great Britain to Canada, and the placing of them in advantageous homes and situations, and thus to aid them in becoming self-sustaining. During the present year sixty children were brought to Canada. No difficulty has been experienced in supplying children with homes and situations; in fact, it was found impossible to supply the demand. In consequence of this, there is a very small number of children at any one time in the home. I found three at headquarters at this date; one of them, a boy of twelve, who had had the misfortune to lose a finger through an accident, and was there recuperating. Another, a lad of sixteen years, had been returned by his employer as unsuitable. There was also a girl of eighteen years waiting to go out to service, and an application for her had already been received. The superintendent informs me that during the past twelve months the general state of health has been very satisfactory. No serious ailments have been brought to her notice, and there were no deaths to record. The society aims, as far as possible, to place the children in rural districts. Each child is placed out under certain conditions, which are set forth in an indenture, duly signed by the superintendent and employer. A person making application to the society must furnish the superintendent with a certificate as to character. Some of the conditions are as follows: The employer is to furnish board, lodging and clothes, and other necessities compatible with the circumstances, and at the end of each half year to pay a specified sum of from five dollars upwards to the society, to be banked for the sole use of the boy. In the case of the older boys, they are expected to be paid the wages current in the district in which they are employed. The younger boys are to receive four months' schooling during the year. The agreement may terminate at a month's notice, and the society reserves the right to remove the child, summarily, and without notice, in case of 'urgent necessity.' In the event of the cancellation of the agreement, the employer is required to return the child to the society's home. Employers are required to notify the superintendent if a boy leaves his place without the superintendent's authority. The home is conveniently situated at Hintonburgh, a suburb of Ottawa, and is commodious and well kept. The sanitary arrangements appear to be good. The house, a wooden structure, contains a bath-room, play-room and sleeping-rooms. It is heated by coal stoves; lighted by electricity, and has city water connections. The home is capable of accommodating fifty children, although forty is the largest number which is said to have been in the home at any one time. The books and records were written up to date, and well and properly kept.

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LIVERPOOL CHILDREN'S FRIEND SOCIETY AND WORKING BOYS' HOME, 9 GREAT ST. GEORGE SQUARE, LIVERPOOL, ENGLAND.

This society has its Canadian distributing headquarters near Lennoxville, in the province of Quebec, under the supervision of Mr. Samuel McFadden, J.P., who has acted as agent during the past fifteen years. The ages of the boys emigrated to Canada are, minimum, sixteen, and maximum, twenty years. The agent states that there has been a great demand for them, and that he usually has about ten applications for each boy. The boys are all located in the county of Sherbrooke, and are reported by their employers to be making good records for themselves. They are all very healthy, and only one boy has been obliged to return to England owing to ill-health. Each boy brings with him from England a certificate of character from his late employer or some other reliable person, who is thoroughly acquainted with him. The agent estimates that there are about sixty of these boys in Canada.

ST. NICHOLAS HOME, 70 LOMBARD STREET, TORONTO.

This home was founded by the late Archbishop Lynch, of Toronto, as a home for orphan boys. For the last ten years no British immigrant children have been received here. The work of this admirable institution is confined to the city of Toronto, and is presided over by a lady superior and an efficient staff of sisters.

## MONTREAL REFORMATORY FOR BOYS.

This institution is under the management of the reverend Brothers of Charity. Boys are committed from the different courts of the province of Quebec. The maximum age is sixteen years, and the longest term does not exceed five years. The boys wear a neat uniform, consisting of a blue serge suit, with trimmings of red, which would not necessarily suggest that of a prison garb. I found the boys very neat and tidy in appearance, and in manner bright and cheerful. There are three day schools, each of which is presided over by a reverend brother. The school rooms are large, well ventilated and bright. The larger boys, who are employed in the industrial branches of the institution, receive an hour's teaching daily, while those who have not as yet entered the shops have a half day's schooling. The play or recreation rooms are large, and appear to be sufficiently commodious. The boys amuse themselves by playing various games, &c. They have a large garden in connection with the institution, which gives employment to about twenty boys. Religious services are held daily. A large chapel is provided on the premises. The general state of health is said to be good. There was only one patient in the hospital ward, and he was said to be suffering from heart trouble. The bath-rooms are modern, and contain plunge and shower baths. There is an ample supply of city water. The boys are required to take three baths a week. The industrial departments are located in the western wings of the building. The trades taught here are as follows: Tailoring, shoemaking, tinsmithing and printing. Seventy-five boys are employed in the boot and shoe shop. Their labour is tendered for, and the class of work turned out is very creditable indeed. In the tinsmith shop thirty-six boys find occupation. All kinds of culinary utensils are made here. In the tailor shop all the clothing used at the reformatory is made, and orders for a limited supply from dealers in the city are filled. The boys also do all the necessary repairing of clothing and boots, which is in itself an item of no small importance. In the printing office many boys are learning the trade. They do job printing principally, and some specimens of the work which I saw were very good indeed. The discipline maintained throughout appeared to be good, and I was particularly impressed with the politeness of the boys when spoken to. As the longest term a boy is sent to this institution for is five years, ample time is afforded for the full apprenticeship to the different trades taught. Before the completion of their term the friends of such of the boys who evince any interest in their well being are notified, in order that they may receive them as they leave the place. In case a boy has no friends, the reverend brothers en-

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deavour to find work for him. As far as I could ascertain, there is only one British immigrant boy, at this date, undergoing a term in this reformatory. He had been committed for a term of five years for theft, three years of which have passed. He is a bright and intelligent boy. He is learning the tinsmithing trade, and is said to be making good progress. I am convinced from my inspection that this reformatory school is properly conducted, and that due attention is paid to the training, education and comfort of the lads confined to the care of the reverend Brothers of Charity.

## PROTESTANT INFANTS' HOME, MONTREAL.

This institution was founded for the purpose of providing a home for children deprived of their natural protectors, either by death, abandonment or otherwise, and for the protection of such children from want, exposure and crime. The regulations which govern the admittance to the home are as follows:—No child under ten days or over four years old. No child subject to any contagious, incurable or other disease. A medical certificate must accompany each infant, and when it is accompanied by its mother she must also be provided with a similar certificate. All necessary clothing is provided by the institution. The charge for children's board is made proportionate to the wages earned by its parents, and in case the child is dependent on charity, and is not visited by its parents or friends, it is held for adoption. Persons wishing to place children in the home must furnish written testimonials from a clergyman or some other responsible person. Infants will not be admitted without their mothers, except in special cases to be decided on by the committee, and the nursing mothers must remain as long as the committee deems it necessary. No woman will be admitted when it is known that she is a mother for the second time of an illegitimate child. The home is governed by a board of lady managers. The staff consists of a matron, who has a general supervision over the institution, one trained nurse and two other nurses. I made as thorough an inspection of the institution as the circumstances would permit. At this date there were sixteen cases. The matron informed me that the general state of health had been good, and the death rate was very small. There are four attending physicians, as well as four consulting physicians, comprising the medical board of the home. The sanitary arrangements appeared to me to be satisfactory. Large galleries extend on the west and south sides of the building from each floor, and these provide a safe play-yard for the children. There is also a large playground on the west side of the building. Fire escapes are provided, and a city fire alarm has been placed in the building. The house throughout was neat and clean, and the ventilation good. At this date there were 44 children in the home, and nine mothers. The children were well dressed and appeared to be bright and healthy and well cared for. I am satisfied from my observation that good discipline exists throughout the institution. I found, amongst others, three British immigrant girls here, taking advantage of the benefits afforded by this home. Their ages were seventeen, twenty and twenty-four years, respectively. These girls came to Canada during the past few years under the auspices of different societies. They obtained positions as domestic servants, one in the city and the others in the rural districts. I was informed that in each case the persons under whose charge they had come to Canada are aware of their present circumstances. They are bright, intelligent looking girls, and the matron spoke well of them. Religious services are held every Sunday, and prayer meetings every Thursday evening. These services are conducted by the clergyman of one of the city Protestant churches.

## THE OLD BREWERY MISSION, MONTREAL.

The aims of this institution, as stated by the superintendent, are to rescue the fallen, feed the hungry, and shelter the homeless. I could find no record of any British immigrant children having been received here during the past year.

Your obedient servant,

G. BOGUE SMART.

SESSIONAL PAPER No. 25

## REPORTS OF IMMIGRATION OFFICIALS IN WESTERN CANADA.

## No. 1.

## REPORT OF THE COMMISSIONER OF IMMIGRATION.

WINNIPEG, June 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I respectfully submit a report of the transactions of my office for the fiscal year ending June 30, 1901. The recent alteration of the date of the annual report from the calendar to the fiscal year has rendered necessary the compilation of new tabulated statements.

In the following tables the immigration recorded at this office for the past fiscal year is set forth, and for purposes of comparison, a table for the fiscal year ending June 30, 1900, has been specially prepared. Statistics are also given of results in previous calendar years, together with other trustworthy information of nationalities, sexes, occupations and distribution of immigrants.

The total immigration recorded at this office for the past fiscal year is 32,005 as against 31,510 for the fiscal year immediately preceding. To these 32,005 must be added a percentage for unrecorded immigrants who come in at various points—arrivals which are largely augmented by wagons, long trains of which are constantly trekking into our territories as immigrants used to do from the eastern to the western states. There is reason to believe that the accessions in this way and via Sumas and Rossland, B.C., are much greater this season than formerly, and the usual 20 per cent allowance may reasonably be advanced to 25 per cent and still be under the mark, since it is known that considerably over 8,000 immigrants have spread along the line of the Calgary and Edmonton Railway alone this season, and our returns of arrivals at immigration halls show a surprisingly large number who were not reported from any line of railway. This percentage gives an additional 8,001 souls, or a total of 40,005 who have come into western Canada. Deduct from this number departures en route for the western and Pacific States, for western Ontario, and the Yukon, and we have the net accession of 39,254 to the population of western Canada during the fiscal year now closed, 4,336 of whom settled in British Columbia. Of the total number of immigrants recorded here about 9 per cent were English and Welsh, 3 per cent Scotch, 1 per cent Irish, 31 per cent Canadians (including 1,368 returned Canadians) and 14 per cent Americans.

The annual statements of the General Colonization Agent, the various immigration agents, land guides and other officials directly connected with the work of this office in western Canada, are incorporated in this report.

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TABLE No. 1—Recapitulation and distribution of Immigrants recorded

Months and Years.	NATIONALITY.															
	Austrian.	Arab.	Belgian.	Bohemian.	Chinese.	Canadian.	Returned Canadian.	Dutch.	Dunkhobors.	Danish.	English.	French.	Finnish.	German.	Greek.	Hebrew.
1899.																
July.	5					746		2,335	6	249	13	12	12		4	
August.	27					417		2	2	214	11	15	71		17	
September.	14					490		4		151	11	10	7		1	
October.			5			600	3		2	185	22	17	45		5	
November.	31		6			581	1			124	10	28	56		3	
December.	5					376		1	2	32	5	9	2			
1900.																
January.	1	3				249	10			28	12	15	9		8	
February.	1	2				314	1	1		66	30	3	20		8	
March.			19	24		2,611	32		19	292	102	12	303		6	
April.			19	13		3,272	57		2	11	498	31	18	318	3	
May.		1	6	6	11	1,274	128		12	376	22	19	389		12	
June.		2		2		703	90		8	303	26	6	211		12	
	84	1	67	45	11	11,633	318	5	2,342	70	2,518	295	164	1,443	79	

Months.	Via.												Total.	Farmers.	
	Ocean.				United States.				Canada.						
	Adults.		Under 12.		Adults.		Under 12.		Adults.		Under 12.				
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.			
1899.															
July.	1,077	1,140	670	610	116	55	35	50	419	156	97	91	4,516	939	
August.	259	177	92	107	94	37	22	27	249	83	42	44	1,233	125	
September.	118	88	89	39	124	56	35	45	221	139	79	68	1,101	153	
October.	236	129	51	69	157	73	55	64	180	179	97	110	1,405	262	
November.	183	149	86	79	135	92	80	80	175	175	90	72	1,396	282	
December.	69	56	29	19	46	26	20	12	100	139	70	57	643	104	
1900.															
January.	62	37	18	18	76	18	2	8	93	91	27	30	480	89	
February.	76	25	10	22	66	32	24	22	180	95	41	21	614	131	
March.	346	104	76	56	518	258	191	277	1,205	621	359	307	4,318	1,690	
April.	967	377	372	332	612	207	180	176	1,635	691	504	423	6,536	2,386	
May.	1,209	690	629	595	364	117	66	74	701	262	159	134	5,000	1,602	
June.	1,015	704	639	505	260	126	116	120	285	198	122	97	4,268	1,188	
	5,617	3,676	2,752	2,541	2,568	1,102	826	955	5,503	2,829	1,687	1,454	31,510	8,951	

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at Winnipeg for the fiscal year ending June 30, 1900.

NATIONALITY.														Totals.									
Hungarian.	Hollander.	Irish, U.S.A.	Italian.	Irlander.	Norwegian.	Newfoundland.	Polish.	Portuguese.	Russian.	Ruthenian.	Romanian.	Slovak.	Swiss.	Swedish.	Syrian.	Spanish.	Scotch.	United States.	Welsh.	West Indian.	Others.	Totals.	
5	17	8	188	4	16	17	10	597	14	46	26	222	7	8	4,316								
15	30	5	4	16	16	17	13	147	10	14	39	162	2	6	1,233								
10	23	3	4	10	36	17	1	76	13	10	11	256	2	6	1,101								
1953	12	12	12	12	16	3	171	43	13	9	39	156	7	20	1,405								
12	6	6	3	4	19	6	2	45	1	4	4	5	51	2	480								
41	52	15	24	19	13	15	248	779	55	1,780	60	35	544	8	614								
47	67	93	32	11	53	1,780	2	1	7	1	6	64	101	735	20	3	12	4,318					
106	41	14	4	37	5	5	143	1,880	13	1	6	48	81	517	2	1	5,000						
10	16	13	140	33	5	5	143	1,880	13	1	6	48	81	517	2	1	4,268						
380	5	293	197	446	217	6	58	676	5,648	1	13	1	6	431	4	475	3,473	49	3	53	31,510		

OCCUPATION.										DESTINATION.					
Farm Labourers.	General Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not Classified.	Total.	Ontario.	Manitoba.	North-west Territories.	British Columbia.	Yukon.	United States.	Total.	
263	233	52	37	56	40	2,896	4,516	11	3,766	436	265	38	4,516		
189	188	57	45	28	42	617	1,233	19	693	298	200	17	1,233		
125	86	42	53	40	5	597	1,101	14	450	375	265	11	1,101		
65	91	41	57	35	12	842	1,405	5	643	428	329		1,405		
	71	62	29	30	27	895	1,396	20	680	383	301	3	1,396		
	42	33	17	13	4	430	643		251	164	228		643		
	61	35	28	8	1	258	480	12	186	137	145		480		
	53	38	28	16	1	347	614	14	226	200	149	8	614		
	171	110	58	4	50	2,235	4,318	29	1,843	2,013	415	18	4,318		
	259	257	109	79	4	3,442	6,536	5	2,608	3,428	455	40	6,536		
	274	158	49	88	33	2,796	5,000	12	2,651	1,838	429	36	5,000		
	158	99	52	45	15	2,711	4,268	10	1,951	1,923	353	26	4,268		
642	1,687	984	544	442	194	18,066	31,510	137	15,957	11,623	3,536	296	51	31,510	

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TABLE NO. 2—Recapitulation and Distribution of Immigrants

Months.	NATION																		
	Austrian.	Arab.	Belgian.	Bohemian.	Chinese.	Canadians.	Returned Canadians.	Dutch.	Dookhobors.	Danish.	English.	French.	Finnish.	German.	Greek.	Hebrew.	Hungarian.	Hollander.	Half-Breed.
1900.																			
July...	1		9			503	30			1	262	20	28	275		10	16		
August...	1			1		700	14			12	175	2	15	137		30	4		
September...	4		2			607	16		1	26	202	27	13	104		11	59		
October...	21					427	17			1	200	3	17	83	1	6	33		
November...	6	1				358	46				73	19	8	172		1	13		1
December...	2					233	9			14	46	3	21	101		8	12		
1901.																			
January...			1			213	8			1	30	8	13	9		15	24		
February...	3		4			344	58				79	3	18	3		12	9		
March...	6		63	1	1	2,041	337			8	232	10	40	171		5	81		
April...	12		6	4		1,647	420	1		39	619	24	59	395			175		1
May...	38		5	9		1,033	268	5		28	677	24	54	434		32	31		7
June...	15		9	1		498	145			33	297	62	42	367	1	8	64		1
	109	1	99	16	1	8,604	1,368	6	1	163	2,892	295	328	2,251	2	138	521	10	1

Months.	VIA.													Farmers.
	Ocean.				United States.				Canada.				Total.	
	Adults.		Under 12.		Adults.		Under 12.		Adults.		Under 12.			
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.		
1900.														
July...	957	708	630	518	138	102	78	65	165	158	98	90	3,707	845
August...	408	308	290	143	222	74	42	45	275	232	168	81	2,138	530
September...	440	162	121	85	133	67	56	45	233	189	99	83	1,713	341
October...	303	189	111	78	186	120	99	97	120	170	72	69	1,614	328
November...	161	102	80	67	97	44	27	38	99	146	66	61	988	156
December...	134	59	34	34	39	10	8	6	89	87	39	32	561	156
1901.														
January...	86	22	8	8	58	27	27	13	95	82	26	22	474	91
February...	94	34	14	15	262	81	70	49	215	94	34	30	992	317
March...	410	99	64	60	811	352	250	268	1,083	463	275	220	4,355	1,865
April...	1,090	339	251	215	971	427	319	293	899	365	303	214	5,595	2,156
May...	1,302	580	358	330	848	271	174	188	526	284	171	131	5,163	1,767
June...	1,197	706	588	474	630	227	159	147	217	164	74	72	4,705	1,658
	6,591	3,358	2,459	2,027	4,395	1,892	1,309	1,254	4,016	2,434	1,255	1,105	32,905	10,210



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ETHNIC.

Italian.	Irish.	Irish-Scottish.	Polish.	Russian.	Ruthenian.	Portuguese.	Ruthenian.	Slovak.	Swiss.	Standard.	Swedish.	Syrian.	Spanish.	Scotch.	United States.	Welsh.	West Indian.	Total.	
18	489	12	81	115	49	1,357	189	110	4	3	40	6	61	269	5		3,797		
174	4,216	5,531	2	10	13	110	150	39	1		28		78	130	281	14		2,138	
39	18	5	1	10	1	61	27				13	7	9	8	481		3	1,713	
24		1	12	5	1	1	10				13		9	8	74	1	6	988	
3	5	6	1	1	4	8					7		15	101				474	
195	15	3	20	3							6		45	578				992	
135	19	67	15	10	3	1	16		5		28		2	1,189				4,335	
131	53	124	132	10	33	3	429		2		195	1	151	883				5,595	
48	192	39	134	1	35	56	1,800	27	2		72		255	320	777	2	42	5,163	
479	1,063	340	75	595	21	224	307	79	1	5,059	69	20	3,680	17	2,992	5,157	70	11	32,005

OCCUPATION.

DESTINATION.

Farm Labourers.	General Labourers.	Mechanics.	Clerks and Traders.	Miners.	Female Servants.	Not classified.	Total.	Ontario.	Manitoba.	North west Territories.	Yukon.	British Columbia.	United States.	Total.
358	153	67	36	38	87	2,396	3,707	18	2,255	1,981	2	339		3,797
62	75	32	24	38	16	1,173	2,158	10	971	812		358		2,138
26	26	33	33	123	16	992	1,713	21	680	338		390		1,713
45	35	53	53	72	1	1,945	1,614	15	792	663		312		1,614
34	19	12	12	35		638	988	9	314	251		302		988
						365	561	9	292	148		142		561
43	28	19	19	45		248	474	11	144	171	3	147		474
74	37	57	57	72		432	992	14	241	427		248		992
158	135	49	112	72		2,034	4,356	47	1,267	2,698	36	372		4,356
321	186	112	112	141		2,651	5,595	87	1,895	2,911	29	697	11	5,595
483	179	118	98	45		2,479	5,163	47	2,024	2,316	40	73		5,163
189	77	31	66	12		2,672	4,705	56	1,861	2,370	28	283	7	4,705
1,896	904	528	996	411	17,069	32,005	342	12,436	14,461	384	1,336	29		32,005

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TABLE No. 3.—Showing the number and sexes of arrivals reported at Winnipeg during the calendar years ending December 31, 1897, 1898 and 1899.

Port.	1897.			1898.			1899.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Winnipeg . . . . .	6,705	4,159	10,864	19,015	8,842	27,857	21,496	14,679	36,175

TABLE No. 4.—Showing the number and sexes of arrivals reported at Winnipeg during the fiscal years 1900 and 1901.

Port.	1900.			1901.		
	Males.	Females.	Totals.	Males.	Females.	Totals.
Winnipeg . . . . .	19,016	12,494	31,510	20,013	11,992	32,005

TABLE No. 5.—Showing the Nativity of Arrivals reported at Winnipeg during the Calendar years 1896, 1897, 1898 and 1899.

Nationality.	1896.	1897.	1898.	1899.
England and Wales . . . . .	632	1,519	3,201	2,833
Ireland . . . . .	13	69	266	270
Scotland . . . . .	105	205	701	613
Canada, including all the provinces . . . . .	375	2,373	13,112	11,591
United States . . . . .	49	712	2,643	2,233
Scandinavia, viz.: Norway, Sweden & Denmark.	515	474	532	769
Icelanders . . . . .	..	..	..	364
Germans from Germany, Austria and Russia . . . . .	1,112	520	998	1,405
France and Belgium . . . . .	389	388	368	273
Ruthenian : Galicians and Bukowinians . . . . .	904	4,363	5,509	7,181
Other countries . . . . .	102	246	525	8,643
Totals . . . . .	4,196	10,864	27,857	36,175

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TABLE No. 6.—Showing the Nationality of Arrivals reported at Winnipeg during the Fiscal years ending June 30, 1900 and 1901.

Nationality.	1900.	1901.
England and Wales.....	2,567	2,962
Ireland.....	293	540
Scotland.....	175	992
Canada.....	11,678	8,694
United States.....	3,791	6,555
Scandinavia, viz.: Norway, Sweden & Denmark.....	718	2,591
Icelanders.....	446	1,063
Germans from Germany, Austria and Russia.....	1,447	2,251
France and Belgium.....	362	304
Ruthenian; Galicians and Bukowinians.....	5,648	5,050
From other countries.....	4,134	1,374
	31,510	32,095

## DEPARTURES.

Inasmuch as our immigration is drawn from so many different sources, it is gratifying to learn that very few who immigrate to western Canada find the country unsuitable or not good enough for them.

Our travelling agents on the 'Soo Line' between Moose Jaw and Portal, and on the railway between Lethbridge and Coutts, have been specially directed to report all departures from Canada passing into the United States of immigrants who were not intending to return, and not more than ten families and three single men, comprising fifty-six souls in all, have so departed by these railways. Of those ten families, five, or about one-half the total exodus, gladly returned to their farms in western Canada within three months after their departure therefrom.

There may be a few unreported cases going south via Winnipeg, but those leaving Canada naturally go the cheapest route, which would be one of the two roads above reported.

The staff of agents and land guides in the outside service must be congratulated on the evident care and attention in placing immigrants judiciously, which is so well proven by the surprisingly small number of dissatisfied ones.

## IMMIGRATION FROM GREAT BRITAIN AND IRELAND.

The immigration from the United Kingdom during the past fiscal year has not varied to any great extent from the previous record. Our accessions are again mainly from England and Wales, whence we received 2,962, Scotland contributing 992, and Ireland, 340—in all, 4,294, an excess of 959 over the previous fiscal year. The employment of the Imperial reserves, volunteers and yeomanry in South Africa does not seem to have much affected our customary quota, which amounted in 1898 to 4,170. But should the mother country encourage emigration from her shores to South Africa by bounties and liberal grants of land, our already small contribution would, perhaps, be seriously affected. It is alleged that England's great industrial prosperity is more and more attracting labourers from the land to the manufacturing towns, and that good farm hands in consequence are as much in request in Great Britain as here.

The success of Mr. Robert Adamson in securing first-rate farm hands in Great Britain last spring is a proof of what might be expected if some new inducement could be offered those already here to send home for their friends.

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## IMMIGRATION FROM THE EASTERN PROVINCES.

Our arrivals from the older provinces, including 1,368 returned Canadians from the United States, numbered 9,972 for the past fiscal year. No harvest excursions took place last season, which must be regretted, as they always leave a portion of their numbers as settlers in the country. But, this year, arrangements are already suggested for bringing in farm hands, and there can be little doubt that a large percentage of these will remain. Eastern Canadians are not so often seen at this office. Some secure employment through our bureau, but, being generally experienced farmers with means, they go off to the land upon arrival, and begin operations at once. Aside from the old Selkirk settlers, they are the agricultural pioneers of the North-west, and many families in the eastern provinces are now represented in Manitoba or the Territories.

## FRENCH CANADIANS.

Mr. Leon Roy, our French interpreter, in his report for the year, states that 275 French Canadians came to western Canada from the United States, and 445 from the eastern provinces, making a total French Canadian immigration into the west of 720, of which number about one-half settled in Manitoba and the Territories, respectively.

There is now a manifest and hopeful tendency of Canadians of French origin in the United States to return to Canada which will receive every encouragement.

Besides his office duties, Mr. Roy has been engaged in looking up lands available for new settlements, locating settlers, and guiding many intending purchasers to lands in the Winnipeg district.

## AMERICAN IMMIGRATION.

Our recorded immigration from the United States (aside from returned Canadians) amounted in the past fiscal year to 5,197 souls, nearly all of the male adults being practical farmers. For the fiscal year ending June 30, 1900, our recorded accessions were 3,473, being 1,724 less than for the past fiscal year, both augmented, of course, by the percentage of unrecorded arrivals at points west and south-west of Winnipeg.

Many American citizens have come in with large means and purchased for practical purposes, farms running from 2,000 to 4,000 acres. Lands which three years ago were unsaleable, now sell readily at fair prices, with an upward tendency. I might mention the case of one Mr. de Grotc, who came in last year and bought some 4,000 acres near Shanawan station on the Pembina branch, and broke up some 1,700 acres which are now under crop. He invested over \$20,000, and is of opinion that, if no disaster happens, the returns from this year's crop will go far to cover his purchases.

## ICELANDERS.

Our accessions of Icelanders for the past fiscal year amount to 1,063 souls, being 896 from Iceland, and 167 from the United States. They acquire the English tongue with ease; harmonize at once with our institutions, and already their leading men take an active part, not only in public affairs, but in the field of letters as well.

The immigration of Icelanders, which had been falling off for several years, started again with a party brought by W. H. Paulson, our Icelandic interpreter, in 1897. This

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was followed by others in 1898 and 1899, and Icelandic emigration to Canada was thus re-established. A very bad harvest in Iceland in the latter year increased the desire to move, and an appeal for aid to the Icelanders here was met by a remittance of \$7,000 towards paying transport. In consequence, Icelandic immigration in the summer of 1900 was the largest since 1893. From information received by the department it was ascertained that a large emigration was contemplated, and Mr. S. Christopherson was sent to the island last winter and did excellent work as guide and interpreter to the people.

Last winter the Icelanders here again sent a considerable sum (nearly \$3,000) as passage money, and already a large number have arrived with more to follow. The Icelandic immigration is of a very desirable class, mostly farmers and young people brought up on farms. Much credit is due to the Icelanders in Winnipeg for their kind and generous reception of their people, and I am able to certify that they do not remain long in our immigration hall, men and girls getting immediate employment, whilst married women and their children are temporarily housed with friends in Winnipeg or in the Icelandic colonies.

The number of Icelandic immigrants from the United States is larger, so far, this season than ever before. They come principally from North Dakota, and have mainly settled around the old colonies at Gimli, though some have gone to other places in Manitoba, Assiniboia and Alberta.

In connection with Icelandic immigration Mr. Sigurdur Christopherson reports that he left here for England, and after arranging for transport there went to Iceland, where he worked for three months, visiting all the principal places, meeting and conversing with many of the people whom he had previously notified of his coming. Nine hundred and twenty-four souls left the island during the spring and summer of 1900, and many more decided to dispose of their property and leave this year.

## SCANDINAVIANS.

Mr. J. W. Wendelbo, our Scandinavian interpreter, submits his report for the past fiscal year with an attached table of arrivals, homestead entries, &c., showing that 294 Swedes, 84 Danes, 194 Norwegians and 233 Finlanders have arrived here from the European countries; and 462 Swedes, 80 Danes, 377 Norwegians and 70 Finlanders from the United States, a total of 1,794 Scandinavian souls. These immigrants were nearly all farmers, and at least 60 per cent of the families brought each a car-load of effects, and all had enough money to make a good start in farming. The Dominion lands agents report 44 Danes, 277 Swedes, 276 Norwegians and 19 Finlanders to have made homestead entry in western Canada during the twelve months, representing 1,920 souls. Of the 989 from the States, 208 came from North and 184 from South Dakota; 340 from Minnesota, 69 from Montana, 40 from Nebraska, 17 from Iowa, 21 from Wisconsin, 16 from Utah, 15 from Kansas, and 79 from various eastern states, the adjacent states having thus furnished the largest quota, proving that the work close at hand has been faithfully attended to. Scandinavian people, generally speaking, are well satisfied with their new homes, and with the fine crop prospects will be more inclined to urge their friends to join them. They are a fine class of immigrants, and any effort to secure them will be much appreciated by the Canadian people of the west.

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TABLE showing Swedish, Norwegian, Danish and Finlandish Immigration for twelve months ending June 30, 1901.

Nationality.	Where From.	SEXES.				OCCUPATION.					DECLARED DESTINAT'N.							
		Male Adults.	Female Adults.	Males under 12.	Females under 12.	Totals.	Farmers.	Farm Labourers.	General Labourers	Mechanics, Clerks and Traders	Domestic.	Not Classified.	Total.	Ontario.	Manitoba.	N. W. T.	British Columbia.	Total.
Swedish	Sweden	166	76	30	22	294	38	44	81	3	31	97	294	10	177	75	32	294
"	United States	238	81	77	66	462	193	1	39	5	8	216	462	38	22	395	7	462
Danish	Denmark	47	14	14	9	84	10	21	13	1	2	34	84		50	24	10	84
"	United States	31	18	14	17	80	27	2		2	3	46	80	6	25	49		80
Norwegians	Norway	115	50	19	10	194	51	33	23	5	14	68	194		117	45	32	194
"	United States	209	53	56	59	377	201	3	4	1	3	165	377		28	349		377
Finlanders	Finland	185	38	3	7	233	5	2	171	1	15	39	233	72	42	20	99	233
"	United States	28	14	12	16	70	27		1			42	70			69	1	70
Totals						1,794							1,794					1,794

## GERMANS.

Mr. Chas. A. Jones, our German officer and interpreter, reports the total arrivals for the fiscal year at 2,251 souls all told, a very gratifying increase over former years, necessitating much more labour and attention.

The class 'Germans' includes Germans proper from Germany, and German speaking people from the United States, Austria, Russia and Switzerland. Russia furnishes by far the largest portion, all farmers. Austria comes next. The United States supplies an ever-increasing number of these people who are well to do, and arrive here with a large quantity of effects.

Immigration from Germany shows a decided improvement on past years. Mr. Jones' table gives the German arrivals as follows:—From Russia, 1,178; Austria, 471; United States, 435; Germany, 155; Switzerland, 12, a total of 2,251, distributed thus: to Manitoba, 857; North-west Territories, 1,363; British Columbia, 31. The German settlers are reported as having a very large area this season under crop, and that a large number of resident Germans have moved out of the city to Yorkton, the feeling being everywhere jubilant over the outlook.

## FRENCH AND BELGIANS.

Our immigration from these sources is fairly satisfactory, and the class of people coming are much to be desired. Mr. Thomas Gelley, one of our French interpreters, has had much to do with the placing of these people. During the fiscal year, 141 souls came from France and were located in Bruxelles, Grande Clairiere, &c., in Manitoba,

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and Bellegarde and Alua in Assiniboia. Eighty-five persons came from Belgium, and have been located at St. Norbert, Deleau and St. Alphonse in Manitoba, and Lethbridge and Edmonton in Alberta.

Our reports from the various places where these people have been located indicate that they are prospering in common with the whole of western Canada.

## RUTHENIANS (GALICIANS AND BUKOWINIANS).

The prejudice which existed in some minds upon the first immigration of these people from Austria, it may be said, is now entirely dissipated, except amongst a few implacable persons, who can see no merit in any nationality save their own. Their readiness to assimilate with English-speaking people, and to acquire their language, is one of their most marked features; and, so far from overstocking the labour market, as was feared by some, both men and women have in reality helped to fill those most pressing needs of this country, viz., an abundance of labour in the field, the household, and on railway construction. There are now, including this year's immigration, a large number of Ruthenians scattered throughout Manitoba and the Territories, all of whom, considering their small means and recent settlement, have been surprisingly successful, whilst the communities, as a whole, have been singularly free from serious crimes or even misdemeanours of the ordinary sort, and have been practically immune from epidemics of disease which the local governments have had to cope with at times among other settlers.

All those arriving this year with families settled at once on homesteads near their friends, and as they had previously been fully informed about the country by letter, there was no difficulty in locating them. Some went to township 5, range 6 east, and the remainder to older settlements in Manitoba and the Territories. Their distribution is as follows:—

Edmonton, Alta.....	1,252
Rosthern, Sask.....	575
Yorkton and Saltecoats, Assa.....	585
Sifton, Ethelbert and Gruber, Man.....	472
Shoal Lake and Russell, Man.....	398
Pleasant Home, Man.....	485
Stuartburn and Grunthal, Man.....	465
Whitemouth and Brokenhead, Man.....	376
Poplar Park and Gonor, Man.....	55
St. Norbert and Cook's Creek, Man.....	135
Farm labourers.....	476
Total.....	5,274

A few Russians passed through on their way to North Dakota, where they had friends. All the Ruthenians, after selecting their quarter sections, set to work at once to erect houses and to cultivate their land. Mr. Geuk, our Ruthenian interpreter, has been engaged meeting all trains with those people on board, going far east to do so, giving information as to homestead regulations, &c., attending to the wants and correspondences of old settlers, hiring out Ruthenian labourers and servant girls, and sending them to farmers and others in town and country, and acting as interpreter for merchants doing business with these people.

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## HUNGARIANS.

The Hungarians settled at Kaposvar, Esterhaz, and a few other points, were estimated in 1898 at about 1,000. In 1899, the immigrants numbered 176, and during the first six months of the following year we received 264. Our accessions during the fiscal year just ended were 521, amounting in all to about 2,000 souls. Some of these have settled in the Indian Head locality and at Zichydorf, south of Regina. They reported well of their progress, and two flourishing communities of farmers are now established there. During this year a new colony has been started in the vicinity of Duck Lake by Mr. Zoltan Von Rajes. The more recent arrivals have mostly trended to the Whitewood, Yorkton and Prince Albert districts, and, as Hungarians rank high in Europe as agriculturists, they will no doubt prosper when fairly settled in their holdings.

I must acknowledge the kind and valued assistance of Rev. Father Woodcutter and others in connection with these people.

## DOUKHOBORS.

In my predecessor's reports, the arrival of the Doukhobors, their circumstances and distribution are fully described, and, as most of them have been resident here for nearly three years, a glance at their progress and condition may not be out of place. The Thunder Hill, Good Spirit Lake and Sand River colonies may be grouped as possessing traits in common and identical opinions. Mr. Harley, the immigration agent at Swan River, in his report for the fiscal year, states that 'the first-named colony numbers 1,500 souls, and has made marked progress during the past year. The people are earning money in many ways, and in a short time will be rich. They have bought many horses, cattle and implements, have 800 acres under crop this year, and are preparing to double this quantity next spring. The health of the colony, on the whole, is good.'

The other two colonies, I am able to state, are also in a forward condition. The Good Spirit Lake people have a large crop, have gone extensively into the raising of cattle and horses, and are entirely self-supporting. Many of them have already separated from the community principle, and are now doing for themselves on their own homesteads. Several villages have asked for special brands for their cattle, and it would thus seem that their rigid system, under a growing feeling of security, perhaps, and a just administration of Canadian laws, is sensibly relaxing. The Sand River colony is the more advanced of the two, having a large area under cultivation—in some villages from three to four hundred acres—and owning much machinery.

The 'Cyprus' colony is progressing too, but not so rapidly as the others, owing to the exhaustion of their means in Cyprus, though some villages have gone largely into cattle. I may say with reference to their views regarding marriage, that a Bill has passed the territorial legislature making the Doukhobor marriage binding.

The Doukhobors are exceedingly hospitable, giving their best to strangers. They are intelligent and handy in other respects; have constructed several substantial bridges without thinking of asking for government aid; also an excellent ferry, and are now building windmills to make their own flour. Other domestic arts survive amongst them, such as weaving, for which they make their own looms, turning, &c., and show considerable ingenuity. Their flocks of sheep are increasing, and many garments are made complete from the natural wool. For the rest, as farmers and producers, there can be no doubt about their success. The villages are all now self-supporting, and will have grain and cattle to sell this fall. Those, in fact, who know them best respect them most, and consider them a desirable acquisition to the country. Their credit with merchants is established, and their word is as faithfully carried out as a written agreement would be.



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The foregoing applies particularly to the Saskatchewan colonies, who are showing greater appreciation of Canadian institutions than the others. It may be added here that in general, the health of all the colonies has been very satisfactory.

I am pleased to express my opinion that only a small number of Doukhobors will seek work beyond their own farms after this season, but will engage exclusively in raising grain and cattle.

I am also glad to report that every Doukhobor who left Canada in 1900 to work in California returned to the country well pleased to remain north of the international boundary.

I desire to express very sincere appreciation of the work done among these people by our officers and by visitors to these settlements, who have offered good and disinterested advice. I feel confident the results will be highly beneficial and prove conclusively the wisdom of securing this hardy class of farmers for western Canada.

## MOLDAVIANS.

In the latter part of April last a party of Moldavians, of a hardy agricultural stock were settled at the File Hills, north of Fort Qu'Appelle, on homesteads in the vicinity of township 15, range 14, west of 2nd meridian. The Germans of Ebenezer came here under similar circumstances and are now exceedingly prosperous. If these Moldavians have equal industry and perseverance they will in a few years be equally well off. By next spring each of their homesteads will have, besides necessary buildings, several acres in crop. Already their exertions have marked them as an acquisition to our rural population, and they are fortunate in having the guidance of Mr. Donald H. McDonald, the local member of the Territories legislature, who takes a direct interest in the welfare of all new comers.

## SETTLEMENTS GENERALLY.

The Icelandic, German, Scandinavian, Doukhobor, Ruthenian, and all other settlements are now under the constant inspection of Mr. C. W. Speers, General Colonization Agent, and a comparative estimate can be made as to their progress and circumstances. In consequence of this supervision their interests are protected, useful information or advice is given, and irregularities, where they occur, are readily adjusted. Nothing more on this head need be added here, as these matters are exhaustively treated by Mr. Speers in his report for the fiscal year. It may be added, however, that with a view to the advantageous settlement of new comers, suitable districts are selected beforehand, so that there is now no delay in placing them no matter in what number they may arrive.

A feature to be noted concerning these alien settlers is the wonderful expansion of ideas taking place amongst them through a constantly increasing communication with English speaking people, coupled with a growing conception of the productiveness of the country and its great possibilities for themselves and their posterity.

The time of Mr. Speers is very fully occupied the year round, as he has to cover a very large area in the exercise of his duties.

## HEALTH.

In the monthly reports of Doctors Corbett and Patterson sent direct to the department, full details are furnished on this head, and nothing further need be said here,

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other than to mention that the two most serious inconveniences of the season have been the outbreak of small-pox in some parts of the Territories, and the quarantining of the ss. *Lake Superior* at Grosse Isle. Generally speaking, the health of the various colonies throughout the interior is good, and any sporadic outbreaks of infectious diseases are by energetic measures speedily stamped out.

Under our present system of health inspection during transit, every new settler is examined on the train by one of these physicians.

#### DOMESTIC SERVANTS.

Many of those passing through our hands are Galicians, an intelligent class of girls who learn English, and adopt Canadian ways surprisingly fast. It is estimated that over a thousand of them are now in service in town and country, and though, like other girls, they vary in acquirements and quality of service, yet, generally speaking, they are doing well, and through their intimate association with English speaking families will be of service hereafter in facilitating the assimilation of the Galician people.

Some 40 girls were brought out by Mrs. Sanford this spring from the United Kingdom who were all well placed immediately on their arrival, and are giving satisfaction. This undertaking has been carried out by Mrs. Sanford largely on her own responsibility with such assistance as I could give; her thorough experience may be of great service hereafter in inducing many other desirable domestics to immigrate to this country, as there is real need of many hundreds of good domestic servants in city and on the farm at good wages.

#### FARM HANDS AND EMPLOYMENT BUREAU.

During the fiscal year 905 incomers applied for farm employment at this office, 439 of whom were English, principally young men, 87 Scotch and 44 Irish, the remainder being mostly German and Scandinavian. In the same period 498 applications were received from farmers in the province and territories for experienced hands, and 496 for inexperienced. The applicants for farm work, therefore, had no difficulty, as a rule, in procuring employment, and as they were generally of a good class, well set up, intelligent and healthy, few complaints have been received as to their conduct or efficiency.

Not included in the foregoing is a very large number of Galicians, Doukhobors and others who passed through this office to various employments obtained for them, mainly on the railway, though of course a good number went to farmers. These men, with few exceptions, have proved to be good workers, and have given general satisfaction to their employers, though demanding the same rate of wages as any other nationality doing the same work.

Under direction of the minister the various agents of Dominion lands throughout the west have also been of much assistance in their respective offices in bringing together the farmer and the new comer seeking work.

#### DELEGATES.

During the past year 262 American delegates made an extended examination of the province and territories, and upon their return to Winnipeg, without exception, reported in the most favourable terms their impressions of the country. They were not only

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delighted but enthusiastic as to the future of western Canada, and stated their intention of spreading the truth throughout their respective states, and of themselves returning to settle in the country. They came mainly from Nebraska and Kansas, the two Dakotas, Minnesota, Iowa, Indiana, Ohio, Illinois, Wisconsin, Missouri and Michigan—the great agricultural states of the American union. These delegations are engineered by our agents stationed in these states, are met and attended by our large staff of land guides outside Winnipeg, and are of great effect in enlightening western American farmers and drawing their attention to this country. It may be added that the correspondence of the great body of American farmers already settled here is also having a marked influence upon emigration from those states. There is, in fact, no immigration stimulus more powerful than the favourable correspondence of men who have prospered in the country, which correspondence I have reason to believe is rapidly increasing and already has had a noticeable effect.

## SALES OF LANDS.

In preceding reports the commissioner has included the yearly sales of land by the Hudson's Bay Company and the Canadian Pacific Railway Company, the greatest land-holders in western Canada aside from government; this as exhibiting the annual increase in the volume of transactions and as an index to the extension of settlement. The Hudson's Bay Company has sold at least \$100,000 worth of land, and probably the Canadian Pacific Railway Company has sold even more. The price obtained for Hudson's Bay Company lands averages as usual about \$5 per acre, against 64,593 acres for \$321,698 for the previous calendar year.

The total sales of Canadian Pacific Railway lands for 1899 were 416,807 acres for \$1,327,667; for 1900, 431,986 acres for \$1,377,715.

## WINNIPEG DISTRICT VACANT LANDS.

The demand for these lands is on the increase, and the sales for the first six months of 1901 exceed those of the same period in any former year. Mr. W. Langmuir Watt, who manages them in the interest of all concerned, states that this year there has been a very brisk demand, and a large quantity has changed hands. The Vacant Lands Committee has furnished a new and useful hanging map of the district, showing the lands for sale plotted out in red, also a Winnipeg pamphlet printed in Norwegian, and these are being distributed from this office and through our United States agencies.

The demand still keeps up, and a good harvest will make this the banner year of the Winnipeg district. Americans have bought largely of these lands, their declared intention being to place settlers on them, so that if this purpose is carried out, these sales will be of immense value to the city and district. A new list should be prepared by the Vacant Lands Committee for distribution early next spring.

## IRRIGATION IN SOUTHERN ALBERTA.

The main irrigation canal constructed by the Canadian North-west Irrigation Company connects the source of supply at St. Mary's river with Lethbridge by a main 115 miles long. Our travelling agent at Lethbridge, Mr. Gray, reports that although the undertaking is only in its infancy, some have already purchased claims along this canal, and in a few weeks are able to show a promising crop of ten or fifteen acres each;

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and it is expected that in the near future all these irrigated lands will be settled by prosperous farmers.' In a letter received from Mr. McGrath, the manager of the company, he states that 'the irrigated acreage sold to June 30 last amounts to about 24,000 acres. The population,' he adds, 'of Stirling and Magrath settlements amounts to about 1,200.'

The rainfall this season has obviated the necessity for extensive general use of the water in the irrigation canals.

#### RAILWAY EXTENSIONS.

The necessity for increased transport facilities by rail still exists, and demands are being made by various communities in the interior which it is the desire of all to see met in a just and liberal spirit.

With increased railway mileage the work of the department will be materially assisted, if the prospects for a largely increased immigration are realized.

#### RAILWAY COURTESIES.

I have much pleasure in stating that in the conduct of our immigration business much of its success is due to the action of the railway companies in affording satisfactory transportation facilities. I have invariably found them ready to render assistance, and by prompt transport and delivery of stock and effects facilitating speedy access to the land.

#### CROPS.

A much larger area is under crop in western Canada than ever before, that in wheat in Manitoba alone being placed at 2,011,835 acres, an increase over last year of 554,439 acres.

Of oats there have been sown 689,951 acres, 191,009 of barley, 20,978 of flax, and a considerable area in rye, pease, corn and buckwheat. Brome grass promises to be largely cultivated, there being over 7,000 acres laid down. The potato acreage is estimated at 24,429, and roots at 10,214. In the Territories last year, where the rains were abundant, the average yield of wheat from threshers' returns was 20.70 bushels.

It is a favourite assertion of land agents and other persons interested in the western States, that western Canada is more subject to drouth than are states to the south. Experience year after year has shown that the facts are the other way, a truth never better exemplified than by the climatic conditions in both countries this very season. No part of western Canada is suffering from lack of moisture, whilst many of the western states are threatened with a total failure of their principal crop from this cause. Western Canada is no more subject to drouth than any other part of the American continent. Certainly the prospects of an abundant yield were never brighter in this country than at present.

#### CATTLE.

The following statement is a sufficient index of the progress of stock-raising, to which any extended reference is unnecessary, though many thousands of cattle have

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been handled by other dealers who have not favoured me with a statement. The grass of the Canadian west is at its best this season, and cattle are shipped from the range for export to Great Britain. The nutrition in our native grasses is proverbial and a wonder to stock-raisers.

There appears to be a noticeable tendency to discard large herds of 'scrub' cattle, and to breed smaller herds of good grades, that keep their flesh and appearance after the long journey to the British markets.

Messrs. Gordon and Ironsides inform me by letter, that from May 1 to December 31 of 1900 they bought cattle out of the following districts, which they classify as per Canadian Pacific Railway main line and branches, viz. :—

	Head.
Emerson branch.....	1,076
Deloraine branch.....	2,175
Glenboro and Estevan branch.....	2,130
North-western, Winnipeg to Yorkton.....	9,890
Main line, Portage la Prairie to Qu'Appelle.....	2,995
Main line, Qu'Appelle to Medicine Hat.....	7,394
Main line, Medicine Hat to Calgary.....	18,400
Prince Albert branch, including Battleford.....	7,510
	<hr/>
	52,570

Of this number 42,700 head were shipped to Montreal for export. In 1898 their purchases were 26,900 head, and in 1899 30,300, showing a remarkable increase in two seasons.

The Canadian west rightly maintains its position as a stock-breeder's paradise.

## HORSES, SWINE AND POULTRY.

The breeding of horses is rapidly increasing, there being now over 20,000 in the ranges in southern Alberta alone. They have almost, if not quite, recovered their old-time value, and the demand is now greater than local breeders can supply. It is reported that whole train-loads left Lethbridge, realising handsome prices.

The raising of hogs is also making headway. Last year Manitoba alone supplied for all purposes about 25,000 hogs. Yet there is a good market for many thousands more to supply the packing-houses in Winnipeg, one of which is being doubled in capacity this year.

In poultry-raising, there is a slight falling off in turkeys, but an increase in geese and chickens, of which, in round numbers, 29,400 and 27,000, respectively, were reared last season. This is far from supplying the local, not to speak of the British Columbia and other markets, and much money goes out of the west for poultry, which might be kept in the country if farmers generally gave this branch of produce the attention it deserves.

## DAIRY PRODUCTS.

I have as yet received no data from the Territories, saving a statement from Mr. Marker, superintendent of creameries, that the output of creamery butter for the fiscal year was 301,271 pounds. The quantity of dairy butter was not obtainable.

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Mr. Murray, the Manitoba dairy superintendent, has furnished me with statistics for that province. The creameries and cheese factories opened this season generally in the first half of May. Last year's success has led to an increase of herds, and the pastures are in fine condition. There were but five creameries prior to 1895, now there are twenty-nine in operation, with the prospect of a considerable addition next year. The output of dairy butter last year was 2,083,920 pounds, which sold at an average of 14.45 cents per pound, and of creamery, 1,254,511 pounds, which sold at 19.18 cents. Of cheese (factory), the output was 1,021,258 pounds, sold at 10.02 cents, the total value of all being \$643,991.09, an increase of \$173,432 over the previous year.

We may look for like results in the Territories, so that before long western Canada will take high rank as a dairying country. After supplying local demands the market at present for our dairy products is British Columbia.

#### SEED GRAIN.

At a few points in Manitoba and the Territories applications were made for the advance of a small quantity of seed-grain to those isolated cases of loss from hail, and after proof of loss and need, sufficient grain was advanced to seed the land proven to be ready for crop. This was judiciously handled by our officials, and liens in each case were taken upon the recipients' lands, payable at the end of this year, so that advances are fully secured. There can be little doubt, with the prospect of an abundant harvest, that these liens will be almost, if not fully, repaid out of the proceeds of this season's crop.

#### PLOUGHING MATCHES.

Ploughing matches now receive much encouragement, the municipalities and individuals furnishing the prizes. They take place about the month of June, and a dozen of them have already been held in Manitoba. The ploughs used are mainly gang and sulkeys, with an occasional match of walking ploughs.

Interesting experiments with a newly invented rotary plough are eagerly anticipated by large progressive farmers.

#### DRAINAGE AND BRIDGES.

An elaborate system of drainage, necessary in certain districts, is being carried out in the province of Manitoba, which will open many tracts of overflowed land to agriculture. Survey parties are this year opening drainage ditches which owners of land have petitioned for. Seventy thousand acres have been drained on Mosquito creek, in the municipality of Franklin, and measures are being taken to drain the Rosser district and westward, securing from overflow probably 200,000 acres there. The Big Grass marsh, covering a large body of land north-west of Portage la Prairie, is also to be dealt with at an early date. These are the most notable propositions, which it is to be hoped will be speedily carried out, as there is an increasing demand for this character of land, at enhanced prices.

No great injury is reported from prairie or forest fires during the past year. Some bridges, however, were affected by the heavy spring freshets, and in future it has been suggested that all important bridges should be built of iron or stone. It is to be hoped that the several local governments will make the largest possible appropriations for these most important needs in developing the west.

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## EXHIBITS.

Our agents in the United States have been furnished through this office with an ample supply of grains, grasses, sections of soil and blocks of coal for exhibition by them at the great agricultural state fairs last summer and autumn. Besides these supplies to our agents, samples were forwarded upon application to private individuals in various States, who made good use of them, I believe, at local fairs in their several localities.

Over 5,000 American visitors attended the Winnipeg fair on Americans' Day, and those presenting themselves at our information bureau at the fair were freely supplied with literature, which has undoubtedly helped towards securing the increased immigration of United States citizens apparent during the fiscal year.

## WINNIPEG IMMIGRATION HALL AND OFFICE.

Notwithstanding the increased convenience and shelter for immigrants at the East Selkirk building, the demands upon the accommodation of the hall here are very great, and are almost continuous. Large numbers of people daily visit the office on all conceivable kinds of business, and innumerable inquiries upon a great variety of subjects are answered by the staff of officials.

## IMMIGRATION HALLS AND TENTS ELSEWHERE.

Halls have been erected by the government at Dauphin, Yorkton, Brandon, Regina, Rosthern, Prince Albert, Calgary and Strathcona, and buildings have been rented at Minnedosa, Birtle, Portage la Prairie, Qu'Appelle Station, Lethbridge, Red Deer, Lacombe and Edmonton. One or two of these may occasionally be overcrowded, but upon the whole immigrants are well cared for. In addition, I have distributed commodious waterproof tents at other points, viz., at Sifton, Swan River, Osler, Hague, Saskatoon, Duck Lake, Alameda, Bellegarde, Millet, Macleod, Olds, Didsbury, Ponoka, Wetaskiwin and Ledue. I think that the existing accommodation will be found sufficient, at all events for this season. Nevertheless, the department may be called upon at a moment's notice to provide shelter at some new point where immigration may have newly started.

The calling in and redistribution of tent accommodation requires continuous care to provide real need of shelter wherever immigrants may from time to time arrive on their way to new locations. By many an immigrant with a large family, without means to lodge them in hotels, this provision by the department is much appreciated.

## TOWNSHIP REGISTERS AND MAPS.

As usual, our land indexes, showing the identical homesteads entered for, and township plans, have been in daily request, and are of much assistance to land-seekers, whilst the demand for maps is incessant. There is a very good sectional map of the province for general circulation.

## CORRESPONDENCE.

The number of letters received at this office during the year is 16,503, and those despatched numbered 17,235, a total of 33,738. During the year under review, letters

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of inquiry have been received from points so far apart as the Falkland Islands, the Soudan and Patagonia, an evidence, if nothing more, of the widespread repute of western Canada, and of a desire for definite information, stimulated, no doubt, to a large extent by the reputation achieved in South Africa by the Canadian contingents.

In addition to correspondence, immense numbers of maps and descriptive pamphlets, freely supplied by the department, have been mailed to all quarters.

## RECORD OF ARRIVALS.

It may be interesting to note that an exact record is kept by name, nationality, &c., of every new arrival reported to this office, a result obtained only by the adoption of a system of checking by agents travelling on trains.

## SYNOPSIS OF REPORTS OF IMMIGRATION AGENTS ON TRAINS.

J. M. MCGOVERN, travelling immigration agent, Port Arthur, reports that he has this summer been on the road mainly all the time. His duty is to meet trains about 150 miles east of Port Arthur, check names, nationalities, proposed occupation and destination of immigrants, and report (including westbound arrivals by steamer) daily to this office; also to see to their treatment, ascertain their wishes, and give all necessary attention, advice and information about changes of cars, routes, &c., which is constantly required by new comers. The cleanliness of cars, a supply of good water and of provisions purchasable at reasonable prices, are important matters to immigrants en route.

Last year's immigration from the United States via Port Arthur was most satisfactory, and, through the activity of our agents, reports of delegates and settlers' correspondence, it is likely to assume very large proportions. Arrivals from the older provinces were, in numbers and class, about the same as the previous year, with the like stock and effects. There has been no serious disease among the people en route.

D. W. AGNEW, Moose Jaw, Assa., reports 3,888 souls and 502 cars as having crossed into western Canada at Portal, between February 5 and June 30 last.

Very few of these located along the 'Soo' line, the settlers there for the fiscal year having been mainly Canadians, of English, Scotch and Irish descent, together with a number of Swedes, Norwegians and Germans, all of whom appeared to be good settlers, and the majority to be in good circumstances. They were distributed as follows: Pasqua and Moose Jaw, 83; Drinkwater, 3; Rouleau, 23; Milestone, 11; Yellow Grass, 6; Weyburn, 9; Estevan, 73; North Portal, 9; in all, 217 souls, with their effects in 34 cars. Some deduction, however, must be made from the Estevan, Pasqua and Moose Jaw figures, for a number of immigrants who subsequently went to Balgonie district. The soil along the 'Soo' line is very rich, varying from sandy loam to heavy clay, according to locality, and the crops are looking well. The sinking of supply wells in the centres of townships by the Territories government and the Canadian Pacific Railway Company, if such co-operation could be obtained, would be much appreciated. This, I consider, is a very important matter, on account of the remarkable fertility of the region otherwise, which will justify a liberal expenditure in sinking test and supply wells at central points.

S. GRAY, Lethbridge, Alta., reports the number of settlers from February 5 last to the end of June, from the United States via Coumts, and by highway between Maple Creek and the western boundary of Alberta, as 871 souls, and the value of the stock, &c., they brought in as \$121,688. The nationality is as follows: 581 Americans, 54 returned Canadians, 69 English, 32 Scotch, 5 Irish, 4 Welsh, 10 Germans, 21 Austrians,



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10 Scandinavians, 13 Danes, 65 Finlanders, 2 Russians and 5 French. Of these, 343 went to the Mormon settlements at Cardston, Stirling and Magrath; 253 to other parts of southern Alberta; 173 to northern Alberta, along the Calgary and Edmontou Railway; 52 to British Columbia; 1 to Saskatchewan; 35 to Assiniboia, and 14 to Manitoba.

He reports the immigrants to be sturdy, industrious people, with sufficient capital and intelligence to insure success.

Settlers in southern Alberta are delighted with it, and it is expected that immigration there will largely increase. Fall wheat can be grown successfully, as well as all other grains, roots and vegetables. The soil is also admirably adapted for sugar-beet culture, and before next season it is expected a large sugar factory will be erected at Brandy, a station on the St. Mary's branch of the Alberta Railway, an undertaking eagerly looked forward to by the settlers. Mr. Gray's information regarding irrigation at Lethbridge is embodied in the paragraph of my report descriptive of this enterprise, and need not be repeated here. On the vast and well-grassed areas of southern Alberta, he states that there are now at least 20,000 horses, 145,000 cattle and 30,500 sheep.

The collieries at Lethbridge, managed by the Alberta Railway and Coal Company, he reports as employing 400 men at the pits and 250 in the railway department, the output of coal for the first six months of this year being, he is informed, 86,366 tons.

From the prosperous condition of things generally one can forecast a largely increased immigration during the coming year.

## SYNOPSIS OF REPORTS OF IMMIGRATION AGENTS IN WESTERN CANADA.

D. MORRISON, East Selkirk, Man., reports that the hall there has accommodated during the year 5,290 German and Galician immigrants destined for points westward. The hall has been greatly improved by whitewashing the walls and painting the woodwork, thus relieving its appearance. Other desirable repairs and improvements including a fine root-house have been effected.

The office and storeroom, he adds, have been made much more convenient and comfortable.

WILLIAM BRAUN, Brandon, Man., reports a satisfactory year's immigration to Manitoba. American delegates should be invariably taken, he thinks, to the Brandon Experimental Farm, as here they can obtain a wider variety of culture samples showing the fertility of the soil and the capabilities of the climate than upon individual farms. He considers the institution a great stimulus to immigration, and that owing to the visits of Americans much land in the locality has changed hands. They see what the soil will produce by being properly treated.

PAUL WOOD, Sifton, Man., reports having guided during the year 150 settlers, and having obtained temporary employment for over 200 settlers, a fair proportion of them being girls, who went to all parts of the province as domestic servants. He also has acted as interpreter at the Dauphin land office, reporting upon land entries, cancellations, valuations of improvements, &c. He spent some seven weeks besides examining the country between Ethelbert and Fisher's Siding to ascertain the area available for settlement, and the most desirable centres.

Galicians settled two years or more are doing well, and as a rule are contented. Cattle are well kept and of superior quality. The people are recognizing the need of schools; two more public schools through his instrumentality are now established amongst them. Numbers of Galician children attend the other older schools with Canadians. He suggests that newly surveyed townships should be placed in the market as soon as possible after survey. It was owing to scarcity of surveyed land that squatting in many cases took place.

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HUGH HARLEY, Immigration Agent for Swan River, Man., reports a steady influx of settlers during the past year, principally from Ontario, England and the United States. Arrivals from the agricultural counties of England, Scotland and Wales with capital and experience have been numerous. There are about 9,000 acres under crop this year, and looking well, so that much grain will go out after harvest. Two municipalities have been formed, so that roads and bridges will be attended to. The demand for land keeps up. There are many homesteads available for mixed farming and abundance of good railway lands. Besides many sales of Hudson's Bay Company lands 15,540 acres of other lands have been purchased. A large number of new buildings have been erected on farms and in the three villages, and signs of prosperity are seen on every side. There are now six post offices in the Swan River Valley, 15 school districts have been formed and new school houses are being built. The timber is splendid, the water good, the soil excellent, throughout the whole Swan River Valley. There are now five saw-mills, a planer and a sash and door factory at work. A number of the first settlers are entitled to patents, and in some instances from \$1,800 to \$2,000 have been offered for these new farms and refused. He reports the immigrants of this year to be of a very superior class. The majority have means, and all have at least enough to give them a start. Thoroughbred stock is being brought in largely, 127 car-loads of stock and effects arriving during the year. The government tents have been of good service to many new arrivals. He concludes by describing the condition of the north colony of Doukhobors at Thunder Hill, which will be found elsewhere referred to in my report.

C. J. THOMSON is our immigration agent at Virden. His operations have included the conveying of French immigrants from Quebec to Antler station on the Pipestone extension en route to St. Maurice, a settlement formed a few years ago in the Reston district; the driving of land seekers from Scotland and the States at different times to various localities, and facilitating their homestead entries; waiting arrival in Winnipeg of Belgian delegates; placing experienced Scotch farm hands with good farmers; attending Winnipeg exhibition and distributing descriptive literature; ascertaining at various points the number of farm hands required for harvesting and arranging for the sending of Doukhobors and Galicians to different districts.

He reports the young men sent to him in April to place with farmers as prospering. He has always done his best to get immigrants to take up land in the Virden district rather than go a long distance, but adds that it is not easy to get men in search of homesteads to purchase land. Much depends upon what money they have brought. His report recommends that lines be ploughed where needed or corner posts put up, so that any one can locate the quarter-section he wants. At certain seasons farmers would be willing to do the work at reasonable prices.

J. S. CRERAR, Yorkton, Assa., reports immigration into his district during the past year as larger than usual, especially from Iowa, Minnesota and the Dakotas, and mainly settled in the Beaver Hills district. Some German families from Nebraska joined a Russian German settlement in the Wallace district, and in spring forty Galician families arrived and settled north-east of Yorkton in the Crooked Lake and Bear Hills colonies. Twenty cars of immigrant effects came to Yorkton from the States and eleven from Ontario, and all the parties mentioned had more or less means, and are delighted with their change of habitation. Galicians and Doukhobors got employment till late in the season with farmers, railways and constructors, and earned much money to tide them over the winter. He reports fifty per cent more land under crop this year than last, with indications of a heavy and early harvest. All industries connected with the land are increasing and the whole district is prosperous, with no sickness to report amongst the many nationalities settled there.

C. STEMSHORN, Regina, Assa., reports 995 arrivals there for the fiscal year, many of whom settled in the district, whilst others went north to Prince Albert. The nation-

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alities were as follows:—531 English, 356 Germans, 13 Scandinavians, 49 Galicians, 34 French, and 12 Russian.

The hall was occupied, counting the time of use by each, for 7,607 days. Most English and Germans, from the United States brought one or two ears of stock. The new comers pulled through the long winter better than was expected, only a few who came in November requiring temporary assistance. He notes that no Doukhobors came to the district for employment this season as they formerly did. He states that the Germans this year were well supplied with means; some of them bought and paid from \$1,500 to \$2,000 for improved farms.

T. COPLAND, Saskatoon, Sask., reports satisfactory progress in his district, and the promise of a great harvest, more than double that of last year. Cattle and pigs are largely raised, and new houses and barns are going up in all directions, and settlers are planting trees round their dwellings—a sure sign of satisfaction. He states that inquiries from the various United States are greatly on the increase, and that delegates who examined the district were enthusiastic in praise of both land and climate.

GERHARD ENS, Rosthern, Sask., reports on German, Galician and other immigration. Large numbers began to arrive in spring, all were farmers and are now located or hired out. About six train-loads of German Americans from Kansas, Minnesota, Nebraska and the Dakotas, first class settlers with means, and two train-loads of Galicians and Hungarians also came in spring, who are placed on good land. Mr. Ens has done much work in the way of correspondence in securing employment for immigrants, taking charge of numerous delegates, and helping the Doukhobors settled west of Rosthern to locate their homesteads so that their entries could be made. He reports them and the Galicians as very prosperous, their crops wonderful—some winter wheat amongst the latter promising 35 bushels to the acre. He calls attention to the attractions of the unsettled Hoodoo and Beaver Hill Creek district, where the soil is first class, water plentiful and timber within easy reach. The duties Mr. Ens is called upon to perform cover a very large territory, and his time is very much taken up.

L. B. COCHRAN, Medicine Hat, reports immigration much in excess of last year, and a desirable class with fair means. The Germans in the Josephsburg district are good citizens, happy and contented and well to do. The rainfall this spring is greater than since 1884. He reports losses to stock last winter as nominal, the calf and lamb crop being exceptionally good. Stock prospects were never better, shipments for six months ending June 30, being 1,633 head. Mr. Cochran has placed sixty men with ranchers during the year at fair wages, visited several parts of his district and found all settlers satisfied, and looks for a very large immigration next year.

JAMES WINN, Calgary, Alta., reports a large correspondence from Great Britain, the United States and Canada, asking for information as to the advantages his district offers to new settlers. Delegates and others who visited the hall were surprised at the samples of grain and grasses on view there, having been led to believe that the region was fit only for ranching. On the contrary, he says, mixed farming has of late years been very successful, and fully compensates farmers for their labour. Many thoroughbred cattle have been brought into the district during the year, and sheep ranching has increased. Horse ranches are profitable. Cattle shipments were above the average, and young cattle throughout the district are in prime condition. Range grass is abundant, hay will be amply secured, and brome grass is an extraordinary crop, and will supplement other grasses in the future, many settlers seeding down increasingly this grass every year.

During the fiscal year, 2,675 immigrants were afforded accommodation in the immigration hall at Calgary, but he estimates that 13,425 immigrants landed at Calgary during the time who did not pass through the hall, proving the necessity of adding at least 25 per cent to the reported returns. The value of stock and settlers' effects which passed through the customs at Calgary for the current year was \$416,210.

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THOMAS BENNETT, Strathcona, Alta., reports the arrivals of immigrants at his agency during the past year as 4,463, as against 3,123 in 1899, and 2,595 in 1898. They consisted of 2,191 from Austria, 1,390 from the United States, 598 Canadians, 225 Germans, 59 British.

The settlers, from reports he has received, are prospering. Already, he says, 852 men have gone to work on the Canadian Pacific Railway from his district, 785 of whom were Galicians.

The incomers from the United States are, upon the whole, a well-to-do class. Many bring stock and implements and buy improved farms, if to be had. Canadian and German immigration has increased.

Mixed farming is a success, and good prices are got for cattle, horses and hogs, so that farmers at a distance from stations can do about as well as those near to it. Homestead entries are far in excess of last year, and settlement is extending fifty to seventy-five miles east of the railway, the land being excellent and adapted to mixed farming. American delegates were loud in praise of the country, and astonished at its products, predicting an immigration to the district of hundreds of thousands from the United States. He reports four large gold dredges in successful operation on the Saskatchewan river, and the number likely to be increased next season.

C. W. SUTTER, Edmonton, Alta., reports that he spent two months last winter in Indiana and Kentucky, working in conjunction with Mr. Holmes, our immigration agent at Indianapolis. He visited a Kentucky German and Swiss colony which he believes may be induced to emigrate, one family, in fact, having since settled in Alberta. He interviewed many Dunkards in Indiana, and visited their leader and adviser, Mr. Frank Fisher, who finally decided to visit this country and see for himself. He came last month (June) with Mr. Holmes, and was so satisfied, that these Dunkards will probably in future emigrate to the North-west. The Galicians are making good settlers, extending cultivation, increasing their horses and cattle, and in every way improving their condition. Their purchases of implements last season, including two threshing outfits, amounted to over \$60,000. They are also bonusing a proposed grist-mill in their midst, and their prospects for this season are very bright. The chief feature of the last year's immigration is the large influx of a desirable class from the United States. They are experienced, English-speaking western farmers, he says, who understand our institutions. The Edmonton hall is continuously occupied by a succession of the best English-speaking settlers. Aside from accessions which did not come in contact with officials, the approximate immigration to the large district contiguous to Edmonton for the year is, of English 613, Scotch 684, Irish 346, Germans from Austria and Russia 1,284, Scandinavians 1,734, Belgians 146, Galicians 623, United States 5,389, Canadians 2,285, other countries 229; total, 13,333.

## SYNOPSIS OF REPORTS OF LAND GUIDES.

C. TOMLIN, Dauphin, Man., reports the number of immigrants who used the hall there since the beginning of last September, when record commenced, as 441. About 300 others arrived who stayed elsewhere. With few exceptions, their appearance was good, and many of them had considerable money. He reports considerable work in lumber camps for capable men.

JOHN MENZIES, Shoal Lake, Man., reports that he has been in close touch with the Galicians since they first settled in the Shoal Lake, Rossburn and Strathclair districts. There are now nearly 1,700 souls comfortably settled there, with fairly good buildings and homesteads, and apparently contented. The men work in spring and summer with our farmers, and in winter cut firewood, which they sell at good prices to settlers to the south of them. The young girls find homes in private families and boarding houses, and in nearly every case have turned out well, earning, some of them, from \$10

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to \$15 a month. They take pride in their appearance and dress, and look much like other girls. Some of the men have a mechanical turn, and have made their own wagons and sleighs, rude and ancient in style, but serviceable. Their cattle wintered in good shape. There will be lots of work for them this season, and he thinks that when these people get a solid footing they will make good and useful citizens.

W. H. McDOUGALL, Reston, reports that the district westward to the 'Soo' line has filled up rapidly during the past three years. Generally speaking, the settlers coming in were a good thrifty lot; two-thirds were Canadians, and the balance English, French and German. The lands selected north-west and south-west, when ploughed and the stones removed, take on a much improved appearance, and the values are rapidly increasing in this locality. Mr. McDougall states that there is not an available homestead within a number of miles of Reston, but there is land for sale on very reasonable terms, and he believes that both the poor and the rich man will succeed in his district.

H. WHITLOCK, Estevan, Assa., reports twenty-eight actual settlers for the year, besides numbers who have entered for homesteads, but are not yet residents. Crop prospects were very promising, and rain abundant. Water is found in his district at a depth of from ten to twenty feet, and coal is plentiful. He thinks land-seekers should be directed to Estevan, as this and the Moose Mountain settlements are only about twelve miles apart, and the seeker can find homesteads by driving eight or ten miles from there, whereas, otherwise, he has to drive from thirty to forty miles. He estimates the crop area at 1,100 acres.

J. S. GRANT, Osler, Sask., reports the arrival at that point of 46 immigrants from Minnesota and 101 from Manitoba. They are nearly all Mennonites, whom he describes as clean, thrifty, industrious and, in most cases, well-to-do, many of them bringing in two to three car-loads of settlers' effects, and money enough to erect comfortable and, in some cases, extensive buildings. He reports sufficient government land to accommodate 100 homesteaders as still available within ten miles of Osler Station. Though some sections of the locality are passed by as stony, they are in reality choice farm lands.

A. E. GUINN, Melfort, Sask., reports beginning duty about May 25 last by showing prospective settlers the lands in the Carrot River district, particularly the Willow Creek and Leather River country. Subsequently, in June, he convoyed land-seekers from Kansas, U.S.A., Ottawa, Ont., Carberry and other places in Manitoba, through portions of the district, being engaged on this duty nearly the whole month.

The necessity of a land guide at this point, so far east of Prince Albert, indicates very plainly that settlement is spreading over the Territories at a very rapid rate.

JOSEPH M. SMITH, Red Deer, reports having taken over 300 people through that country during the fiscal year.

During the year twenty improved farms, 100 Canadian Pacific Railway, 60 Saskatchewan Land and Homestead Company, and a few Hudson's Bay Company quarter-sections have been sold in this district. The ranching industry of Red Deer is now equal to that of any other district, crops look well and hay most promising.

COOK MEYER, Ponoka, Alta., reports having taken about 700 persons to land during the fiscal year, of whom 96 were of foreign birth and 108 of foreign extraction. Canadians numbered 37, and 409 were Americans, of whom 112 came from Nebraska, 66 from Iowa, 50 from North Dakota, 26 from South Dakota, 8 from Montana, 12 from Illinois, and 35 from Ohio, and 100 nondescript. Of the whole number, 58 were delegates, and the remainder homesteaders and land-seekers. The district is pretty thoroughly settled for twenty miles east and west of the railway, the Canadian Pacific Railway lands being disposed of for a considerable distance, and the Indian reserve well sold out.

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J. N. BURDICK, Lacombe, Alta., reports 22,000 acres of Canadian Pacific Railway land and 3,000 acres of Hudson's Bay Company land sold during the past year in that district, in addition to 79,360 acres homesteaded, the immigrants representing about 2,600 souls. About 100 families are settling on land near Gull lake and Buffalo lake, which should be surveyed and opened for entry at once. He thinks this land the cream of the district. The new immigration hall has been occupied at times by as many as eighty or ninety English-speaking people.

## SYNOPSIS OF REPORTS FROM DOMINION LAND AGENTS.

The newcomer is immediately brought in contact with these agents, and I can bear testimony to the willingness with which these officials have added to their ordinary duties, by the giving of information and useful advice that a newcomer really needs. To the efforts and interest of these land agents must be credited a fair measure of the successful work of this branch of the department during the past year.

The following extracts will be of interest :—

L. J. CLEMENT, Brandon, Man., reports that entries have been made chiefly in townships 5, 6 and 8, ranges 29 to 34, west—north and south of the Pipestone extension of the Canadian Pacific Railway.

The class of settlers was above the average, many experienced farmers with large means, chiefly English, Canadians and Americans. Cancellations are yearly decreasing—an evidence of prosperity—and farmers are buying contiguous lands at high prices. Creameries are increasing. Cattle and horses sell readily at good prices, and harvest prospects the brightest for many years.

JOHN FLESHER, Minnedosa, Man., reports a considerable increase in homestead entries in his district during the past year, also extensive purchasing of lands from the provincial government, railway companies and other corporations. The great want of his district is more settlers, in order that municipal taxation may be reduced, schools and churches be better supported, and social intercourse extended. Rain has been abundant, and the crops are promising the largest yield ever known. The quality of horses and cattle is steadily improving, and the trade growing, so greatly indeed, that stockers are scarce, and are being imported from Ontario. The creameries are prospering, and will exceed last year's output. Dairy work is receiving the attention its importance deserves. Mr. Flesher looks forward to the most prosperous season known.

F. K. HERCHMER, Dauphin, Man., reports that the Canadian Northern Railway Company and Hudson's Bay Company have sold largely, but operations have been mainly confined to the older settled parts, where high prices have been obtained. Good land is now largely taken up and fresh surveys are required. He reports a large tract east of the district as desirable land, and some surveyed townships near Lake Dauphin contain some settlers. He suggests improving the trails and roads. Increased railway transport, particularly from Gilbert Plains, helped producers last year. Oats were a good crop, and brought good prices, the demand exceeding the supply. Barley was a small but good crop, and roots and vegetables perhaps better than usual. Cattle, hogs and poultry are in great demand. Crop prospects are good. The Swamp Lands selections have lessened in considerable measure the lands available for settlement, and some damage was done by fires in the wooded parts, but not as in former years. He notes a steady improvement, new houses, barns, &c., all through the district. Drainage is of great importance, and a comprehensive system, with government aid, is required. Large areas could be recovered for settlement this way. School districts are forming as requirements call for them, and churches are being built in all the centres of population.

W. C. DEBALINHARD, Yorkton, Assa., reports the various settlements of Hungarians, Poles, Germans, French, Danes, Icelanders and Dutch in his neighbourhood as doing

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well, without exception; also, 'that the grain crop in the Doukhobor settlement is very fine, and they are making great progress. Their cattle and horses are particularly well looked after, and are fat and in first-class condition, and their villages are well and orderly kept.' The Galicians, so far, have the advantage over the Doukhobors through being longer in the country. Their girls after domestic service, and men after a year's work in town, return home speaking English. Immigration from the United States is large and the class good. There is every prospect of the largest crop ever taken off in the district, in both hay and grain, the increase in acreage being 30 per cent over last year.

K. CLAUDE KISBY, Alameda, Assa., reports a winter without severe storms; cattle came out well, and the outlook for crops the most favourable on record, wheat promising to average 25 bushels to the acre. Still plenty of first-class land in the district, but nothing to speak of within eight to ten miles of the railway. This year's settlers are mainly young Canadian farmers from Manitoba and Ontario, also a large number from the United States, who have taken land and have ample means, and about twenty German families from Russia and Austria. The latter, settled in township 4, range 5, west second meridian, have sufficient capital to secure a fair start. The country between Moose Mountain and Weyburn, and about Estevan and Bienfait, is being rapidly taken up, but large tracts are still open in the district, with splendid soil, good water and wood or coal within easy distance.

JOHN McTAGGART, Prince Albert, Sask., places arrivals in his district at 2,000 souls, the number of homestead entries exceeding that of any previous year.

Last year's crop was excellent, and this year's still better—a growth phenomenal. Every one hopeful and contented.

R. V. CHISHOLM, Battleford, Sask., reports that the year's immigration to his district is not to be measured by the small number of entries. Numbers have come in and got employment, who, having gained experience and some means will start for themselves. The farm productions of last year were far above the average, oats being so excellent that they were hauled 95 miles in wagons for seed. The spring was late and wet, but crops are looking well. The prospects are a harvest equal to last year's. The winter was not severe, and cattle came out well. The settlers are eagerly awaiting the advent of the Canadian Northern Railway, and with a view to it, farming is beginning to rival ranching, and intending homesteaders are on the alert. On the whole, he reports the district to have much more than held its own during the past year. Contentment pervades the community, and thrift and enterprise are more manifest than for many years.

J. R. SUTHERLAND, Calgary, reports that his district has received a fair share of the large immigration into Alberta, the majority of the settlers going north and the remainder south of Bow river. The homestead entries for the year (893) show an increase of 365 over the preceding twelve months. The number of immigrants who utilized the immigration hall, viz., 2,675 persons, an increase of 916 compared with the previous year, does not adequately represent the total incomings, as large numbers put up at hotels, or go on to the land without stopping at Calgary. Mr. Wiinn, immigration agent at Calgary, estimates the arrivals there at 13,425. The settlers are of a good class, and numbers of them bring in much capital. Last year's crop was above the average for the district.

A. J. FRASER, Lethbridge, Alta., reports a large increase of immigration to his district, nearly double the area under crop, as also of homestead entries, the settlers going mainly into the Cardston, Macleod, Pincher Creek and Medicine Hat country; a number bought land from the Irrigation Company, and others from the Calgary and Edmonton Railway Company. The settlers are well satisfied, and are going into mixed farming. Grain, roots and vegetables are all doing well, and harvest prospects were never

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better. He reports the district as singularly well adapted to mixed farming, that a healthy condition prevails, and all lines of business prosperous.

W. H. COTTINGHAM, Red Deer, Alta., reports a year of great progress for the Red Deer district. The grain ripened, and a bountiful harvest was secured. Not much fodder was required, as the winter was mild. Cattle came through on the prairie grass in good shape, and with very little loss.

The homestead entries are largely in excess of the previous twelve months, and a large number of persons have purchased railway lands, also land in the Sharphead Indian reserve. Fully one thousand heads of families have settled in his land district during the year, amounting at the usual average to 5,000 souls.

A large number are foreigners who first settled in the United States, and a number are returned Canadians. With one or two exceptions, all settlers during the past year speak the English language. Mr. Cottingham points out that mixed farming in his district is not an experiment, but its success has been fully demonstrated. Some intending settlers seem disappointed that they cannot get free homesteads near a town with churches and schools at hand. Yet, so far as Red Deer is concerned, free homesteads of first-class land can be had, but not at a less distance than twenty miles from the railway.

R. A. RUTTAN, Edmonton, Alta., reports an extraordinary increase in the settlement of that district, and development very great. The bulk of the settlers are homesteaders, but numbers have purchased railway lands, and from grantees of half-breed scrip. The whole number of heads of families is reckoned at over 2,100, and the increased immigration of the year has been materially assisted by the correspondence of parties already settled in the district, who are contented and prosperous, and promoters of an immigration which is certain to increase largely year by year. Though rains were heavy for a short period, crop prospects are good. Two million bushels of oats, it is believed, will be exported from the region north of Red Deer river this season, the other grains being required for home consumption. The prospect of the Canadian Northern Railway passing through the district is already stimulating settlement in the 'Vermilion River country,' a beautiful region south and east of Beaver lake, in townships 49, 50 and 51, in ranges 13, 14 and 15, west of the fourth meridian. There is still ample room for hundreds of settlers in the Edmonton agency, along the probable location of that road. Mixed farming has become general in the district, excepting Stony Plain district, where grain is a specialty—sometimes a mistaken policy since when grain is damaged, the mixed farmer can feed it to stock at a profit even greater than that obtained at the ordinary prices of grain. The settlers, merchants and business men generally are satisfied with the existing conditions in the district.

E. A. NASH, Kamloops, B.C., reports a cool season with plenty of rain, so that fine crops are growing without irrigation. The climate seems changing, he says, and if so, lands hitherto considered worthless will be eagerly sought after. Hay and grain look well, the range-feed excellent, and cattle in prime condition. He believes Kamloops to be a mining centre, and reports a costly dredger as about to begin work on Thompson river, fifteen miles from town, also a large number of people awaiting confirmation of recent surveys in order to make their entries.

JOHN MCKENZIE, New Westminster, B.C., reports a large correspondence last fall and this spring asking for information as to climate, prices of produce, quality of lands and prospects of settlers now in the country. The British Columbia government also supplies him with immigration literature. Pamphlets descriptive of western Canada alone are not very well suited to British Columbia, the natural conditions being different. A good many people have arrived during the past fiscal year who have purchased in most cases partly improved lands; others have settled in valleys not yet surveyed. The district he states will be excellent for dairying and mixed farming, and the weather this season is propitious.



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## SYNOPSIS OF REPORTS OF SUB-AGENTS OF DOMINION LANDS.

SPENCER PAGE, Wapella, Assa., reports the actual immigration into his district during the last fiscal years as not very large, but a large number of cancelled homesteads have been reoccupied by a very desirable class, viz., the sons of old settlers. Only two car-loads of immigrant's effects were landed at Wapella last spring, owing to there being no homestead land now in that region. The Finlander and Jewish colonies are making progress, the cultivation area has increased, and nearly all the Jews now own half a section of land and are doing well as farmers.

REGINALD NEWTH, Qu'Appelle, Assa., reports a large extent of excellent land lying idle north of that town.

H. G. W. WILSON, Indian Head, Assa., reports that whilst the land in that vicinity is now well settled, there is still a large tract available in the southern part of the district which is reasonably close to the Canadian Pacific Railway, the soil being a heavy black loam with clay sub-soil. A French settlement ten miles south is progressing. The foreign element in the district is very small; but whilst the majority is Canadian, foreigners should do equally well in the district, where well known success in the growing of wheat and other cereals should be a strong inducement to intending settlers. An immense acreage is under crop this year and promises excellent results.

J. J. ENGLISH, Maple Creek, Assa., reports only for the six months ending June 30, as he has only been in charge of the office there during that period. Homestead entries are largely in excess of last year, the new settlers being of a most desirable class. Well-provided immigrants from Dakota, Iowa, Nebraska and Montana are bringing in fine stock to the ranges. Large numbers of settlers are locating along the Saskatchewan river, and a ferry upon the river would settle a good country on the north side. Little loss was sustained by the ranchers last winter, and shipments of fat cattle were made from Maple Creek as early as the month of May. Over 3,000 stockers were brought from the east into this district this spring; the crop acreage is very much larger than usual, and is in splendid order.

He reports a number of immigrants from Montana as having settled on lands south of Cypress Hills, awaiting surveys.

R. M. MITCHELL, Weyburn, Assa., reports that hay matures earlier than in districts more easterly where the 25th of July is the day fixed to start cutting. At Weyburn they will cut on the 15th July, as at Regina. A great number of settlers are applying for patents for their homesteads.

A. B. COOK, Arcola, Assa., reports that during the season a great many settlers arrived in the Moose Mountain district, and more than 60 cars of settlers' effects have been unloaded at Arcola. A large number of Americans from Minnesota, Nebraska, Dakota, Iowa and Illinois have taken land and commenced operations. In addition, a number have arrived from Ontario and the eastern provinces, and some from France, Germany and Ireland. All these settlers are superior and desirable, and apparently well satisfied and delighted with the district.

Mr. Cook reports the season very satisfactory; weather all that could be desired, and prospects for a banner crop. The cattle on the ranches and the mountains never looked better, and the number is rapidly increasing.

The land in the district is admirably suited to grain-raising, being composed of 12 inches of loam with a clay sub-soil. First class water can be obtained almost any place at an average depth of 20 feet, and there is an abundant supply of wood in the Moose mountains.

A number of free homesteads within easy reach of Arcola are still open, together with a large quantity of railroad land open for sale.

The country to the south of Moose Mountain is mostly of a rolling character, being formed of long slopes and valleys with a number of streams of water. The

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Moose Mountain creek winds along the valleys, and is a very pleasant stream of clear water, running the year round.

Mr. Cook's district is a rather large one, and he estimates there are still several hundred first-class homesteads open for settlement.

C. O. CARD, Cardston, Alta., reports that it would be of great benefit to have his district settled east and west to the boundary. The government has opened the country for homesteading as far east as range 19, but pasturing and arable lands extend to the mountains on the west.

He reports good harvest prospects in the Mormon colonies. The acreage under crop is double that of last year, and so vast a quantity of land is being broken up that the acreage under crop will be quadrupled in 1902. Stock prospects are excellent, several thousand additional head have been placed upon ranches and farms during the year. The ranges have not looked better in fourteen years. The trouble now is to get homesteads enough for home-seekers; but the government has thrown open township 1, in ranges 20, 21, 22 and 23 south and east of Cardston and south of Magrath and Stirling. New comers are going north to the Waterton river, and settling east and west of that stream. Settlers are generally contented. Last year's good crop is likely to be followed by another. Much of the country adjacent to the Foot Hills is undulating, and in places precipitous, so that road allowances cannot be followed, and other roads are needed to give settlers access to markets, and to the mountains for timber.

A. E. COX, Pincher Creek, Alta., reports regarding the region west of range 26 west of the 4th meridian, to the Rocky Mountains. The settlement of this district proceeded very rapidly during the past year, the new settlers being mainly practical farmers from the United States, Ontario and the United Kingdom, who recognize that the region is adapted to mixed farming, and have both confidence and capital to buy land adjacent to their homesteads if available. The result is that the district is now being fenced and in some parts the area for purely range cattle is very much restricted. Rangers are consequently either buying land for pasture or moving their herds farther east. In the future there will be small herds of better value instead of a few large ones of inferior quality. Immigrants too are buying lands to raise wheat, and soon grist-mills and elevators will stud the country. Fall wheat has never been a failure in this district.

The winter had a few cold weeks, but cattle wintered reasonably well. Crops were good and abundant and well saved. There is increased acreage under crop this year of grain and grass; timothy and brome are receiving much attention, both being profitable for home use and export. Garden stuffs always do well in this district. The future development of the large coal areas of the region will greatly advance its material prosperity. The exports of his particular district were approximately 2,700 cattle, 300 horses, a large but unknown quantity of hay and some grain, the imports being 1,700 cattle, mainly stockers, and thoroughbred bulls. Pincher Creek has become a distributing centre, and has increased considerably in importance and solidity during the past year.

W. D. PITCAIRN, Ponoka, Alta., states that 3,500 acres of Indian reserve land have been sold since the middle of March last, at an average of \$2 per acre. He estimates the immigrant arrivals at his point for the year at from 600 to 700 souls, 75 per cent of whom are Americans, mainly from Dakota, Nebraska, Iowa and Minnesota, especially Dakota; and are a good class of yeomanry who have realized on their property in the States and are investing at Ponoka; fully 70 per cent are married men with their families, the remainder being principally British, Danes and Swedes.

Fifteen miles from either side of the railway there is abundance of good free land awaiting settlement, but within that distance the land is largely taken up. Road-making is one of the great needs of the district, also bridges over creeks and streams. The district is admirably adapted for stock, but with better railway and road facilities, dairying and mixed farming would be carried on much more largely than at present.

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## OTHER MATTERS OF INTEREST.

Western Canada has long been considered as a land of wonderful natural resources, but new and additional proof of its vast possibilities may be found in several facts: that while boring for water, coal has been found at Otterburne and St. Malo, on the east side of the Red river; natural gas was reached right in the town of Melita, at a depth of 381 feet; brine of great strength has been found near Dauphin, and near Miami a bed of natural cement has been discovered which a company is now manufacturing by mixing it with gypsum from Lake Manitoba, and of this material they are now turning out 75 barrels a day.

While western Canada is beyond question an agricultural country, the land of the farmer and stock-raiser, yet these new 'finds' will be interesting reading, and doubtless awaken further investigation into future possibilities.

Localities which at one time were occasionally troubled with summer frosts have completely overcome that difficulty, and it is now proved beyond a doubt that cultivation is an almost certain preventive of summer frost in the northern portions of our Territories, as is also the case in various States of the Union formerly troubled in the same way.

## CONCLUSION.

The conditions of the fall of 1900 might have been considered by some as sure to affect immigration from the United States particularly, but it appeared on further investigation that the north-western States of the Union at least had been passing through a similar experience. Notwithstanding, therefore, those temporary conditions, which might have affected the incoming of American farmers, I am pleased to be able to point to the very handsome record during the first six months of 1901, to prove that the good reputation of the Canadian west is now firmly established in the opinions of American farmers. Lands which last year could have been bought for from \$3 to \$5 per acre, are now worth from \$5 to \$10 per acre, and in some choice localities land has advanced over 300 per cent; and the fact that school lands in the Territories brought in some cases \$3 an acre more than similar lands in Manitoba, is significant of a general advance in values throughout the whole country.

It appears to me that a fairly general movement has been successfully inaugurated in favour of western Canada, and it is not too much to suppose that this movement, instead of decreasing, will rapidly widen from year to year.

I have found that there are such a large number of people coming from the south by way of Emerson, on the Canadian Northern Railway, and by way of Gretna, on the Canadian Pacific Railway, that I would recommend that arrangements be continued for the placing of a man on each of the daily trains passing over these respective lines, in order to check the arrival of immigrants, and to assist this office in disseminating useful information and advice to newcomers.

The whole of the staff connected with the office have been kept very busy during the whole of the year, and the efficiency with which the work has been carried on in all its branches is a natural tribute to the effective work of my predecessor, Mr. W. F. McCreary.

Respectfully submitted,

J. OBED SMITH,  
*Commissioner.*

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## No. 2.

## REPORT OF C. W. SPEERS, GENERAL COLONIZATION AGENT.

WINNIPEG, August 7, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit to you my annual report, being a review of the work done by me from June 30, 1900, to June 30, 1901.

In the month of July, 1900, my time was occupied inspecting the colonies situated in Saskatchewan, viz., the Galician settlers, the Doukhobors, and settlers of other nationalities in the vicinity of Rosthern, and in addition to the above, I looked over portions of the country in the vicinity of Crooked Lakes, Carrot river, Wingard and Dundurn, to select suitable districts for the future colonization of different nationalities. The colonies inspected were making excellent progress, they have broken large tracts of land, and have acquired a great deal of stock, their surroundings are very much improved, and where employed they have given excellent satisfaction. I have received the highest testimonials as to their work as domestic servants and labourers, both from corporations and from individuals. They possess a good country, and the districts inspected for future colonization possess every natural advantage; well wooded and watered, with the best of soil. Saskatchewan is capable of holding an immense population, and also insuring great prosperity for its settlers.

During the same month I was enabled to secure employment for a great many of our settlers. During the month of August, 1900, I was in attendance at the fairs at Winnipeg and Brandon, where we had a bureau of information, and distributed large quantities of immigration literature. We met a great many American people at these places. I also purchased at these fairs some very excellent samples of grain for the United States state fairs. During the latter part of the month, I assisted in placing a thousand Galicians and Doukhobors in the harvest fields of Manitoba. I am pleased to note that they invariably gave satisfaction, and were considered first-class men.

The classification and shipment of grains, grasses and other exhibits for state fairs also engaged my attention in August.

During the month of September I attended the state fair of Illinois at Springfield, assisting Mr. Broughton. We put up a very nice exhibit of Canadian products, and gave information to thousands of people daily, who were inquiring about Canada. After returning, I inspected several of our colonies, doing some special work, and under instructions of the 22nd of October, inspected all the workhouse children, as well as philanthropic societies and institutions, making a detailed report thereon.

My time was also occupied in inspecting the different colonies, looking after various things pertaining to settlers, and I found our foreigners in a very satisfactory condition.

I beg to observe that many things occur from time to time that require attention, such as cases of unpaid wages, differences and disputes as to the location of land, reports that contagious diseases have broken out, &c., such things as the above mentioned I have had to look into and report upon.

I inspected the colonies in the Saskatchewan district during the same month, and I found the Galician settlers in a very prosperous condition, and also the Doukhobors settled in that district. They comprise seven villages. They possess 450 head of

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cattle, 186 horses, 200 sheep, and have over 2,000 acres of land ready for crop, which has been sown during the late spring. They are a very thrifty, progressive community, and are commencing to realize the extent of their land, and the great producing possibilities of the country, and a wider development of individualism will follow. They are spreading out from the villages, working for other farmers, and they get an idea of what one man can do.

I also visited the Galician settlers, in the Dauphin district, in the vicinity of Duck Mountain. I found these settlers in a very prosperous condition, and their future fully assured; good houses, plenty of stock, and they possess an excellent country.

I spent a few days in February with Mr. Smith, the new Commissioner of Immigration, looking into particulars pertaining to the work of the coming season, viz., the preparation and care for the reception of immigrants at different points throughout the west, and also submitted a map showing the prospective districts where people will be colonized during the present season.

Subsequently I inspected some of the buildings of this department, and recommended certain changes. I also visited Saskatchewan district, doing work for the department, and again visited the different colonies.

In compliance with instructions from the deputy minister, I took charge of the purchase and distribution of seed grain to be given to the settlers in Assiniboia, under the direction of Mr. J. G. Turriff, Commissioner of Dominion Lands. The purchases of suitable grain, the compilation and correction of the list submitted from Ottawa, as well as new applications received, had to be thoroughly gone into in the different districts. The lists were carefully compiled, and about 44,000 bushels of grain were distributed from different points. The seed grains were carefully examined at places of shipment, and only the highest grades purchased at commercial values. Lien security was taken for the department from each individual receiving an advance, and handed over to the Dominion Lands Department according to instructions from the commissioner. I beg to intimate that the Canadian Pacific Railway Company were very generous in assisting to get the grain into the hands of the settlers, and handled it in all instances with promptness and despatch. This advance to the settlers has been a great boon to the district, and has been highly appreciated by the recipients, who are now on the verge of reaping a bountiful harvest, the production of the seed which was supplied them.

I was enabled to do considerable immigration work during the seed grain distribution, as will be shown in reports dated April, May and June. I accompanied John Ashworth, representing the English Quakers, through the Doukhobor settlements, and also visited a number of other districts.

Of this year's arrivals of new settlers fully 35 per cent are farmers and producers, about 15 per cent are labourers, the others are made up of tradesmen and men of other callings. I consider farmers and labourers the greatest acquisition to our country.

We are now on the verge of reaping and harvesting one of the greatest crops ever produced in western Canada, and we are now confronted with the difficulty of getting sufficient help to meet the requirements.

I may say with reference to the Galicians that they have assisted largely in building our new lines of railway and colonization roads. Their future usefulness along the line indicated will be very great; they ask no light-handed or clerical work of any kind. There has been no infringement or encroachment by them upon any class; they have been obedient and industrious; their homes and colonies in all cases show what industry and frugality will do. They have carefully husbanded their earnings, and purchased the necessaries and commodities of life, as well as being large consumers of the manufactured products of eastern Canada. People who a few years ago subjected them to adverse criticism have changed their views. The towns and villages adjacent to these colonies have grown, as they never did hitherto; trade has expanded, and merchants speak highly of their honesty and their trade. They are all learning the English language and anxious to have English speaking schools. Their adaptability

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to our customs and usages, as well as their conformity to all our regulations, impresses one that we will not have to wait one generation, but in a very short time they will be Canadianized, and be identified with our citizenship, and become a potent factor in our development.

In submitting this report, I may say that my duties during the year have been multifarious, and I am pleased to state that there is general prosperity prevailing throughout all the colonies of different nationalities, settled in north-western Canada. Wages are higher in Canada to-day than they have been in 25 years, and I am persuaded that the department has every reason for congratulation, not only at the prosperity of the different colonies settled in the west as a result of their work, but from the fact that a steady stream of immigration is coming from the southern republic, and that the active work done by the regular agents of the department in the United States has already borne fruit.

I have endeavoured in addition to promoting a peaceful colonization of all people coming into the country to look after these people in the way of giving advice and otherwise after they have been settled, and also to adjust any difficulties that would arise that might militate against them. They are, generally speaking, happy and prosperous and contented.

Your obedient servant,

C. W. SPEERS,  
*General Colonization Agent.*

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## OPERATIONS IN THE UNITED STATES.

## No. 1.

REPORT OF W. J. WHITE, INSPECTOR OF AGENCIES IN THE UNITED STATES.

DEPARTMENT OF THE INTERIOR,  
OTTAWA, JUNE 30, 1901.The Superintendent of Immigration,  
Ottawa.

SIR,—In submitting to you a report on the work done in the United States by the agents of the immigration branch during the year ending June 30, 1901, it may be said that securing settlers there is no longer an experiment. In the spring of 1897 an active propaganda in a few of the western states was established, and while first thought to be somewhat doubtful, year after year has shown marked increases in the number of settlers who have gone to western Canada, and the past year has been the most gratifying of all, exceeding anything that had been anticipated. Taking the year just ended, not only has there been a greater number of settlers from the United States, but the amount of money and effects taken in by them will, I am sure, show a most decided increase. It is no longer the man with limited capital who comes to Canada, but the one who has, in many cases, a large bank account to his credit. It is he who is now establishing himself in the western prairies, and with him also his friend and neighbour. It is no uncommon thing to see colonies (sometimes filling a large train with their effects) going to Canada and settling in districts by themselves, quickly surrounding themselves with every social comfort and making not only their own settlement attractive, but adding value to the lands which surround it. It need scarcely be pointed out, it being a fact pretty well known by this time, that the American settler quickly adapts himself to Canadian ways and methods, and brings with him an experience which makes it very easy for him to soon get a return from the land which he is occupying; the usual difficulties of pioneering proving no obstacle to him. His experience is also valuable to those from other countries who have not had the opportunity of a training in western life. A visit to the districts in which Americans have settled, the well finished houses and barns which they immediately erect give every assurance that they have removed to Canada intending to make it their permanent abode. They at once have schools established, churches erected and cause villages to spring up very quickly. Hundreds of letters in the hands of our agents from American settlers show that they have written back to their friends assuring them that Canada and Canada's laws are good enough for them, that they are satisfied with the new conditions and anxious to have more people follow. It is scarcely necessary to emphasize the fact that of the thousands of Americans who have made their homes in Canada during the past five years all have proved to be good citizens.

## ADVERTISING.

One of our principal agencies, and without which successful work could not be looked for, is that of judicious advertising. To this I have given considerable atten-

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tion, and after having analyzed the various methods I am fully satisfied that the plan adopted by me in 1897 is still the only one that will bring about the results which we have been pleased to see. In the states in which active operations are being carried on, namely, North and South Dakota, Minnesota, Wisconsin, Nebraska, Kansas, Iowa, Illinois, Missouri, Indiana, Ohio, and Michigan, advertisements are inserted in all the local newspapers during a portion of the year. The principal farm papers are used as well as the leading weekly newspapers. Neatly displayed advertisements are run, and reading notices descriptive of the country appear from time to time. The columns of upwards of seven thousand newspapers are used, and in this way we reach the great mass of people amongst whom the agents are working. When the towns in which newspapers are published are visited personal calls are made upon the editors, and it is very rarely that the next issues of the papers do not contain a couple of columns of reading matter concerning Canada, which the editors are pleased to have, and which while of great value to the work has never been made a charge on the department. From time to time posters are circulated on the markets, at the school houses and other places; carefully edited and well printed literature finds its way into the hands of all applicants.

#### THE ATLAS.

The illustrated atlas published by the department is one of the best mediums that has been placed in the hands of the agents, and it is always in great demand. Besides this the Concise School Atlas has been of considerable value and much interest, it being possible to get it circulated in several of the schools, and I would recommend that an additional number of these be published, those having paper covers being as satisfactory as the linen. In addition to these there are other pamphlets, such as 'Timely Remarks,' 'Hints to Settlers,' 'Delegates' and Settlers' Reports.' All these have had a free and extensive circulation.

#### IN SCHOOLS AND COLLEGES.

There has also been a demand from schools and colleges for a wall map of Canada which could not be filled, excepting in a few cases, where it was thought they would be most useful and of assistance to our agents.

#### STATE AND COUNTY FAIRS.

At state and county fairs large quantities of literature are distributed to farming classes and to labourers who are likely to become settlers on our free grant lands, and to others who evince interest and who may likely remove to Canada. This together with the exhibits of grains and grasses, attractively displayed, makes an excellent advertisement.

During the fall, winter and spring the agents hold meetings in school-houses and halls, and deliver lectures on Canada and its resources. They attract large and interested audiences and considerable success as a rule follows these meetings and the personal canvass that is made for a few days afterwards.

#### KEEPING CONSTANTLY AT IT.

Although the department and its agents have been very successful in securing a large number of excellent settlers, it is only by means of continued and unceasing effort that this work is accomplished. 'Keeping constantly at it' seems to be a motto that must be fully observed, and it has been this that has brought about the results



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which the reports of the agents show have been accomplished in the various states. The operations in these states have been very active since the spring of 1897, and as previously pointed out, each succeeding year has shown a very large increase in the numbers who have moved to Canada.

The work in Nebraska became so great that it was found necessary in 1900 to place an assistant in the office at Omaha, and in the spring of 1901 further assistance was required. In the state of Wisconsin I desire to point out that there are obstacles in the work there not found to such an extent in others. The results there show that great success has followed, but it would have been even greater were it not for the competitive activity of the railroads having lands of their own to dispose of. This, however, will not last long, and then we hope these roads will be found to co-operate, to some extent, making it less difficult to get settlers.

In Minnesota the work of the agents has been followed with a satisfactory degree of success. The settlers who have gone from there are men possessing considerable means, and as settlers are exceedingly satisfactory. A large number coming from this state during the past year are Mennonites, who have settled in Saskatchewan, and whose reports to their friends are very satisfactory. Eastern Assiniboia has also been a favourite spot with a great many from this state. The office at St. Paul has been found more useful the past year than ever on account of so many passing through from the southern districts and stopping over to gain additional information before continuing their journey.

The work in Iowa during the past year has been carried on actively. From this state has gone to western Canada a class of settlers that may be said to be of the very best in the state, most of them having considerable means.

The success of the work in Illinois is unabated, and we continue to get a very satisfactory class of settlers. The correspondence shows that the work of the agent during the past year has been greatly increased, and judging from the nature of the correspondence, I feel safe in saying that the number of settlers from Illinois next year will show a wonderful increase over the past.

The State of Indiana was one that the department felt should be a good field for an agent, and early in the year 1900, Mr. E. T. Holmes, formerly of the St. Paul office, was placed in charge. It was expected that he would devote his time to advertising his work during the first year, and it was scarcely expected that he would be able to chronicle any direct result. In this, however, we have been agreeably surprised. He has sent out some excellent delegations, the most important, probably, being a Mr. F. Fisher, representing a number of families of Indiana, Ohio, and adjoining states. The report of Mr. Fisher's visit has appeared in a great many papers, and will doubtless bring Canada to the attention of many who will be guided by his advice. I look for a large movement to Canada during the next year, as a result of his visit. Other delegations of importance were also sent during the year, and a number of settlers. I have pleasure in stating that, in my opinion, the work in Indiana fully justifies the establishment of an agency in that state.

In Ohio excellent work was being done by the late Mr. D. L. Caven, who was one of the best agents in the employ of the department. Capable and energetic, he was continually active in the work of sending settlers, and it was while in the performance of his duties the illness came upon him, which afterwards was the cause of his death. I am pleased to state that Mr. J. Young, the present agent, is actively engaged in carrying on the work there, and good results should follow.

Michigan has done remarkably well, and there is reason to feel pleased at the excellent work that has been done here by the agents in charge of the state. During the year Mr. Grieve was removed from Saginaw to Sault Ste. Marie that he might be in closer touch with the movement from Northern Michigan, as well as to be of assistance to those who go into Canada in that direction. The interest in Canada is growing in this state, and the united effort of the agents there is meeting with splendid results, the settlers going from Michigan being a most desirable class.

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The agencies in North and South Dakota have been able to report wonderful success. Many of the settlers who have gone from these states have bought largely of lands in Canada. As a class, they are the very best. Many of them have formerly resided in Canada.

From Kansas and Missouri it is pleasing to report that we have been able to secure a large number of first-class and desirable settlers. Like in the other states named they have had the experience of life on western farms, and had they no other capital than that they would prove valuable on the prairie farms of Canada. But in very few cases have any gone who did not take with them means sufficient to fully equip their farms with a splendid outfit so that they could immediately commence operations.

## OPENING UP OF INDIAN LANDS IN THE STATES.

During the past winter, when it became known to the department that the Indian Territory, adjoining Oklahoma, was to be opened up, and that a rush was likely to take place to that district, it was thought advisable that I should pay a visit to the Territory. I did so, and found that land hunters were going there by thousands. It was quite evident that in the whole of the territory about to be opened up there was not enough land for one-tenth of those who would visit it. The idea of taking advantage of this for advertising Canada and Canada's lands was acted upon, and Mr. Crawford, the Kansas agent, was advised to place exhibits and distribute literature. This will be done, and early in July he will remove temporarily to El Reno, and remain there with whatever staff is necessary until the drawing is concluded.

I feel that the work in the United States during the past year has been very satisfactory, and that the future has still greater results in store. We may look for material gains from this source from year to year, as the wonderful resources of Canada become more widely known.

Your obedient servant,

W. J. WHITE,  
*Inspector of United States Agencies.*

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## No. 2.

## REPORT OF M. V. McINNES.

ROOM 2, MERRILL BLOCK,

DETROIT, MICH., July 1, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I beg to submit my report for the year ending June 30. The year has been a busy one, yielding good results and much promise for the future. I have received many favourable letters from persons who have gone from this and adjoining states to settle in western Canada, and these are naturally of great assistance to me in my work. I am aware of 3,024 persons having gone from this territory during the year to settle in western Canada. These were all desirable immigrants, and the majority of them people of means. They took with them 93 ear-loads of stock and effects, in addition to 127,000 lbs. of light freight. One man took 20 thoroughbred horses and 10 pedigreed bulls to improve the stock in the neighbourhood in which he proposed settling.

That feature of our work which is represented by a display of the products of western Canada at state and county fairs was well attended to.

We were in evidence at the Tri-state Agricultural Exhibition, at Toledo, Ohio, where the three important states of Michigan, Ohio and Indiana were represented; also at the Michigan State Fair at Grand Rapids, Michigan, and at special county exhibitions held at Sandusky and Columbus, Ohio, and also at 11 other county fairs in Michigan and Ohio.

This involved an undivided attention and a good deal of hard work, but the results more than justified the expenditure of labour and means. First-class diplomas were secured from the governors of the Tri-state Fair at Toledo, and the State Fair at Grand Rapids, and diplomas and letters were received, couched in the most courteous language and with every mark of appreciation and respect, from the executive in charge of every one of the other fairs and exhibitions where our products were displayed. The wheat and all other cereals made a most excellent impression, and have been the means of attracting to western Canada a large and interested number of inquirers, 90 per cent of whom have either become actual settlers there or intend to be such in the near future.

The German-American colony, planted more than two years ago in the Moose Mountain district, in south-eastern Assiniboia, of which the thrifty little town of Alameda is the headquarters, is thriving, as the German element, whenever transplanted to congenial soil, never fails to be. Mr. William Riebert, ex-mayor of Detroit, the counsellor and guide of the little community, paid us a visit a few months ago and reported most favourable progress. He was the picture of health and activity, and affirmed that he believes the wholesome climate of western Canada will add ten years to his life. He assisted very materially my labours among his compatriots in Detroit and Wyandotte, and together we secured 76 new immigrants, who left under his direction for the land of health and plenty well equipped with solid stores of goods.

I have not lost sight of our Danish and Swedish friends in Michigan. Many letters have passed between us, and some excellent delegates, chosen from among these people, are about to visit western Canada to investigate the country. A great deal of literature in their language has been distributed among them, and I look for good results in the near future.

It is with feelings of sincere sorrow that I record the death, during the year, of Mr. David L. Caven, former Canadian government agent for Ohio. He had not been

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long transferred to this state when he fell a victim to paralysis while in the discharge of his duty. After a short illness he succumbed to a sad and untimely death. He was a zealous worker and always had the good of Canadian immigration at heart. Mr. Caven's death replaced the Ohio work in the Detroit office for a time, and entailed additional labour, augmenting the correspondence to a very large extent.

Perhaps the most important factor in our work is the sending of delegates from different sections of the United States into western Canada to investigate the land, its people and resources. The written evidence of these men—wide-awake and progressive farmers—is a valuable part of the literature that we disseminate. It cannot be gainsaid, and has been the means of sending into the west quite a little army of settlers from different parts of the union. I have been careful to foster and advance this excellent means of advertising, and have sent out quite a number of delegates from Michigan, Ohio, and other states during the last year. Several are now in the west, and before threshing time is past more will follow. Invariably their reports have been favourable, and they speak in the very highest terms of all they saw. This phase of our work should be continued for some time to come.

Many inquiries have been made concerning the agricultural, mining and business opportunities of the provinces of Quebec and New Ontario, and I distributed to good advantage all the literature received bearing on the resources of these localities. Quite a number of settlers have been secured for both provinces, and I am convinced that, as time goes on, their vast resources will attract a large and active immigration.

Altogether the outlook for the future is encouraging. It does not appear to be overcast by a single cloud, and if the crops in Manitoba and the west prove to be a success this season,—which seems to be almost assured,—I believe there will be quite an exodus from those parts of the United States where new homes are sought for, into every section of western Canada during the coming year, and, so far as I see, our labours will be doubled.

Your obedient servant,

M. V. McINNES.

## No. 3.

## REPORT OF JAMES N. GRIEVE.

SAULT STE. MARIE, MICHIGAN, July 24, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to present my report of the work done in my district for the year ending June 30, 1901.

During the twelve months, I am pleased to inform you that the number of settlers who went from my territory to all points in Canada, was 1,311, being distributed as follows :

To Manitoba, North-west Territories and British Columbia, via :—

Portal . . . . .	90
Gretna . . . . .	48
Fort William . . . . .	140
Sault Ste. Marie . . . . .	180
Windsor . . . . .	92
Total . . . . .	550

To Algoma, Eastern Ontario, Quebec and the Maritime Provinces, via :—

Sault Ste. Marie . . . . .	640
Sarnia . . . . .	81
Windsor . . . . .	40
Total . . . . .	761
All told . . . . .	1,311

These people took with them 14 car-loads of settlers' effects and about 74,000 lbs. in small lots, estimated value \$22,000. As will be seen by the above figures, the volume of business done during the year just closed has considerably increased.

Early in the present year I was transferred from Saginaw to a point still further north in the state and since that time I have made my headquarters at 'the Soo.'

During the latter half of April and the month of May something over 500 people called to see me and gather what information they could regarding the North-west, and I have reason to believe by later results that their mission was not in vain, as almost every day I cross the river with parties starting for some part of Canadian territory.

I am pleased to say that the immigration this season so far has been greater than at any time during the four years of my work. In April, May and June of the present year I had 120 families, representing 600 people, crossing at this point to make their homes in some part of the Dominion, a large number of them being French Canadians.

One of the principal factors in my work and one that has been followed by good results is the placing upon exhibition at the state and leading county fairs grain and grasses, products of our western country. This kind of advertising I think it well to

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continue, and would advise the placing of minerals upon exhibition as well, which would add not only greatly to the appearance of the exhibit, but would materially assist in drawing people's attention to the mineral wealth of New Ontario and British Columbia.

I attended the state fair at Grand Rapids, along with Mr. M. V. McInnes, of Detroit, and Mr. E. C. Oviatt, of the Canadian Pacific Railway, and we were kept busy from early morning until late in the evening. Our department was thronged with sight-seers and eager questioners who one and all pronounced our exhibit the finest upon the grounds. I also assisted Mr. T. O. Currie at the Wisconsin state fair, held at Milwaukee, and was pleased with the very artistic way in which he had the exhibit arranged. As at Grand Rapids the Canadian exhibit was the centre of attraction, the only drawback being the impossibility to do justice to the thousands of people who seemed anxious to gather all the information possible of the western fields where such grain and grass could be grown.

I also attended as many county fairs as time would permit, and at each one arranged my exhibits to make them as attractive as possible, and without any undue flattery can safely say that my exhibit was the greatest attraction of the fairs. At Eaton county fair, I handed out nearly 1,500 pounds of printed matter, principally atlases and 'Western Canada.' My thanks are due to Mr. E. C. Oviatt for assisting me there during the two busiest days. Besides advertising in this way, during the fall and winter months I exhibited in a number of small country places throughout my territory, generally staying from one to three days in each place. In this way I came in personal contact with hundreds of farmers and villagers and have thus been enabled to present to them the advantages offered by western Canada.

Your obedient servant,

JAMES N. GRIEVE,  
*Canadian Immigration Agent.*

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## No. 4.

## REPORT OF E. T. HOLMES.

INDIANAPOLIS, IND., June 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR.—I beg to submit my report for the year ending June 30, 1901. During the year I issued certificates to one hundred and two (102) settlers whose capital and effects I valued at ninety-one thousand nine hundred (\$91,900) dollars, which I consider a fair estimate. One settler who went from this state and settled at Ponoka, Alberta, is reported to be worth forty-five thousand (\$45,000) dollars. The capital of the others varied from five hundred (\$500) to eight thousand (\$8,000) dollars.

During the fall of 1900, I put in an exhibit at the Indiana state fair, and also at three county fairs, which attracted a great deal of attention and comment, the spectators stating that it was the finest display of its kind they had ever seen.

The number of inquiries I have received by mail regarding the free government lands of western Canada, has been far beyond my expectations, but as I was informed when I first came to this state (and have since learned by experience) that 'hoosiers' are very slow people to move, I feel confident that when they have learned how well pleased those are that have moved, they will soon realize the advantages offered them in western Canada.

It has been my practice to answer all inquiries promptly, sending at the same time some literature, and forwarding their names to the department for more literature to be sent them. I have also called on all that time would permit. During December and January last, I held a number of meetings in this state and Kentucky, all of which were well attended. I distributed literature at each of the meetings after addressing the people. I have visited about every county in Indiana during the past year, and as I invariably have to drive into the country to see the people, it takes a lot of travelling to see even a few of them.

In May last I made a trip to Edmonton and Prince Albert, accompanied by Mr. Frank Fisher and wife, of Mexico, Indiana. Mr. Fisher is a leader among the Dunkards, who are purely an agricultural set of people, and the best class of farmers in the United States. Mr. Fisher expects to locate a colony of his people in Saskatchewan next spring. I think Mr. Fisher and his wife are the first Dunkard delegates that ever visited western Canada, and I feel assured that his report on the country will be a means of starting a movement of their people to Canada from North Dakota, as well as Indiana, as a great many people who have moved from here to Dakota have not found that country what they expected it to be.

Your obedient servant,

ED. T. HOLMES.

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## No. 5.

## REPORT OF J. YOUNG.

COLUMBUS, OHIO, July 1, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—On March 15 last, I had the honour to be appointed immigration agent, to this, one of the most important states in the union. On the 20th day of March I entered upon the duties of my office, and as a preliminary to coming here spent a few days in Winnipeg with Mr. Commissioner Smith at his office. I also, before leaving for this place, spent the greater part of a month visiting different districts in the Canadian north-west, acquainting myself with the districts in which immigrants are likely to locate. That time I consider was well spent, as I can give intending settlers the benefit of my personal knowledge of those districts. On the 19th April I arrived in Columbus, and at once took up the work that had been commenced and successfully carried on for a short time by the late Mr. D. L. Caven. I found that there had accumulated upwards of 300 letters, from the time of Mr. Caven's death, and for a time I was very busy in order to catch up with the work. Since assuming office, I have received and answered over 200 letters of inquiry. I consider prompt attention to correspondence a very important part of the work, therefore, I have not been able to visit as many people as I would have wished to do. However, I have visited several districts throughout the state, and have arranged for several delegates to go to the Canadian north-west this summer; four of those will go this month, and a party of eight or ten will go about the first of August. I expect to accompany the latter party. They all represent good families, and are well distributed over the state.

I have issued four certificates to farmers, who went to the Canadian north-west last month. Their families will follow this fall or next spring, and I expect to send several families this fall.

Ohio is a first-class field to expect immigration from, for two substantial reasons. In the first place, the land is good, consequently it is very high, ranging in price all the way from \$50 to \$125 per acre. In the second place, the state is over-peopled, and I find many farmers with large families living on 25, 40 and 50 acres, and in many cases paying high rents. Those people are all looking to some country where they can better their condition, and it only requires that the advantages of the Canadian west be made known to them, to reasonably expect a large immigration from Ohio, in the very near future. I find a great many farmers have their eyes on Oklahoma, not knowing anything about the Canadian west, and the system of judicious advertising in the local papers, so as to reach the individual farmer, will have beneficial results.

Your obedient servant,

JOS. YOUNG.



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## No. 6.

## REPORT OF C. J. BROUGHTON.

927 MONADNOCK BUILDING,  
CHICAGO, ILL., July 6, 1901.The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit my annual report of work done in Illinois, for the year ending June 30, 1901. There have left this district four hundred and sixty souls during the year, with fourteen cars of live stock and emigrants' movables. The majority of these people had over \$600 to the family, some had more. One man, who took two ears with him, had \$12,000; two others had \$2,800 each; another \$3,000. There were six families, consisting of thirty-three people, in Bond county, all ready to go to Alberta, but unforeseen circumstances stopped them; they, however, leave in August or September. Again, in Sangamon county, fourteen more were prevented leaving when they intended to. A rate of \$5 between Chicago and St. Paul had a tendency to scatter the people. That is to say, where a large party was arranged for a certain date last year, this year they went at all times. Some of them I accompanied to St. Paul. They were all met in Chicago, safely transferred to the station from which they were to start, and generally taken care of till their departure. In two instances I had a special car provided for them. There have been sent out from this office since June 30, 1900, two thousand and ninety-five pieces of mail, and we have had half as many letters, post cards, &c. I have, the same as in past years, visited a number of places and called on numberless people, and the results will show in time. For instance, I started three years ago to work on a family and they moved this spring to our country. I had two or three delegates in the early spring. They returned satisfied and will help to move people the coming year. I have more going in August. Besides the number given as going to western Canada, there have to my knowledge twenty-two gone to British Columbia, and thirty-one to Northern Ontario. It might be well to say that the land grant railroads in the United States inaugurated a low rate for home-seekers this spring, and a good many people who had been talking western Canada took advantage of these rates to go and see these different states, a good many going to Oklahoma and waiting three months for the opening of the reservation, which event, I understand, takes place July 4; however, most of these people, I feel confident, will finally locate in western Canada. With a great many things to work against this year, I have secured for western Canada from Illinois, while not as many as I would like, yet a good number, which will be increased fifty per cent or more during this year. Last fall I had an exhibit again at the state fair, where Mr. C. W. Speers assisted me, and thousands of people saw and commented on the fine display, and the officials of the exhibition granted us a diploma which I have in this office. If we can secure good space this year, we will have another display which advertises Canada. The advertising done is a great help to us, bringing us in touch with the people who are anxious to know more about western Canada. In conclusion, I will say that no one I have heard from who has left Illinois for western Canada is dissatisfied with the change made, but all are enthusiastic and are writing me daily to call on some of their friends.

Your obedient servant,

C. J. BROUGHTON.

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## No. 7.

## REPORT OF BENJAMIN DAVIES.

154½ EAST 3RD ST.,

ST. PAUL, MINN., August 1, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour of submitting my report of work accomplished and settlers sent from this state to western Canada from July 1, 1900, to June 30, 1901.

You will see that the number sent from Minnesota far exceeds any previous year, or two years; also the number of car-loads of effects has more than doubled, as well as actual cash taken into western Canada by my settlers.

I have continued the plan of work adopted from the first, with a few improvements that are suggested and carried out as the work proceeds.

I attended the Minnesota State fair, held at Hamlin, between the Twin Cities, putting up a very fine exhibit of Canadian grains and grasses, both in the straw and threshed, after which I divided the large exhibit in two parts, and attended the county fairs, Mr. J. H. M. Parker, sub-agent at Duluth, taking one half of the exhibit and attending county fairs in northeastern and northern Wisconsin. I have found good results from the exhibits. The same programme will be followed this year; only attending different towns from last.

I also held some twenty-two public meetings in the different parts of Minnesota, addressing the people and explaining the advantages of western Canada as a home for farmers. I am pleased to say all these lectures were well attended and the number anxious for information far exceeded my expectation.

I have distributed thousands of atlases and pamphlets, received through you, in every county in this state. Callers at my office always go away loaded with information, atlases and pamphlets.

I have personally visited every county in this state, in many cases appointing a sub-agent to represent me.

These sub-agents, in many cases, have done good work, as their monthly reports will show, which reports, together with my own, have been forwarded to you regularly.

I find on careful examination of record in this office that I have sent from this state, as settlers in western Canada, between July 1, 1900, and June 30, 1901, 2,060 farmers, representing a cash capital of \$2,273,757; they also took with them 241 car-loads of effects, representing a value of \$323,800. Thus you will readily see how emigration is increasing from Minnesota.

I am of the opinion that I shall send nearly as many more this season, basing this opinion on actual observation, from letters of inquiry, and from the good reports that are constantly coming from parties who have already located in different parts of Manitoba, Assiniboia, Saskatchewan and Alberta.

Your obedient servant,

BENJAMIN DAVIES,

*Canadian Government Agent.*

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## No. 8.

## REPORT OF CHARLES PILLING.

ST. PAUL, MINNESOTA, U.S.A., July 6, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I beg leave to submit my report for that portion of the year in which I have been operating in Minnesota, ending June 30, 1901.

Commenced work in the St. Paul office on December 1, 1900. During the winter months I addressed fifteen meetings in the southern part of the state, which were all well attended, and the results gratifying, as the correspondence, showing continued interest, and a considerable movement to western Canada from all the places where these meetings were held, testifies. In accordance with instructions, I made a tour of central and southern Minnesota, visiting all the sub-agents, making a special report and recommendations to Mr. W. J. White, the inspector, and Mr. Davies, the agent for this state. The suggested changes and rearrangement of territory embodied therein were adopted, and will, I believe, be of advantage to the work in their various districts. The balance of my time has been devoted to visiting correspondents, distributing literature at sales, fairs and markets, and assisting generally in such work as came to hand, or by direction of Mr. Davies. I have not considered it within my province to go into details respecting the work generally in Minnesota; this, presumably, being fully covered by the report of the resident agent.

Your obedient servant,

CHARLES PILLING.

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## No. 9.

## REPORT OF J. M. MACLACHLAN.

ROOM 12B, CALLAHAN BUILDING,  
MILWAUKEE, WISCONSIN, June 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit my first report on immigration. Since coming here in February (1901) to co-operate with Mr. Currie, I have noticed that the keenest interest is being manifested by farmers and others in our Canadian north-west. Letters have been coming in from every county in the state asking for information relating to our free grant lands, &c. Mr. Currie, who has been working here now for about three years, has covered the territory well, as is evidenced by the correspondence coming to hand daily with many requests for agents' certificates for reduced railway rates for intending settlers. Our publications are in great demand, and containing, as they do, useful maps as well as the fullest and most reliable information relating to the country, they do not fail to interest the people and are doing a good work in themselves, and in this way assisting the agents largely in their efforts to further the tide of immigration. From travelling over certain portions of the state I have been in a position to understand quite readily some of the difficulties one has to contend with in connection with the work here. One of the gratifying features of the work done in this state is the class of settlers that have been sent to make their homes in western Canada. They are thrifty, industrious, and energetic men and women, who are anxious and determined to succeed. Intelligent delegates, as well as individual land seekers, have gone from different sections, and I am pleased to report without exception they have all given the most favourable reports of the country, and the result has been that they—along with their neighbours in many instances—have sold out here and returned to settle in some one of the provinces. As my time upon this field has been of such short duration I must claim the indulgence of the department with reference to my meagre report. By the end of another year I hope to be in a position to give a more minute and favourable one, as far as my own personal knowledge of the work is concerned. In conclusion, I beg leave to say that, successful as the work heretofore has been, from present prospects I believe I am satisfied in saying that the coming year will show a large increase in the numbers that will emigrate to the great north-west. The seed has been carefully and well sown during the past two or three years, and a large harvest must naturally be the result.

Your obedient servant,

J. M. MacLACHLAN,  
*Canadian Government Agent.*

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## No. 10.

## REPORT OF W. V. BENNETT.

OMAHA, NEB., June 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR.—I have the honour to submit my report for the last year, from July 1, 1900, to June 30, 1901. The number of immigrants as actual settlers who have gone, and settled in Manitoba and the North-west Territories, was 1,661, who took with them 154 cars of settlers' effects, and a capital of \$1,762,050. During the same period I had 22 delegates from different points in the state, who represented colonies varying in size from 10 to 100 families, this making a total of 1,683 souls. All whom I have heard from seem to be perfectly contented, happy and prosperous, and the outlook for the coming year is much more encouraging than ever before.

Your obedient servant,

W. V. BENNETT.

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## No. 11.

## REPORT OF J. S. CRAWFORD.

214 WEST 9TH ST.,  
KANSAS CITY, MO., June 30, 1901.The Superintendent of Immigration,  
Ottawa.

SIR.—The opening of 14,000 homesteads for free entry, in the Kiowa-Comanche Indian district, has been the principal event of the past year. It very much disturbed my work, as the lands are in my territory and all the railroads traversing the country south are active agents in taking prospective settlers over their lines. Not only movers from my territory have been assembling around the lands to be opened, but all the states have been contributing to the rush, until now there are ten to twenty people for every one likely to get a homestead. With this condition existing, I have a grain exhibit tent at Chickasha, Indian Territory, one of the prominent gathering places for these people, many of whom express themselves surprised at our products, and who declare that on failure to secure homes there, they will at once go to western Canada.

The final day for allotment being August 6, and one of the registration places being El Reno, Oklahoma Territory, I expect to move the exhibit and keep it there until after that date. Street meetings are also being held, and I expect good results to follow from that class of work. It is found that delegations from all the states of the Union are there, so that large results may be looked for, from work there on the return of many of these people to their homes.

A condition of drought existing now for the past three months, all over the southwest, from which will follow a failure in almost all kinds of crops, excepting wheat, will have a tendency to send people north to our country; even now, this is being felt in increasing inquiries at the office here.

I have forwarded about 400 settlers with their effects, and 65 delegates to examine the country and return and report, up to this date.

More than the usual amount of literature has been distributed, both at street meetings and through orders for same on department at Ottawa. The class of same supplied is well adapted to the needs of the people, and with the advertisements given the press, brings many inquiries, and it looks as if money spent in this way brings the best results. It is surprising, however, how much is yet required to be done to have the crowds of possible homeseekers hear of our country as a place of settlement.

In conclusion, I would say that before the season closes I expect a larger number of settlers to go north, from this district, than in any former season.

Your obedient servant,

JOHN S. CRAWFORD.

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## No. 12.

## REPORT OF W. H. ROGERS.

WATERTOWN, SOUTH DAKOTA, June 30, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR, -I have the honour to submit my report of the work in South Dakota during the twelve months ending June 30.

The results of the year's work are very encouraging indeed. In that time, according to our records, 829 persons, with 216 cars of effects moved to Manitoba and the Territories. Besides these a great many families from the western part of the state, from which there is no direct outlet from the north by rail, drove across the country. No report has yet been received as to the exact number, but it is safe to say this additional number will raise the total to at least 1,000 persons. This represents an increase of about 100 per cent over the previous year.

Not only has there been a gratifying increase in point of numbers, but also in the financial condition of the people who have moved during the period covered by this report. The conditions existing and the methods employed are practically the same as have been outlined in previous reports. There is still quite a 'boom' in South Dakota lands. Hundreds of farmers and speculators from the eastern and middle states are purchasing these lands at good figures. Immediately on selling these, farmers look for new homes elsewhere. The importance of looking after these people and directing them to the Canadian west is quite evident. Indeed, much of the success we are able to report is due to the utmost vigilance in this direction. The interest in western Canada continues to widen and deepen. As further evidence of this fact I may say the number of letters written during the last six months has averaged about 210 per month. Moreover, it is a common thing for parties to drive from 40 to 80 miles to meet me, to get all the information possible regarding the country, rates, routes, &c., &c. In conclusion, will simply say every indication points to an increasingly large emigration from this state to our Canadian north-west.

Your obedient servant,

W. H. ROGERS.

## No. 13.

## REPORT OF J. H. M. PARKER.

DULUTH, MINN., July 9, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I take pleasure in reporting the work done from this office for the year ending June 30, 1901. I attended several county fairs, distributed a quantity of literature and delivered 28 lectures, and the time is now at hand when Canada is going to receive the benefit of the advertising and work done in the states. Immigration from now on will increase from 50 to 75 per cent per annum. The number of settlers sent from this office was 582 during the past twelve months, with 65 cars of stock and household goods; \$131,500 cash. The prospect for the next year is very encouraging. I have just returned from a trip through Manitoba and the North-west Territories, and I find the crops looking very good with few exceptions. The settlers all seem contented and doing well.

Your obedient servant,

J. H. M. PARKER,  
*Agent, Duluth, Minn.*



## No. 14.

## REPORT OF W. RITCHIE.

GRAFTON, N. DAK., August 7, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I beg to submit this my report of work done in North Dakota from June 30, 1900, to June 30, 1901.

Number of settlers moved into Canada from North Dakota during above time, 2,203; numbers of cars of effects brought by above settlers, 384; value of each car, about \$800; making a total of \$307,200 worth of effects brought in.

Your obedient servant,

WM. RITCHIE.

## No. 15.

## REPORT OF REV. M. BLAIS.

MONTREAL, July 8, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have visited several French Canadian centres in the states of Minnesota and Kansas where I with regret noted much ignorance in regard to the advantages which colonization in our country offers. The astonishment caused by the lectures I gave, and during which I endeavoured to put forth our wealth and the brightness of our future convinced me that with more effort we should be able to transfer to our soil large numbers of our compatriots.

I attended to the office work during part of the winter, answering numbers of correspondents, who addressed me from the United States as well as from Canada.

During the spring I directed to the west a good number of families coming from the eastern states and the province of Quebec.

I have just returned from Manitoba, where I accompanied about 80 excursionists, all of whom have received excellent impressions by observation made on the spot. The beautiful appearance of the harvest in Manitoba ought to favour our work very much.

Your obedient servant,

M. BLAIS,  
*Priest. O.M.I.*

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## No. 16.

## REPORT OF THE REV. H. L. GOUIN.

HOTEL DIEU ST. JOSEPH,  
MONTREAL, July 5, 1901.The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit to you my report for the year ending June 30, 1901.

The first two weeks of the month of July I spent in the Canadian west, encouraging the new settlers, and giving advice to those I had brought, also visiting in company with delegates the districts of Carrot river and Alameda. My delegates have published in different newspapers very favourable reports.

During six weeks I visited the different centres of New England, where I gave several lectures. With a permanent agency a certain number of French Canadians could be repatriated. However, from experience gained from the American west, I am led to think that the repatriation of my compatriots is much easier to accomplish from Minnesota, North Dakota and Michigan, where free homesteads are practically a thing of the past.

Returning to the province of Quebec, I have given about thirty lectures about Manitoba and the North-west, endeavouring above all to visit the localities where there is less industry, and where the young people are still tempted to go to the United States. I also distributed about 25,000 pamphlets, newspapers, testimonials, reports, circulars, &c.

Since then I have been occupied with the correspondence and the compiling of a pamphlet, chiefly dealing with the Saskatchewan district.

Several young men have settled in the Carrot river district. The Montana miners with whom I had correspondence, will during the summer explore the most advantageous districts of the Canadian west.

I could not state the number of settlers who have gone to the west through my intervention during the year because I have not accompanied them all. As soon as the railway between Yorkton and Prince Albert is completed, I have no doubt that the Carrot river valley will attract a good number of settlers.

I have forgotten to state that I have written numerous articles in the papers.

Your obedient servant,

H. L. GOUIN, Priest,  
*Immigration Agent.*

## No. 17.

## REPORT OF DAMASE GAUTHIER.

LAURENTIDES, P.Q., August 28, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—As a report of my work up to the 30th of June last, I have the honour to write to you as follows:—

Under instructions from the department, I have worked principally in the eastern states. I put myself in communication with the French Canadians, who are numerous in this part of the American republic, and I have tried to influence them to come to Canada.

The principal means I have used have been to give lectures. In these lectures I praised Canada, enumerated the advantages it offers, demonstrated the salubrity and mildness of its climate, the grandeur and fertility of its plains, the number, beauty and utility of the lakes and waters, the extension of its commerce, the brilliant future which is reserved for it, the benefits of agriculture and colonization. I have given some general observations upon the different centres of colonization.

I gave lectures at Holyoke, Three Rivers, Lawrence, Lowell and Nashua. When I know of any families who still have ties in Canada, I make it my duty to call upon them and engage them to return to their native land.

The third means which I have used has been to distribute literature. After my lectures I do not fail to offer to my audience books and maps upon the different points of colonization. I always carry a good lot with me, and when I run short, I promise to send them some by post. In this way I have distributed about a thousand pamphlets.

The work of immigration and repatriation has a very encouraging outlook in the United States. The prosperity which exists in our country, the progress of the agricultural class, the success of the dairy industry, have made all eyes turn to the Canadian side. It was because of this that the Canadian immigration last spring was so large. It promises to be still greater next spring.

Your obedient servant,

DAMASE GAUTHIER,  
*Immigration Agent.*

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No. 18.

## REPORT OF C. O. SWANSON.

WATERVILLE, P.Q., July 1, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I beg leave to submit to you the following report of work done during the last year.

On November 2 I had the most successful excursion that I have ever had. The excursion was from St. Paul and Minneapolis over the Soo Line. I had settlers and delegates joining me at different stations along the route. I got a first-class report, signed by thirteen of the delegates, which report was published in the *Winnipeg Free Press*, and in the *Swedish-American Mail*, Minneapolis, and forwarded to the department.

On January 1 I started on a trip to the western states, and visited a few localities where I thought I could do the best work. I continued my trip to Alberta to visit the colonies, and to look up the best land on which to settle people this spring. During this trip I got very good letters from some of the first settlers in the colonies. These letters have also been printed in folder form, and are being sent out to the inquiring public, and the letters are doing good work.

This spring I had my annual April excursions from Montreal and Minneapolis. They were a success, especially the one from Minneapolis. The Scandinavians are coming into Canada from the western states in large numbers, and the numbers are increasing every year.

A few parties go occasionally from the east. I sent a party of thirteen from Montreal to Alberta on June 25. I have also had several families direct from Sweden this spring who have mostly gone to Alberta.

You are aware that there has not been much advertising done in the Scandinavian language through the papers this spring, but we have had all we could manage in the way of correspondence from what has been done. Since January 1 we have received at the office in Ottawa 1,500 letters, which have been attended to, and I have answered personally about 800 here at Waterville and while travelling.

The prospect for Scandinavian immigration is good. Our settlers in the west are prospering and are looking for very large crops this year. The markets are good, and I hope there will be nothing to disappoint them.

Your obedient servant,

C. O. SWANSON.

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## No. 19.

## REPORT OF THE LAKE ST. JOHN REPATRIATION AND COLONIZATION SOCIETY.

QUEBEC, August 12, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I beg leave to report as follows to your department on the work done by this society jointly with the Quebec and Lake St. John Railway Company, on behalf of immigration and colonization during the year ending June 30, 1901.

One thousand nine hundred and twenty-three new settlers have been directed to the Lake St. John region, divided as follows :

From United States and Canada . . . . .	1,708
“ France . . . . .	185
“ Belgium . . . . .	19
“ Norway . . . . .	4
“ Italy . . . . .	4
	<hr/>
Total, new settlers . . . . .	1,923

Of course, as in the past, these settlers were transported free by the Quebec and Lake St. John railway, together with their household effects.

Delegations also came from different parts and have proved to be very effective in every respect. As in the past, these delegates have been transported gratuitously by the railway. We have also had delegates from Belgium, France, Finland and Russia. The reports of all of them have been most favourable to the Lake St. John region, of which many of them speak enthusiastically from every point from which they have regarded it.

During the past year we had : 206 delegates, representing 111 parishes in Canada and the United States, 38 counties in Canada, 2 states in the United States, 6 different countries.

Three farmers' excursions took place during the year, the success of which surpassed our anticipation. Seven hundred and twelve intending settlers took advantage of these opportunities to visit this fertile region, a number nearly double that of last year, which was 387. Three hundred and seventy-two others have taken advantage of the special half-fare rate existing for those who visit the region with a view to settling there.

This makes nearly 3,150 as the number of persons who, for the purpose of colonization, through our society, have gone into the Lake St. John region during 1900-01, either to visit it with a view to settlement, or to definitely settle there.

The Colonization Department of the Quebec government has been good enough to supply us with attractive advertising matter for our undertaking; and quite recently have had printed for us many thousand copies of a hanger which has obtained many expressions of approval.

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'Le Colon,' the organ of our society, founded last March, aids us greatly in our work ; it keeps before the public the Lake St. John region by its gratuitous distribution among the prospective settlers, keeping the latter well informed as to the continued progress of all the district. Regarded from the standpoint of our work, its services are very valuable.

We have the pleasure of being in a position to state that those settlers who are now coming in are much better provided than in former years. Thus, last year 52 families brought with them complete car-loads of furniture, agricultural implements and cattle, say about 1,040,000 pounds in weight, besides about 1,500,000 pounds in less than car-load lots brought in by the remainder of the settlers, in all, a total of more than 2,500,000 pounds of effects owned by settlers coming into the Lake St. John district.

The dairy industry grows yearly and extends its benefits as far as the more recent settlements of the Lake St. John district. This industry amounted in 1899 to \$294,716, and its output in 1900 to nearly \$500,000, and the 1901 figures promise a still larger increase.

In view of the rapidly increasing immigration movement towards the Lake St. John district, the society has decided to send its secretary to work out agencies throughout Europe, and it is expected that he will leave during the month of October next.

I trust that you will be satisfied with the present increase in the number of settlers and the continuously growing popularity of the Lake St. John region.

Your obedient servant,

RENE DUPONT,  
*Secretary.*

## No. 20.

## REPORT OF A. RIBOUT.

MATTAWA, ONTARIO, August 8, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—In accordance with your instructions I have the honour to submit my report for the year ending June 30, 1901.

Having received my appointment as immigration and colonization agent for western Ontario, in order to get a true knowledge of the country, I first started for North Temiscaming, in the provinces of Ontario and Quebec, and made an exploration over that beautiful country.

From October, 1900, to the end of June, 1901, I have delivered in the eastern states and in different places in the province of Quebec 18 lectures illustrated by means of a powerful acetylene lantern, which I carry along with me with views of the country; in every case the attendance was above expectations, and a keen interest was displayed.

During the lectures I have called the attention of my hearers to the magnificence of our lands for colonization, principally on the North Temiscaming in the district of Nipissing, province of Ontario, and in the county of Pontiac, province of Quebec.

I always when speaking to my audience dwell principally on the farming industry as it is carried out in our country.

I dwelt also on the necessity of raising stock, such as cattle, sheep, hogs, &c., which is of first importance for farming and for the success of farmers.

I have a large correspondence to attend to; I find that when the advertisements in the newspapers are running, the number of letters received is very appreciably increased.

I have published in *La Patrie* a series of articles concerning the North Temiscaming region, which were well appreciated, as I saw by the numbers of letters I have received and which I answered.

The results from my lectures and correspondence brought up in the course of the spring two families from France, altogether eight souls, who are settled in the vicinity of Mattawa; four families from the province of Quebec, 21 souls, who are settled in the township of Cameron, near Mattawa; one family from Parry Harbour, who are settled in the township of Mattawa, four souls; 21 families from the eastern states were directed to the Temiscaming region, Quebec side, making a total of 163 souls. Sixteen families are settled around Verner; six are settled around Warenes; seven in the townships of Dunnet, Appleby, Casimir and Jennings, and nine in the French River valley, making altogether a total of 234 souls.

The capital in money and stock taken by those I got a report from, amounted from \$500 to \$800; that is not bad for a start on good lands, such as are in those regions.

I must also say that a number of families went to those places without calling at my office for particulars; they were directed by the Society of Colonization of Montreal.

In the townships of Bucke, Dymond, Casey, Harris and Hudson, in the district of Nipissing, many new settlers arrived during the fall of 1900 and this spring, through the Bureau of Colonization of Ontario; not less than 20 new houses were erected this year in the New Liskeard village, not counting the new farmers established in the vicinity. That country is progressing very rapidly.

Many land prospectors went through the North Temiscaming country this year, and they all returned home very enthusiastic about what they saw.



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Since my appointment as an immigration and colonization agent on the 1st of August, 1900, I have received 278 letters of inquiry about lands, quality of soil, &c., to which I replied. I have distributed by mail and other ways 2,000 copies of a pamphlet on the North Temiscaming region. I also sent out, on request, 60 maps of the district of Nipissing, and 60 of the county of Pontiac, and a quantity of literature issued by the Quebec and Ontario governments.

Many persons asked me for particulars of Manitoba and the North-west Territory; not having visited these parts of the country, I answered them what I have learned myself by literature in my possession.

My policy, or my conscience either, does not allow me to depreciate any part of our country, but at the same time I consider that the North Temiscaming region is one of the finest in Canada; being good soil and suitable for every people, rich or poor. I have no doubt that if the Ontario and Quebec governments wish to help liberally the opening of good colonization roads, that region will soon be one of the most important in Canada, for it grows every kind of crop, as wheat, oats, barley, &c., as well as any other territory for colonization, and also because it is easy to establish any kind of industry by developing its numerous water courses.

Your obedient servant,

A. RIBOUT,

*Dominion Immigration and Colonization Agent.*

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## No. 21.

## REPORT OF R. A. BURRISS.

PORT ARTHUR, ONT., July 13, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit my report of immigration work done in the districts of Thunder Bay and Rainy River, for the year ending June 30. Many of the difficulties experienced during the past two years are gradually disappearing. The one great disadvantage is still in the way, the want of colonization roads in advance of settlement.

Good roads and other means of communication are a necessity in any country and especially so in a well-wooded one such as this. It is not right that settlers coming from a distance should have to chop and hew their way into their locations. Some have come thousands of miles to find that the last dozen miles of their journey presented the greatest difficulties.

Notwithstanding that colonization road work is in progress in the townships, roads are only being made for the settlers who have arrived, and have been on their locations one or more years, while many cannot get to their claims, and all new seekers for homes must of necessity force themselves into unroaded territory. The next difficulty in the way of successfully colonizing is the want of re-surveys. As fast as re-surveys are made the locations are taken.

At the present time new locatees are searching with compass and chain for their lots. In the township of Dorion, east of Port Arthur, on the Canadian Pacific railway, the above condition exists.

Some colonization road work was done, but within a month settlers have gone back three to four miles with nothing to guide them to their lots but a trail.

Industrious men with their cars of effects and families have gone in there recently. Every land-seeker sent into Dorion has returned and located a claim, all expressing themselves as being delighted. About one-third of this township has been colonized this spring.

In the townships of Gillies and O'Connor, in Thunder Bay district, the settlement has prospered, new families are coming in, all the available lots being taken up. Roads are being constructed, at least fifty miles, and bridges built across the White Fish river, and the superintendent of the Duluth branch of the Canadian Northern has been placing in switches. Whereas two years ago we had twenty-five of a population, we have now four hundred and twenty-five, and all of them are pleased, and are reasonably prosperous, taking into consideration the limited means many of them had when they arrived. This is pre-eminently a poor man's country. Three new school-houses are being erected. This settlement will be extended into Marks, Lybster and Conmee. We are calling for roads and surveys. About twenty-five families of Finlanders have located here. Last fall two of their leading men came to me with their preacher wishing transportation arranged that he might make semi-monthly trips and hold religious services.

All of the available land in Blake has been entered, and some of the settlers are making creditable showings. Some more road-work has been done, and it is important to have the work extended as far as possible next year in order to admit of further

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settlement. The most prosperous community of farmers in this district is in Slate river valley. Some things that contribute to the great success of these people is their proximity to Port Arthur and Fort William over good roads. Their land is very easily cleared, and of the best quality. Men of some means have located here, many of them from the States. The Illinois settlement are adjusting themselves splendidly to the conditions of this country while many former Canadians are coming from South Dakota. One day two weeks ago two cars of fine stock, consisting of four head of horses and fifteen head of cattle, were unloaded for this section. One car came in from South Dakota, and two more from the same section are to be here in October.

In the township of Oliver, a number of improved farms have been purchased by new settlers, who are doing splendidly. One gentleman has started a dairy and markets one hundred pounds of butter per week in Port Arthur. Eighteen families came with this gentleman to New Ontario and all of them remained but two. One gentleman from South Dakota recently contracted for one thousand acres out of which to make a dairy farm. People from all over the continent are asking for transportation rates and coming to Port Arthur and Fort William, and all the smaller towns along the railroads of the district, to go into business. Carpenters, mechanics and common labourers are coming from all quarters with their families and have no trouble in finding employment. It is next to impossible to find a house to rent, while new buildings are going up in all directions.

Little progress can be made in the settlement of the lands of Rainy river until the Canadian Northern railway is completed from Port Arthur to Winnipeg. We have a million acres of fine agricultural land there, some twenty-four townships open to free grant now. There has been a general inflow of settlers this year, but, probably nowhere are roads in greater demand and more difficult to make for the want of gravel. The settlers who have been placed in there during the past three years from the United States are prosperous and happy, having church and school.

Great preparations are being made to push the settlement of Rainy river. The Canadian Northern has given settlers rates from Winnipeg to the mouth of the river, and many settlers are availing themselves of them, while at Port Arthur is located the Immigration building, for the accommodation of all settlers from the United States and eastern Canada. Transportation rates are procurable from both railways centering her. In the near future we can offer settlers every advantage.

We are securing a desirable class of settlers, men are coming who wish homes. They have added many thousand dollars to the wealth of New Ontario. Young men are coming with their brides to make homes. Ninety foreigners recently applied for naturalization in Port Arthur. They have become British subjects. Many of the new settlers on Rainy river are anxious to take out naturalization papers.

It has been my aim to induce immigration from foreign countries. Your department sent me to the United States to spend February and March lecturing and distributing literature. I visited Michigan, Ohio, Indiana, Kentucky, Kansas, Missouri and Iowa. Everywhere I was received with the greatest courtesy. Churches, town-halls, colleges, high-schools, and other places were thrown open free, while the people seemed to be delighted to hear of Canada and her development. But notwithstanding all this, I assisted about three families from eastern Ontario for every one from the United States. I have a man now located at Red Deer, Alberta, from Illinois, who expected to come here, but could not, who will devote much of his time to circulating literature and helping others from his state in settling there, and several parties are arranging to go.

Owing to the great influx of settlers into Thunder Bay and Rainy River districts this year it has been almost impossible to keep a record of the exact number. They came in via Winnipeg, Tower and Fort Frances, Duluth, and Detroit. Through the influence of my lectures, the circulation of literature, and the many articles printed in the United States papers, my work has been more of a general character. It has been a help to all our United States agencies. From one locality in Wisconsin we had ten

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families, former Canadians, who came with all their effects, one a merchant with enough means to purchase property and go into the mercantile business.

At a very low estimate, we have had from the United States alone four hundred people with all their possessions.

The population of Port Arthur alone the past year has increased eight hundred. The Rainy river valley had about nineteen cars of settlers' effects from all places ; we have had ten cars unloaded here, also two saw-mills to go into the country. Immigration to our districts has been most flattering. We have had more population during the past two, than the previous twenty years. We had sixteen families from one county in eastern Ontario, all with farms of their own and prosperous. New settlers are going into dairying, stock-growing, gardening, and one man into bee culture with profit. The immigration hall in Port Arthur is free to all and of great service to the settler. Here they store their effects and leave their families while being located. Land guides are furnished free. Ninety per cent of the settlers are happy and prosperous.

Your obedient servant,

R. A. BURRISS.

## No. 22.

REPORT OF THE REPATRIATION AND COLONIZATION SOCIETY OF  
MONTREAL.

The Superintendent of Immigration,  
Ottawa.

SIR,—I have the honour to submit the eighth annual report of the operations of this society, covering the period between July 1, 1900, and June 30, 1901, during which 818 persons, adults and children, have settled upon lands in the provinces of Quebec and Ontario as well as in Manitoba and the Canadian North-west Territories, under the auspices of this society, and the number of visitors or prospective settlers to the different colonization centres was 367, making a total of 1,185.

The settlers were distributed as follows:—

Gaspé . . . . .	63
Matapédia . . . . .	24
Lake St. John . . . . .	21
North of Montreal . . . . .	569
Lake Temiscamingue . . . . .	63
Northern Ontario . . . . .	62
Canadian North-west . . . . .	16
Total . . . . .	818

The visitors were divided in the following manner:—

Matapédia . . . . .	10
Lake St. John . . . . .	13
North of Montreal . . . . .	325
Northern Ontario . . . . .	9
Gaspé . . . . .	..
Temiscamingue . . . . .	..
Total . . . . .	367

According to their birthplace the settlers reported at the offices of the society may be classed as follows:—

From Canada, 600, from the United States, about 150; and the balance from Europe.

It is important to remark here that the officials of the agency are not authorized to issue settlers' tickets to immigrants from Europe destined for the west. Only those who come to settle in the eastern provinces are recorded. However, the requests for information coming from France, Belgium, Switzerland, &c., have increased perceptibly since the great exhibition at Paris.

I am happy to add that in the districts where it is possible more closely to control the colonization movement the numbers furnished each year by our society agree pretty well with those of the last census.

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But as to the general result of our operations during the period covered by this report, I regret to have to state that the number never went so low, even during the first year of our labours. Such a decrease, during the remarkable era of prosperity, seems strange and demands explanation. Obstacles have arisen, which have largely neutralized our efforts and the effectiveness of our work. To mention one—the essential condition, the first matter of all colonization, is the land, the facile granting of lots. It must be acknowledged that in the province of Quebec this is the most deplorable deficiency. North of Montreal and Ottawa, as well as in the Temiscamingue, the Gaspé and Matapédia districts, the lands open for settlement have not been subdivided, and there are no roads. All that I have said on this subject, in my annual reports of 1898 and 1899, is still true, with aggravation, and the development of the country is thereby greatly retarded.

Your obedient servant,

T. A. BRISSON,  
*General Agent.*

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## No. 23.

## REPORT OF T. O. CURRIE.

MILWAUKEE, WIS., October 18, 1901.

The Superintendent of Immigration,  
Ottawa.

SIR.—I submit my annual report of work done in the state of Wisconsin during the year beginning July 1, 1900, and ending on June 30, 1901.

As previously reported, by instructions from the department, I opened an office in the city of Milwaukee in July, 1900, and as soon as settled proceeded at once with the general work in the state.

We began attending fairs last year in August, and continued attending same until along in October, report of which I have already submitted to the department.

I am pleased to report that during the year we sent 511 people from the state of Wisconsin into the Dominion of Canada, some going into northern Ontario, some to Manitoba, but a greater portion going to Saskatchewan and Alberta. Many others, I believe, have gone from this state through our influence of which we have no track, only that they have left. Many avail themselves of the spring excursions; we having kept them thoroughly posted on that line, they took advantage of same. Seventy-five per cent of those who left this state were ex-Canadians. They are a very desirable class of settlers. With but two exceptions they brought with them considerable wealth, one family connection from the vicinity of Ripon bringing with them \$143,000 in cash and three ear-loads of freight. These people purchased three sections of land near Red Deer, and many others are following to locate in the same district. The settlers brought with them a total of \$532,000 and 22 ear-loads of freight.

While the work has not been so extensive in some quarters as we would have liked it to have been, we are more than pleased with the class of settlers that we have been able to secure.

Our work at the fairs we attended last fall proved to be fertile seed sown in good ground.

We still meet with strong competition in this state from large land companies, and particularly from two lines of railroad that hold large tracts of land in the northern part of the state, the railroad companies in many instances giving free transportation to settlers and their household effects, who will purchase their lands, and in every instance giving free transportation to those in search of homes who will go and view those lands.

On returning to my office last fall at the conclusion of fairs, I found myself overwhelmed with work and calls for interviews from all parts of the state. During the year we visited nearly every county in the state, and some counties many times. I continued the work along until February, when you were good enough to send to my assistance Mr. MacLachlan, who ably assisted me in the office. I left him in charge of the office work, taking the outside work myself, but as far as possible in emergency cases he would go out to assist me at points which I could not reach.

With brighter prospects ahead of us for the coming year, full of hope, I trust our most sanguine expectations may be crowned with success, and above all that we may be able to secure such an honourable class of settlers in future as we have in the past.

Your obedient servant,

T. O. CURRIE.





PART III.

DOMINION LANDS SURVEYS



# SURVEYS.

## REPORT OF THE SURVEYOR GENERAL.

DEPARTMENT OF THE INTERIOR,  
TOPOGRAPHICAL SURVEYS BRANCH,  
OTTAWA, August 23, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR,—I have the honour to submit the following report upon the operations of the Topographical Surveys Branch during the twelve months ending June 30, 1901.

Between June 30, 1900, and the end of the calendar year, twenty-six survey parties were employed on ordinary land surveys in Manitoba, the North-west Territories and British Columbia. In 1901, the number of parties engaged upon the same kind of work was thirty. In addition to the above, two parties were defining the British Columbia-Yukon boundary, and one was exploring in the Mackenzie and Keewatin districts. Four surveyors are permanently located in the Yukon Territory, and are making surveys under the direction of the Commissioner of the Territory.

### MANITOBA.

Cyrus Carroll, D.L.S., during the last half of 1900, completed the survey of the outlines of townships 1 and 2 in ranges 11, 12 and 13, east of the principal meridian, and also subdivided certain portions which appeared to be suitable for settlement. In townships 1 and 2, ranges 11 and 12, 36 sections were surveyed most of which were occupied by settlers. He completed his season's work on October 12.

J. A. Coté, D.L.S., is engaged in making surveys in south-eastern Manitoba, in the neighbourhood of the Manitoba and South-Eastern Railway. He was instructed to survey all the meridian outlines intersecting the railway line, and to subdivide such of the lands on the railway, or adjacent to it, as may be required. He is also to subdivide portions of township 1 in ranges 8 and 14, and to run the outlines of township 5, range 9, townships 3 and 4 in range 10, and township 2, range 13, east of the principal meridian. He reports that he has completed the surveys required in township 5, range 9, and in township 4, range 10.

R. Bourne, D.L.S., was instructed on September 19, 1900, to make a resurvey of township 17, range 1, and township 19, range 2, east of the principal meridian, and to survey the sixth base line from the principal meridian eastward, a distance of twelve miles. Since then, he has been instructed to survey the principal meridian through townships 21, 22, 23 and 24, to project the seventh base across range 1, and to run the meridian exterior between ranges 1 and 2 east from the seventh base to the sixth correction line. He has completed the resurvey of township 17, range 1, east of the principal meridian.

C. F. Aylsworth, D.L.S., completed the subdivision of township 33, range 30, township 35 in ranges 30 and 31, and township 36, range 30, west of the principal meridian, in the Thunder Hill Poukhobor reserve. He was afterwards instructed to re-mark some of the corners, which had become obliterated, in township 23, range 27, west of the principal meridian, and also to re-mark about thirty-eight miles of township outlines in the Swan river district, which had been run in winter, and were,

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therefore, not mounded. This season, Mr. Aylsworth was instructed to re-survey townships 11 and 12, in ranges 7 and 8, and to re-establish a number of corners in township 13, range 7, east of the principal meridian. He has also been instructed to subdivide the south half of the north-east quarter of section 11 in township 13, range 6, east of the principal meridian, into lots, with an area of about one acre each. The Canadian Pacific Railway station of Tyndall is located upon this section. Mr. Aylsworth reports that he has completed the resurvey of township 12, in range 8.

H. B. Proudfoot, D.L.S., has this year been awarded a contract for the subdivision of a number of townships in central Manitoba lying between the south end of Lake Winnipeg and the principal meridian.

A. F. Martin, D.L.S., is Swamp Lands Commissioner for the Manitoba government, but in connection with that work he has instructions from this department to survey some township outlines. He has also been instructed to locate and survey a colonization road from Teulon northerly along the Limestone ridge for a distance of about sixty miles. Mr. Martin has been working, up to the end of June, in the country between lakes Winnipeg and Manitoba.

Thos. Turnbull, D.L.S., was instructed to make an exploratory survey of the country between lakes Winnipeg, Manitoba and Winnipegosis. He was engaged in this work during the latter part of 1900, leaving the field about the end of January, 1901. He reports that the best land is close to the lakes, while the interior is mostly swamps, marshes and stony ridges. A map showing this exploration is appended.

C. A. Bourget, D.L.S., who was working under contract on the west side of Lake Winnipegosis in the Dauphin district, finished work for 1900 by subdividing township 34, in ranges 19 and 20. The country where he was working is covered with a dense growth of timber with a great quantity of windfall, and is partly burnt over.

Jas. Dickson, D.L.S., who was engaged during 1900 in making surveys in the north-western part of Manitoba, completed his work on October 11; then, according to instructions of September 18, he inspected a number of townships which had been surveyed under contract.

J. C. Desmeules, D.L.S., was engaged in surveys in the Dauphin district during 1900. During the last half of the season, he surveyed the north outline of township 31, range 20, west of the principal meridian. He then produced the eighth base line westward for three miles, and ran the east outline of township 28, range 24, and the north, east and south outlines of township 27, range 23. He completed the season's work by subdividing township 27, range 23, and a part of township 28, range 23, west of the principal meridian.

#### NORTH-WEST TERRITORIES.

J. J. Dalton, D.L.S., is engaged in surveys in Assiniboia, near Yorkton and Pelly. A number of lakes in that district having dried up, it was thought advisable to subdivide their beds; Mr. Dalton has been instructed to do the work. These lake beds occur in townships 24 and 25 in range 1, townships 24, 25 and 26 in range 2, townships 23, 25 and 26 in range 3, and townships 23, 24 and 25 in range 4, west of the second meridian. He is also to subdivide township 32, range 30, and townships 31 and 32 in range 31, west of the principal meridian, and to make a traverse of the south bank of the Assiniboine river in township 32, ranges 1 and 2, west of the second meridian. The north side of the eighth correction line has been marked with two sets of posts, across ranges 1, 2, 3 and 4, west of the second meridian, and Mr. Dalton has been instructed to remove those belonging to the old system of survey; he is also to re-mark a number of obliterated corners in township 25, range 5, west of the second meridian.

A. J. Brabazon, D.L.S., had instructions to dispose of various survey outfits which had been stored between Dauphin and Yorkton, and then to renew the survey marks in township 23, ranges 5, 6 and 7, and in township 24, ranges 6 and 7, west of the second meridian. He found that most of the creeks and sloughs which were

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shown in the original surveys of these townships, had dried up entirely. He finished his work about October 26.

A. F. Martin, D.L.S., was last year working under contract west of the second meridian. During the last half of the year, he completed the subdivision of townships 33 and 34, range 4, townships 33, 34 and 35, range 5, townships 32 and 33, range 9, and townships 27, 28, 33 and 34, range 10.

A. Bourgeault, D.L.S., was working under contract during 1900 in the country west of Princee Albert. He completed the subdivision of township 46 in ranges 8, 9 and 10, and township 47, in ranges 8 and 9, west of the third meridian. This season, Mr. Bourgeault has been awarded a contract in Saskatchewan, north of Quill lakes. He is to subdivide township 35 in ranges 11 and 12, and township 36 in ranges 11, 12 and 13, west of the second meridian.

P. R. A. Belanger, D.L.S., was working during 1900 in the vicinity of Pasquia mountain. During the last half of the season, he produced the eleventh base line as far as range 15, and also ran the east boundary of range 9 south to the eleventh correction line. This season, Mr. Belanger is working in the country east of Princee Albert. He has been instructed to survey the thirteenth base line from the second meridian westward to the east boundary of range 20, and also to run the east outlines of townships 45, 46, 47 and 48, in ranges 5 and 9, west of the second meridian. Mr. Belanger left for the west about the end of April. He has already completed the base across ranges 19, 18 and 17.

James Dickson, D.L.S., during the season of 1901 has been instructed to survey certain township outlines between Princee Albert and the second meridian, north of the twelfth base line. He has already completed the east outlines of townships 45 and 46 in ranges 6, 7 and 8, west of the second meridian.

J. A. Belleau, D.L.S., was engaged during 1900 in making surveys in the Thickwood hills. He first ran eight miles of the meridian between ranges 6 and 7 to the north outline of Pet-ty-quaw-ky Indian reserve; then he surveyed the meridian outlines of the Doukhobor reserve near Carleton, and also the north outline of township 46, range 7, west of the third meridian. This season Mr. Belleau, with his assistant, Mr. P. W. Currie, is surveying in the country east of Princee Albert in Saskatchewan. He was instructed to complete the twelfth base line across ranges 9, 10 and 11, and to survey the east outlines of townships 47 and 48, in ranges 19, 18 and 17, of townships 45, 46, 47 and 48, in ranges 16, 15 and 14, west of the second meridian. He started work at the northeast corner of township 44 in range 12, but on account of the exceptionally wet season, and the swampy nature of that part of the country, he was compelled, after running about two miles of the base, to abandon work there; he has commenced work on the meridian outline between ranges 13 and 14.

C. C. DuBerger, D.L.S., was engaged in renewing corner marks in Northern Alberta. He had also been instructed to subdivide township 52, range 21, townships 49, 50 and 51, range 22, and townships 48 and 49, range 23, all west of the fourth meridian. He renewed the corners in townships 53 and 54, in ranges 19 and 20, west of the fourth meridian, and also the corners along the north outline of township 52, range 21. He finished his season's work by completing the subdivision of township 52, range 21, west of the fourth meridian. Mr. DuBerger's work for 1901 consists in running township outlines, adjoining the ninth and tenth base lines between ranges 4 and 10, west of the second meridian.

L. P. Gauvreau, D.L.S., was given a contract in 1900, to subdivide townships 43, 44 and 45, in ranges 8 and 9, west of the third meridian. He completed three townships, but on account of irregularities of survey, the work has not been accepted.

J. J. McKenna, D.L.S., was given a subdivision contract in the Cypress hills. During the last half of 1900, he completed the subdivision of township 5, in range 24, and township 6 in ranges 24 and 27, west of the third meridian. Mr. McKenna is again working under contract this season. He has been instructed to subdivide

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certain townships in Red Deer district in Central Alberta. His work includes township 37, in ranges 17, 18, 19 and 20, township 38 in ranges 17, 18, 19, 20 and 21, and township 39, in range 18, west of the fourth meridian. Mr. McKenna reports that he has not been able to start work as early as he expected on account of the wet condition of the country.

E. J. Rainboth, D.L.S., during the last half of 1900 completed his subdivision contract in southern Alberta. The townships surveyed lie for the most part in the district which has been opened up by the construction of the Alberta Railway and Coal Company's railroad, which runs south from Lethbridge. This year, Mr. Rainboth has again been given a contract to subdivide a number of townships in southern Alberta, south of Medicine Hat, and in the Cypress Hills.

G. J. Lonergan, D.L.S., is engaged in making scattered surveys in southern Alberta to meet the requirements of the settlers in that district. This is the work that Mr. J. E. Woods was engaged in last season. Mr. Lonergan has been instructed to subdivide township 1, range 21, and township 7, range 26, west of the fourth meridian, and township 14, in ranges 1 and 2, township 15, range 2, townships 16 and 20, in range 3, and township 16, range 4, west of the fifth meridian. He is also to subdivide parts of township 1, range 28, township 2, in ranges 22 and 29, township 11, range 29, and townships 2 and 11, in range 30, west of the fourth meridian, and townships 5 and 10, in range 1, and township 13, in range 2, west of the fifth meridian. He is also instructed to make a traverse of part of Milk river in township 2, range 21, west of the fourth meridian, and of High river in township 18, range 2, west of the fifth meridian. He reports having finished work in township 2, range 22, and in township 7, range 26, west of the fourth meridian.

J. E. Woods, D.L.S., was engaged all the season of 1900 in southern Alberta making various surveys to meet the requirements of the settlers in that district. He surveyed the meridian outlines of townships 2 and 3, in ranges 16, 17, 18 and 19, west of the fourth meridian. He also subdivided portions of township 27, range 20, townships 1 and 3, range 22, township 1, range 22, township 1, range 28, and township 3, range 29, west of the fourth meridian, and township 6, range 2, west of the fifth meridian. In the latter township, he also made a traverse of Old-man river. He produced the section lines from township 6, range 3, west of the fifth meridian, through the Crow Nest Pass to the western boundary of Alberta, and also made a traverse of the railway through this district, and a part of the Crow Nest river. During August, he traversed part of the Vermillion lakes and Forty-mile Creek in the Rocky Mountains Park of Canada. Before coming east, he examined a subdivision contract in southern Alberta along the Alberta Railway.

C. E. Towle, D.L.S., has been awarded the contract for the subdivision of a number of townships in the vicinity of Red Deer in Alberta. His work comprises townships 31 and 32, in ranges 21 and 22, townships 31, 32, 33 and 34, in range 23, and townships 31, 32 and 33, in range 24, west of the fourth meridian.

G. P. Roy, D.L.S., has accepted a contract in Alberta near Red Deer. He is to subdivide townships 35 and 36, in ranges 19, 20 and 21, and townships 33 and 34, in ranges 21 and 22, west of the fourth meridian.

W. F. O'Hara, D.L.S., was engaged during 1900 in making surveys in the Finlanders' reserve, west of the fifth meridian. During the latter half of the season, he completed the meridian outlines of townships 41, 42, 43 and 44, range 4, townships 39, 40, 43 and 44, range 5, townships 38, 39 and 40, range 4, and of township 40, range 6.

J. N. Wallace, D.L.S., is engaged on the survey of outlines in the Finlanders' reserve, west of the fifth meridian. He has reopened part of the thirteenth base north of Pigeon lake, and has completed the survey of the east outline of townships 45, 46, 47 and 48, in range 2, west of the fifth meridian. Mr. Wallace reports that he is progressing rather slowly on account of the heavy timber with which the country in this neighbourhood is covered, and also on account of the season being exceptionally wet.

A. McFee, D.L.S., completed his 1900 contract by subdividing townships 41 and

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42, in range 2, west of the fifth meridian. This season, Mr. McFee is working under contract in Alberta, west of Red Deer. He is to subdivide township 38, range 3, township 39, ranges 2, 3, 4 and 5, and township 40, range 5, west of the fifth meridian.

John Molloy, D.L.S., was given a survey contract in western Alberta. He is to subdivide townships 40, 41, 42, 43 and 44, in range 3, and township 40, in range 4, west of the fifth meridian.

Hugh McGrandle, D.L.S., was given a contract for the subdivision of several townships south of Pigeon lake in northern Alberta. The contract includes townships 43, 44 and 45, range 2, and townships 45 and 46, range 1, west of the fifth meridian, and townships 45 and 46, range 28, west of the fourth meridian. He is also to make a traverse of Battle and Blindman rivers, and to renew certain corners in this neighbourhood which had been marked with wooden posts.

J. C. Desmeules, D.L.S., is this season engaged in surveying in the Edmonton district. He has been instructed to subdivide township 49, range 28, west of the fourth meridian, and townships 47, 48, 49, 53 and 54, in range 1, and townships 49 and 53, in range 2, west of the fifth meridian.

Louis Gosselin, D.L.S., is at work in the Beaver hills near Edmonton. He was awarded a contract for the subdivision of townships 49, 50 and 51, in range 22, and townships 48 and 49, in range 23, west of the fourth meridian.

R. W. Lendrum, D.L.S., was working under contract during 1900. He finished his work for the season by subdividing townships 43 and 44, in range 1, west of the fifth meridian. This season, Mr. Lendrum has been awarded a contract in the Beaver hills, east of Edmonton. He is to subdivide township 50, in ranges 20 and 21, and parts of township 51, in ranges 20 and 21, and township 52, in range 20, west of the fourth meridian.

J. B. Saint Cyr, D.L.S., was awarded a contract in northern Alberta. He is to subdivide townships 59 and 60, in ranges 24, 25 and 26, west of the fourth meridian. He left for the west early in June.

J. K. McLean, D.L.S., was engaged during 1900 in making surveys west of the fourth meridian in northern Alberta. He was instructed to renew the survey marks in township 57, in ranges 22, 23, 24, 25 and 26, and to complete the subdivision of township 58, in ranges 17 and 18, together with the sixteenth base line and some adjacent meridians. During the last half of the season, he renewed the corners in township 57 in ranges 22 and 23, and subdivided part of township 58, range 18. This season, Mr. McLean is working in the Edmonton district. His instructions are to complete the subdivision of township 58, in ranges 24, 25 and 26, west of the fourth meridian, and to run certain township outlines between the fifteenth and sixteenth correction lines between ranges 20 and 27, west of the fourth meridian. Mr. McLean reports that part of the fifth meridian was obliterated, and that he was obliged to re-run it. He has completed the eastern boundary of townships 59 and 60, range 27, and a portion of the base line across range 26.

L. E. Fontaine, D.L.S., was instructed in 1900 to produce the fourth meridian and run various outlines adjoining it. He commenced work by re-marking the fourth meridian between the fifteenth base and the fifteenth correction line, and then produced it northward as far as Cold lake. He then ran part of the outlines of township 63, ranges 1 and 2, township 64, ranges 2, 3 and 4, and of townships 63 and 64, range 5. In April of this year, Mr. Fontaine received instructions to survey parts of the sixteenth and seventeenth base lines and the intervening block outlines, this being a continuation of his last season's work; but while proceeding to the field he met with an accident; his party has been disbanded.

A. C. Talbot, D.L.S., during the last half of the season of 1900 was working in northern Alberta, west of the fifth meridian. He subdivided township 52, range 2, completed the subdivision of township 53, range 3, and subdivided part of township 53, range 1. He reports that he was greatly delayed during the latter part of the season by the wet weather. This season, Mr. Talbot has been sent to Lesser Slave lake

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to make surveys which have been asked for by the settlers in that neighbourhood. He has been instructed to lay out the occupied land into lots of suitable size.

C. C. Fairchild, D.L.S., left early in May for Peace river, near Dunvegan, in the district of Athabasca. He was instructed to survey township outlines and subdivide the necessary townships in the settlement of 'La Société de Colonisation de la Rivière La Paix.' He is to run the twentieth and twenty-first base lines eastward from the sixth meridian, project the adjacent meridian outlines, and subdivide such of the lands as are required immediately by the colonisation company. Mr. Fairchild went by way of Athabasca Landing and Lesser Slave lake.

## BRITISH COLUMBIA.

J. E. Ross, D.L.S., during the last half of the season of 1900 was engaged in making surveys in the Kamloops district of the railway belt in British Columbia. He surveyed various lots along Bonaparte river, and the Caribou road, and also subdivided portions of township 20, in ranges 23 and 24, west of the sixth meridian. From here he went to Spallumcheen river, along which he made a continuous section survey as far as the east side of Mabel lake. Before leaving the field, he located the northerly and easterly boundaries of timber berth No. 78. During the season's operations, he located and marked the boundary of the railway belt on the Lillooet road, Caribou road and Bonaparte river, also in several places on the south side of Spallumcheen river. This season, Mr. Ross is continuing his work in the railway belt. He has traversed the Columbia river near Revelstoke, and made the required surveys in connection with lots 513 and 499, Kamloops division of Yale district. He tried to locate lot 525, group 1, Kamloops, but did not succeed. Several small surveys around Revelstoke have been made, and Gold Hill station has been connected with the Dominion section lines. Portions of townships 18 and 19, range 14, and township 21, range 13, west of the sixth meridian, have been subdivided; some land west of Mara station has been surveyed, and the limit of the railway belt on Adams river and Adams lake has been located. Mr. Ross reports that several other surveys which he expected to make early this season have been delayed by the high water in the rivers.

W. J. Deans, D.L.S., was engaged during the season of 1900 in the railway belt, British Columbia, his surveys being largely to meet the requirements of settlers. He commenced work in township 3, range 30, west of the sixth meridian, moving from there to Vedder mountain, where he made the surveys required in townships 19 and 22, east of the coast meridian. In the Morris creek valley he surveyed parts of townships 4 and 5, in range 29, west of the sixth meridian, and along Chilliwack river and Slesse creek, parts of township 26, east of the coast meridian, and township 1, in ranges 28 and 29, west of the sixth meridian, were surveyed. While in this district, he endeavoured to locate some of the marks on the international boundary, but without success. This year, Mr. Deans is to continue the surveys in the western part of the railway belt. He has been instructed to renew the marks of the Canadian Pacific traverse along the railway from North Bend to Lytton, and also to subdivide some of the land near the international boundary on Slesse creek. He is also to make the necessary surveys in townships 11, 12, 13 and 14, in ranges 26 and 27, township 4, range 30, and township 15, range 25, all west of the sixth meridian.

A. O. Wheeler, D.T.S., was to commence work about July 1 in British Columbia, among the Selkirk mountains. It was thought advisable to prepare a map of the country in this neighbourhood; to Mr. Wheeler has been entrusted the field work in connection with its preparation. The work will be done by means of photography, and by using the Canadian Pacific railway as a temporary base; a secondary triangulation will be expanded for the purpose of fixing camera stations and approximately locating peaks.



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## BOUNDARY SURVEYS.

Geo. White-Fraser, D.T.S., was engaged during 1900 in a continuation of his previous season's work of establishing astronomical stations along the part of the sixtieth parallel of north latitude, which forms the boundary between British Columbia and the Yukon Territory. He went in by way of Skagway and Bennett to a station on the southern extremity of Little Windy Arm, which had been established the year before. Starting from this station, he worked westward establishing a monument on an expansion of West Arm river; a second on the east side of the valley of a river which crosses the boundary about seven miles east of Takhini river; and a third on the east bank of Takhini river. Then failing to find a pass across the watershed between the Takhini and Alsek rivers, he was forced to return to Skagway and to make his way up to the Alsek river by way of the Dalton trail. He established a fourth monument on the east bank of Alsek river, a short distance above 'Horse Canyon,' and a fifth on the west bank of a tributary of the Alsek, thus completing his work for the season.

A. Saint Cyr, D.L.S., was engaged during last season in a continuation of his previous season's work on the boundary between British Columbia and the Yukon Territory. Astronomical stations had been established along part of this boundary at points about twenty miles apart, and Mr. Saint Cyr was erecting intermediate stations placed about one mile apart. These intermediate stations are marked by a three-foot iron post driven flush with the ground, and alongside of this a wooden post at least four inches square, is placed, around which an earth or stone mound is built. Instructions were given him in April, 1900, to complete the posting and mounding of the line between Bennett and Atlin lakes, and to continue the survey as far as Teslin lake. During the season, he completed about one hundred miles of the boundary. The first part of the season, the weather was most favourable, but during the last two months he encountered several snow storms which delayed the work greatly. The line between Bennett and Atlin lakes, a distance of thirty-six miles, was marked with forty-two monuments. This part of the line was described in Mr. Saint Cyr's report of 1899. The portion between Windy arm and Taku arm, about sixteen miles, is the most mountainous part of the boundary, and in June, snow several feet deep still lay on the slopes. Between Taku arm and Atlin lake, a distance of fourteen miles, the country is covered with a dense forest of spruce and pine. The highest part of this stretch is near Taku arm where the line reaches an elevation of about seventeen hundred feet. Between Atlin and Teslin lakes, the country is broken only by low hills, which are mostly covered with a heavy growth of pine, fir, and spruce, which in most cases reaches to the hill tops. Between these two lakes, fifty-one monuments were erected. About one hundred and fifty photographs were taken during the season, which give a good idea of the country in which this boundary lies.

## EXPLORATORY SURVEY FROM GREAT SLAVE LAKE TO CHESTERFIELD INLET.

J. W. Tyrrell, D.L.S., left Ontario the end of January of last year to explore the country between Great Slave lake and Chesterfield inlet on Hudson bay. He completed the survey and returned to Hamilton, Ont., on December 14 last, where he has since been engaged preparing plans and a report of the exploration.

## YUKON TERRITORY.

The system of Dominion land surveys in townships and ranges has not been extended to the Yukon Territory. It was considered that the large expenditure necessary to subdivide the country into townships and sections was not commensurate with the small proportion of the land for which a demand might be expected to arise in the near future. Surveys are accordingly made under the provisions of section 19 of 60-61 Vict., Chapter 29, which authorizes the survey of lands in the Yukon district and in the remote parts of the unorganized portions of the North-west Territory in lots of such size and shape as may be found advisable. Under this section, every applicant

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for a parcel of land has a survey of such parcel made by a duly qualified land surveyor, and the plan of such survey is submitted for approval to the Surveyor General. The arrangement is inexpensive and permits the disposing of land any where without the delays incurred in the extension of the township surveys, but it requires careful control and supervision to prevent encroachments of one lot upon another. Up to the beginning of 1900, very few lots had been surveyed in the territory, but as soon as lands commenced to be in demand, it became imperative to bring the surveys under proper supervision. With that object in view, detailed instructions were prepared for the survey of lots, town sites, mining claims, mill sites, roadways, and generally all surveys intended as a basis for the issue of patents, it being understood that surveys for bases, such as placer claims, hydraulic concessions, &c., would remain, as heretofore, under the direction of the Commissioner of the Territory. It was also arranged to send to the territory an experienced officer to organize the surveys; he was to remain one year in the country so as to become conversant with the requirements of the service, after which he was to return to Ottawa. With the assistance of his experience, final measures were then to be devised for dealing with the Yukon surveys. Mr. C. C. Chataway was appointed to the position as examiner of surveys, and started for Dawson at the end of April, 1900. He was authorized to issue to Dominion land surveyors the general instructions printed for their use, to sign them for the Surveyor General, and to issue supplementary instructions for such contingencies as might arise. The returns of the surveys were to be handed over to him, and if found satisfactory, were to be forwarded to the department for confirmation. If not satisfactory, they were to be returned, with his remarks, to the surveyor. He was to organize a system of record of the surveyed lots such that any lot might be properly located and easily referred to, every surveyed parcel of land being given a lot number in a group. The group was to be about 50 miles square, but this dimension could be departed from if any reason existed for so doing.

A survey party in charge of Mr. C. W. MacPherson, D.L.S., was placed under his direction and subject to his orders for the purpose of rectifying or completing imperfect surveys, and collecting such additional data as were necessary for the control of the surveys. It was suggested to establish a number of reference marks accurately located, at least over the Klondike district. On this subject, as well as upon other matters of importance, he was to consult the Commissioner of the Territory.

In November, 1900, Mr. Chataway, at the request of the Commissioner, submitted a scheme for a permanent survey office at Dawson. The plan proposed was to continue the arrangement adopted as a temporary expedient for one year when Mr. Chataway was sent to the Yukon Territory. The officer in charge was to be called 'Director of Surveys,' and his surveyor was to be 'Inspector of Surveys.' The Commissioner having recommended the adoption of the scheme with some slight modifications, his recommendation was approved, and Mr. Chataway was appointed as Director of Surveys. The Surveys Office at Dawson now consists of Mr. Chataway, Director of Surveys; Messrs. P. F. X. Genest and E. B. Bolger, draughtsmen, and Mr. H. B. M. Brown, typewriter. A chief draughtsman has still to be appointed. The Dominion land surveyors on the local staff are Messrs. Jas. Gibbon, P. T. C. Dumais, C. W. MacPherson and A. J. McPherson.

Under the present arrangement, all surveys to be used as a basis for the issue of patents are dealt with by Mr. Chataway in the same manner as before. Hydraulic and placer claims and other surveys are subject to such instructions as he may receive from the Commissioner, under his control, and the returns of such surveys are examined and approved by him before being placed on record in any office in the territory, or before being forwarded to the department. He keeps for record duplicates of all plans passing through his hands, and files them under consecutive numbers. He makes all compilations of plans that are necessary for the use of the various officials at Dawson.

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The public are allowed to examine the plans filed, the charge for searching a plan being ten cents in all cases, without exception. Copies of plans or compilations are also furnished at a charge based upon the size of the plan and the amount of work. His office is used as an agency for the sale of maps published by the department.

After the season's operations are well begun, the Director of Surveys is expected to visit the various parts of the territory in connection with his duties, to examine the surveys made, as well as the general condition of the country, and to ascertain what is, or is not, advisable in connection with the expenditure on surveys. During his absence, or illness, one of the surveyors of the staff takes his place.

The duties of the chief draughtsman are to check survey returns, to plot main compilations, and such other duties as may be assigned to him by the Director of Surveys.

The typewriter, besides performing his ordinary duties, receives and accounts for all fees for searches, copies of records, sales of maps, &c. He keeps a record of all filings and returns, and looks up records for the public when required.

178 lots in the territory have been surveyed and confirmed since the inception of the surveys. A list of the lots, with particulars, is appended.

## OFFICE WORK.

A considerable increase in the office work is apparent in consequence of the greater extent of the surveys made during the year.

The correspondence consisted of :—

Letters received.....	3,560
Letters sent.....	3,854
Number of accounts.....	439
Amount.....	\$254,007 37
Cheques forwarded.....	1,222 00

The following is a synopsis of the work of the draughting office :—

Plans and field notes of subdivision surveys examined.....	141
Plans and field notes of mineral claims examined.....	14
Plans and field notes of correction and other miscellaneous surveys examined.....	62
Township plans completed for printing.....	207
Proofs of plans examined.....	218
Declarations of settlers received.....	164
Miscellaneous plans, tracings, &c., made.....	1,364
Progress sketches received.....	209

The Eldon and Baker creek sheets of the phototopographical survey of the Rocky mountains were completed and printed.

A considerable amount of work was done in connection with the nomenclature of peaks and other features of the Selkirk range and Rocky mountains, in which confusion had crept in, different travellers using different names for the same features. Lists of the names were compiled, and also maps of about 100 square miles round Glacier station in the Selkirks, and about 275 square miles round Field station in the Rockies.

The maps of groups of lots in the Yukon Territory commenced last year for office purposes have been extended, and the surveyed lots in each group added to the maps as the surveys were approved.

The 'sectional maps,' on a scale of two miles to an inch, have been kept up to date as new surveys were completed, the following additional sheets being compiled, viz : Waterhen, Mossy Portage, Armit river and Pasquia.

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The map of Mr. T. Turnbull's exploration between Lakes Winnipeg and Winnipegosis was reduced to six miles to an inch, and prepared for photolithography.

Another map, showing the 60th parallel of latitude from Teslin lake to Alsek river and adjacent country, was also compiled on a scale of six miles to an inch to illustrate the reports of Messrs. White-Fraser and Saint Cyr on the survey of the boundary line between British Columbia and the Yukon Territory.

About 600 files of papers were received and dealt with, referring to a great variety of subjects, areas and descriptions of parcels of land, applications for new surveys and for re-marking of old surveys, questions as to the marking of corners, &c., &c.

#### BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

The regular meeting of the Board of Examiners was held, commencing on Monday, February 11, 1901. The following candidates passed examinations before the board :—

##### *Preliminary Examination.*

J. M. Bates, Ottawa, Ont.  
 J. E. Beatty, Sarnia, Ont.  
 E. H. Phillips, Calgary, Ont.  
 P. W. Currie, Ottawa, Ont.  
 J. D. Craig, Ottawa, Ont.

##### *Final Examination for D.L.S.*

G. J. Lonergan, P.L.S., Buckingham, Que.  
 M. W. Hopkins, O.L.S., Hamilton, Ont.  
 A. J. McPherson, O.L.S., Brockville, Ont.  
 C. C. Fairchild, O.L.S., Simcoe, Ont.  
 H. S. Carpenter, O.L.S., Ottawa, Ont.

The increasing number of candidates for preliminary examination indicates that the profession of Dominion land surveyor is looked on as offering better prospects than has been the case of late years. For some years past very few have thought it worth while to enter on an apprenticeship as pupil to a Dominion land surveyor, but the greater amount of surveying now being done in Manitoba and the North-west Territories, and still more the opening up of mining regions in British Columbia and the Yukon Territory, have caused a much greater demand for the services of surveyors.

The candidates for final examination are chiefly those who have already obtained commissions as surveyors of one or other of the provinces; this is due to the same cause, the lack of good prospects of employment for some time previous to the last two years having deterred young men from entering the profession to become articled to Dominion land surveyors.

The correspondence of the board amounted to :—

Letters received.....	356
Letters sent.....	498

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## APPENDICES.

The following documents are appended :—

Schedule of Dominion land surveyors employed,

List of lots in the Yukon Territory, &c.,

Statement of work performed in the survey records office,

Schedule of work executed in the photographic office,

Schedule of work executed in the lithographic office,

List of Dominion land surveyors who have been supplied with standard measures,

Reports of Messrs. Cyrus Carroll, Thos. Turnbull, Jas. Dickson, J. C. Desmeules, P. R. A. Belanger, A. J. Brabazon, J. A. Belleau, L. E. Fontaine, W. F. O'Hara, J. E. Woods, A. C. Talbot, J. K. McLean, C. C. DuBerger, J. E. Ross, W. J. Deans, Geo. White-Fraser, Arthur Saint Cyr and J. W. Tyrrell, Dominion land surveyors, on surveys made in 1900.

Examination papers of the Board of Examiners for Dominion land surveyors.

I have the honour to be, sir,

Your obedient servant,

E. DEVILLE,

*Surveyor General.*

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## APPENDIX No. 1 TO THE REPORT OF THE SURVEYOR GENERAL.

SCHEDULE of Dominion Land Surveyors employed, and work done by them from the date of the last annual report to June 30, 1901.

Surveyor.	Address.	Description of Work.
Aylsworth, C. F. ....	Madoc, Ont. ....	Subdivision of parts of townships 33, 35 and 36, range 30, also of townships 34, 35 and 36, range 31, all west of the principal meridian. Survey of the north boundaries of township 35, range 30, of townships 34 and 35, range 31, the south boundary of townships 35 and 36, ranges 30 and 31. Resurvey of the north, south, east, west and part subdivision of township 12, range 8, east of the principal meridian.
Belanger, P. R. A. ....	Ottawa, Ont. ....	Survey of the north boundaries of township 40, ranges 9, 10, 11, 12, 13, 14 and 15, and of township 44, ranges 2, 3, 4, 5, 6, 7 and 8, the east boundary of townships 40, 41, 42, 43 and 44, range 9, of township 41, range 10, also of townships 41 and 42, range 13, all west of the 2nd meridian.
Belleau, J. A. ....	Ottawa, Ont. ....	Survey of the north boundaries of townships 46 and 48, range 7, also of township 48, range 9, the east boundary of townships 47 and 48, range 7, of townships 47 and 48, ranges 8, 9, 10 and 11, all west of the 3rd meridian, also the north boundary of township 44, range 11, west of the 2nd meridian.
Bourgeault, A. ....	St. Jean, Port Joli, Que.	Contract No. 7, survey of the north and south boundaries and subdivision of townships 46 and 47, range 8, part of west, north and east boundaries and subdivision of township 46, range 9, the north, south and subdivision of township 47, range 9, part subdivision of township 46, range 10, resurvey of the north boundary of township 45, range 8, also of the east and south boundaries of township 46, range 9, of the east and west boundaries of township 46, range 10, all west of the 3rd meridian.
Bourgot, C. A. ....	St. Adelaide de Pabos, Q.	Survey of the east boundary of township 34, range 21, the north, south and subdivision of township 34, range 20, the west boundary and part subdivision of township 34, range 19, all west of principal meridian.
Bourne, R. ....	Winnipeg, Man. ....	Survey of lot 82, in the parish of St. Boniface, resurvey of the south, north and west boundaries and resurvey of township 17, range 1, the north boundary of township 18, ranges 1 and 2, all east of the principal meridian, the east boundary of township 18, range 1, west of the principal meridian, also part of east boundary of township 19, range 1, west of the principal meridian.
Brabazon, A. J. ....	Portage du Fort, Que.	Resurvey of township 23, ranges 5, 6 and 7, and township 24, ranges 6 and 7, all west of the 2nd meridian.
Carroll, C. ....	Prince Albert, Sask. ....	Survey of the east and north boundaries of township 2, range 13, of the east boundary of townships 1 and 2, range 12, the east and south boundaries of township 1, range 13, subdivision of part of township 1, range 12, also part of township 2, range 11, east of principal meridian, resurvey of the east boundaries of township 1, range 10, and of township 2, range 10, east of the principal meridian.
Côté, J. A. ....	Quebec, Que. ....	Part subdivision of township 5, range 9, east of the principal meridian.
Deans, W. J. ....	Brandon, Man. ....	Part subdivision of township 1, range 29, west of the 6th meridian, part of east outline of township 25, east of coast meridian, also part subdivision of township 12, range 8, west of the 6th meridian, resurvey of part of section 13, township 19, east of coast meridian, of sections 29, 33 and 34, township 22, east of coast meridian, east boundary of section 25, township 26, east of coast meridian, the boundary of section 21 in township 2, range 29, west of the 6th meridian, also north boundaries of sections 18 and 20, in township 4, range 29, west of the 6th meridian, and boundary of section 22, township 3, range 30, west of the 6th meridian.
Desmeulles, J. C. ....	Murray Bay, Que.	Part subdivision of townships 27 and 28, range 23, west of the principal meridian.

## SESSIONAL PAPER No. 25

## APPENDIX No. 1 TO THE REPORT OF THE SURVEYOR GENERAL.

SCHEDULE of Dominion Land Surveyors employed, and work done by them from the date of the last annual report to June 30, 1901—Continued.

Surveyor.	Address.	Description of Work.
Dickson, James . . .	Fenelon Falls, Ont.	Subdivision of township 17, range 18, and township 33, range 20, part subdivision of township 33, range 28, and township 32, range 29, all west of principal meridian, the east boundaries of townships 45 and 46, ranges 6 and 7, all west of the 2nd meridian.
Dumais, P. T. C. . . .	Dawson, Y. T. . . .	Survey of part of R. C. Mission property and part of lots Nos. 3, 4, 5 and 6, block D, Smith addition for 2nd avenue extension, survey of lots 27, 28, 29, 30, 31, 33 and 35, group 2, and 1 and 2, group 7, lot 6, group 3, subdivision of part of lot 1, group 2, survey of lots 48, 49, 50, 52 and 53, group 2, 7 and 8, group 3, and 1, group 7, survey of Trunk road to Stewart river.
Dulberger, C. C. . . .	Waterloo, Que. . . .	Survey of part subdivision of township 52, range 21, the north outline of same, part subdivision of townships 53 and 54, ranges 19 and 20, the south outline of township 53, range 21, also part subdivision of same, all west of the 4th meridian.
Dalton, J. J. . . . .	Milton, W., Ont.	No survey completed.
Fitzgerald, J. W. . . .	Peterboro, Ont. . . .	No survey completed.
Fontaine, L. E. . . . .	Levis, Que. . . . .	Survey of the east boundary of townships 58, 59, 60, 61, 62 and 63, range 1, the north boundary of township 62, range 1, the north and east boundaries of township 63, range 2, the north boundary of townships 62 and 64, range 2, the east boundary of townships 62 and 64, range 3, the north boundary of township 64, ranges 3 and 4, the east boundary of townships 63 and 64, range 5, all west of the 4th meridian.
Gosselin, L. . . . .	Quebec, Que. . . . .	Contract No. 6, no survey completed.
Gauvreau, L. P. . . . .	Quebec, Que. . . . .	No survey completed.
Gibson, J. . . . .	Dawson, Y. T. . . . .	No survey completed.
Lendrup, R. W. . . . .	Strathcona, Alta. . . .	Contract No. 2, subdivision of townships 42, 43 and 44, range 1, north and south outlines of 43 and 44, range 1, all west of 5th meridian, the south outline of township 51, range 21, west of 4th meridian.
Lowe, Henry. . . . .	Winnipeg, Man. . . . .	Survey of trail extending from north boundary of the Westbourne settlement to its intersection with the Sandy Bay trail, through sections 1, 12, 13, 14 and 23, township 14, range 9, west of principal meridian, Province of Manitoba, survey of trails through Westbourne settlement on the north and south sides of the Whitemud River and the extension easterly of trail on the south side through sections 25 and 36, township 13, range 9, west, and through section 31, township 13, range 8, west of the principal meridian, Province of Manitoba.
Loneragan, G. J. . . . .	Buckingham, Que. . . .	Survey of division of township 7, range 26, west of the 4th meridian.
Molloy, J. . . . .	Rosser, Man. . . . .	Contract No. 9, no surveys completed.
Martin, A. F. . . . .	Winnipeg, Man. . . . .	Subdivision of townships 33 and 34, ranges 10 and 4, of townships 32 and 33, range 9, of township 33, 34 and 35, range 5, of townships 27 and 28, range 10, survey of the east boundary of township 36, range 6, also the south boundary of township 35, range 4, resurvey of north boundary of township 32, range 9, all west of the 2nd meridian.
McLean, J. K. . . . .	Elora, Ont. . . . .	Subdivision of township 58, range 18, of township 56, ranges 22 and 23, resurvey of township 57, ranges 22, 23 and 24, north boundary of township 57, ranges 22 and 23, of the north boundary of section 19 and re-measurement of settlement (Lobatic) lines in township 58, range 18, of and the east boundary of township 58, range 23, all west of the 4th meridian.
McPhee, A. . . . .	Innisfail, Alta. . . . .	Subdivision of townships 40, 41 and 42, range 2, also resurvey of the north and east boundaries of township 40, range 2, all west of the 5th meridian.
MacPherson, C. W. . . .	Dawson, Y. T. . . . .	Survey of lots 1, 2, 3, 4 and 5, group 6, of 1, 2, 3, 4, 7, 8, 10 and 11, group 8, of 1 and 2, group 9, of lots 5 and 6, group 4, lots 1, 2, 3 and 4, group 10, lots 1 and 2, group 11, lots 28 and 29, group 5, also subdivision of blocks A, B, H, I, O, P, V, W, being a part of lot 2 in group 4, all in the Yukon Territory.

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## APPENDIX No. 1 TO THE REPORT OF THE SURVEYOR GENERAL.

SCHEDULE of Dominion Land Surveyors employed, and work done by them from the date of the last annual report to June 30, 1901—*Concluded*.

Surveyor.	Address.	Description of Work.
McPherson, A. J. . . . .	Dawson, Y.T. . . . .	No survey completed.
McKenna, J. J. . . . .	Dublin, Ont. . . . .	Subdivision of townships 5 and 6, ranges 24, 27, 28 and 29, township 5, range 30, all west of the 3rd meridian.
McGrandle, H. . . . .	Huntsville, Ont. . . . .	Contract No. 8, no survey completed.
O'Hara, W. F. . . . .	Chatham, Ont. . . . .	Survey of the east boundary of townships 42, 43 and 44, range 2, of townships 41, 42, 43 and 44, range 3, of townships 39, 40, 41, 42, 43 and 44, range 4, of townships 39, 40, 43 and 44, range 5, the north boundary of township 44, range 2, all west of the 5th meridian; subdivision of townships 31 and 32, range 10, west of the principal meridian.
Proudfoot, H. B. . . . .	Toronto, Ont. . . . .	Contract No. 1, no survey completed.
Ross, J. E. . . . .	New Westminster, B.C.	Subdivision of townships 19, 20 and 21, ranges 26 and 27, of townships 22 and 23, range 25, of township 23, range 26, of township 20, ranges 23 and 24, of township 18, ranges 6 and 7, of township 19, ranges 5 and 6, of township 19, range 7, of townships 22, 23 and 25, range 12, of townships 20, 21, 23, 24 and 25, range 13, of townships 18, 19, 24 and 25, range 14, of township 20, ranges 8 and 9, all west of the 6th meridian; re-survey of part of lots 92, 93, 95 and 643, part of lots 42 and 646, and part of lots 468 and 644, also the south boundary of Neskamlith Indian reserve; part subdivision of townships 23 and 24, range 2, all west of the 6th meridian.
Roy, Geo. P. . . . .	Quebec, Que. . . . .	Contract No. 12, no surveys completed.
Rainboth, E. J. . . . .	Aylmer, Que. . . . .	Subdivision of townships 5 and 6, ranges 17 and 18, townships 2 and 3, range 16, township 4, ranges 16, 17, 18 and 19, townships 1 and 2, range 15, townships 2 and 3, range 17, townships 2 and 3, ranges 18 and 19, township 2, range 20, townships 3 and 5, range 21, township 5, range 23, all west of the 4th meridian.
Rinfret, R. . . . .	Dawson, Y.T. . . . .	Survey of lot 7, group 1, of lots 61, 77, 78, 66, 67, 87, 68, 82, 88, 89, 92, 93, 94, all in group 2 in the Yukon Territory.
Saint Cyr, A. . . . .	Ottawa, Ont. . . . .	No survey completed.
Sirois, E. . . . .	Que. . . . .	Assistant to J. C. Desmeules.
Saint Cyr, J. B. . . . .	St. Anne de la Perade, Que. . . . .	Contract No. 4, no survey completed.
Saunders, B. J. . . . .	Banff . . . . .	Re-survey of part of east boundary of townships 45 and 46, ranges 26 and 27, west of the 4th meridian.
Talbot, A. C. . . . .	Ottawa, Ont. . . . .	Subdivision of townships 52 and 53, ranges 2 and 3, re-survey of east and south boundaries of township 52, range 2, the east and west of township 52, range 3, the north boundary of 52, range 1, the north boundary of township 51, range 3, all west of the 5th meridian; survey of the N.W.M.P. reserve at Fort Saskatchewan in township 54, range 22, west of the 4th meridian.
Towle, C. E. . . . .	Waterloo, Que. . . . .	Contract No. 13, no survey completed.
Turnbull, Thos. . . . .	Winnipeg, Man. . . . .	Survey between Lakes Winnipeg, Manitoba and Winnipegosis.
Vincent, F., D.L.S. . . . .	Que. . . . .	Assistant to J. K. McLean.
Woods, J. E. . . . .	Aylmer, Que. . . . .	Subdivision of township 1, ranges 22, 23 and 28, of township 3, range 29, west of 4th meridian, of township 6, range 2, of township 7, ranges 3 and 4, of township 8, ranges 4, 5 and 6, all west of the 3rd meridian; re-survey of section 30, in township 27, range 20, west of the 4th meridian; also renewal of corners of sections 27 and 34, township 1, range 23, west of the 4th meridian, survey of east outline of townships 3 and 4, ranges 16, 17, 18 and 19, all west of the 4th meridian.
White-Fraser, Geo. . . . .	Toronto, Ont. . . . .	Survey of a portion of the province of British Columbia and the Yukon Territory, being adjacent to the 60th parallel of north latitude between Little Windy Arm and Alsek river.
Wallace, J. N. . . . .	Calgary, Alta. . . . .	Survey of the east boundaries of townships 45, 46, 47 and 48, range 2, west of the 5th meridian.
Wheeler, A. O. . . . .	Calgary, Alta. . . . .	No survey completed.



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## APPENDIX No. 2 TO THE REPORT OF THE SURVEYOR GENERAL.

LIST of lots in the Yukon Territory of which the surveys have been made and confirmed.

*Group No. 1, Yukon Territory.*

Lot No.	Area in Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
2	10 00	Wm. Ogilvie.	1896	May 20, '99.	H. A. Constantine	
4	80 00	Wm. Ogilvie.	1896	May 20, '99	E. J. Ward.	
7	1 45	R. Rinfret	1900	Sept. 7, '00.	Rt. Rev. W.C. Bompus, Bishop of Selkirk	
12	20 66	Wm. Ogilvie.	1896	May 20, '99	Isabella M. Healy.	Cone Hill Quartz Claim.
13	320 00	Wm. Ogilvie.	1896	" 20, '99	W. F. Cornell.	Coal Mining Location.
14	1 '99	Wm. Ogilvie.	1896	" 20, '99	Isabella M. Healy.	
15	160 00	Wm. Ogilvie.	1896	" 20, '99.	Hamilton, Constantine & Ogilvie.	
16	320 00	R. J. Jephson.	1899	July 16, '00.	S. H. Stewart.	
17	320 00	R. J. Jephson.	1899	" 16, '00	Jas. Hall Watson	
18	80 00	R. J. Jephson.	1899	" 16, '00	Jas. Watson	
19		R. J. Jephson.	1899	Sept. 21, '00	J. J. Healy.	
20		R. J. Jephson.	1899	" 21, '00	J. H. Watson & J. J. Healy	
21	160 '00	A. Fawcett	1899	Jan. 17, '00	E. O'Brien	
22	320 '00	R. J. Jephson.	1899	July 16, '00	T. C. Healy	
23	8 48	R. J. Jephson.	1899	Sept. 18, '00.	T. C. Healy	
25	160 00	Adam Fawcett.	1900	Aug. 17, '00.	H. Siemer	
26	80 00	Adam Fawcett.	1900	" 17, '00.	E. B. Condon.	
27	160 00	Adam Fawcett.	1900	" 17, '00.	E. C. Condon	

*Group No. 2, Yukon Territory.*

1		P. T. C. Domais.	1900	Aug. 20, '00		Subdivision of part of lot.
		Jas. Gibbon	1899	Jan. 17, '00	Dominion Government	Government reserve addition.
2	18 00	Wm. Ogilvie	1897	May 20, '99.	Arthur Harper	
3		C. S. W. Barwell	1898	Jan. 22, '00	Joseph Leduc	Addition.
1	14 30	Wm. Ogilvie.	1897	May 20, '99	F. Atkins (or Smith)	
7	41 87	J. Gibbon	1897	Sept. 22, '99.	A. H. Day	
6	42 00		1897	July 22, '99	Stewart Menzies.	
8	32 00		1897	Jan. 24, '01.	H. C. Gingg.	
9	159 60		1898	Sept. 8, '00	Johnson Fortier Morgan	
		C. S. W. Barwell.	1899	July 30, '00		Subdivision of lot.
10	79 50	Jas. Gibbon	1898	Sept. 8, '00	B. C. Sprague	Subject to rights ac
11	40 35	C. S. Barwell.	1899	Jan. 18, '00	Canadian Development Co.	quired to date.
12	40 35	Jas. Gibbon	1897	8 July 22, '99	Government addition	
13			1898	Sept. 22, '99	Dominion Government	
14	16 36	C. S. W. Barwell.	1898	Jan. 17, '00	N. A. F. & T. Co. per Jas. J. Healey.	
15	2 00	Lewis Bolton.	1899	" 17, '00	R. Reeves	
		P. T. C. Domais	1900	Aug. 3, '00		Subdivision of lot
17	160 00	Louis B. Stewart.	1899	Jan. 18, '00	C. Macleod and M. J. Gates	
18	160 00		1899	" 18, '00	C. Macleod	
19	160 00		1899	" 18, '00	M. Marsden	
20	160 00		1899	" 18, '00	A. Gibbs	
21	127 45	Lewis Bolton.	1899	" 18, '00	Sam Ward et al	
22	36 04		1899	" 17, '00	J. A. Aekley	
23	39 30		1899	" 17, '00	J. G. Morley.	
24	44 44	Jas. Gibbon	1899	" 17, '00	Dominion Government	
25		R. J. Jephson	1900	Sept. 18, '00	Government Reserve ad-	dition
26	160 00	C. S. W. Barwell	1900	29, '00.	L. R. Fokla	

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APPENDIX No. 2 TO THE REPORT OF THE SURVEYOR GENERAL—*Con.*LIST of lots in the Yukon Territory, &c.—*Con.**Group No. 2, Yukon Territory—Con.*

Lot No.	Area in Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
27	10 00	Paul T. C. Dumais	1900	July 27, '00	Capt. J. D. Murray	
28	10 00	"	1900	Aug. 11, '00	J. A. Cleveland	
29	10 00	"	1900	July 27, '00	Emile Mahr	
30	20 00	"	1900	Aug. 8, '00	G. W. Linfield & R. Perry	
31	10 00	"	1900	" 8, '00	Albert Pixley	
33	200 00	R. J. Jephson	1900	" 10, '00	Jno. Simpson	
34	165 25	P. T. C. Dumais	1900	" 3, '00	Moosehill Indian Reserve	
36	51 65	T. D. Green	1899	Mar. 22, '00	"	
37	48 97	"	1899	" 22, '00	"	
38	47 12	"	1899	" 22, '00	"	
39	51 65	"	1899	" 22, '00	"	
40	22 00	R. W. Cautley	1900	July 24, '00	M. F. Mosher	
41	51 65	T. D. Green	1900	Aug. 14, '00	"	
42	43 97	"	1900	" 14, '00	"	
43	41 40	"	1900	" 14, '00	"	
44	34 15	"	1900	" 14, '00	"	
45	5 00	J. L. Cote	1900	Sept. 5, '01	F. A. Cleveland	
46	10 00	"	1900	" 5, '00	"	
47	10 00	"	1900	July 27, '00	W. A. & P. J. Jewell	
48	10 00	P. T. C. Dumais	1900	Dec. 27, '00	Wm. Gorbrait	
49	10 00	"	1900	" 27, '00	L. J. McCarty	
50	10 00	"	1900	" 27, '00	C. Tangen	
52	5 00	"	1900	" 27, '00	H. E. Kolloen	
53	10 00	"	1900	" 27, '00	"	
54	"	J. L. Cote	1900	Sept. 9, '00	"	
59	37 40	R. J. Jephson	1900	Feb. 12, '01	Hermengilde Laundry	
60	63 34	"	1900	Oct. 23, '00	"	
61	80 00	R. Rinfret	1900	" 23, '00	J. A. Morgan	
62	35 10	T. D. Green	1900	Nov. 9, '00	"	
63	31 09	"	1900	" 9, '00	"	
64	51 65	Geo. Edwards	1900	Oct. 23, '00	"	
65	51 65	"	1900	" 23, '00	"	
66	160 00	Raoul Rinfret	1901	Mar. 7, '01	Daniel H. McDermid	
67	159 70	"	1901	April 4, '01	Daniel H. Sinclair	
68	48 50	"	1901	" 9, '01	"	
77	80 00	"	1900	Dec. 27, '00	Wm. B. Morgan	
78	9 80	"	1900	Feb. 25, '01	Alaska Commercial Co	
81	36 77 1/2	A. Fawcett	1901	July 2, '01	W. J. Nolan	
82	10 1/2	Raoul Rinfret	1901	April 9, '01	McDonald	
83	47 64	C. S. W. Barwell	1900	" 4, '01	Polorado Mineral Claim	
84	23 23	"	1900	" 4, '01	Adole Mineral Claim	
85	51 65	"	1900	" 4, '01	Bl'k Jack Mineral Claim	
86	50 66	"	1900	" 4, '01	Victoria Mineral Claim	
87	132 90	R. Rinfret	1901	" 4, '01	Paul Forest & Golfroi Jolicœur	
88	11 94	"	1901	" 15, '01	N. Nelson	
89	7 34	"	1901	" 15, '01	"	
90	22 97	C. S. W. Barwell	1901	June 19, '01	A. R. Cameron	
91	9 00	T. D. Green	1901	May 15, '01	"	
92	20 00	Raoul Rinfret	1901	July 30, '01	Jno. A. Morgan	
93	10 00	"	1901	" 30, '01	"	
94	80 00	"	1901	" 30, '01	Messrs. Perry & Vau dall	
95	5 51	Adam Fawcett	1901	" 24, '01	Wm. H. Daily	

## SESSIONAL PAPER No. 25

APPENDIX No. 2 TO THE REPORT OF THE SURVEYOR GENERAL—*Con.*LIST of lots in the Yukon Territory, &c.—*Con.**Group No. 3, Yukon Territory.*

Lot No.	Area in Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
1	160 00	Jas. Gibbon	1897	Jan. 23, '01	Jas. M. Wilson	
2	40 00	"	1897	" 23, '01	Gov't Reserve	
3	150 22	"	1897	" 23, '01	Stewart Menzies	
4	165 00	"	1897	" 23, '01	James M. Wilson	
5	17 73	"	1899	" 23, '01	Gov't property	
6	48 35	P. T. C. Dumais	1900	Aug. 14, '00	W. E. Jacobs	
7	160 00	"	1900	Jan. 9, '01	Christian Sonnicksen	
8	160 00	"	1900	" 9, '01	Sam Henry	
10	80 00	Geo. Edwards	1901	July 30, '01	Jas. Hagen	
11	80 00	"	1901	" 30, '01	"	
12	80 00	"	1901	" 30, '01	"	
13	77 82	"	1901	" 30, '01	"	
22	21 21	R. W. Cautley	1901	" 24, '01	Messrs. Bege & Edwards	Rights transferred to W. R. Hill.
23	18 30	Adam Fawcett	1901	" 24, '01	F. Gauke	

*Group No. 4, Yukon Territory.*

1	40 00	Jas. Gibbon	1897	Jan. 23, '01		Gov't Reserve.
2	640 00	"	1897	" 23, '01	Arthur Harper	
		R. W. Cautley	1898	" 22, '00		Townsite of Ft. Selkirk
		C. W. MacPherson	1900	July 2, '01		Subdivision of blocks A, B, H, I, O, P, V, W
3	480 00	Jas. Gibbon	1897	Jan. 23, '01	Joseph Ladue	
4	640 00	"	1897	" 23, '01	Donald McDonald	
5	10 00	C. W. MacPherson	1900	July 2, '01	C. D. Co.	
6	159 98	"	19 0	" 2, '01		Indian Reserve.

*Group No. 5, Yukon Territory.*

1	40 00	H. G. Dickson	1899	Feb. 8, '00	Wm. W. R. McLune	
2	40 00	"	1899	" 8, '00	G. W. Mitchell	
3	10 00	"	1899	" 8, '00	Colin F. McSane	
4	40 00	"	1899	" 8, '00	Duncan C. Fraser	
5	40 00	"	1899	" 8, '00	Harvey Graham	
6	40 00	"	1899	" 8, '00	Wm. Whitman	
7	40 00	"	1899	" 8, '00	Hance Jas. Logan	
8	39 65	"	18 9	" 8, '00	John Hisher	
9	10 00	"	1899	" 8, '00	Geo. R. Maxwell/Rey	
10	40 00	"	1899	" 8, '00	Allan Haley	
11	40 00	"	1899	" 8, '00	Arnold L. Borch	
12	10 00	"	18 9	" 8, '00	N. W. M. P.	
13	10 00	"	1899	" 8, '00	"	
14	40 00	"	1899	" 8, '00	Harry Jas. Patterson	
15	20 30	"	1889	" 8, '00	Sam. Effengis Adair	
16	40 00	"	1899	" 8, '00	Italia Louis Adair	
17	40 00	"	1899	" 8, '00	Jay Wiley	
18	10 00	"	1899	" 8, '00	J. An. Tins. Bethnew	
19	97 12	"	1899	" 8, '00	B. V. M. T. & T. Co.	
20	6 12	"	1899	" 8, '00	Vincent Ignace Haly	
21	22 18	"	1899	" 8, '00	Hy. G. Smith	
23	75 00	"	1900	May 15, '01	Coughlin & McKinnon	
24	40 00	"	1900	June 19, '01	Whitney & Baxter	
25	80 10	"	1900	" 19, '01	"	

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APPENDIX No. 2 TO THE REPORT OF THE SURVEYOR GENERAL—*Con.*LIST of lots in the Yukon Territory, &c.—*Con.**Group No. 5, Yukon Territory—Con.*

Lot No.	Area of Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
26		P. T. C. Dumais..	1889	Oct. 11, '00.	Dominion Gov't	Subdivision of lot.
27		"	1889	" 11, '00.	"	Subdivision of lot.
28	159 98	C. W. MacPherson	1900	July 24, '01	"	
29	40 00	"	1900	" 24, '01	N. W. M. P.	
30	160 00	H. G. Dickson..	1901	" 24, '01	Jas. E. Beatty..	
31	160 00	"	1901	" 24, '01	"	
32	160 00	"	1901	" 24, '01	E. Johnston..	
33	160 00	"	1901	" 24, '01	Robt. Lowe	
34	160 00	"	1901	" 24, '01	Geo. Armstrong	
35	160 00	"	1901	" 24, '01	W. Armstrong	
36	160 00	"	1901	" 24, '01	"	
37	160 00	"	1901	" 24, '01	T. C. Norris..	
38	160 00	"	1901	" 24, '01	"	

*Group No. 6, Yukon Territory.*

1	160 00	C. W. MacPherson	1900	Sept. 25, '00	R. Y. M. T. & T. Co	
2	160 00	"	1900	" 21, '00	"	
3	110 23	"	1900	" 21, '00	"	
4	160 00	"	1900	" 21, '00	"	
5	40 00	"	1900	" 21, '00	N. W. M. P.	
6	120 00	Hugh Burnet..	1899	May 15, '01	H. M. Woodbridge	
7	160 00	"	1899	" 15, '01	"	
8	90 00	"	1899	" 15, '01	"	

*Group No. 7, Yukon Territory.*

1	40 00	P. T. C. Dumais.	1900	Jan. 9, '01	N. W. M. P.	
2	40 00	"	1900	Aug. 8, '00	The Trading & Exploring Co. Limited.	

*Group No. 8, Yukon Territory.*

3	40 00	C. W. MacPherson	1900	Apr. 30, '01	"	Police Reserve.
4	40 00	"	1900	" 30, '01	"	" "
7	2 00	"	1900	" 30, '01	Dominion Government.	

*Group No. 9, Yukon Territory.*

1	40 00	C. W. MacPherson	1900	Apr. 30, '01	N. W. M. P.	
2	40 00	"	1900	" 30, '01	"	

*Group No. 10, Yukon Territory.*

1	40 00	C. W. MacPherson	1900	July 2, '01	"	Police Reserve.
2	40 05	"	1900	" 2, '01	"	" "
3	40 00	"	1900	" 2, '01	"	" "
4	159 76	"	1900	" 2, '01	Miller.	

*Group No. 11, Yukon Territory.*

1	40 017	C. W. MacPherson	1900	July 2, '01	N. W. M. P.	
2	25 50	"	1900	" 2, '01	"	

## APPENDIX No. 3 TO THE REPORT OF THE SURVEYOR GENERAL.

STATEMENT of work performed for the twelve months ending June 30, 1901.

Files received and dealt with.....	1,180
Letters drafted.....	3,380
Memorandums, reports, draft memorandums to council, &c..	291
Plans, tracings, &c., copied or compiled.....	369
Statutory declarations copied and mailed.....	136
Plans sent to agents, registrars, &c.....	3,011
Pages of field notes copied.....	138
Prints of plans received and stored.....	11,464
Original plans recorded.....	495
Original field books recorded.....	346
Letters written to agents, registrars, &c.....	576
Registered parcels sent out.....	701

F. CLAYTON,

*Surveyor and Draughtsman in charge of Branch.*

DEPARTMENT OF THE INTERIOR,  
 SURVEY RECORDS BRANCH,  
 OTTAWA, August 19, 1901.

## APPENDIX No. 4 TO THE REPORT OF THE SURVEYOR GENERAL.

Work done in the Photographic Office, Department of the Interior.

Aristo prints.....	1,305
Bromides.....	669
Black and white prints.....	270
Wet plates.....	84
Dry plates.....	608
Transparencies.....	36
Crayon pictures.....	2

## GEOLOGICAL.

Aristo prints.....	507
Bromides.....	28
Wet plates.....	52
Transparencies.....	2
Dry plates.....	12

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## APPENDIX No. 5 TO THE REPORT OF THE SURVEYOR GENERAL.

SCHEDULE of Work done in Lithographic Office from July 1, 1900, to June 30, 1901.

Month.	MAPS.		TOWNSHIPS.		FORMS, &c.	
	Number.	Copies.	Number.	Copies.	Number.	Copies.
1900.						
July . . . . .	2	300	4	212	3	940
August . . . . .			26	1,381	2	1,050
September . . . . .	2	30	10	530		
October . . . . .			19	1,011		
November . . . . .	2	150	14	744	5	800
December . . . . .			17	905	3	625
1901.						
January . . . . .	5	90	15	799	3	300
February . . . . .	1	150	21	1,115	3	540
March . . . . .			38	2,021		
April . . . . .	2	135	13	693	1	15
May . . . . .	2	150	12	639	1	500
June . . . . .			18	957	2	570
Total . . . . .	16	1,025	207	11,007	23	5,340

## RECAPITULATION.

Number of maps . . . . .	16	Number of copies . . . . .	1,025
“ townships . . . . .	207	“ “ . . . . .	11,007
“ forms, &c. . . . .	23	“ “ . . . . .	5,340
Grand total . . . . .	246	Grand total . . . . .	17,372

SESSIONAL PAPER No. 26

APPENDIX No. 6 TO THE REPORT OF THE SURVEYOR GENERAL.

LIST of Dominion Land Surveyors who have been supplied with Standard Measures.

Name.	Address.	Date of Appointment.	Remarks.
Austin, G. F.	Dewdney, Alta.	April 14, '72	
Aylsworth, C. F.	Madoc, Ont.	May 17, '86	
Bairwell, C. S. W.	Dawson, Yukon Territory	Aug. 21, '94	
Bayne, G. A.	Winnipeg, Man.	April 14, '72	
Belanger, P. R. A.	Ottawa, Ont.	May 17, '80	Surveys staff, Dept. of Interior.
Belleau, J. A.	Ottawa, Ont.	May 15, '83	
Bigger, C. A.	Ottawa, Ont.	Feb. 30, '82	
Bolton, L.	Listow-I, Ont.	April 14, '72	
Bourgault, A.	St. Jean Port Joli, Que.	Feb. 29, '83	
Bourgault, C. E.	St. Jean Port Joli, Que.	Feb. 21, '88	
Bourget, C. A.	Ste. Adelaide de Palos, Que.	May 14, '84	
Bourne, R.	Fort Rouge, Winnipeg, Man.	June 17, '75	
Brabant, A. J.	Ottawa, Ont.	May 12, '82	
Bray, S.	Ottawa, Ont.	Nov. 14, '83	Dept. of Indian Affairs.
Brodie, S.	Fort Qu'Appelle, Assa.	April 14, '72	
Brownlee, J. H.	Victoria, B.C.	April 15, '87	
Burke, W.	Minnedosa, Man.	April 14, '72	
Burnet, H.	Victoria, B.C.	June 22, '85	
Burwell, H. M.	Vancouver, B.C.	Feb. 17, '87	
Carroll, C.	Prince Albert, Sas.	April 14, '72	
Cantley, R. W.	Dawson, Yukon Territory	Sept. 2, '96	
Cleveland, E. A.	Vancouver, B.C.	June 27, '99	
Côté, J. L.	Dawson, Yukon Territory	Feb. 21, '90	
Cotton, A. F.	New Westminster, B.C.	May 11, '80	
Dalton, J. J.	Milton, Ont.	April 17, '79	
Dennis, W. J.	Brandon, Man.	May 13, '86	
Dennis, J. S.	Regina, Assa.	Nov. 19, '77	Dominion Topographical Surveyor,
Denny, H. C.	Calgary, Alta.	April 1, '82	Deputy Commissioner, Public Works,
Desmeules, J. C.	Murray Bay, Que.	April 14, '72	N.W.T.
Dickson, H. G.	Whitehorse, Yukon Terr'y.	Feb. 19, '89	
Dickson, J.	Fenelon Falls, Ont.	April 14, '72	
Doupe, J.	Winnipeg, Man.	April 14, '72	
Doupe, J. L.	Winnipeg, Man.	Oct. 6, '88	
Drewry, W. S.	Victoria, B.C.	Nov. 14, '83	
Driscoll, A.	Edmonton, Alta.	Feb. 23, '87	
DuBerger, C. C.	Waterloo, Que.	Nov. 17, '81	
Ducker, W. A.	Winnipeg, Man.	Feb. 30, '83	
Du-nais, P. T. C.	Hull, Que.	Feb. 29, '82	
Edwards, G.	Thurso, Que.	April 14, '72	
Fairchild, C. C.	Simcoe, Ont.	Feb. 20, '91	
Fawcett, T.	Niagara, Falls, Ont.	Nov. 18, '76	Dominion Topographical Surveyor,
Fawcett, A.	Dawson, Yukon Territory.	Feb. 22, '93	Alaska Commercial Co.
Fitzpatrick, J. D. A.	Kildare, Que.	Feb. 23, '87	
Fontaine, L. E.	Levis, Que.	Aug. 13, '92	
Foster, F. L.	Toronto, Ont.	April 14, '72	
Francis, J.	Poplar Point, Man.	June 17, '75	
Garden, J. F.	Vancouver, B.C.	May 13, '80	
Garden, C.	Winnipeg, Man.	April 14, '72	
Garden, G. H.	Lethbridge, Alta.	April 14, '72	
Gauvreau, L. P.	Quebec, Que.	April 14, '72	
Gibson, J.	Dawson, Yukon Territory	Feb. 12, '91	Gold Commissioner's office, Yukon Territory.
Gore, T. S.	Victoria, B.C.	April 19, '79	
Gosselin, L.	Hedleyville, Que.	May 15, '80	
Green, T. D.	Dawson, Yukon Territory	May 19, '84	
Harris, J. W.	Winnipeg, Man.	April 14, '72	City Surveyor, Winnipeg.
Henderson, W.	Chilliwack, B.C.	Nov. 17, '83	
Hopkins, M. W.	Hamilton, Ont.	Feb. 20, '91	
Hubbell, E. W.	Ottawa, Ont.	May 19, '84	Surveys staff, Dept. of the Interior.
Jephson, R. J.	Calgary, Alta.	May 12, '89	District Engineer, N.W.T.
Klotz, O. J.	Ottawa, Ont.	Nov. 19, '77	Dominion Top. Surveyor, Astronomer Dept. of the Interior.
Latimer, F. H.	Detroit, Michigan	Nov. 13, '85	District Engineer, N.W.T.
Laurie, R. C.	Battleford, Sask.	April 27, '83	
Lawe, H.	Winnipeg, Man.	April 14, '72	
Lendrum, R. W.	Edmonton, Alta.	May 15, '80	
Lonsgeran, G. J.	Buckingham, Que.	Feb. 28, '91	
Lumsden, H. D.	Ottawa, Ont.	April 14, '72	
MacPherson, C. W.	Dawson, Yukon Territory.	Feb. 7, '90	

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APPENDIX No. 6 TO THE REPORT OF THE SURVEYOR GENERAL—*Con.*LIST of Dominion Land Surveyors who have been supplied with Standard Measures—*Concluded.*

Name.	Address.	Date of Appointment.	Remarks.
Magrath, C. A.	Lethbridge, Alta.	Nov. 16, 81	Dominion Topographical Surveyor, Land Commissioner, Alberta Railway and Canal Co.
Malcolm, L.	Blenheim, Ont	April 14, 72	
Martin, A. F.	Winnipeg, Man.	April 14, 72	
Miles, C. F.	Rat Portage, Ont	April 14, 72	
Molloy, J.	Rosser, Man.	April 14, 72	
McArthur, J. J.	Ottawa, Ont.	April 17, 79	
McAree, J.	Toronto, Ont.	April 14, 72	Dominion Topographical Surveyor.
McFadden, M.	Neepawa, Man.	April 14, 72	
McFee, A.	Innisfail, Alta	April 19, 79	
McGrandle, H.	Huntsville, Ont.	May 30, '83	
McKenna, J. J.	Dublin, Ont	April 14, 72	
McKenzie, J.	New Westminster, B.C.	Nov. 18, '88	Dominion Lands Agent, New Westminster.
McLatchie, J.	Nelson, B.C	April 14, 72	
McLean, J. K.	Elora, Ont.	April 1, '82	
McPherson, A. J.	Brockville, Ont.	Feb. 21, '01	
McPhillips, G.	Windsor, Ont.	June 17, '75	
Ogilvie, W.	Ottawa, Ont	April 14, 72	
O'Hara, W. F.	Chatham, Ont	Feb. 19, '95	
Patrick, A. P.	Calgary, Alta	Nov. 19, '77	Dominion Topographical Surveyor.
Pearce, W.	Calgary, Alta.	May 10, '80	Inspector of Surveys, Dept. of Interior
Proudfoot, H. B.	Toronto, Ont.	Mar. 28, '82	
Rambooth, E. J.	Aylmer, Que.	May 19, '81	
Rainboth, G. C.	Aylmer, Que	April 14, 72	
Ralph, Wm.		April 14, 72	
Reid, J. L.	Prince Albert, Sask	April 14, 72	
Rinfret, R.	Dawson, Y.T.	Feb. 29, '00	
Ritchie, J. F.	Nelson, B.C	Jan. 7, '9	
Robertson, H. H.	Montmagny, Que	April 14, 72	
Roberts, V. M.	Sturgeon Falls, Ont.	May, 17, '86	
Robinson, F. J.	Regina, Assa	Feb. 20, '00	
Rorke, L. V.	Sudbury, Ont	Aug. 13, '91	
Ross, J. E.	New Westminster, B.C	Feb. 12, '91	
Roy, G. P.	Quebec, Que	Nov. 17, '81	
Saint Cyr, J. B.	Ste. Anne de la Perade, Que.	Feb. 17, '87	
Saint Cyr, A.	Ottawa, Ont	Feb. 17, '87	Surveys Staff, Dept. of the Interior.
Saunders, B. J.	Regina, Assa	Nov. 16, '84	
Seager, E.	Rat Portage, Ont	April 14, 72	
Selby, H. W.	Wabigoon, Ont	Nov. 15, '82	
Shaw, C. A. E.	Victoria, B.C	May 10, '80	
Spaight, Thos	Toronto, Ont	Nov. 16, '82	
Starkey, S. M.	Starkey's P.O., N.S	April 14, 72	
Stewart, G. A.	Calgary, Alta.	April 14, 72	
Stewart, L. B.	Toronto, Ont	Nov. 22, '82	Dom. Topograph. Surveyor, Professor School of Practical Science, Toronto.
Stewart, E.	Ottawa, Ont.	April 14, 72	Chief Inspector of Timber and Forestry.
Talbot, A. C.	Ottawa, Ont	May 13, '80	Surveys Staff, Dept. of the Interior.
Thompson, W. T.	Fort Qu'Appelle, Assa	Nov. 19, 77.	Dom. Topographical Surveyor and District Engineer, N.W.T.
Tremblay, A. J.	Les Etoulements, Que.	Feb. 18, '90	
Towle, C. E.	Waterloo, Que.	April 14, 72	
Turnbull, T.	Winnipeg, Man	Feb. 29, '82	
Tyrell, J. W.	Hamilton, Ont	Feb. 16, '87	
Vaughan, J. W.	Vancouver, B.C.	June 11, '78	
Vicars, J.	New Westminster, B.C.	May 17, '86	
Wallace, J. N.	Hamilton, Ont.	Feb. 20, '00	
Wheeler, A. O.	Calgary, Alta.	Nov. 21, '82	
White-Fraser, G.W.R.	Toronto, Ont	Feb. 21, '88	Dominion Topographical Surveyor.
Wilkins, F. W.	Norwood, Ont	May 18, '81	" "
Wilkinson, W. D.	Toronto, Ont	Feb. 22, '93	" "
Woods, J. E.	Blairmore, Alta.	Nov. 14, '85	

P. B. SYMES.

*Secretary of the Board of Examiners for Dominion Land Surveyors.*



## APPENDIX No. 7 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF CYRUS CARROLL, D.L.S.

## SURVEYS IN SOUTH-EASTERN MANITOBA.

PRINCE ALBERT, SASK., November, 1900.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR.—In pursuance of your instructions, I surveyed the outlines of townships 1 and 2, in ranges 11, 12 and 13, east of the principal meridian, and subdivided such portions of the townships as appeared to be suitable for settlement.

Immediately on receipt of the instructions, I proceeded to Winnipeg where I procured the necessary supplies and organized the survey party. The work was continuously prosecuted till the 12th day of October, when I returned to Winnipeg and thence to my home in Prince Albert where I at once set to work at the returns of the survey.

In townships 1 and 2, ranges 11 and 12, I surveyed in all 36 sections. The most of these are in township 1, range 12; the remainder are, however, contiguous thereto so that the whole forms a compact settlement. The land is nearly all taken up without much regard to railway, school or Hudson Bay Company's land. The settlers are mostly Norwegians and Icelanders, with a few Frenchmen, and one or two Scotchmen.

The greater part of the land is reclaimed swamp land, roots and sunken decaying swamp timber being found everywhere.

A few years ago fire destroyed the greater portion of the small swamp timber, consisting of tamarack, cedar and alder. The water receded and grass began to grow and a few trees of birch, balsam of gilead, and poplar appeared in patches. The land is well adapted for grazing, so that it suits the settlers who are naturally inclined to the raising of cattle and sheep instead of cereals. I noticed, however, two small fields of wheat.

The sand ridges, which cover the greater part of the unsurveyed lands, are barren and never will be of any use. Fire has overrun them and destroyed the few small stunted jack pines that grew in places.

The timber is nearly all in the swamps, any of value that had escaped the fire was taken away years ago, what remains is barely sufficient to supply fire-wood, house logs, and rails for the settlers.

The westerly part of township 1, range 11, is mostly in the great Kauswaup swamp. This swamp is very wet; much of it is a floating bog. It extends well into range 10, and into Minnesota. In townships 1 and 2, range 13, only the outlines were surveyed. I do not consider that there is sufficient land fit for settlement in these townships to warrant the expense of subdividing them.

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In the north-east corner of township 2, range 13, there was at one time a considerable quantity of pine, tamarack and spruce timber, but any that was of use was taken away some years ago, as stated in my timber report.

I could not find the parties who signed the petition for the survey of township 1, range 14. There may possibly be one or two bona fide settlers. There is a lumber camp at the landing on Mud creek, but no men were at it except the one in charge. The railway section man and his son both intending to pose as settlers can scarcely be regarded as such in this township since they live on the Minnesota side of the line where they have homesteads. There is a considerable quantity of small tamarack suitable only for cordwood which, I believe, is being cut under license.

The Manitoba and South-Eastern Railway crosses the north-east corner of township 2, range 12.

I have the honour to be, sir,

Your obedient servant,

CYRUS CARROLL, *D.L.S.*

SESSIONAL PAPER No. 25

## APPENDIX No. 8 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF THOS. TURNBULL, D.L.S.

EXPLORATION OF THE COUNTRY BETWEEN LAKES WINNIPEG AND WINNIPEGOSIS.

WINNIPEG, February 9, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—According to your instructions, I left Winnipeg accompanied by W. C. Pritchard, J. N. McKay and C. H. Blanchard, to explore the country lying between Lakes Winnipeg, Manitoba and Winnipegosis.

It seemed to me from the inquiries I made, that the easier way to reach the interior of the country was from the Lake Manitoba side. I accordingly started north from Oak Point on an old cart trail, running nearly north through the surveyed country. The old section corners are nearly all obliterated, although the lines are easily traced in the wooded parts. The first post I found was at the northeast corner of section 6, township 22, range 3, west of the principal meridian. From this point I made a careful track traverse as far as shown on the accompanying map. From the northeast corner of township 22, range 3, to the southeast corner of section 33, township 23, range 3, the trail is over a dry ridge, the higher parts of which are light sand and gravel, while the lower levels are clay and very stony. From this point the trail follows the east side of a large hay marsh almost due north for about two miles. Along the east and west sides of the marsh there is a strip of green timber, principally poplar, with a small quantity of spruce.

From where the trail leaves the marsh, near the northeast corner of section 3, township 24, range 3, the soil is light and stony to about the north side of section 15. At this point there is a fine spring bubbling out of the limestone rock, which crops out here. The trail then enters a narrow swamp covered with a small growth of scattered tamarack, and turns to the northeast across some good hay land for a distance of about two miles, where it ends at a well defined gravel ridge, which is burnt bare in places or covered with dead jack pine.

I followed the ridge in a northwesterly direction to Fisher river, which is about forty feet wide, with very little current, and banks about twenty feet high. I left the horses at the river and followed the ridge for some distance; it was, however, so covered with fallen timber that I decided not to take the horses any farther north, but to go, if possible, in a northeasterly direction to the Fisher River Indian reserve. Accordingly, I retraced my steps to the east side of section 25, township 24, range 3, where I met a number of Indians from Rabbit point, who were picking seneca root. They came in by way of Swan lake, Birch lake and Slave lake, and as they had found the muskgs very soft, they concluded to return by our trail. They had endeavoured to make their way northeast to Fisher river, but encountered so much wet country that they turned back. I followed their trail to about the middle of section 33, township 24, range 2, where it ends, and leaving the ponies here, I travelled northeast about six miles.

As it was impossible to take the horses across to Fisher River reserve, or in fact in any direction except the way I came, I decided to go around to the Lake Winnipeg side, and see as much of the country as possible by striking in at different points

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from the trail leading northerly along the lake from Selkirk. The country above described was all burned over some years ago; there is a second growth of timber in places, but none of marketable value. The vegetation on the high land, when I saw it in October, did not seem to be luxuriant, and the marshes were mostly too wet to admit of saving the hay, which was of an inferior quality.

I reached Selkirk on October 22, and proceeded to Gimli. From there I travelled west along the centre line of township 19, ranges 1 and 2, east of the principal meridian. The eastern half of townships 19 and 20, in range 2, is fairly good land, though somewhat stony; and is covered with a heavy growth of poplar. A number of Galician squatters have settled in this locality, and have made small clearings. The soil, although stony, is very good. In the centre of township 19, range 2, there is some excellent spruce timber, covering an area of two or three square miles. Township 19, range 1, is very wet; the greater part of it has recently been burnt over.

I could not get my horses any farther west than the east side of range 1, and it was impossible to travel north because of the muskegs, I therefore followed the trail northerly along Lake Winnipeg to the centre of township 22; from here I went west and camped on section 24, township 22, range 2, east of the principal meridian. Leaving my outfit at this point, I crossed ranges 2 and 1. There is a good deal of first-class land in this vicinity. Township 22, in ranges 1 and 2, is principally open, with small bluffs of timber. The lower portions were quite dry in October, and covered with a rank growth of excellent hay; the higher land is a fine clay loam, free from stones. The land lying to the west of the principal meridian is light and stony, and the muskegs are too wet for hay, except about the edges. Township 23, range 2, east of the principal meridian, contains some good land, but it is lighter than the soil in the vicinity of Icelandic river, and more or less stony.

From Geysers, I travelled along a good trail to the Fisher River Indian reserve; it follows a ridge of high land nearly all the way from the crossing of Icelandic river on section 1, township 23, range 3, east of the principal meridian. Very little of the land along the trail is of any value for agricultural purposes. The soil is light sand, gravel and clay, covered with stones. Some good timber between the fourteenth mile north of Icelandic river and the twenty-second mile was killed a year ago by fire. From the twenty-second mile to the Fisher River Indian reserve the timber is mostly small jack pine. The land within the reserve is good clay, and free from stones, but in every direction outside of the reserve the high land is light and the muskegs very soft.

Owing to the character of the country and the scarcity of horse feed at this time of the year, I found it necessary to pay off my men, and in doing so, I made sufficient allowance in each man's time to take him back to his home. After waiting a day or two for the muskegs to freeze sufficiently to carry men on foot, I engaged three Indians and started across to the narrows of Lake St. Martin. The first two miles from Fisher river is over fairly good hay land in a dry season, but from there on to the south-west corner of township 29, range 2, west of the principal meridian, the country is an immense marsh intersected with narrow sandy ridges running about north-west. Near the south-west corner of township 29, two granite hills rise abruptly from the muskeg to a height of seventy or eighty feet; they occupy an area of about a mile square, and are covered with a light growth of jack pine.

For six miles farther our course was over a wet country to about a mile west of Mantagao river. Up to this point the country has been burnt and is now mostly open with a second growth of small scrub in places. Extending from a mile west of Mantagao river for about ten miles is a belt of green timber principally spruce and tamarack. The tamarack growing on the muskegs is very small, and the spruce, although some of it is large, is mostly too small for railroad ties, and is scattered. After crossing this belt of timber the country becomes more ridgy with swamps lying between; the bearing of the swamps is generally north-west. The ridges and swamps are all of

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the same general character, the ridges being light and stony and covered with a second growth of jack pine, averaging from two to four inches in diameter. There are small isolated clumps of the original jack pine, averaging from six inches to one foot in diameter. The swamps are mostly covered with ice, and are apparently never dry at any season. This is the character of the country as far as the line between ranges 6 and 7; from this to Lake St. Martin, the ground is high and light with very few sloughs, and the soil is too light to be of any value. From the narrows of Lake St. Martin I went to Fairford to get supplies, and secured an Indian with his dog train to take them to Gypsum lake, from which point we packed an outfit in a north-westerly direction, as shown on the map. From Lake St. Martin to Gypsum lake, there is a large amount of good hay land with very little timber, but from Gypsum lake to Waterhen lake the country is of the same general character as that lying to the east of Lake St. Martin. The ridges run mostly in a northerly direction, and are somewhat wider. The travelling from Lake St. Martin was tedious in the extreme; our course lay across the ridges and swamps, and it was almost impossible to squeeze between the small jack pines.

Approaching Waterhen lake, the country becomes very wet. Close to the lake there is some good hay land, but back from it the swamps are too soft for hay. On striking Waterhen, I came down to Winnipegosis and from there to Winnipeg. Between Fisher river and Winnipegosis, there was very little snow, and we had to move everything on our backs. I thought it better to go to Winnipeg for a time and prepare a map, with the intention of returning to the field as soon as the snow became deep enough to enable me to use toboggans and snowshoes.

On January 7, 1901, I started from Reaburn and drove to Rabbit point, where I secured two Indians and proceeded north. My object was to find and locate, as nearly as possible, a large lake the Indians told me was about twenty miles north of Slave lake. Slave lake is the source of the Mantagao river. The waters of the lake find their way north through marshes connected by a small creek to a lake known to the Indians as Birch lake. As there is another lake of this name lying to the south of Slave lake, I have called this one North Birch lake on the map. The country between Slave lake and North Birch lake is covered with small green timber. The ridges run north-west and are covered with small green poplar from two to ten inches in diameter, while the lower ground is mostly covered with spruce and tamarack. Scarcely any of the tamarack is large enough for railroad ties, and the spruce is small and scattered. North Birch lake is nearly three miles long, and from one and one-half to two miles wide. The north and south banks are high and covered with a heavy growth of poplar and some oak. Limestone crops out in the ridge on the south side of the lake, and on a small island at the west end. From here I returned to Winnipeg, where I arrived on the 31st of January.

Speaking generally of the whole country lying between Lakes Winnipeg, Manitoba and Winnipegosis, the best land is close to the lakes, while in the interior, it is swamps, marshes and stony ridges.

I have the honour to be, sir,

Your obedient servant,

THOS. TURNBULL, *D.L.S.*

## APPENDIX No. 9 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF JAMES DICKSON, D.L.S.

## SURVEYS IN SWAN RIVER DISTRICT, MANITOBA.

FENELON FALLS, February 19, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of my operations during the past season.

On April 11 last I received your instructions, dated two days previously, to proceed to the neighbourhood of Swan lake, Manitoba, to survey some outlines and subdivide certain townships in that locality. On the 21st I received a telegram informing me that I should first retrace the lines in township 17, range 18, west of the principal meridian, and that instructions therefor would be mailed to me at Dauphin.

I started for the west on April 23, and arrived at Winnipeg the following Thursday forenoon. Here I had to remain until Monday to get supplies and have them shipped to Dauphin. Before leaving I was joined by Messrs. Nosworthy and Gross from Lindsay, and I engaged two axemen, with whom I arrived at Dauphin on Tuesday evening, May 1.

Next day and part of the day following I engaged my party, and had the wagons fitted up and loaded. On Thursday afternoon I started the party on the trail leading across the Riding mountains, but remained behind one day myself to take along a man who was not prepared to start out with the others.

I left Dauphin on the 4th, and overtook my party next day before noon. The weather for some time had been dry, and the roads were fairly good; but from the nature of the soil I saw that a few hours' rain would render them impassable, and as there were indications of rain, I travelled all next day, Sunday.

I arrived at the south boundary of township 17, range 18, on the following Wednesday, and camped near the southeast angle of section two. We commenced work next day by tracing out the east boundary of section 36, township 16, range 18.

Township 17, range 18, was subdivided in the year 1873, but as the survey was believed to be erroneous, I was instructed to restore the old lines as nearly as possible, and prepare an accurate plan of the township.

I produced the east boundary of township sixteen due north across township seventeen, and at the north side of each section I traced out the chord to intersection with my line, both in this township and in the township to the east. I found the lines in every instance. At the northeast angle of sections 1, 13 and 25, the settlers showed me where they had seen the original post standing, and in every case when I produced my line to the point it was within one foot of the spot shown me.

At the northeast corner of the township I found a large cedar post, which I have no doubt is the original post; but it was lying on the ground, and I could not find any trace of where it had stood, nor could the settler throw any light on the matter. I chained the north boundary from my line to Otter lake, where I found an original post standing; the distance from my line to the post agreed so closely with that

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shown on the plan of the township that there can be no doubt of the accuracy of my line. I found no trace whatever of the original line ; but there is a colonization road along the east side of the township which, after it leaves section 12, trends gradually towards the east until the north side of section 25 is reached, when it turns due east into the next township. The settlers seemed to believe the road constituted the east boundary of the township, and had fenced accordingly. It was evidently a case in which the surveyor found his line was wrong, and instead of running it over again, merely established the corners of the sections by offsets. I subsequently met a settler who knew how the boundary had been run, and had also assisted in cutting out the road, who volunteered the statement that the above was what really did take place.

The township is well settled along its south and east boundaries ; there are also a few settlers in the interior. They are mostly Swedes, and are a good class of settlers.

At the time the first survey was made, the township must have been covered with a heavy growth of poplar, balm of gilead and white birch ; but a large part of it has since been burnt over ; some of it is quite bare, consequently all traces of the original lines and posts are gone.

Where the woods were in the original state, or even partly so, I experienced no difficulty in finding the lines, as they had been well blazed. I also found quite a number of the original posts, and at some points, although the posts were gone, I obtained their positions accurately by the intersection of the old lines. In every instance where I found original marks of any kind I adhered strictly to them ; where there were none to be found, I made the survey in accordance with the provisions of the manual.

Otter lake, in the northeast part of the township, is a fine body of water and well stocked with fish ; it is the source of the Rolling river. There are a great number of lakes in the township, most of them are very small, only a few being large enough to require traversing ; they were, however, a great hindrance to the work of the survey, as I had upwards of seventy triangulations to make, and each lake is surrounded by more or less marsh. Elk and duck are plentiful, so this must be a sportsman's paradise during the hunting season.

It will be seen from my plan of the township that the lakes differ very much in size and shape from the plan of the original survey. This is the more remarkable as I failed to find any evidence of their levels having been affected by beavers or any artificial cause.

While working in this township, I received your instructions of May 4 to survey, next, townships 33, ranges 28 and 29, west of the principal meridian, and also your letter of May 8 instructing me to complete the survey of township 34, range 28, consisting of three miles.

I finished the survey of township 17, range 18, west of the principal meridian, on July 8 ; the following day I left for Minnedosa, and from there went by train to Yorkton. On July 12, I started for the north end of the Duck mountains by the Fort Pelly trail, and by noon of Saturday, reached the Indian Agency on the Cote reserve, where, through the courtesy of the agent, Mr. Jones, I procured an Indian guide, as I knew nothing of the route to my work. Three miles north of Cote, we struck east from the Pelly trail and travelled twelve miles over a fairly good trail, camping in the evening at an Indian ranch. We remained here over Sunday, and by noon of the following day, reached the south boundary of township 33, range 29, one mile and three-quarters east of its west boundary.

I commenced the survey of this township on July 17, and completed it on August 16. I took declarations from three squatters in the township and traversed their improvements. One of them had done no breaking ; the other two had. A lad had a few acres under crop in section 36, but he was too young to be entitled to a homestead, and as his father had made the improvements for him, I did not take a declaration, but have shown the breaking on the plan of the township.

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I moved east into township 33, range 28, and commenced the survey of it on August 17. The northeast part is so stony and so broken up by gullies as to be utterly worthless ; I, therefore, did not run the east boundary of sections 27, 34, 14, 23, 26 and 35, nor the north boundary of sections 23 and 24. There are two squatters in the township ; I took a declaration from each and traversed their improvements.

I had while in this township received your instructions of August 14, to subdivide as much of township 32, ranges 29 and 30, as I could before disbanding the party. I commenced the survey of township 32, range 29, on September 17. From the north boundary of the township, I ran four miles of the east outline, three miles of each of the two adjoining meridians, and the whole of the remaining ones. At the south boundary, I planted iron posts properly marked on these meridians, but as the line was not run, I did not put mounds at the corners.

I also ran the south chord across sections 9, 8 and 7 to Bearhead lake, and the whole of the north chord except across section 9. I would have run that portion also, but had not time to trace out the west boundary. The squatters and Indians insisted that the lake should be called Clear Water lake ; I, however, pointed out to them that on the government maps there was a Clearwater lake shown at the head of Bearhead creek, some miles to the south, and as no name was given to this lake on any map I had seen, I intended to call it Bearhead lake, by which name it would be known in future.

There are five squatters in this township, and I took declarations from four of them ; the fifth was not at home. I finished work in this township on October 6, and moved into township 34, range 28, where I ran the east boundary of sections 3, 11 and 2, which completed the survey of the township.

On the 11th, I drove with my party to Swan river, and disposed of my horses by public auction, stored the wagons, &c., for the winter, and discharged the party, except two men and the cook. I left Garland with the three men and went north-east on the Pine river trail to inspect the survey of township 33, ranges 19, 20 and 21, and township 34, ranges 19 and 20, in accordance with your instructions of September 18.

I finished this work on the 22nd, and started for home by the first train south from Garland. I reached home on October 31, after an absence of about six months.

I have the honour to be, sir,

Your obedient servant,

JAMES DICKSON, D.L.S.



## APPENDIX No. 10 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF J. C. DESMEULES, D.L.S.

## SURVEYS IN THE DAUPHIN DISTRICT.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

MURRAY BAY, December 31, 1900.

SIR,—I have the honour to submit the following general report of my field operations in the Dauphin district during the season of 1899 and 1900, in connection with the different surveys allotted to me under your instructions dated September 26, 1899, and those of subsequent dates.

Owing to previous engagements, both with the local government of Quebec and some private parties, I was unable to leave Murray Bay before October 18. I arrived in Winnipeg on the 22nd, where I engaged my party of twelve men.

After having bought supplies and completed my outfit, I left Winnipeg on the 24th and arrived at Cowan the following day, where I pitched the tents and waited for my supplies until the 28th. In the meantime I was busy looking for the starting point of my survey, training chainmen, and verifying instrument and chain.

Having met J. L. Reid, D.L.S., who had run the north limit of township 35, range 23, I obtained from him a sketch of the line together with other information, and I was able to begin work on October 31 by running the east meridian of section 2, township 36, range 23. I continued work by running successively the meridian of section 11, the north limit of section 12, and east meridian of section 3, and on November 9 moved camp about five miles.

I finished the survey of the above township on January 2, 1900. Up to November 24, no frost of any account was experienced, and the survey over the wet and swampy country proved very arduous and slow.

Township 36, range 23, west of the principal meridian. East boundary of sections 2, 11, 14, 23, 26, 35. This line in the first three-quarters of section 2 runs north over a rolling country covered with jack pine, then a spruce muskeg is intersected, which continues on the following sections to the north limit of the township. A lake of clear water covers about one-third of section 24, the rest of the section being swamps and spruce muskegs.

East boundary of sections 3, 10, 15, 22, 27 and 34. This line on the first three sections runs north over a rolling country covered with heavy windfalls and overgrown with jack pine and young poplar. The Canadian Northern Railway is crossed at 69.65 chains on section 10. East of sections 22, 27 and 34, the country is swampy and covered with spruce muskegs.

East boundary of sections 4, 9, 16, 21, 28 and 33. The whole of this line, as well as the remainder of the township, traverses country which ranks second and third class for farming purposes, but the proximity of the railroad should add to its value by reason of the great quantity of firewood, fencing, building timber and ties that can be got out of the country.

The Sinclair river, a tributary of Swan river, runs through sections 8, 17, 18, 19, 29 and 30 of this township. The Canadian Northern Railway traverses sections 2 and 11 in a northerly direction, then turns to the west north-west on section 15, crosses sections 15, 16, 17 and then runs due west at the north end of section 18. Owing to the wet state of the country up to December 3, when the ground commenced to freeze,

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we could hardly cross the swamps and muskegs covering the greater part of this township, and the survey work was in consequence much retarded. Besides this, the thick fallen timber intermixed and overgrown with jack pine and brush, made it a very arduous task to open and run lines. I was, therefore, kept much longer in this township than I at first expected.

After opening a road to carry the outfit and provisions from Cowan, I moved camp to the southeast corner of township 37, range 24, and began work in this township on January 11 by running the east outline and north boundary. I completed the subdivision of the township on March 17. It was a tedious task to run the lines through the dense growth of large poplar and spruce, with thick underbrush of dry willows in large bunches, alders, and scrub, intermixed with heavy windfalls of dry timber.

The quality of the land in this township, chiefly in the west part, may rank first class for farming purposes, and the rich forest of large poplar and spruce covering the ground offers every advantage for building and lumbering. The east part ranks second class, but is not of less value either from a trading or lumbering point of view. Sinclair river enters the township on section 2, and runs diagonally through sections 3, 4, 5 and 6.

On March 19, I moved camp towards Cowan, where I arrived on the 21st, after two days of hard labour dragging overloaded toboggans through two and a half feet of snow. It was the 26th before I could leave Cowan by rail for Pine river station, situated in the south-west corner of section 33, township 32, range 22, where, according to your instructions of January 23, 1900, I was to subdivide the eastern half of the above township. After pitching my tents at the north-east corner of section 34, I began work on the 29th by running the meridian east of sections 34 and 27, and then ran successively the meridian outlines of sections 35, 26, 22 and 23, and north limits of sections 22, 23 and 24, when I was obliged to close operations altogether in that quarter on April 4. The snow completely disappeared in three days of very warm weather, and the country was so overflowed that I was compelled to stop work and leave at once for Pine river station. Besides this, the remainder of the township is low land consisting in a great part of tamarac muskegs and swamps, which the Pine river overspreads, and is apparently of no value and could be subdivided to better advantage during the winter or a dry summer season. The subdivided portion of the north-east part of the township, viz. : sections 22, 23, 24, 25, 26, 27, 34, 35 and 36 is swampy, with the exception of sections 22, 27 and 34, which are dryer and covered with spruce and tamarac six to eighteen inches in diameter, fit for building and lumbering purposes.

Bridges along the railway line were swept away owing to the flooded condition of the rivers and creeks, and the trains were very irregular and unsafe. I was in consequence delayed at Pine River station until April 10, when I reached Sifton Junction, but had to wait there until the 13th for a train to Winnipegosis.

In reply to my telegram to Ottawa as to horses and the necessary camping outfit, I was instructed that they could be had at Cowan, where they were in charge of William Sifton. I knew that no horses could be obtained there, and after many inquiries I learned that the horses and outfit were at Minatonas, on a farm belonging to Mr. Sifton, about twelve or fifteen miles west of Cowan station. On May 19 I sent one of my sons with another man who knew the road in the part of the country between Winnipegosis and Minatonas to get the horses : but both returned next day completely disabled from two days travelling through an overflowed country. Seeing that it was impossible to get the horses safely from Minatonas in this way, I thought it advisable to have them brought over by the railroad, and for that reason I sent my eldest son upon a hand-car to Sifton station with instructions to wait for the first train to Minatonas. On April 27, he returned with the horses and wagons.

On May 1, I moved my camp to section 2 on the base line between townships 31 and 32, range 19. Whilst there I opened a road across the base line as far as section

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31, in order to transport my outfit when subdividing township 31 ; I then moved camp to the north limit of township 32, range 19, and subdivided the west part of this township. On May 17, I moved into township 31, range 19, and completed the subdivision of the west part on June 8.

Township 32, range 22, west of the principal meridian. East boundary of sections 34, 27 and 22. This line was run south over a level country covered with willow, alder, spruce and poplar, six to twelve inches in diameter, together with heavy windfalls and dry fallen timber.

East boundary of sections 35, 26 and 23. This line runs south and crosses a hay marsh extending southward from 24 chains in section 35 to 23 chains in section 26 ; the surrounding country is level and swampy. The remainder of the section is dryer and grown with black spruce and a few birch trees. On section 23 the line crosses a hay marsh extending from 10 to 50 chains southward, with scrub and scattered spruce, tamarac and birch trees, six to twelve inches in diameter. The line crosses Pine river at 34 chains in section 22, thence the country is swampy as far as 60 chains, where it becomes dryer and is burnt scrubby prairie.

Township 32, range 19, west of the principal meridian. East boundary of sections 6, 7, 18, 19, 30 and 31. This line runs through a level country covered with poplar, willow, alder and thick brush, with muskegs, swamps and heavy windfalls intervening.

Township 31, range 19, west of the principal meridian. East boundary of sections 5, 8, 17, 20, 29 and 32. This line was run south over a level country thickly covered with a new growth of poplar, willow, alder and brush, forming an almost inextricable network with the heavy windfalls.

East boundary of sections 6, 7, 18, 19, 30 and 31. This line runs south over the same kind of country as the above line ; it is overgrown with a thick growth of young poplar, &c., and scattered bluffs of poplar, spruce and tamarac, six to twelve inches in diameter.

The two portions of townships 31 and 32, range 19, above described are not of any value, except for the timber, which is suitable for fencing and building purposes. The numerous muskegs and swamps covering the greater part of the country make it difficult to get through with wagons, which sink to the axles. After satisfying myself that the survey of townships 31 and 32, range 20, could not be done to advantage at this season of the year, I deemed it advisable to suggest that this work should be postponed until winter, and asked for instructions as to surveys in a more suitable part of the country.

Having in the meantime made the survey of the north limit of township 31, range 20, I closed operations in this locality on June 21, and moved camp back to Winnipegosis on my way to townships 27 and 28, range 23, in pursuance of your instructions of June 18. On June 25, I sent men and part of the outfit with the wagons across to Ethelbert, whilst I and one of the men went by rail with the bulk of the outfit. On the 28th, I left Ethelbert with my party and travelled about fourteen miles to the 8th base line. From June 29 to July 2 we were employed in cutting a road through heavy bush and thick brush, in order to reach my starting point at the northeast corner of section 34, township 28, range 23.

After moving camp to section 33, and finding that it was impossible to go farther with the wagons in consequence of the roughness of the country, broken as it is by deep ravines and obstructed by the thick forest, I was obliged to adopt another mode of conveyance. It consisted of two poles about eighteen feet long, fixed at one end about three feet apart by two crosspieces firmly fastened to the poles with strong iron bolts. This conveyance, drawn by one horse, carried loads of three to four hundred pounds, through the dense forest and hilly country we had to travel, to the closing of the east meridian of township 28, range 24, where I was able to again use the wagons up to the end of the season.

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I produced the 8th base line westward for three miles, and ran successively the east outline of township 28, range 24, the north boundary of township 27, range 23, the east meridian of fractional township 27, range 23, and the 7th correction line south of said township 27. The country through which these lines were run is rough and hilly, frequently broken by deep ravines and densely wooded with large timber and thick underbrush, or is burnt country, with heavy layers of fallen timber and overgrown with young poplar, willow and alder. I subdivided fractional township 27, range 23, as I considered it suitable for immediate settlement, and for the reason that some Galicians and other settlers had squatted on sections 36, 24, 22 and 14.

Township 28, range 23, west of the principal meridian. North boundary of sections 33, 32 and 31. This portion of the 8th base line runs over an undulating country covered with a heavy growth of poplar, spruce and birch trees for the first part. Over sections 32 and 31, the country is more broken and hilly, and where the original forest has been destroyed by fire, is now a thick growth of young poplar, willow and alder intermixed with fallen timber.

Township 28, range 24, west of the principal meridian. East boundary of sections 36, 25, 24, 13, 12 and 1. This line runs over the southeastern slope of Duck mountain, where the country is frequently broken by deep ravines containing small streams running eastward, which are likely the headwaters of Drifting river. A heavy forest of poplar and spruce, six to twelve inches in diameter, together with a thick underbrush, covers the ground in sections 25, 24 and 13; the country through the remainder of the sections was burnt, and is now covered with young poplar, alder, willow and scrub.

Township 27, range 23, west of the principal meridian. North boundary of sections 31, 32, 33, 34, 35 and 36. This line was run east through a rolling country slightly sloping to the southeast, and crosses several streams flowing into Drifting river. The ground is covered with a dense growth of young poplar, willow and scrub, the original forest having been destroyed by fire some years ago, except in a few hollows where scattered bluffs of poplar and spruce are still to be seen.

Meridian east of township 27, range 24. This line was run south, through sections 36, 25, 24, 13 and a gore on section 12 of 4.81 chains, as far as the 7th correction line. The character of the country along this meridian is similar to that of the above line. A branch of Valley river is crossed near the north of section 25, where a few stacks of hay have been cut in the neighbouring marshes by settlers from the Gilbert plains.

7th correction line, south of fractional sections 7, 8, 9, 10, 11 and 12. This line was run eastward over an undulating country overlooking the Gilbert plains towards the south. A branch of Valley river is crossed on section 8, and a lake of good clear water on section 9. The land is first-class for farming purposes, and covered with a new growth of young poplar, alder, willow and scrub. The original forest was destroyed by fire some years ago, but several scattered bluffs of poplar are to be found which the fire did not reach.

Mr. Mathews has built a lime kiln at the north end of section 32, in township 26, range 23, and gets the limestone out of a ridge overlooking a hollow in which the branch of Valley river already alluded to, rises. A good trail leads from this place northward to Ethelbert on the Canadian Northern Railway, and southward to the towns of Umatilla, Oaknook, Valley River and the settlements of the Gilbert plains.

East boundary of sections 31, 30, 19 and 18. This line was run south, and on section 31 crosses a branch road leading from Ethelbert to Fort Pelly across the southern slope of Duck mountains; there is another branch of the same road between sections 30 and 31 leading to Valley River in the Gilbert plains. The latter branch follows the windings of a small brook flowing southward to the middle of section 18, when it turns eastward on entering township 26, range 23. The country along this line is undulating and covered with fallen timber, poplar, willows and brush, together with some scattered bluffs of poplar six to ten inches in diameter.

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East boundary of sections 32, 29, 20 and 17. This line was run south, and crosses a branch of Drifting river in sections 32 and 20. The country is undulating and covered with a heavy growth of poplar and spruce six to ten inches in diameter and a thick underbrush of willows, alder and scrub, intermixed with a heavy layer of fallen timber.

East boundary of sections 33, 28, 21 and 16. This line crosses another branch of Drifting river twice in section 33, and the first branch, above mentioned as crossing on section 32, crosses here again in section 21. The country is undulating; sections 33 and 28 are covered for the most part with spruce and tamarac six to ten inches in diameter; sections 21 and 16 are covered with poplar six to ten inches in diameter and underbrush of willows, alder and scrub, with fallen timber intermixed.

East boundary of sections 34, 27, 22 and 15. The country over which this line runs is undulating and covered with a heavy growth of poplar six to ten inches in diameter, and a thick underbrush of willows and alder. Sections 36, 24, 14 and 22, in township 27, are settled upon by homesteaders. Although these people settled here only a few months ago, they have raised a sufficient quantity of potatoes, turnips, cabbages and other vegetables for their use during the coming winter.

Township 27, range 23, is a fine piece of country, and very suitable for farming purposes as well as for stock raising and lumbering. At least seventy-five per cent of it ranks first-class; it is well timbered, and abundantly furnished with water throughout the whole year by means of wells easily built, or by the numerous ponds and creeks emptying towards the south into Valley river and towards the east into Drifting river.

Having completed the subdivision of township 27, range 23, I thought it advisable before leaving the work to subdivide sections 2 and 12 in township 28, range 23, as several Galician families had selected homesteads in these sections, and furnished me with statutory declarations. In order to locate their claims I surveyed the east and west boundaries of section 2 and the west and north boundaries of section 12. A great number of Galicians are likely to settle in this part of the country. As a rule they are good workers and faithful employees, so far as I can judge from personal experience, having engaged some of them as labourers on the survey during the summer. From an agricultural point of view they are a most desirable class of settlers.

On October 3, I left the field for Ethelbert, the nearest station on the Canadian line of railway, where I discharged the men who had been hired at this point, and also disposed of the horses and outfit, &c. On the 8th, I left Ethelbert for Winnipeg; after discharging the remainder of my party and settling some accounts, I left for home. I reached Murray Bay on October 13, after an absence of nearly a year.

I have the honour to be, sir,  
Your obedient servant,

J. C. DESMEULES, *D.L.S.*

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## APPENDIX No. 11 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF P. R. A. BELANGER, D.L.S.

## SURVEYS IN PASQUIA MOUNTAIN.

OTTAWA, March 4, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I beg to submit the following report on my operations during the past season :—

In compliance with your instructions dated February 3, 1900, to continue the survey of the second meridian, and base lines therefrom, I left home on February 7 for my initial point in township 47 on the second meridian, and after stopping at Winnipeg and Yorkton to hire men and buy supplies, I reached Fort Pelly on the 16th. Here, I spent a week examining a contract survey, after which I made arrangements with the freighters to take my outfit and supplies from Fort Pelly to the intersection of Overflowing river with the second meridian, a distance of over one hundred miles of which upwards of ninety miles was through a bush country with no road and about two feet of snow on the ground. The journey was made under great difficulties, and though I had to pay the exorbitant rate of five dollars a hundred for freight, we were obliged to tramp down the snow with our snowshoes for the freighters who followed us at the rate of about six miles a day. This mileage was as much as could be done under the circumstances. The hardships the horses had to undergo, together with the want of proper food, told so much on them that three died on the return trip, which caused a loss to the freighters almost amounting to their earnings.

I reached my initial point on March 12, and started work on the second meridian by re-measuring township 47 in order to make a correction of two chains at the 12th correction line to compensate for an error in surplus found in township 32. From township 47, I prolonged the meridian to the north-east corner of township 53, a few chains south of Carrot river where I stopped work on April 5, because of the great depth of snow water which covered that flat country and rendered progress farther north entirely impossible.

The return journey from Carrot river to the intersection of the 12th base line with the second meridian, where I had a depot of provisions, was extremely arduous. The men packed one hundred pounds of freight on their backs, and made two trips a day to carry the outfit and supplies over a distance of four miles a day. The fine warm weather, which prevailed in the early part of April, caused the snow to melt in one week; the water rushed down from Pasquia mountain and submerged the flat country before the creeks were open to carry it away.

I reached the 12th base line on April 23, and produced it eight and a half miles west to the intersection of a pack trail. I then moved southward on this trail to my next work on the 11th base line. I reached my initial point on the base line between ranges 8 and 9 on May 16, and left my assistant in charge of the party with instructions to run meridian outlines, and I started for Yorkton to buy supplies, horses, &c., to complete my summer's outfit.

On my return, I produced the 11th base line as far as range 15 where I tied on to the base which had been run from the west. I also ran some meridians to tie with the 10th and 12th base lines, after which I returned to the north.

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On August 3, I resumed work on the 12th base line, and ran it to range 9 where I stopped on September 10. I ran the east boundary of range 9 southward to the 11th correction line in order to get out of the bush, and to comply with your instructions, dated August 9, to examine a contract survey before returning to Ottawa.

Having given a short resume of my work in connection with the different surveys allotted to me, I will now give a general description of the country over which I passed.

*Second Meridian.*

Township 48. From the intersection of the meridian with Overflowing river in township 47 northerly, the line runs through a low, level, wet country, covered with scrubby spruce and tamarack swamps alternating with bare muskegs. Small creeks cross sections 12 and 13 in a south-easterly direction.

Township 49. This township is of the same character as township 48, and entirely unfit for anything. Pasquia river crosses section 24, and is here only a small stream about 15 to 20 feet wide. It rises on the north-west on Pasquia mountain and runs across the meridian in a south-easterly direction for some distance, after which it turns north-east.

Township 50. This township is also very low and wet, and is covered with spruce and tamarack swamps interspersed with scattered birch and scrubby black poplar. Numerous creeks cross sections 13, 24, 25 and 36. The eastern point of Pasquia mountain is a short distance west of the meridian, on sections 26 and 35.

Township 51. Sections 1 and 12 appear low and level, but the remainder of the township is occasionally broken by small burnt ridges, alternating with tamarack swamps, and may be called rolling country. There appears to be a gradual fall from the centre of the township to the north; this would indicate that the height of land is between Overflowing river and Carrot river. Waskwei river, a stream 75 links wide, rises in the south-west on Pasquia mountain, runs north and crosses the meridian in sections 25 and 36, after which it turns northeast to a large muskeg where it loses its water.

Small creeks cross sections 1, 12 and 13. With the exception of section 36, the timber is fire-killed and consists of scrubby, dry tamarack and jack pine, and is only fit for fuel.

Township 52. This township is also low and generally wet, and mostly covered with spruce and tamarack: a good percentage of the timber is suitable for building and even lumbering purposes. The soil is third and fourth class, except on section 13, where it is first and second class.

Township 53. This township may properly be described as a floating bog: it is extremely low and covered with tamarack swamps, muskegs, sloughs and numerous lakes.

A large creek, 40 links wide, crosses section 12, running easterly; a few chains on each side of its banks there is a belt of good timber. Another belt of good timber crosses the southern part of section 1.

The large tract of land as seen from the second meridian between Overflowing river and Carrot river, a few chains north of township 53, is entirely unfit for settlement.

*11th Base Line.*

Range 9. This range is rolling burnt country, covered with scrub. Creeks are crossed on every section, except section 36. The soil ranks first class.

Range 10. Heavy, rolling burnt country, covered with scrub. On section 31 there is a range of high hills, which is the beginning of Greenwater hills. Creeks are intersected on every section. The most important is Copeau river, crossing section 32; it is only twenty links wide, but was six feet deep at the time of the survey. The soil ranks first and second class.

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Range 11. Heavy, rolling and hilly open country, covered with scrub. Greenwater hills extend over the whole range. Section 31 is timbered in its west half. Greenwater lake and another large lake are a short distance north of the base line. The soil is generally first and second class.

Range 12 has been burnt over, but is now covered with a thick second growth of poplar, two to four inches in diameter. Greenwater hills extend across the eastern part of the range, apparently as far as section 34. Red Deer river crosses the east half of section 31; it is here two and a half chains wide and from four to five feet deep, with a very slow current. Ten chains north of the line there is a rapid, where the river can be forded in one foot of water over a stony bottom.

Range 13 is low and level, very stony and gravelly; and is also covered with poplar bush two to six inches in diameter, alternating with large scrubby willow swamps and muskegs. The soil is second and third class.

Range 14 is level and undulating country, partly burnt, and broken by numerous swamps and muskegs. A large lake is intersected on section 34, which extends north and northeast for a couple of miles. The soil is poor, and may be rated third class.

Range 15. The character of this range is somewhat similar to range 14, but the soil improves in the west half, where it ranks second class.

#### *12th Base Line.*

Range 1. Section 36 and about half of section 35 are covered by a large tamarack muskeg extending southwesterly. Over the remainder of this range the line runs through large poplar, thickly mixed with hazel bush, occasionally broken by hay marshes. Smoking Tent brook runs across section 35 in two deep channels about 20 chains apart. Numerous small creeks, rising in a large muskeg south of the base, are also crossed on sections 31, 32 and 33. The soil ranks first and second class.

Range 2. The country from sections 36 to 33 inclusive is rolling, covered with large poplar and heavy hazel bush or willow, and first-class soil. Red Deer river crosses the east half of section 34, where it takes a turn westerly and follows the line for about 30 chains, after which it turns again in a northeasterly direction. At the crossing, it is seven chains wide; there is a small island near its west bank. Another small stream, supposed to be Spring creek, enters section 33. It rises in a large muskeg covering sections 32 and 31, and follows the line easterly for a short distance to the north and empties into Red Deer river.

Range 3. There is a large tamarack and spruce muskeg on the first three and a quarter miles, then rolling country, which for a mile is covered with dry and green jack pine. Fir river, a stream 85 links wide and 18 inches deep, is intersected in the eastern part of section 32; west of the river the line runs through thick poplar and hazel bush. On section 31 is a large swamp. East of Fir river the country is unfit for settlement, whilst on the west side it may be considered first class.

Range 4 is level country, covered with poplar, alder and willow, interspersed with a few hay swamps. There are some creeks on sections 32 and 31, which flow in a northeasterly direction. The soil ranks first class.

Range 5. The country across this range is rolling, but in other particulars it is much the same as range 4; the soil is first class, with the exception of section 33, which is covered by a lake and tamarack muskeg. Greenwood river crosses section 32; it is sixty links wide and three feet deep, with sandy bottom.

Range 6. Gently rolling country, covered with poplar and scrub, and occasionally broken by a spruce or hay swamp. Beginning in section 31, the ground rises westerly at an angle of thirty minutes, and the poplar becomes larger and more dense. About one mile south of the base the timber is burnt; this brule extends westerly and southwesterly. On section 32 is a bluff of spruce suitable for building purposes. The soil ranks first class; it is a deep loam, with clay subsoil.

Range 7. With the exception of the west half of section 33 and part of the east half of section 32, which are covered by a hay marsh formed by an old beaver dam on



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a small creek, this range is heavily timbered with large poplar, mixed with hazel or alder.

The surface of the ground is gently rolling, with a gradual ascent of 15 to 30 minutes towards the west, and is first class soil. Prairie river, a stream sixty links wide and four feet deep, with gravel bottom and slow current, is intersected in the west half of section 32.

Range 8. Is gently rolling or level country, heavily timbered on sections 36, 35, 34 and 33, with black poplar and spruce; the latter is generally suitable for building purposes, some might even be used for lumber.

On sections 32 and 31, the country becomes lower and is broken by large swamps. Here, the spruce fit for lumbering increases in quantity. A brule in the west part of section 31 forms a small prairie in which the township corner lies. From this corner I turned south and ran the east boundary of townships 40 and 39, and closed my survey on township 38.

Township 40 is covered with poplar bush alternating with large willow swamps. The timber is very large in sections 1 and 12 on both sides of Red Deer river; the river is crossed in the north half of section 1. Several creeks running south-easterly are intersected on this meridian. A good pack trail leading from Nut lake to Red Deer lake is crossed on section 12, and another running north-west and branching from the former at a short distance east of the meridian is also intersected on section 13. The soil ranks first class.

Township 39. The north half of section 36 in this township is timbered with large poplar, but the remainder of the township has been cleared by fire. Small bluffs of dry and scattered green poplar and hay marshes are interspersed here and there. Copeau river, a small stream with muddy bottom is intersected in section 13. The soil is first class; it is a rich clay loam with clay subsoil. This township, as well as township 39, range 8, seems very suitable for immediate settlement, as far as I could judge from the east boundary of range 9.

I also surveyed the east boundary of township 41, range 10; it is heavily timbered, rough and hilly, with the exception of the north half of section 25 and section 36 which are open and suitable for settlement. Copeau river meanders across section 25 in a north-easterly direction. Another stream, which may be called the east branch of Copeau river, is intersected in section 13, and empties into the main stream a short distance west of the meridian.

There were no settlers between the 11th and 12th base lines, as far as my survey extended, but judging from the quality of the soil and the fact that the Canadian Northern Railway runs a short distance north of the 12th base line, I do not hesitate to say that this land will be settled before long.

On September 26, I broke camp and proceeded to Fishing lake where I examined a contract survey. This occupied eight days during which time I examined 43 miles of line, after which I continued my journey to Yorkton, and having delivered my outfit to Mr. Reekie, proceeded to Winnipeg where I discharged the balance of my party on October 13.

I have the honour to be, sir,

Your obedient servant,

P. R. A. BELANGER, D.L.S.

## APPENDIX No. 12 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF A. J. BRABAZON, D.L.S.

## RESURVEYS AND RENEWAL OF MARKS NEAR YORKTON.

PORTAGE DU FORT, QUE., March 16, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report on my operations in the field during the past season. Your instructions, dated June 29, 1900, were to renew the survey marks in township 23, ranges 5, 6 and 7, and in township 24, ranges 6 and 7, and also to dispose of certain survey outfits stored at several places between Dauphin and Yorkton.

I left Ottawa on July 16 and arrived in Winnipeg on the 18th, where I bought a stove and some tents. The following morning I left for Dauphin, where I met Messrs. McFadden and Gauvreau. Here I disposed of the outfit stored with Robert Hunt, and on Saturday, the 21st, I left for Swan river, where I sold a horse wintered by O. C. Markham. From this, I went to Loat's farm, where Mr. Hubbell's horses were wintered. After settling with Loat for the wintering of the horses, I left for Minnionas, and disposed of the outfits stored there, and also settled with Mr. Sifton for wintering Mr. J. L. Reid's horses. On the 26th, I left for Pelly and sold an outfit stored with the Hudson Bay Company by Mr. Belleau. I left for Yorkton on the 28th, where I bought my supplies, and after having the outfit put in order, I left for township 23, range 5, on August 1.

I renewed the corners in this township and found that not only the creek, but almost every slough shown on the plan of the original survey had become dry. Mr. Gauvreau, my assistant, who remained with Mr. McFadden when I left Dauphin on July 21, joined me on August 6. Having completed the renewal of the corners here, I proceeded to township 23, range 6, in which I also renewed the marks of the corners, and found the same conditions as mentioned in the above township to prevail with regard to water. I then moved into township 23, range 7, and as many of the corner marks were obliterated, while most of those found were very erroneously located, I re-surveyed the township. The only water found here was a slough on the east boundary of section 7, a pond in the south-west quarter of section 21, and a pool in the creek bed near the north-east corner of section 16. I also re-surveyed the greater part of township 24, range 7, as many of the corner marks were obliterated. The creeks and many of the ponds shown on the plan of the original survey of this township were dry. I completed my survey by renewing the corner marks in township 24, range 6. In this township no water was found, so it was necessary to dig for a supply. After several fruitless attempts, good water was struck in the creek bed in section 15, at a depth of less than four feet. The survey of this township was completed on October 26, and after settling some business matters in Yorkton, I left for home on the 31st.

I have the honour to be, sir,

Your obedient servant,

A. J. BRABAZON, D.L.S.

## APPENDIX No. 13 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF J. A. BELLEAU, D.L.S.

## SURVEYS IN THE THICKWOOD HILLS.

DEPARTMENT OF THE INTERIOR,

OTTAWA, February 28, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of the survey of meridian outlines executed by me during the past season in the Thickwood hills.

In compliance with your instructions, I left Ottawa on April 9 for Prince Albert, where I organized my party. I stopped in Winnipeg one day to get the iron posts required for the survey from the Manitoba Cartage and Warehousing Company. On receipt of your telegram dated April 13, giving me the names of the men appointed on my party, I started for Regina, where I met Messrs. Sweet and Fisher, and proceeded with them to Prince Albert. The hiring of the balance of my party was made without delay; the horses which I required could not be had in the town, so it was some days before I could purchase suitable ones for the work. Harness for the wagons and buckboard had to be made. The iron posts, which were ordered on April 12, only arrived in Prince Albert on the 22nd, thus delaying our departure for several days.

On April 23, my outfit being complete, I started with the party for Aldina, via Green Lake trail, which we followed as far as Carlton crossing, where I was informed by the mail carrier that the trail to Aldina was unfit to travel with loads, the recent heavy rains having rendered it almost impassable, even for a light rig. We, therefore, followed the Green Lake trail as far as Mistowasis, where we arrived on May 2, after eight days of very hard work for each member of the party. On May 3, I explored westerly for a passage through the valley of Snake Plain creek, but it was so wet everywhere, and the water in the creek so high, that we were obliged to seek another way to the Aldina trail. After travelling a few miles in a southerly direction, we found drier country extending westerly; the next day we crossed the Aldina trail, which we followed for five miles in a northerly direction, and camped near Mr. Crowe's farm.

After getting all the information I desired as to the nature of the country we had to travel through to reach the initial point of my work, I was asked to complete the meridian between ranges six and seven, about seven and three-quarters miles in length, by the settlers who were living in the vicinity of the Mistowasis Indian reserve and were making improvements without knowing exactly if they were working on the reserve or not. Seeing that this line would pass mostly through open country, and that the survey of it would be to the interest of the department as well as the settlers, I ran the meridian to the intersection of the north boundary of Pet-ty-quaw-ky Indian reserve.

On May 21 we moved camp in the direction of the 13th base line to survey the meridian outlines of the Doukhobor reserve. The base line in range 7 is very indistinct; the greater part of it runs through a burnt country with many swamps and lakes. It was, therefore, several days before I could locate it by means of a flying

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traverse, which I tied to the southeast corner of township 48, range 7. I may say that this work was done under the most unfavourable circumstances, both as regards weather and country. From May 7 to September 8, 124 days in all, we worked 77 days, made 22 moves, covering about 110 miles, in bushy country, and cut about 100 miles of trail. During this period we had 47 days of rain. It will thus be seen that the season in this part of the country was very wet, and, therefore, greatly delayed the work.

#### *Description of Meridians.*

Township 48, range 7. From the northeast corner of section 13, going south, the country is rolling and undulating, and broken by tamarack swamps. The timber consists of jack pine and poplar, from six to twelve inches in diameter. There are two lakes on this meridian, one in section 12, and the other in section 1. Snake Plain creek flows through the township in an easterly direction. A wagon trail to Mistowasis crosses the south half of section 13. The soil may be rated as second class.

Township 47, range 7. The east boundary of this township is very much broken by large lakes; the most important is Lake Royal, which is about three miles and a half long and one mile wide. The water is fresh and contains fine jackfish. The trail to Aldina crosses the meridian about ten chains south of the lake. Sections 13 and 12 are cut off by a large alkali lake. Pet-ty-quaw-ky Indian reserve is intersected on the south half of section 12. This township is rolling and undulating, with scattered bluffs of poplar and spruce, and some hay marshes and sloughs. The soil may be rated first and second class.

Township 48, range 8. This township is very much broken and is hilly, and is heavily timbered with poplar, birch and some spruce. There are many hay marshes and sloughs. Iroquois lake and Lake Carpenter occupy nearly the whole of the six sections of this township. The water in these lakes is fresh, and a great quantity of large pike and jackfish are caught yearly by the Indians. A large creek, 15 to 25 links wide, crosses the north part of the township, and flows into Iroquois lake on the north side. Snake Plain creek is the outlet of the lake, and crosses the meridian near the northeast corner of section 13. The soil may be rated second class.

Township 47, range 8. This township is rough and rolling, and heavily timbered with poplar, white birch and spruce, suitable for building purposes. Lakes and hay sloughs are numerous. The tier of quarter sections adjoining the correction line is more open, and scattered with scrub. The east boundary of the township runs through a rolling country, with scattered bluffs of small poplar and willows. The soil may be rated first and second class.

Township 48, range 9. This township is rolling and broken country, and heavily timbered with black and white poplar; white birch and spruce of good size are found in bluffs. There are a few large lakes near the south and west boundaries. A creek of good size flows from west to east through the township and crosses the meridian near the centre of section 13. There are also numerous hay marshes and small lakes. The hay in the sloughs is of the best quality, being all blue joint and red top. The soil is good, and may be rated first class.

Township 47, range 9. This township is very much of the same nature as the one to the north of it, being well timbered with good-sized poplar, white birch and spruce suitable for building and fencing purposes. The heavy bush seems to end in the centre of section 12 on the east side, and the north boundary of section 7 on the west side. The southern portion of the township is undulating with scattered willow scrub. There is a large lake in the centre of the south boundary of the township known as Little Sandy lake. There are also smaller lakes and many hay sloughs scattered here and there. The soil is generally good, and ranks first and second class.

Township 48, range 10. This township is thickly wooded with large poplar and heavy undergrowth; there is some good-sized spruce and tamarack in the large mus-

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kegs suitable for building purposes. The surface is rolling and much broken by ravines. It is well watered by many creeks and small lakes. Along the west boundary there are large burnt tamarac muskegs, nearly open. The subsoil is not so deep as it is in the other townships, and in many places is very stony. The soil may be rated as second and third class.

Township 47, range 10. The northeast half of this township is timbered with black and white poplar and some white birch. The southwest half is open and rolling, with scattered bluffs of low scrub. Large hay marshes and small lakes are numerous. Two old cart trails pass through the township and join the Aldina trail. The soil rates first class.

Township 48, range 11. This township is similar to those on the east situated in the Thickwood hills. It is well timbered with poplar and some birch. Large tamarac muskegs and numerous sloughs are met with. The country becomes more level as we approach the south boundary; the bush is not so dense and of smaller diameter. The soil is generally first class, being black loam with clay subsoil.

Township 47, range 11. This township is nearly all open rolling country, interspersed with small bluffs of young poplar and scrub. Hay marshes, lakes and sloughs are numerous. A wagon trail from Meeting lake is crossed in the southeast of section 13; it joins the Duck lake trail about ten miles in a southeasterly direction. The soil may be rated first and second class.

Whilst the meridian exterior of township 47, range 8, was being mounded, I ran the north boundary of township 46, range 7, which was necessary to complete the survey of the township. This line is about two and three-quarter miles long, and closes on the west boundary of Pet-ty-quaw-ky Indian reserve. At the end of every meridian outline the jog was surveyed and properly connected with the meridians run north from the 12th base line.

On September 7, having completed the survey covered by the first part of my instructions, I put the party in charge of my assistant to make the necessary repairs to wagons, harness, &c., before starting for the 16th base line west of the 4th meridian, and I proceeded to Duck lake to purchase supplies and feed for the horses. In compliance with my instructions, which were confirmed by your letter of July 26, I proceeded to Onion lake, where I intended to establish my headquarters. I arrived there on September 25, having been greatly delayed by heavy rains and snowstorms. After getting the necessary information as to the best means of reaching the 16th base line, and being satisfied that the time allowed me to go there and return to Prince Albert would not enable me to do work of any consequence, I telegraphed you of the fact, and asked for instructions. The next day I received authority from you to return by way of Prince Albert, and to examine two contract surveys.

On the 27th we started from Onion lake, and on October 5 pitched our camp near the north boundary of township 46, range 10, where I began the examination of one of the contracts. The examination of the two contracts occupied six days; the result was communicated to you in a separate report, accompanied by sketches.

We reached Prince Albert on October 14, and on the following day the party was discharged. In accordance with your telegram of October 13, I sold the outfit and horses by auction on the 18th. The proceeds of the sale were very satisfactory.

I left Prince Albert on the 20th, and arrived in Ottawa on October 25.

I have the honour to be, sir,

Your obedient servant,

J. A. BELLEAU, D.L.S.

## APPENDIX No. 14 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF LOUIS E. FONTAINE, D.L.S.

SURVEYS NORTH OF UNION LAKE, SASKATCHEWAN.

LEVIS, January 22, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit to you the following report on the survey of part of the fourth meridian, and certain block outlines west of the meridian, all of which was made in conformity with your instructions, dated March 14 last.

On receipt of the instructions, I reported at your office in order to obtain the necessary data, in connection with the work I was called upon to perform, and after due preparation, I left Ottawa for Edmonton on April 5, in company with Mr. A. Michaud, P.L.S., who was appointed as my assistant. On the evening of the 12th, I arrived at Edmonton where I stopped for a fortnight to engage men, purchase supplies and complete my outfit. On the 27th, I left Edmonton for Onion lake, following the south shore road of the Saskatchewan river. The recent heavy rains had rendered the trail so soft that the wagons were often mired and we were frequently obliged to double the teams on a load. The streams were carrying water with full banks. The floods had in two places carried off the bridges, necessitating the building of rafts so as to enable us to continue our journey. With these difficulties to contend against, the progress was slow and delayed us somewhat in reaching the starting point of the summer's operations.

On my arrival at Onion lake, I immediately set to work training the chainmen and menders as to their duties, and ran trial lines from the Indian reserve corner post in order to locate the fourth meridian. On the conclusion of these preliminaries, I proceeded as follows with the operations :—

I reopened, reposed and remounded that portion of the fourth meridian lying between the 15th correction and the 15th base lines.

Starting from the 15th base line, I produced the fourth meridian northerly, a distance of thirty-eight and a half miles to the shores of Cold lake in section 13, township 63. As the lake is too wide to admit of the meridian being produced across it, I decided to open certain township outlines around it, and in this way reach the 17th base line. Proceeding thus, the lines surveyed were as follows :—The south boundary of township 63, ranges 1 and 2 ; the east boundary of township 63, range 2 to the intersection of the shores of Cold lake ; the east boundary of township 63, range 3 ; the north boundary of township 63, range 2 to the shores of Cold lake ; and the east boundary of township 64, range 3, to the 17th base line.

From the north-east corner of township 64, range 3, west of the fourth meridian, I surveyed the base line easterly across the north boundary of township 64, range 2, as far as the shores of Cold lake, and westerly across ranges 3 and 4. I then surveyed the east boundary of townships 63 and 64, range 5, to the 16th correction line.

In accordance with subsequent instructions received, I stopped work at the 16th correction line and started for Edmonton, where I arrived on October 16. I paid off my men, settled the survey accounts and made arrangements for the storage of my outfit, and then continued my journey home, where I arrived on November 5.

Having given a brief account of the season's work, I will now endeavour to give a description of the country covered by the survey.

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*Fourth Meridian.*

Township 55. The first four miles of the east boundary of this township crosses a rolling country, more or less covered with willow scrub together with scattered bluffs of second growth poplar interspersed with clumps of spruce. The remainder of the boundary is heavily timbered with poplar, birch and spruce. The soil is second and third class.

Townships 56, 57, 58, 59, 60 and 61. The country crossed by the east boundary of these townships is generally rolling and densely timbered with spruce, poplar, cypress and tamarack of small diameter and thick underbrush. There are numerous lakes, swamps and marshes of various sizes on the line. Beaver river, flowing eastward, is intersected on the south-east quarter of section 13, township 61. This stream is two chains wide, six feet deep, with a current of two and one-half to three miles an hour. Its general direction is west, north-west. The soil on this boundary is third class.

Township 62. The east boundary of this township for a distance of two miles crosses a rolling burnt country covered with a second growth of poplar and willows, then for three miles it passes a series of swamps and floating bogs extending a distance of about four miles on each side of the line as witnessed at a bird's-eye view from an adjacent height. The remainder of the line crosses the south side of the height which surrounds Cold lake.

Township 63. The part of the east boundary of this township that was surveyed comprises sections 1, 12 and the half of 13. The surface is a gradual slope towards Cold lake. The timber is heavy, poplar and spruce of twenty-six inches in diameter are in large quantities. The soil is third class. The shores of Cold lake are intersected in the north-east half of section 13. It is the largest body of water in this region, its dimensions being about twenty miles long by eight miles wide; it has numerous bays and is surrounded at a distance of two miles from its shores by heights of about 200 feet which slope gradually to the water. Two chains from the shore line the water is two feet in depth.

The above description, it must be understood, only applies to the country in the immediate neighbourhood of the survey operations; it would be quite different in some other parts, especially five or six miles west of the line, where good agricultural land is to be found.

*16th Correction Line.*

Township 63, range 1. Running westward across range 1, the south boundary of this township crosses the western heights surrounding Cold lake for a distance of one mile, and then enters an undulating country covered with windfalls of burnt timber and a second growth of poplar and willow scrub up to section 6, which is partly open prairie with scattered islets of poplar. The soil is second and third class, except on section 6 where it is a rich loam fifteen inches in depth on a clay subsoil.

Range 2. The line across this range runs for a distance of one mile through islets of poplar; it then crosses an undulating burnt country covered with windfalls of burnt timber and a second growth of poplar and cypress. On the east half of section 1, the trail from Cold lake to 'Mission de St. Raphael du lac Froid' is intersected. The soil is third class, except on section 1 where it is of a superior quality.

*Meridian Extensions.*

Township 63, range 2. The east boundary of this township comprises sections 1, 12, 13, and a part of section 24 as far as the shore line of Cold lake. It crosses a rolling and partly open area in section 1; the remainder of the line runs over a broken surface which has been visited by fire, and is now covered with a second growth of poplar and willow scrub. The trail from Cold lake to 'Mission de St. Raphael du lac Froid' is intersected on sections 1 and 24. The soil is second and third class.

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Township 63, range 3. Running northerly the first two miles of the east boundary of this range crosses an undulating country covered with cypress, the line then enters swampy lands extending about three miles, after which it passes through islets of poplar interspersed with small patches of prairie covered with scrub. Bear river crosses the north half of section 1 in a westerly direction. It is seventy-five links wide and three feet deep, with a slow current. The land is third and fourth class.

\* Township 64, range 3. This meridian passes over a rolling and burnt country covered with windfalls of burnt timber and a second growth of poplar mixed with willow scrub. Bear river crosses the north half of section 1 in an easterly direction. The soil is third class.

Township 64, range 5. Running southerly, the east boundary of this range in the first three and one-half miles crosses a rolling country covered with poplar, birch, spruce and cypress; it then traverses a lake one mile in width after which it runs over a small ridge to a scrubby swamp one mile long and entirely unfit for anything. Jackfish river crosses the north half of section 36 in a south-westerly direction. The soil is third class.

Township 63, range 5. This meridian crosses a rolling and burnt country covered with a second growth of poplar and willow scrub. On section 24, the line traverses a lake half a mile in width and extending on each side of the meridian a distance of about three and one-half miles. Beaver river crosses the south half of section 1 in an easterly direction. The land is third class.

#### *Parallel.*

Township 63, range 2. Running east across this range, the north boundary of the township crosses a gently rolling burnt country overgrown with scrub and second growth of poplar. Bear river crosses the west half of section 32 in a southerly direction. The shores of Cold lake are intersected on the west half of section 35. The soil is second and third class.

#### *17th Base Line.*

Range 2. Running eastward across part of range 2, the 17th base passes over a rolling burnt surface covered with a second growth of poplar and scrub. The shore line of Cold lake intersects the base on the east half of section 34. The soil is second and third class.

Ranges 3 and 4. Running westward across these ranges the base line passes over a rolling country covered with poplar, birch and spruce. Lakes are crossed on section 31, range 3, and on sections 35 and 36, range 4. Jackfish river crosses the line on the west half of section 32, range 4, in a southerly direction; it is fifty links wide and three feet deep. The land is third class.

#### *General Remarks.*

The waters of the numerous lakes and streams in this locality are of a greenish tint, clear, soft and pleasant to the taste. They are well stocked with whitefish and pike, and are also the abode of flocks of ducks, gulls, and wild geese.

The swamp lands are mostly floating bogs, and in some cases cover an extended area.

In the course of my season's work, covering a large area of bush land, the only timber I found worth mentioning is a strip on the heights adjacent to the south shore of Cold lake. Some good spruce may be obtained in different places, but in my opinion, not in sufficient quantity to warrant being reserved as timber berths. Eight miles in a southerly direction from the southeast corner of township 63, range 2, the nucleus of what may become an important settlement is to be found; it is



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called 'Mission de St. Raphael du lac Froid.' There is a Roman Catholic church, a school house, and several other buildings owned by Chippewyan Indians. This locality, I understand, is well situated, and adapted for ranching and agricultural purposes.

Three fairly good trails converge at this point; the first from Onion lake via Frog lake, the second from St. Paul de Metis, and the third crosses Beaver river and follows the south and west shores of Cold lake as far as Bear lake pack trail.

Several difficulties had to be contended with in carrying on the surveys, owing to the wooded nature of the country. I had to dispense with wagons and use pack horses; the excess of water on account of the prevailing heavy rains throughout the season, filled every depression of the ground, and all hands were frequently obliged to be in the water, waist deep, from morning until night; the softness of the ground in some places prevented us from keeping the camp outfit up to the work; and the mosquitos, black flies and myriads of other insects, rendered it very unpleasant for man and beast.

Notwithstanding these difficulties, I may state that during the season one hundred and ten miles of outlines were surveyed, twelve miles of which consisted of reopening, reposting and remounting marks of a previous survey.

I have the honour to be, sir,

Your obedient servant,

LOUIS E. FONTAINE, *D.L.S.*

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## APPENDIX No. 15 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF W. F. O'HARA, D.L.S.

## SURVEYS IN NORTHERN ALBERTA.

CHATHAM, Ont., January 11, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—In pursuance with your instructions, dated March 13 last, to survey certain meridian outlines west of the fifth meridian, I proceeded to Calgary, where I organized my party and purchased my outfit and supplies. From thence I proceeded to the northeast corner of township 41, range 2, west of the said meridian, where I commenced my survey. I surveyed the following township outlines in the order given :—

East boundary of township	42,	range	2.
"	"	41 and 42,	range 3
"	"	44 "	43 " 2
"	"	44 "	43 " 3
"	"	44 "	43 " 4
"	"	44 "	43 " 5
"	"	41 "	42 " 4
"	"	40 "	39 " 4
"	"	40 "	39 " 5
"	"	38 "	" 4
"	"	40 "	" 6

The work was carefully performed, and strictly in accordance with the provisions of the manual of survey. The plans and field notes will show the topography and timber of the country. Generally speaking, the country is rolling and hilly, with the exception of the Blindman and Medicine river valleys, which afford the best land for agricultural pursuits. The timber consists chiefly of poplar, but pine, spruce and tamarac are found in limited quantities in isolated positions where protection is afforded from prairie and forest fires.

The soil is exceedingly rich and fertile, being composed principally of black and clay loam, with a clay subsoil. In a few localities peat is present, the depth of which could not be ascertained from the pits which mark the survey, they being only eighteen inches deep. Sandy loam was also found occasionally throughout the work.

The climate is very changeable, and at present unfit for the production of cereals. The country was visited by snow and frosts every month in the year, with the exception of the month of July. However, I am inclined to believe a change will occur with the opening of the country. After a few hundred thousand acres are broken and exposed to the sun's rays, the ground will absorb infinitely more heat than it does in its present condition. This will be due to its being intensely black and also to the rarity of the atmosphere at these altitudes, which vary from 2,400 to 2,600

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fect above the sea level. Rain or hail fell in very large quantities during the course of the summer, having fallen in all about 100 days. The range of the thermometer was from 30° to 75° during the summer months.

The country is very wet, but can be easily drained, as the fall in various directions is considerable; this is indicated by the rapid currents of the numerous streams. The best mode of procedure towards development would be to enlarge the natural water courses and excavate lateral drains along the road allowances and grade the excavated earth thereon.

The region is well adapted for mixed farming and stock raising. The only difficulty with cattle would be, their having to contend with myriads of black flies, horse flies and mosquitos.

The streams afford a great many excellent mill sites, which can be chosen by any one wishing to engage in the milling business. In conclusion, I might say this part of Alberta is difficult to surpass anywhere in the North-west, notwithstanding the difficulties and hardships that at present confront the early settler.

I have the honour to be, sir,

Your obedient servant,

W. F. O'HARA, *D.L.S.*

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## APPENDIX No. 16 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF J. E. WOODS, D.L.S.

## SURVEYS IN SOUTHERN ALBERTA.

OTTAWA, March 27, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit to you the following report on my operations during the season of 1900.

I left Ottawa for Calgary on April 7 for the purpose of making the surveys required in southern Alberta. Before organizing my party for the season, I went to township 27, range 20, west of the fourth meridian, with three men, to survey a homestead on the Rosebud river. The valley of the river contains a few flats from five to fifteen chains wide, flanked on each side by high banks sloping back over a mile; they are cut up by a network of deep ravines with almost perpendicular sides. There is little to attract settlers in this district, and as a consequence, it is sparsely settled. The climate seems rather dry for the cultivation of cereals, and hay land is scarce for ranching purposes. However, the pasture is abundant and of fine quality; there is also splendid shelter for stock against the winter storms.

I returned to Calgary on the 20th, after a drive of one hundred and forty miles, and at once organized my party, purchased supplies and prepared my outfit for the season's work. I did not leave for the south till the 27th, being delayed by two days of heavy rain; the roads were soft and muddy, and were not improved by a fall of three inches of wet snow the first day out. Two days later, the mud had dried up and we made good progress. On May 5, I reached the second base line, where I commenced the season's operations, having come two hundred miles from Calgary.

I surveyed the township outlines forming the east boundary of townships 2 and 3, ranges 19, 18, 17 and 16, west of the fourth meridian; the country embraced within the outlines is a high rolling prairie lying to the north-east of Milk river ridge. The soil is generally a sandy loam with clay subsoil, very stony in spots, and is dry and hard, indicating a small rainfall. This district will not be suitable for farming until irrigated. It is, however, one of the best ranching districts in the west. As all the townships I outlined have since been subdivided, a detailed description of the country will be found in the subdivider's report.

On May 28, I commenced the subdivision of township 3, range 23, eighty-five miles from where I completed the township outlines. This township is in the Milk river ridge; it is rough and hilly with long sloping ridges and valleys. It is well watered by several brooks fed by numerous springs. Judging from the heavy growth of grass, and the quantity of water in the brooks, there is sufficient rainfall for agricultural purposes. The soil is a rich black loam over eighteen inches deep in places, with a subsoil of loose clay. It is well adapted for mixed farming; the valleys contain sufficient level land for cultivation, whilst the ridges afford splendid grazing, and there is good shelter for stock.

Township 1, range 23, which I next subdivided, is for the greater part situated in the Milk river ridge. It is a high, hilly prairie, broken by deep ravines and large valleys; the north-west part is situated at the foot of the ridge, and contains several

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sections of good land already taken up by settlers. The Milk river, a swift stream of good spring water and half a chain wide, runs through the south-east part in a deep valley from which the ground rises rapidly to the north-west and to the south-east. The south-east corner of the township is at an altitude of 4,595 feet above sea level, and 458 feet above the river. Most of the river bottom could be irrigated at small expense by diverting the river. With the exception of a few sections on the west side, the township is only fit for grazing purposes.

Township 1, range 22, is also high, rolling prairie, intersected by several valleys with long, sloping banks. The soil is a sandy loam with clay subsoil, very stony in places, and although it is very dry, it is covered with a heavy growth of bunch grass. The Milk river runs through sections 20, 29, 33 and 36; the valley is a flat from ten to fifteen chains wide, which can easily be irrigated.

My next work was in township 1, range 28, fifty-five miles farther. I only surveyed section 36 to accommodate two settlers who had located here. The remainder of the township seems unfit for immediate settlement.

Another move of twenty-five miles brought me to township 3, range 29, where I subdivided fifteen sections along the east and north boundaries, and which comprises about all the land fit for settlement. The eastern part is rolling prairie with patches of scrub; it lies along the western slope of the valley of Waterton river.

The northern part is undulating prairie with patches of scrub, which become denser and denser towards the south-west. The few settlers located here follow ranching for a livelihood; some cultivation has been successfully conducted in the valley of the river.

A further drive of forty miles brought me to township 6, range 2, west of the fifth meridian, where I completed the traverse of Old-man river and ran the east boundary of section 23. On August 6, I reached township 6, range 3, fifteen miles farther, where I commenced extending the section lines through Crow Nest pass.

The departure of four men, who were unable to cut the heavy timber on the lines, left my party badly crippled. As it would have been a loss of time to attempt to run lines with the remainder of the party, I instructed my assistant to make a traverse of the Crow Nest river, whilst I went to Banff with one man to traverse a part of the Vermillion lakes and Forty-mile creek. It rained most of the time I was there, and I had not completed the survey when I was obliged to return to the Crow Nest pass as my assistant had secured men to complete the party.

The roughness of the country rendered it impossible to extend the subdivision by the usual method. I, therefore, surveyed the section and quartersection lines wherever practicable along the valley of the Crow Nest river, and connected the lines with one another as far as the continental divide. Where it was impossible to run a straight line, I established the position of section corners by a traverse. All the lines were checked by a traverse of the railway, calculated by latitudes and departures.

I extended the traverse of the Crow Nest river from section 10, township 7, range 3, to the east boundary of section 4, township 8, range 4; the time at my disposal did not allow me to continue the traverse any farther.

In township 7, range 3, the valley is wide and rises to the north and south in broken slopes and benches, timbered with spruce and fir on the south side, and with patches of willows and bluffs of poplar on the north side. On section 36, township 7, range 4, the bases of Bluff and Turtle mountains come within a few chains of each other, and for a quarter of a mile the pass is not over five chains wide; it then widens out, and for six or seven miles forms a valley consisting of benches rising gradually one above the other up to the mountains. The southern slopes are all timbered with pine, fir and spruce. The northern slopes are prairie, with groves of large fir trees and small bluffs of poplar, giving the country the appearance of a park. On the west side of section 7, township 8, range 4, the pass is again almost closed by two mountains, each sending out high spurs that come within two chains of one another. In range 5, the pass widens out again as far as Crow Nest lake, and has

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the same appearance as in range 4. The lake extends across sections 8 and 9, between two high mountains rising from the water's edge with almost perpendicular walls.

A comparatively level piece of ground half a mile wide, well timbered with large spruce and fir, extends between Crow Nest lake and Goose lake. At the western end of Goose lake the pass turns suddenly to the north, and a quarter of a mile farther, at an altitude of 4,225 feet above sea level, is the continental divide forming the boundary between the district of Alberta on the east, and the province of British Columbia on the west.

Large deposits of coal have recently been discovered in the pass, and several parties have begun developing operations. The prospects of this district becoming an important coal mining region are very promising.

A good wagon trail follows the valley of the river through the pass as far as the lake, where it turns north, and passing around a high mountain, crosses into British Columbia by a pass 1,000 feet higher than the lake.

A large saw mill on section 3, township 8, range 4, supplies all the lumber required by the settlers.

The Crow Nest Branch of the Canadian Pacific Railway, constructed through the pass a few years ago, is an indispensable factor in the development of the resources of the country.

I was much annoyed and delayed whilst making the survey through the pass by men getting intoxicated; liquor was easily obtained along the railway, and men were independent, as work was plentiful elsewhere. I was thus unable to survey the lines required to locate the lands of the British American Coal Company.

On September 28 I left the summit to inspect contract No. 6 along the Alberta Railway; for the next seven days it snowed almost continually, and at one time there was over two feet of snow on the ground, so that travelling with wagons was impracticable. On September 8, the snow had sufficiently disappeared to allow us to proceed. On the 13th, after a drive of 150 miles, I reached the second base line and commenced the inspection of several townships. On the 20th, I left for Lethbridge, passing by McCarty's ranch, where I made arrangements for storing the outfit and wintering the horses. On this last drive we covered 75 miles.

During the season I travelled 750 miles between the different parts of my work. As I had good horses, sufficient transport and good roads, I spent comparatively only a short time travelling.

I have the honour to be, sir,

Your obedient servant,

J. E. WOODS, *D.L.S.*

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## APPENDIX No. 17 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF ALBERT C. TALBOT, D.L.S.

## SURVEYS IN NORTHERN ALBERTA.

OTTAWA, February 12, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of my field operations during the past season, in the northern part of Alberta.

In pursuance of your instructions, dated March 28, I left Ottawa on April 10 and arrived at Edmonton on the evening of the 16th, having in the meantime been delayed a short time at Calgary on business.

I was unable to procure any labourers at Edmonton within the week after my arrival, as several parties going north were being organized, and in order to secure a sufficient number of men high wages were offered. I drove to St. Albert on the 18th, and made an unsuccessful effort to buy horses and hire men there. The following day I went to Wataskiwin by train and succeeded in hiring two men, whom I sent to Bittern lake to bring my transport outfit and camp equipage to Edmonton.

On the 23rd, I left for Fort Saskatchewan to make the survey of part of the mounted police reserve, as required by your instructions; upon the completion of this work, I returned to Edmonton on Saturday, the 28th, having been delayed for two days by heavy rains.

Between April 30 and May 3, I engaged the necessary labourers, bought two horses and completed my equipment, and on the 4th I left for the field of my operations. The roads were in an unusually bad condition, owing to the exceptionally wet season of 1899 and the heavy snow fall of the succeeding winter. We travelled thirteen miles only the first day, and it was a very heavy day's work for both men and horses; we were obliged in many places to double the teams on each wagon, and three or four times had to unload, though I had taken the precaution to hire an extra wagon and team in order to lighten the loads. The second day, we travelled on higher ground, where the roads were in much better condition, and we covered about 21 miles with less trouble than we experienced the previous day. We camped at night on the west side of township 52, range 1, west of the fifth meridian, and I decided to begin work in township 52, range 2, before moving camp any farther. We spent Monday, May 7, searching without success for the outlines of the township; the country having been partly burnt and the lines overgrown with brush, and the posts either rotted or burnt, it was impossible to locate any of the marks of the corners. The next day, I secured the services of one of the settlers to show me where the east outline crossed the Edmonton trail, and started work from this point.

As it was impossible to travel through township 52, range 2, even with pack horses, I surveyed the south half only from our camp on the Edmonton trail and left the remainder of the township to be surveyed in the fall. On June 18, I moved camp to Wabamun creek in township 52, range 3, and surveyed that portion of the township south of the Indian reserve, also re-established the south parallel, and reopened and re-marked the meridian exteriors.

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On July 5, I moved camp across the Indian reserve to township 53, range 3, and completed the subdivision of the township, five sections having been previously surveyed. As it was now August 11, I thought it was too late in the season to begin work in a township farther west, especially as there was no immediate necessity for surveys in that direction, and, therefore, decided to take my camp to the north part of township 52, range 2, and complete the subdivision of this township.

In order to reach the work, I had to go around by the Edmonton trail as far as, the centre of range 1, and from there westerly, thus covering a distance of thirty miles which necessitated three days of hard travelling, because of the bad condition of the trails and heavy rain during one of the days. From August 16 to September 8, I was engaged completing the subdivision of this township, having been much delayed by stormy weather and a fall of snow on August 25.

On September 10, I moved camp to township 53, range 1, as I had been told some farmers had squatted there; I found that three or four had made some improvements in sections 4, 6 and 8. From September 11 to October 6, I surveyed only twenty miles in this township, having been much delayed by stormy weather; there was a fall of sixteen inches of snow on September 24, followed by more snow during the early days of October. I stopped work for the season in this township.

Most of the country I had instructions to survey is covered with bush, or brule, with a second growth and the dead timber standing in places. There are small open tracts, but these are not large enough to be of much advantage for immediate settlement.

#### *Description of Townships.*

Township 52, range 2. The soil in this township is second class, being light and sandy, except in a few sections on the south and west sides of the township, where it is a clay loam or a black loam on a clay subsoil. Up to a few years ago, nearly the whole township was covered with a dense growth of poplar, cottonwood, birch, gray willows, and clumps of spruce trees. Fires have since overrun upwards of one-half of the township; as most of the dead timber remains standing and the burnt area is covered with a second growth of young poplar and willows, the land is, therefore, not suitable for immediate settlement. The timber which has escaped the fire is generally sound, good size, and suitable for building purposes. The country is hilly and cut by numerous lakes, swamps, and chains of small hay marshes. On sections 6 and 24, there are small prairie openings, where squatters have made some improvements.

Township 52, range 3. Only two tiers of sections were surveyed on the south side of this township, as the remainder of the township forms part of 'Alexis Stony Indian Reserve.' The soil is second class, being a clay loam mixed with sand in many places. The country is generally very hilly, but from the east line of the township to Wabamun creek, which crosses the subdivided area near the centre of the range, it is open prairie, with scrub and scattered bluffs of green poplar. West of the creek it is brule and green brush, with intervening belts of mixed green poplar, cottonwood, birch and spruce. The best of the spruce timber has been cut for the Edmonton market. Whilst I was in the township, six or seven farmers began making improvements on sections 2, 3 and 12. The Edmonton trail crosses the southeast corner of the township, and a trail to Wabamun lake and Lake St. Ann branches from it in section 2.

Township 53, range 1. Sections 5 and 6, and part of sections 4, 7 and 8, have of late years been overrun by fires and, except for a few prairie openings, are now covered with poplar brush and willow scrub. The remainder of the surveyed portion is covered with a dense growth of poplar, cottonwood, birch, gray willows and spruce, with heavy underbrush. Timber of good size may be obtained in sufficient quantities for building purposes, and in many places there are belts of young timber suitable for fence rails. The country is in general very hilly, and the soil is second



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class, being a good sandy loam, except near the southwest corner of the township, where it is light sand.

Township 53, range 3. The south half of this township is rolling and hilly, and the soil is second class. Rather more than a half of this portion of the township has within recent years been overrun by fires, leaving belts of green timber. The burnt portion is now partly covered with green poplar brush and scrub. On the south and west sides of the township there are a few prairie openings, and the country is generally more open. The north part of the township is low and wet, and mostly covered with swamps, muskegs and floating bogs, but near the north boundary the ground is higher, and a belt of green poplar, cottonwood and spruce runs across sections 33, 34, 35 and 36. The soil in this portion is either third or fourth class. Some quarter-sections sufficiently open for immediate settlement may be obtained on the west side of the township and along a creek running in a south-easterly direction from section 17 to section 2. The wagon trail from Lake St. Ann to the Indian reserve in township 52, range 3, crosses the southwest corner of the township.

During the season I surveyed 118 miles of new lines, re-established 10 miles, and reopened and re-marked 22 miles, making in all 150 miles. The season was an exceptionally wet one; between the time of our departure from Edmonton and our return there were twenty-five week days on which we had rain or snow, and in consequence of this the work was much retarded. In addition to the loss of time caused by bad weather, fourteen days and a half were occupied in travelling and moving camp, so that after deducting Sundays and holidays there only remained ninety-five days actually spent on the survey, of which twenty-four were showery. Owing to the thick bush and heavy underbrush, it was very tedious work opening the lines near some of the lakes and across the many swamps, in which the men were obliged to work in water from three to twenty inches deep. Very often some of my men were laid up with coughs, colds or fever, contracted through having to work so much in water, and because of the frequent cold showers on very warm days. It was difficult to secure good axemen, especially during harvest time, as the farmers were offering good labourers \$40 to \$45 per month.

On October 8, we left for Edmonton, where we arrived after two days of very hard travelling over a distance of thirty miles, the roads being in even worse condition than in the spring. On the 10th, I paid off all the labourers but two; these were required to take care of the horses and to assist in packing the transport and camp outfit. On the 12th, I delivered the horses and transport outfit to Mr. Carruthers, and discharged the remaining two labourers.

I left Edmonton for Ottawa on October 13, and reported at your office on the 21st, having taken a vacation of three days on my way home.

I have the honour to be, sir,

Your obedient servant,

ALBERT CHAS. TALBOT, *D.L.S.*

## APPENDIX No. 18 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF J. K. McLEAN, D.L.S.

## SURVEYS IN NORTHERN ALBERTA.

ELORA, ONT., March 22, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of the surveys performed by me during the past season under your instructions, dated April 10, 1900.

My work consisted of a resurvey of townships 57, ranges 22, 23, 24, 25, 26, west of the fourth meridian; the east boundary of townships 58, ranges 22 and 23, and I also surveyed part of township 58, range 18. I arrived at Edmonton on the evening of April 24. As my outfit was in bad repair, I did not send for my horses until May 1, but spent the week in making repairs and new tents. My horses came in on May 2, most of them had been sick with lung fever, and as the roads were very bad, I decided to feed them with hay and oats at Edmonton until the following Monday. I then started for township 57, range 26, the road to range 22 being reported in an almost impassable condition. I reached there the following Wednesday, and commenced operations next day.

Township 57, range 26. This is a fairly good township; there are some settlers about Manawan lake and along the southerly part. A German settler on section 6 would not believe that a former survey of the township had been made, and stated that a short time before my arrival, a number of settlers had moved out as they were unable to find the lines or posts. A great portion of the township can be made into good farms. It is likely that an extension of the German settlement from the south will soon take place.

Township 57, range 25. There are a number of settlers in this township. A church has been built, and a post office established in the north-east portion. Nearly the whole of the township, while not first class, will make fairly good land for settlement. The greater part of the timber has been burnt.

Township 57, range 24. The most southerly row of sections and the row along the east boundary are of poor quality; the remainder, with few exceptions, are good. There is a large number of settlers in this township, and all seem well satisfied. The timber has generally disappeared, although enough remains for fuel or small buildings.

Township 57, range 23. The trail from Athabasca landing to Edmonton runs through this township. Small areas of good land are found along the trail in sections 2 and 3, and part of sections 10 and 32. The remainder of the township is sandy with swamps. A very large muskeg extends across sections 23, 24, and 25 to 28.

Lostpoint lake is at the south-east corner of the township, but is almost entirely in the townships to the south. There is some good hay around the lake. The timber has nearly all been burnt.

Township 57, range 22. A very small area of this township, near the north-east corner, can be used for farming; the remainder is very sandy with many marshes and muskegs. The timber has been nearly all burnt; poplar and willow scrub with small rough jack pine is all that is now found.

The east boundary of township 58, range 23, runs through a very poor sand country and large swamps; the timber is also very poor.

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The east boundary of township 58, range 22, also runs through a poor country. Redwater river crosses the south end of this line ; it was about forty links wide and ten feet deep at this point last season. Some good hay land extends along this stream, and a small ranch could easily be established without much disturbance from settlers. The timber along this line is poor and partially burnt, but improves somewhat in size at the correction line.

After completing the survey of township 57, range 22, I proceeded to township 58, range 18, by way of the Victoria trail. The country along the trail is now fairly well settled up to the crossing of the Redwater river. Settlers are also found as soon as the sandy country east of the creek is crossed. The country along the trail for some distance before reaching the Indian reserve also looks well.

Township 58, range 18. A small portion only of this township north of the Lobstick settlement was surveyed. The country, when I was there, was exceedingly wet, so that a fair estimate could not be made. The soil, however, appeared good and if dry, would make good land for farming purposes.

From here I proceeded to Edmonton, arriving there on the morning of October 12, and left on the following day for home.

I have the honour to be, sir

Your obedient servant,

J. K. McLEAN, *D.L.S.*

## APPENDIX No. 19 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF C. C. DUBERGER, D.L.S.

SURVEYS IN BEAVER HILLS, NORTHERN ALBERTA.

WATERLOO, Que., November 9, 1900.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of my field operations during the past season. In accordance with your instructions, dated April 4 last, I was engaged upon the subdivision of townships and renewal of corners in the Beaver hills.

In order to avoid delay at Edmonton awaiting iron posts, I wrote to the Manitoba Cartage and Warehousing Company, Winnipeg, on April 13, asking them to forward 150 small iron posts and eight large ones.

On the night of April 30, I arrived at Edmonton, and was employed until May 7 purchasing horses and carts, engaging men and getting my survey outfit ready; the following afternoon I went under canvas about two miles and a half east of Edmonton, and awaited the arrival of two members of my party.

I started for the Beaver hills on the 12th, and followed for a few miles a road running east and two miles south of the 14th base line, after which I travelled two miles north to the highway along the base line. From here the highway runs true east for several miles, after which its general direction is east southeast to Beaver lake. It was opened in 1898 to meet the requirements of the Beaver lake settlement, but as it crosses so many marshes and bogs, it has been abandoned, except as to the western portion. The Beaver lake settlers in going to Edmonton prefer using the old trails around the Beaver hills and passing by Fort Saskatchewan, although longer than the direct but almost impassable highway. However, I followed the highway as far as township 52, range 19, west of the 4th meridian, where I had to leave it in order to reach the 14th base in the same range, at which point I commenced work by renewing the markings of the corners. It was May 19 before I reached my destination; the greater number of the soft places had to be paved with boughs, which caused delays of fifteen minutes to four hours, and from the trail to the 14th base the way had to be cleared and a bridge across Norris creek had to be built.

Surveying in the north-eastern part of the Beaver hills is generally very difficult; owing to marshes, bogs and lakes surrounded by thick green bush or half burnt and heavily entangled timber, we were obliged to wade through water to the knees, often to the waist, rather than make our way through the obstacles on dry land. With the exception of the eastern and northeastern parts of townships 53 and 54, range 19, we worked in this class of country until the beginning of September.

As it was impossible to keep the main camp close to the work without great loss of time, and in order to avoid long walks to and from camp, I was obliged to resort to what is termed the packing system. For this purpose sufficient provisions and the absolute necessities for a week were placed on the backs of the horses; thus equipped they generally left the main camp on Monday morning and returned to it the following Saturday. By this means we were enabled each night to camp close to the work of the survey.

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While renewing corners, my camp was for the greater part of the time on the meridian between ranges 19 and 20. From there I worked across range 19 and slightly more than a half of township 53, range 20, up to Tawayik lake; I then moved camp into township 54, range 20, while working westwards, and afterwards into the western part of township 53, range 20, while working southwards.

In this part of the Beaver hills it is absolutely necessary to open and clean out a road before undertaking to move camp; this entails much work, as the ground is thickly covered with stumps and fallen trees much entangled, and the numerous marshes which have to be gone around very much lengthen the road.

The renewal of corners in these townships was therefore tedious work, and was further interrupted because of rainy weather; at least one-half of our time was lost on account of rain. The original survey of these townships was made about eighteen years ago, at which time the corners were indicated by wooden posts; since then the country has been much devastated by fires, consequently I could find but a small proportion of the posts.

The following is in table form the number of posts looked for in each township and the number found:—

Township.	Range.	Looked for.	Found.
53	19	81	22
54	19	58	33
53	20	106	51
54	20	41	7

In township 54, range 20, the percentage found is very low, though the search was made in the southern part of the township, where the country seemed less affected by fire. The remaining portion of the township was so burnt over as to leave very little more than the rough prairie, so that I decided to give up further search for posts in this township.

The soil in the above four townships is second and third class, but as there are so many marshes, bogs and lakes the townships are, I think, more suitable for stock raising than agricultural purposes. Still, the eastern part of townships 53 and 54, range 19, and the north-eastern part of the latter township are pretty well settled; there are also some settlers' improvements in the western part of township 53. I was told that in townships 53 and 54, range 20, quarter-sections were taken up by settlers established in the adjoining townships, range 21. A log house and stable were seen on section 7, township 54, range 20.

Except as to township 54, range 20, islands of good size poplar with spruce here and there suitable for building purposes are found; the timber seems to be made use of as several rollways were seen.

On September 7, I commenced the subdivision of the northern part of township 52, range 21, west of the fourth meridian, which I had left unfinished in 1893, and also renewed the corners on the north boundary. This portion of the township is almost completely burnt over and the rough prairie is covered with fallen trees, scrub and young poplar; the south-eastern and south-western portions are covered with half burnt poplar. There is, however, a quantity of good, dry, sound poplar suitable for building purposes. The surface of the township is rolling and interspersed with lakes and marshes; the soil is second class.

I intended to commence renewing the corners in township 53, range 21, west of the fourth meridian on September 24; but in the evening of the 22nd rain began to pour and kept pouring abundantly until about 5 o'clock the following evening, when it commenced to snow, and by the night of the 24th twelve inches of snow had fallen. The next two days were wintry days, but during the night of the 26th the snow commenced to melt so rapidly that by the afternoon of the 27th I was able to go to work,

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but the ground was so soggy that the members of the party had to go through water nearly as cold as ice, and creeks from 15 to 30 inches in depth had to be crossed where none could be seen before the snow storm.

Having instructions to discharge my party on October 15, and seeing that the weather continued inclement and admitted of almost no work being done, I decided to leave for Strathcona on October 5 in order to pay off the members of my party without further delay ; I arrived at Strathcona on the 6th, and left for Ottawa on the 17th.

I have the honour to be, sir,

Your obedient servant,

C. C. DuBERGER, *D.L.S.*

## APPENDIX No. 20 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF J. E. ROSS, D.L.S.

SURVEYS IN RAILWAY BELT, KAMLOOPS DISTRICT, BRITISH COLUMBIA.

KAMLOOPS, B.C., December 17, 1900.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report on my survey operations during the past season in the Kamloops district of the railway belt in British Columbia.

At the date of last season's report I was engaged on the survey of the boundary of the belt near the Spallumcheen river. Owing to the unfavourable weather, the impassable state of the roads for hauling or packing supplies and the roughness of the country through which the boundary line passes, I found it would be almost impracticable to continue the survey through the winter. But, as the immediate object of the survey was to ascertain if the lands upon which timber was being cut lay within the railway belt, I decided to accomplish this by carrying a traverse line along the lumber trail to Mabel lake; this I succeeded in doing in a comparatively short time. On finishing here, I closed field operations and returned to Kamloops.

On April 17, after receiving instructions from you, I left Kamloops with two men for township 17, range 17, west of the 6th meridian, where I was engaged for a few days in making a traverse of part of Trapp lake.

On May 3, upon the receipt of further instructions from you, I went to Hat creek, where I made a partial subdivision of townships 19, 20 and 21, in ranges 26 and 27, west of the 6th meridian. The land surveyed in these townships lies chiefly in the Hat creek valley. For a mile or two on each side of the creek the country is rolling and open, with considerable bench land, but the surface is so uneven and hummocky that but little of the land can be cultivated. Along the creek there are small patches of meadow and bottom land. The soil is alkaline in places. The country is well watered with numerous small streams, but the climate is so dry that irrigation has to be resorted to on the high lands; it is so cold that vegetables cannot be grown with much success; potatoes, however, do fairly well. Stockraising is essentially the industry of the valley, but the small amount of hay land will prevent it reaching great proportions. The settlement in the valley is small and scattered. The lands taken up lie chiefly along the creeks. There are a few quarter sections suitable for settlement yet unoccupied.

From here I went to the Bonaparte river, into which the Hat creek flows, and surveyed some lots along the river and the Cariboo road. Most of the land had been surveyed into provincial lots, some of which were taken up during the Cariboo gold excitement in 1862. The character of the country and climatic conditions are somewhat similar to those of Hat creek valley, but the land is much lower and consequently the summer frosts do much less damage. The bottom land is of small area, and partly overflowed during high water in the Bonaparte. The bench land needs to be irrigated to ensure good crops. The settlers here are favoured with a good road to market, and splendid mail accommodations.

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One of the main objects of these surveys in British Columbia is to define the limits of the railway belt in as many places as possible. On the last two surveys I marked out the boundary in three places, viz., Lillooet road, Cariboo road and Bonaparte river. In all, this necessitated a survey of nearly twenty miles in length.

From the Bonaparte I went to a point, nearly due south, on Barnes creek, where I made a partial subdivision of township 20, in ranges 23 and 24, west of the 6th meridian. The country here is undulating and hilly; it is partly open and partly well wooded with fir and bull pine of medium size. The soil is fairly good, though alkaline in places, and requires to be irrigated to be productive. The chief drawback is the scarcity of water for irrigation purposes. Some of the settlers propose storing the surplus water from the creeks, in ponds or reservoirs, for use during the dry season. Several have already succeeded fairly well by adopting this method.

From here I returned to the survey on Spallumcheen river, where I made a continuous section survey along the Spallumcheen to the east side of Mabel lake. I also marked out the southerly limit of the railway belt in the most accessible places to the south side of the river as far as the east side of Mabel lake. The soil varies from sand and gravel to a good clay loam. There is sufficient good agricultural land for a small settlement. At present there is but one settler located here. The chief drawback is the lack of a good road. In general, the land is well wooded; in a few places it is open and burnt. The timber on the land surveyed is scarcely valuable enough to be considered as timber limits. There are some good fir and white pine of medium size and a few large cedar, but the good timber is so scattered that it is a question if it would pay the cost of taking out. Along the river, the best of the timber has been cut. As I reported to you on the completion of the first survey I made here, nearly all the timber cut on the Spallumcheen river was taken off Dominion lands. The greater part of the timber cut was, I understand, taken off the stream which empties into the north end of Mabel lake. The survey was not carried to this point, as it lies at least five or six miles within the railway belt. I have been informed by parties, who have been on the ground, that there are good timber limits on the last mentioned stream, as well as on Kingfisher creek, which flows into Spallumcheen river.

On October 15, I quit field operations and returned to Kamloops. Shortly after returning here I received instructions from you by telegram, to locate the northerly and easterly boundaries of timber berth No. 78. This was a matter of only a few days' work.

The past summer, like the previous one, was cool and wet, and the winter, so far, has been very mild.

I have the honour to be, sir,

Your obedient servant,

JOS. E. ROSS, *D.L.S.*



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## APPENDIX No. 21 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF W. J. DEANS, D.L.S.

SURVEYS IN RAILWAY BELT, BRITISH COLUMBIA.

BRANDON, MAN., February 8, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of the surveys made by me last season in the railway belt, British Columbia :—

Your instructions, dated December 27, 1899, were received on January 3, 1900, and on the 12th I left Brandon for British Columbia. I first went to Enderby to interview Joseph E. Ross, D.L.S., and found that he was about ten miles up the Spallumcheen river. I left Enderby for his camp on January 16, and arrived that night after a hard tramp through mud and snow. Next day Mr. Ross moved camp five miles farther up the river, I accompanied him and remained with him two days. The papers I was to receive from him were at Enderby, and as it would have delayed his work to return with me and get them, we decided it would be better to wait until his return to New Westminster where he expected to be in ten days.

I went from Mr. Ross' camp to New Westminster, where I arrived on January 20, and called on the Dominion lands agent. As I had instructions to survey the north-west quarter of section 22, township 3, range 30, west of the sixth meridian, the agent desired me to do this work while waiting for Mr. Ross. I accordingly left on January 24 for Harrison river, where I engaged three men, and after making the required survey, I returned to New Westminster on January 31, and Mr. Ross handed me over all the papers he had relating to surveys required in the part of the province in which I was to operate. I now made preparations to start the surveys required at Vedder mountain, and having purchased tents and provisions I left for Miller's landing on February 8 with my assistant and cook. The next day I hired a man to take the outfit over to Vedder mountain. The roads were in a very bad state owing to recent rain, and it was in consequence difficult to make much headway, but we arrived at the mountain late that night. I was advised in New Westminster not to make up my party in the city, but to employ ranchers as labourers. There was no difficulty in getting labourers at Vedder mountain. On February 12, I started the surveys required in townships 19 and 22, east of coast meridian, of the lands squatted on by settlers who had been flooded out on the lower lands. There seems to be quite a demand for bench lands; they are not as fertile as the lower lands, but are safe from high water and are well adapted for fruit culture when not too high. While I was in this part of the country, a number of intending settlers, principally from the United States, were looking for bench lands.

The benches of Vedder mountain are very fertile, berries, cherries and plums grow wild in profusion; grain does well, and vegetables attain great perfection. Vedder mountain occupies the greater part of township 22, east of coast meridian, and is well covered with alder, fir, hemlock and cedar, but fire has done considerable damage to the timber in some places in this township. The lands squatted on by settlers are pretty heavily timbered, but the timber is generally of poor quality. There are many fine streams of water throughout the township, which the farmers make use of by

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means of crudely constructed water wheels, to generate power for a great many domestic purposes. Sumas lake, which occupies the north-west corner of this township, is a source of much trouble to settlers on the lower lands ; it is quite shallow in low water but a few days rain in the mountains is sufficient to raise it very high. It abounds with fish of various kinds and is quite a resort for sportsmen.

On March 28, I completed the surveys required in townships 19 and 22, E. C. M., and on the 29th started for Morris creek to make the surveys required in townships 4 and 5, range 29, west of the sixth meridian. I hired a man to take the outfit to Camp Slough on the Fraser river, and there hired men and boats to get up to Morris creek. I had considerable trouble ascending the Harrison river, the water being low and a heavy wind blowing. We arrived at Morris creek on April 1, and commenced work on the following day in township 4, range 29, west of the sixth meridian. This township is very rough and mountainous ; there are, however, many small glades or valleys of good land which produce grain, vegetables and fruits. The township is well timbered in places with hemlock, fir, cedar and alder ; where the settlers are located, it is timbered principally with alder and a few fir, cedar and hemlock of very large size. The Harrison river runs through the southern part of the township. There are a number of settlers along the river who grow fruit and vegetables in large quantities, for which they find a ready market at the Harrison Hot Springs. The finest strawberries I ever saw were grown along this river, and on land which looked unfit to produce anything. Along the river the land is generally high, so that the settlers are not troubled with floods like their more unfortunate neighbours on the low lands. There is quite a large and deep lake in the northern part of the township. I could not find any inlet to it, although there are two or three streams which must empty into it below the surface ; the shores are well wooded with cedar and fir from four to six feet in diameter, suitable for shingles and lumber.

Sections 5 and 6, in township 5, range 29, west of the 6th meridian, are well wooded with cedar, fir and hemlock, two feet in diameter ; they should be reserved for a timber berth.

I completed all the surveys which could be made in Morris Creek valley on June 9, and on the 11th left for Camp Slough on the Fraser river ; from this I went to section 24, township 26, E.C.M. The work done in this township consisted of running the eastern boundary and some subdivision lines. Lot 439, group 2, occupies the southern part of the township. The northern boundary of the lot, instead of running east, is inclined about six degrees north ; the eastern boundary approaches to within a short distance of the eastern boundary of townships 25 and 26, thus leaving a very narrow strip between the lot and the townships.

The south-eastern part of township 26 is very high. There is some good agricultural land in sections 11 and 14 ; the rest of this part of the township is good grazing land, and would be easy to clear up. There are large deposits of marble of various colours on section 13.

I moved camp from township 26 to section 25, township 25, E.C.M., on July 13, and started surveys in township 1, range 29, west of the 6th meridian. The Chilliwack river runs through the northern part of this township. It is from two to three chains in width, four to six feet in depth, and runs from five to seven miles an hour. It caused me a great deal of trouble to cross and recross ; large trees thrown down in the attempt to form a crossing were frequently swept away, thus a whole day was often occupied in making a single crossing. The tremendous water power in the river will no doubt some day be utilized. There are two settlers in this township who have located in anticipation of good markets for agricultural products when the mines in the district are developed. The good agricultural land is principally along the river. I completed the surveys in township 1, range 29, on August 28, and on the 29th started running section lines in township 1, range 28, west of the 6th meridian. This township is very mountainous ; the land fit for agricultural purposes is confined to a narrow strip along the Chilliwack river and Slesse creek. Three settlers are engaged

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in farming in this township, but a great drawback to the development of the district is the difficulty of getting in and out, the only means being a very poor trail, which for a great part of the year is almost impassable. There is some good timber in the northern half of the township, but in the southern part the timber is of poor quality. Some excitement was caused by the discovery of gold ore in this township; many claims were staked on both sides of the international boundary, and in some cases the prospectors recorded their claims both in British Columbia and the state of Washington, as they were uncertain as to the location of the boundary line. I ran a traverse from the north boundary of the south half of section 15, in order to find station 44 on the international boundary, but could not get any trace of the pyramid of stones which marked the station. I think it must have been destroyed by rock slides or ice. A great many prospectors have been through this section, yet none appear to have seen any of the marks erected by the International Boundary Commissioners.

There is a large post on the west bank of the Slesse creek, which was no doubt used as an astronomical station on the boundary survey; it has been regarded by interested parties as marking the international boundary. I located the post, but was unable to trace the traverse from it to the boundary. If station 44 could be found, it would be a most difficult task to connect this station with No. 43, as the distance is nearly 16 miles, and the country is covered by mountains 6,000 or 7,000 feet high, very rocky and precipitous. It is necessary that this portion of the international boundary line should be defined so that the south boundary of township 1, range 28, can be determined. Most of the mineral discoveries on the Canadian side are in range 28. About the middle of September, a pack train from Chilliwack was seized by the U. S. customs officers, which put me to a great deal of inconvenience, as I was depending on the pack train for supplies. The people of Chilliwack are much interested in this mining district, as the natural outlet of the country is down the valley of Slesse creek and Chilliwack river, and its development would mean a great increase of trade to the merchants of Chilliwack.

I finished the surveys in township 1, range 28, west of the 6th meridian, on October 9, and started for Chilliwack on the 11th, arriving there that night. Next day I paid off the party and took the boat for New Westminster; I remained here till October 18, when I left for Brandon, Manitoba, where I arrived on the 21st.

The past season was a very unfavourable one for field operations; the amount of rain which fell seemed to me extraordinary, and I was told by old settlers that they considered it a very wet season. It was with the greatest difficulty that the farmers saved their hay and grain.

I have the honour to be, sir,

Your obedient servant,

WILLIAM JAMES DEANS, *D.L.S.*

## APPENDIX No. 22 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF GEORGE WHITE-FRASER, D.T.S.

LATITUDE DETERMINATIONS ON THE BOUNDARY BETWEEN THE PROVINCE OF BRITISH COLUMBIA  
AND THE YUKON TERRITORY.

VICTORIA, B.C., February, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—Acting on your instructions, dated March 4, 1899, and renewed March 21, 1900, I went to Vancouver by the Canadian Pacific Railway, and while waiting for a northern steamer, engaged two men, a cook and a packer, and made some other preliminary arrangements. I had to wait in Vancouver for some days before any boat went north, and finally arranged for the transport of myself and party by the SS. *Cutch*.

Conditions in Skagway have improved since I passed through in March, 1899. Customs business was less complicated, and the railway being in operation to Bennett, freight was not piled up everywhere en route. At Bennett, I purchased some necessary articles, and made inquiries as to horses, for some of those I had left in charge of the North-west Mounted Police at Tagish, had succumbed to the rigours of the winter. Suitable animals for mountain packing were scarce and expensive, and likely to become more so owing to the great numbers required by the Public Works Department for the Ashcroft-Atlin telegraph line. I was offered four by a freighter living in Atlin, and thought it best to close at once with him, so went to his camp and purchased them, bringing them back to put with the rest of my band at Tagish. I also hired a sleigh to move my camp outfit while working on the ice.

My first point was the southern extremity of the Little Windy Arm. Mr. St. Cyr, D.L.S., had run a line from my post on Lake Bennett, and had erected a monument on the west shore of the Little Windy Arm. After waiting a few nights, I obtained observations, and measured from my instrument to St. Cyr's post. I then struck camp, and went to Caribou crossing to bring up my pack animals. I had intended to go at once, while the ice was still fit for travelling, to the head of the West Arm, and there observe for a monument, but owing to a rather early breakup, considerable portions of Lake Bennett were free of ice, and travelling was very dangerous over the rest, so I decided to move a little distance out of Caribou and remain there until feed was sufficiently advanced for the horses. I had an opportunity of communicating with Mr. St. Cyr, and informed him as to the error of the monument on Little Windy Arm. The breaking up of the ice was much accelerated by violent wind storms from the south, and once it commenced it was not very long before the lake was free, and the boats running between Bennett and Whitehorse. Watson river, on the east bank of which I had made my camp, was much affected by the artificial lowering of the level of the lake through which it flows, which was done by the railway company in order to facilitate the construction of the road. During the lowering process, the river became uncontrollable, burst through a retaining bank and swept everything before it. Where it flows into Lake Bennett, and for some distance up stream, its bed is a deep sticky ooze, forming a kind of dangerous quicksand in which I nearly lost one of my best

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horses. He was so badly exhausted by his struggles to extricate himself from the mud, having fallen into it, that I had to leave him behind. He was subsequently taken over by Mr. St. Cyr, and included in his pack train.

As soon as the grass was sufficiently grown to support the horses, I moved up to the head of the West Arm, and after an approximation observation, I moved up the river flowing into it, to where the sixtieth parallel crosses it. On the way from Caribou to the West Arm, I crossed Wheaton river, along the right bank of which is some very fair spruce timber which is being converted into lumber at Mill Haven. There is also fair timber at the head of the West Arm, and up the river flowing into it; and also some on a small lake on the south side of the Arm, almost opposite Mill Haven.

West Arm river, some few miles down from its source in the same extensive glacier that gives birth to a number of considerable streams including Chilkat, Alsek, Takhini, and others, widens out into a long lake about six hundred yards wide, near the mouth of which the boundary crosses. The mountains bordering the valley are high and precipitous rising to an elevation of over 3,000 feet above the level of the lake. On the east side, the line crosses a very precipitous part. There was no evidence of any minerals in the rock along this valley, nor is there any considerable timber although a patch here and there might pay to work when other and more accessible limits have been worked out.

After a delay on account of dull nights, I was able to observe, and placed a monument on the west shore of the lake about a quarter of a mile above the mouth. The mound is of boulders and earth, and the post is marked J and in accordance with your instructions. A bear walked almost into our camp upon two consecutive mornings, I then discovered I had placed the monument on his trail.

Throughout the season, the weather was generally unpropitious. At every place I observed for a point, I was delayed by cloudy weather, and it was an unfortunate coincidence that whenever I particularly desired to take a photograph on the way of a glacier, a picturesque precipice, or other interesting view, it was rendered impossible by a very gloomy sky, or perhaps a drizzling rain. The nights are so short in the summer and the light so good even at midnight, that a star of the fifth magnitude is almost too small to observe satisfactorily with the No. 5 altazimuth, unless the atmosphere is quite clear, and a very little mistiness is sufficient to render it difficult, if not impossible, to observe on one of the fourth. I suppose the large glacier and its surrounding snow fields, to which I have referred above, which lies within a few miles of the 60th parallel, is the cause of keeping the atmosphere full of moisture during the summer.

A considerable stream coming from a westerly direction falls into the West Arm at the head; and I judged that I could follow it some distance towards the Takhini. West Arm river meantime had become so swollen as to be impassable for pack animals with loads, so I built a raft and carried my camp outfit across the lake on it. Shortly after leaving the lake, I found portions of an Indian trail leading along the valley; but it was not of much assistance, being very indistinct and overgrown. The source of this stream is about twelve miles up the valley, at an altitude of nearly 3,000 feet above Lake Bennett. For the greater part of its course it falls along the valley with a rapid current; but about four miles from the lake it commences to rush down a narrow gorge with precipitous sides which, at and near the lake, are over 300 feet high. There is spruce and jack pine, not of great size, along this stream for about six miles, but at an altitude of about 3,700 feet above sea level all timber disappears and gives way to scrub and brush of willows, poplar and a very dense stunted growth of spruce, which seldom attains a greater height than six or seven feet. Travel was much impeded by the numerous rock slides, which filled the valley from side to side with enormous boulders broken off from the mountain ridges. In general, however, it was easy to pick out a good trail for the animals. It was necessary every evening, after having traversed any considerable number of these slides, to overhaul the horses' feet, reset loosened shoes or put on new ones, otherwise I should

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shortly not have had one horse in fit condition to pack. The watershed between Lake Bennett and the west along this route is 5,800 feet above sea level; the pass is bleak and bare of anything except moss and lichen, and the snow so deep that although I crossed it on July 6, I believe it would have been impassable a week earlier. From the summit of the pass there is a gentle slope to the west of about two miles; then a very steep drop brought me to a fair-sized stream flowing northward, which I subsequently concluded to be one of the sources of the Wheaton river flowing into Lake Bennett near Mill Haven. I followed this stream up a few miles to place a monument on it, but it forked farther up; the eastern fork runs too near to my post J, and the western branch terminated, or rather commenced, in a perfect *cul-de-sac*, filled by a rugged glacier, up which I could not work near enough to the parallel. Returning, therefore, down stream looking for a feasible pass to the west, I found that the main stream of Wheaton river came down a long, gentle, sandy valley from the west, and that the stream on which I was travelling was a branch. I turned up the main stream and followed it for some miles to the actual head of Main river, a small, clear lake, surrounded by bleak, bare, rock-strewn mountains. From the hills above the lake, the course of Wheaton river may be seen for a long distance running in a northeasterly direction before it turns south and falls into Lake Bennett. There is a considerable quantity of spruce timber all the way down this valley, but a fire has been through it and destroyed considerable areas. Although too small to have much value as lumber, it might serve the requirements of local miners. Along the valley there are indications of quartz, and on my return, I learned that some good specimens had been brought out. Leaving the Wheaton source, and crossing a watershed at an elevation above sea level of 5,000 feet, I found, to my surprise, spread out before me and stretching in a northerly and southerly direction, a wide, deep valley, through which was flowing a considerable stream, widening out below me into a long lake, which continued as far as I could see up and down. On reaching the level of the lake, I found a fairly well marked Indian trail leading along the shore, and a little farther down on the spit of land jutting out into the lake was evidently an old camping ground with wigwam poles left standing, awaiting a traveller. I came to the conclusion that this must be the Takhini river indicated on map, sheet No. 5, and somewhat out of place. I followed the lake shore south to the parallel, and while waiting for an observation, explored in various directions. This river takes its rise in one of the branches of the great glacier twelve miles or so south of the 60th parallel, and flows in the direction N. 10° to 20° W. It very shortly attains a considerable volume, being increased by numerous streams of small and medium size falling into it from east and west, all of which are glacial, until about five miles from the glacier, it is about 150 feet wide, and of an average depth of at least thirty inches, with a current of about three miles per hour. For the first ten miles or so it runs a tortuous course through a wide valley, forming mud bars and marshy flats; the bordering mountains are high and rugged near the glacier and slope steeply down in almost impassable rock slides; farther north on the east side the slope is easier, and the mountains recede somewhat, leaving a valley. The bottom of the valley and some distance up the sides is covered with thick willow and other brush and scrub, with splendid grazing for animals. Here and there a torrent rushing down from the snows above, has washed down giant boulders and rocks and gravel, which it has strewn along its course, building up its own bed many feet above the level of the valley. Fragments of quartz are very common in these wash heaps, and along the shores of the lake; and I found several large and small lumps of a substance closely resembling, both in appearance and weight, iron ore that had been subjected to the action of heat sufficient to burn it. On the mountains I found in many places veins and 'stringers' of quartz, in some places as much as six and eight inches wide, and great quantities of it scattered about everywhere. It was chiefly, however, of the kind called by prospectors 'bullquartz,' that is dead white in colour, sometimes slightly crystalline, and probably quite barren. There is very little timber on the

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east side of the river, and it is quite small and insignificant; but on the west side, especially along the hills bordering the lake, there is in places a close growth of spruce and jack pine, sometimes over twelve inches through, although usually smaller. The timber belt is narrow, extending only a few hundred feet above the lake level; above is the usual scrub and dense underbrush. I also found in places the distinctive green copper stain in the rock, although never any stronger indications.

After considerable delay I observed and placed a monument on the east side of the valley, about 100 yards south of a considerable brook discharging through an elevated gorge, and thence finding the level of the valley by a series of cascades, and about 400 yards from the bank of the river. The post stands out high above the surrounding brush and is marked **K**.

I crossed the river at a rather deep ford, and went north along the west shore searching for a feasible pass over the mountains to the west. There were many that seemed to offer a possible route, but all of them eventually terminated in glaciers, the moraines of which, with the bordering mountains, presented difficulties insuperable to horses. At last, however, I found a high valley leading far back discharging its stream into the lake down a very precipitous and deep gorge, which, although blocked by the usual glacier and strewn with rocks and boulders, afforded a possibility of getting farther westward. The route along this stream was almost a continuous rockslide, and, therefore, difficult travelling, and the scrambling up the terminal and lateral moraines of the glacier required great care not to injure the horses, but the summit was attained without accident. There, at an elevation of 6,000 feet above sea level, I found that the actual mountain tops were but little above the level of the summit of the pass, and as far as I could see was an ocean of jumbled boulders. In front of me, about three miles away, the hills sloped very suddenly to a deep valley, the bottom of which I could not see, while beyond, lay a lofty barrier of mountains, rising abruptly from the valley, and holding amid their jagged peaks, glaciers and snow-filled crevices. They were apparently considerably higher than any I had previously crossed and much more rugged, and I examined them in vain through the glasses for a possible pass. Beneath, between the summit and the valley, was a small plateau holding a green glacial lake, in the surface of which were mirrored two commanding masses of rock that stood up some hundreds of feet above it. The peculiar horizontal lines of cleavage, so often seen in this part of the mountains, give the cliffs almost the appearance of masonry. About three miles of this level plateau terminated in a very abrupt, in some places, precipitous descent, to another large river flowing northward, the valley of which lay spread out with the glacial stream running in a serpentine course far below me. This river like the one a few miles back, widened out into a lake not of any great length. The majesty of the mountain masses in the grip of fields of ice, rather heightened by the gloomy clouds which veiled some of the higher peaks, presented a scene of great grandeur. The valley itself is narrow, the mountains on the east side rising four thousand feet, sheer in places, in others very steeply to a somewhat lower elevation; on the west, they were equally precipitous but apparently higher. From where I stood to the river bank, proved to be a descent of 2,750 feet, and not more than 400 yards in plan. I found traces of a trail on the east bank with old chopping by both Indian and white-man, and some old camp grounds. Afterwards, washed up by the lake shore, I found portions of a raft, and other relics, which strengthened the conclusion I had come to, that this was the real Takhini river shown on the map, sheet No. 5, and that the river some seven miles east, had not up to then been generally known. The level of the valley where I descended to it, is about the same as that of Lake Bennett, and as might be expected, there is a considerable quantity of spruce and some birch timber on both sides of the river. Although generally not exceeding ten to twelve inches, there is some over that and running to eighteen inches in diameter, this extends as far south as I could see. The character of the rock appeared to be much the same as all along my route with veins and stringers of quartz cropping out in places. I also observed

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some pieces of 'float' that much resembled lignite, and I was not surprised to hear on my return to Skagway, that coal had been discovered on the Takhini near Whitehorse, which, of course, is much farther down stream than where I was.

The Takhini is a glacial river and takes its rise in the great central glacier that is the common birthplace of so many streams. After a tortuous course of some miles, it widens out into the lake shown on map, sheet No. 5, and after about six miles of lake, turns sharply to the west beyond which point I could no longer see it. After several days delay, which I employed exploring for a way across the mountains to the west, I obtained an observation and erected a monument by the river bank on the east, marking it L. Not having discovered a possible route across the mountains, I was reluctantly compelled to decide in favour of returning to Bennett and thence to make my way to the 60th parallel again via Skagway and up the Dalton trail. I varied the return journey by making straight for Bennett, from the source of the eastern branch of Wheaton river across a bleak divide, and thence down a glacial stream to the head of the long lake on West Arm river, then across another low summit by an extensive hay meadow down to Homan river, and thence to Bennett.

Bennett city was practically deserted, most of the hotels and other places of business having been moved down the river to Whitehorse. I then took my horses by the White pass to Skagway. The bleached skeletons of horses lying scattered thick among the boulders along the trail and the rugged beds of the mountain torrents are mute witnesses to the heartrending labours and privations imposed on pack animals during the early days of travel over the Chilkoot pass before the construction of the railway. Even now, the trail from the summit down to Skagway is rough and bad travelling.

Skagway people seem to be ignorant as to the Dalton trail to the Porcupine country. I think they prefer not to believe that there is a rather promising mining country for which Skagway is not the natural point of entry. From Skagway to Haines' Mission, which is one of the southern terminals of the Dalton trail, is a few hours run with a steamboat. Landing at Haines necessitates crossing the treacherous Chilkat river a few miles up, as there is no trail up the east bank. The river bed is full of shifting quicksands and being wide, makes a difficult and risky crossing for horses. I had engaged the services of a Chilkat half-breed with a canoe, and owing to his knowledge of the river, got all my horses across without accident, although even then they floundered into several quicksands. Once across, there was no further difficulty, as the Dalton trail is built through bush and over swamps up to Porcupine, the centre of the Porcupine mining district. Until a road is built along the east bank of the river as far as the Indian village of Klukwan, it would be better for persons taking horses into that country to take them round to Pyramid harbour instead of landing at Haines. The latter is really the end of the Dalton trail and obviates the Chilkat crossing. There is no town at Pyramid, no store, and no feed for animals until they are taken a little distance up the trail, but I consider these disadvantages are not so great as the risk of taking animals across the river from Haines. Travellers must be prepared to buy feed for their animals along the road to Porcupine. As the trail for the greater part is through thick forest and the remainder along the gravelly bed of Klehini river, there is no feed and practically no convenient camping grounds. The Porcupine Trading Company have a stopping house at Longbridge, halfway to Porcupine. Once at Klehini river, the road generally keeps along it necessitating very frequent crossings which are sometimes risky on account of the depth and strength of current. At Porcupine the Trading Company has a store at which everything in reason can be obtained for a mining prospecting, or surveying expedition. Prices are a little high.

Seven miles beyond Porcupine is Pleasant Camp, the Mounted Police post, and two miles beyond that the trail finally leaves the river bed and rises out of the timber on to the bare mountain sides. From here on to Dalton House, at the crossing of Alek river, timber is met only twice, at the Glacier camp, about thirty miles from Pleasant camp, and at the Bear camp, fourteen miles farther. The trail is high in the mountains, in places very boggy. At Bear camp, I took an observation for



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approximate position, and followed the Alsek river down a few miles to the parallel. It was now September and getting chilly, and slight falls of snow portended the approach of winter. At this point I set up a monument on the east bank of Alsek river, some little distance up stream from the mouth of the canyon known as 'Horse' canyon. It is marked **M**.

There is a good deal of timber on both banks of the Alsek. I may say that the river I call the Alsek is marked on the maps as the Tatshenshini. I learned from Indians and others acquainted with the country that Alsek is the proper name, and that Tatshenshini or Tatshanhini, as I have spelled it on my map, is the name of another stream tributary to the Alsek. At the end of this report I append a note on the nomenclature of some of these streams.

Dalton House, where the trail crosses the Alsek for the third and last time, is about twelve miles downstream from the boundary. All the way down the river, and for some distance up its eastern tributaries, there is good timber, and the men who were with me, both of whom were prospectors of long experience, spoke to me of the favourable appearance of the rock, more especially in the section around the headwaters of a stream flowing into Chilkat river north of Mount Glave. On my return I learned of the 'strike' up Bear creek, which, from descriptions, I gather to be the very stream I refer to.

At Dalton House I had to cross the Alsek to the right bank at the Mounted Police post. The river is a considerable size, and a slight rain in the hills, or warm weather melting the snows, makes it unfordable. This is the point where the Wesketahine Indians have their village. These Indians are a branch of the Stieks, but have apparently many distinctive features. Their language differs from that of the Chilkats to the south, and from that of the Hutshis, 150 miles to the north. It seemed to me to have a peculiar and rather pathetic significance this fact of seventy-five persons all told constituting a separate nation, with peculiar language and customs. They have intercourse with other tribes, and to some small extent intermarry, but on the whole keep very much to themselves, trading in furs and catching salmon to dry.

I followed the right bank of the Alsek down to the 60th parallel again, about sixteen miles. There is fair timber all along, and very good grazing. I followed one affluent stream up for some distance, leading in a westerly direction, in order to get around a deep gorge that was impassable. This led me out on to an extensive tract of level country, with hay marshes in which, I believe, a large quantity of hay might be put up if ever minerals are discovered in the vicinity in sufficient quantity to attract a settlement. This level stretch, extending for many miles, terminated at the foot of a lofty range of snow-covered mountains that seem to run in a general northerly and southerly direction with, no doubt, a considerable stream running parallel to them. I believe that this stream will be found to be the Kaskawulsb, and that the deep cleft in the mountains contains the stream called the Alsek on the maps, but whose real name, according to my Indian informants, is the Sectec, spelt according to the sound. In that case the rest of the boundary, west of the Alsek river, will be easy to run, being mostly over the flat country. Having got round this gorge, I headed back to the river through a very dense brush and brule woodfall. Camping not far from the top of the descent to the river on the shore of the lake, I observed much broken quartz 'float' scattered about, and finally found the outcrop of a considerable ledge. All along the river bank also, quartz fragments are frequent. I set up my instrument on the bank of the river and observed, being nightly visited and inspected by bears whose footprints, some of them enormous, were observable in the sands next morning. I was anxious to get away, as there had been several slight falls of snow, and the snow line was rapidly creeping down the mountain sides, and I was very glad when I was able to set up post **N** on the west (right) bank of the river, about a half mile downstream from the mouth of the deep gorge I mention above.

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I immediately broke camp and returned to Dalton House, where I found the head packer of the Porcupine Trading Company. He strongly advised me to hurry out as quickly as I could unless I wanted to get snowed in. I had intended to go east from post and put in another post towards the Takhini, but in consequence of this advice I abandoned that idea and determined to go out. I left a quantity of supplies at the police post, taking a receipt for them, and started on the morning of October 7. It very shortly began to rain, then turned to snow, and by nightfall there were several inches of snow. From that time it snowed every day until on the last summit, a day and a half from Pleasant camp, it was quite deep, and to follow the trail was a matter of some difficulty. There was, of course, no feed for the horses and no wood, so it simply meant pushing on. It snowed so continuously that the day after I crossed the last summit the trail was blocked and impassable and the inside country shut off completely. In fact I had just managed to get out in time. Thence to Haines was easy travelling. I sent the horses to Pyramid this time and crossed then to Haines in a scow, whence they were taken to Skagway and thence to Tagish for the winter. I believe horses will be expensive in the spring in consequence of the demand for the telegraph line and the rush into the Salmon and other new districts, so I judged that it would be economy to send them to Tagish rather than sell them for the very few dollars they would have fetched then. After a few days in Skagway settling up, I returned to Victoria to prepare this report and plan.

#### *Note A. Rivers.*

The river I have marked on my map, between the west arm of Lake Bennett and Takhini river, seems to be quite unknown to any prospectors I have met, and neither the Chilkat Indians of Haines and Klukwan, nor the Sticks living at Wesketahine were able to give me any information about it, and yet there is a trail on its east bank. I supposed it is used by the Hutshis on their way east, or by the Tagish Indians going west. I believe that it must be an affluent of the Takhini, otherwise it must be Watson river falling into Lake Bennett at Caribou crossing. This latter is improbable, as the size of the stream where I crossed it within twelve miles of its source was apparently considerably greater than that of the Watson at its mouth a month earlier. On my map I have named the streams according to the names known by the Indians. The main river by the Dalton trail is Alsek. Its first large tributary from the east is Tashanini (not Tatshenshini), then comes the Takheni (different from the large Takhini). The Kaskawulsh is apparently correct, but the large affluent of the Alsek lower down than the Kaskawulsh is the Seetee, not Alsek. Hin, or Hini, seems to be an affix signifying in the Chilkat language, water or river.

#### *Note B. Communications.*

The great obstacle to the rapid development of the Yukon mining resources seems to be the want of good transport facilities. When I was up the Porcupine district, I heard a great deal of the wealth of the creeks 'inside,' and that the only reason why prospecting had not been followed by mining on a large scale in the neighbourhood of Lake Dezadcash was the expense of getting supplies in. It struck me that if ever that district proved a really wealthy one, there is probably a feasible route for a railway into it without going through the United States territory from Haines. Starting from Caribou, there is a possible route, via Wheaton river, over the summit down to New river, following my route from the head of the Wheaton, then down the west shore of that long lake, thence into the Takhini valley. As the mountains seem to get lower and less rugged the farther one goes north from the central glacier south of the 60th parallel, it is more than probable that there is a feasible route for crossing the Takhini to the country west of the Dalton trail.

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*Note C. Keep of Horses.*

I do not know whether it is the intention of the government to do much work in the Yukon requiring the use of horses as pack animals, but if such is proposed, I think it might be economy in the end to have a few men put up hay at some central points, with sheltered corrals and a small log cabin, so as to winter the animals instead of selling them in the fall and purchasing anew every spring. This year I had to pay \$75 each for four animals (getting them cheap) and \$90 for a fifth, and on my return I could not have got any reasonable sum for them. There are hay marshes up Homan river, about twelve miles from Bennett; at the mouth of Torch river flowing into Taku Arm; at the head of Atlin lake, and smaller ones elsewhere. Near Dalton House, there is an extensive meadow where a large quantity of hay might be put up at small expense. A band of horses that have run together for some time are more valuable as a band, than the total of their individual values, and it is a pity to break up bands that have run together a whole summer in order to take chances in the spring with a lot of untried animals.

I have the honour to be, sir,

Your obedient servant,

GEORGE WHITE-FRASER, *D.T.S.*

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## APPENDIX No. 23 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF ARTHUR SAINT CYR, D.L.S.

SURVEY OF A PART OF THE BOUNDARY LINE BETWEEN BRITISH COLUMBIA AND YUKON TERRITORY.

OTTAWA, April, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Ottawa.

SIR,—I have the honour to submit the following report of my work in 1900 on the survey of the boundary line between the Yukon Territory and the province of British Columbia. The boundary line is the sixtieth parallel of north latitude, along which stations were established by George White-Fraser, D.T.S., in the season of 1899. I connected these stations by lines having the same curvature as arcs of the parallel. The latitude of the stations was determined by astronomical observations, and monuments were erected in order to perpetuate the stations. Between Lake Bennett and Teslin lake five monuments were placed; one on the east shore of Lake Bennett, it is marked by a large wooden post and an earth mound; a second on the east shore of Atlin lake; a third, called A, in Happy valley, eleven miles east of Atlin lake; a fourth, called C, is thirteen and a half miles west of Teslin lake; and the fifth one, D, is found on a ridge 390 feet to the west of the shore of the lake. In the fall of the year 1899, an astronomical station was determined on the west shore of Taku Arm, ten miles and a half west of Atlin lake; and in the spring of 1900 Mr. White-Fraser observed on Windy Arm in order to determine the location of the boundary at that point, thus making in all seven astronomical stations in a distance of 85 miles.

My instructions of April 4 were to complete the posting and mounding of the line between Bennett and Atlin lakes and to continue the survey of the boundary line as far as Teslin lake. I left for Vancouver, where I organized my party on April 13, and took passage on the steamer *Danube*. After a voyage of six days, I landed in Skagway, where arrangements were made with the railway officials to have my supplies shipped to Bennett with as little delay as possible. I received from the North-west Mounted Police at Bennett part of the outfit which had been stored there the previous fall. I remained in Bennett three days, waiting the arrival of the supplies and transport outfit from Skagway; in the meantime I made the necessary preparations for our trip to the boundary.

On Lake Bennett the ice up to April 23 had proved to be safe for transport, but could not be relied on much longer. Reports had reached us that at Upper and Lower Caribou crossing, two teams of horses had gone through the ice and had been lost with their loads. I therefore decided to engage a freighter at once, and send him with one of my men who knew the country, to make caches of provisions on the boundary line at Taku Arm and Atlin lake, so that if the ice happened to break up whilst we were working in the mountains, we would have sufficient supplies to keep us till navigation opened. I then left with the rest of the party for the boundary line, about twelve miles north of Bennett. On leaving Bennett we were provided with hand sleds, which proved valuable as a means of transportation on the lakes as long as the ice lasted. At this time snow slides from the range of mountains west of Lake Bennett kept up a roar, which continued all night when the weather turned

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mild. The snow was five and six feet deep on the low lands, and as sleds could not be hauled in the mountains, we were obliged to carry supplies and outfit on our backs.

In all my experience of snowshoeing at many points between Labrador and Alaska, I found it in this district in the spring time the most difficult and fatiguing. This is due to the fact that all through the winter the weather is cold and dry so that the snow does not pack, but is very light and of great depth; when the warm weather of spring melts the surface, the under snow becomes a soft slush, into which a snowshoe will sink as much as two feet. The great daily variation of the temperature from a hot sun in the day to as much as  $20^{\circ}$  below zero during the night added to our troubles. When we camped for the night, we had to spread our blankets on sleeping bags on the snow; in the morning we would find our boots frozen so stiff that it was difficult to get them softened sufficiently to be able to put them on. Our equipment was as light as it could be, and the provisions were selected with a view to much nourishment and little weight, still the whole outfit at the start was more than could be carried at one trip. By starting at daybreak, we had the benefit of the crust formed on the snow during the night, but about 10 o'clock it melted, and travelling became extremely laborious. Thus we plodded along the line, having to dig trenches in snow ten to fifteen feet deep in order to plant posts and build monuments, until the beginning of July, when the last post was planted on the west shore of the Taku Arm.

The topography of the country traversed by the line between Bennett and Atlin lakes was so minutely described in my last year's report that I need not give any further description. The boundary line over this stretch of thirty-six miles is defined by forty-two monuments erected on the most prominent mountains and ridges, and in the valleys. The line was well cleared wherever it ran through forests; the numerous photographs taken from the highest points traversed by the line show the opening through the timber, and also the features of the country.

On my arrival at the astronomical station erected on the east shore of Lake Bennett, I commenced the work of posting and mounding the boundary to connect this station with the one on Taku Arm, and continued as far as the top of Racine mountain, where natural difficulties prevented me from proceeding any farther for the time.

I then started for Taku Arm, and had almost reached my destination when I received a message from Mr. White-Fraser informing me that his observations for latitude at Windy Arm showed that the trial line was 16.13 chains to the south of the true parallel. On receipt of this message, I wrote you for instructions as to how I was to proceed; in the meantime, I continued on my way to the point at which the trial line intersects Taku Arm. As instructed, I measured an offset north of 1,215.5 feet, and built a monument, which now marks the true boundary; from it, I ran the line west to connect with the position of the 60th parallel, recently determined by Mr. White-Fraser. This line is posted and mounded as far as the top of White-Fraser mountain. I could not go any farther west, because of insurmountable obstacles.

I then retraced my steps to Taku Arm and entered Talaha bay, which I followed till the ice gave out, and having abandoned the sleds, I made my way across country to the east shore of Atlin lake by May 15. The old trial line was then produced to Mr. White-Fraser's astronomical station on the east shore of Atlin lake; the station was found to be 1,611 feet north of the trial line. The true line was then run westward to connect with the astronomical station on Taku Arm. It was opened, mounded and posted in accordance with instructions. There are eighteen posts and mounds to the west of Taku Arm, and twelve to the east. The most westerly one is fourteen and a half miles from the Arm; the most easterly one is eleven miles. The intervening marks were placed as near one mile apart as the configuration of the country would permit.

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## DELIMITATION OF THE BOUNDARY BETWEEN ATLIN AND TESLIN LAKE.

By the time we reached Atlin lake, it was partially free of ice, the snow had almost disappeared from the low lands, and the new growth of grass was showing on the low slopes of the hills. I therefore thought it advisable to procure some pack animals; so far we had only one horse, which had not been of much use to us, as it had become lame while being led along the stony and swampy shore of Taku Arm to our camp on the railway line, a distance of fifteen miles. No horses could be purchased at any price in Atlin, as they had all been secured by the parties then constructing the Dominion telegraph line to Telegraph creek. I therefore telegraphed Captain Primrose, in charge of the Tagish post, who replied that he had no pack animals to spare, but referred me to Mr. J. Haney, who was then building the British-Yukon railway between Bennett and Caribou crossing. I got four horses from Mr. Haney which, though not regular packers, could in an emergency be made to do the work. I also got one from Sgt. Heathcote, in charge of Caribou post, which had been left here in the spring by Mr. White-Fraser. I returned to Atlin with the five horses, though I could have employed twice the number. The progress of the preliminary survey was very slow and laborious, due to the lack of sufficient means of transport, together with the absence of a broken trail, and the consequent difficulty of getting over a country in which the growth of timber and underbrush is so thick, that it is practically impossible to take pack horses through without cutting a track six feet in width. During the progress of the survey a portion of the party was engaged exploring in the vicinity of the line for the best ground over which to take the pack train, and in blazing and cutting a trail. Caches of provisions for use on our return trip were also left at suitable points along the line; this proved a great boon when, owing to the lack of proper feed, the horses became so exhausted that they were not able to carry the loads exceeding one hundred pounds each.

## METHOD OF SURVEY.

The astronomical stations were connected by marking on the ground a series of tangents to the prime vertical circles passing through each of the astronomical points; from these tangents the calculated offsets to the 60th parallel were measured at approximate distances of one mile. From the last measured offset between an astronomical station and the tangent passing in its vicinity, the relative station-error was found. In the final marking of the boundary line, the station-error was distributed between the monuments in the ratio of their distances. The boundary line is marked by iron posts three feet long and three-quarters of an inch in diameter, driven flush with the ground where the soil would permit; alongside the iron post is a wooden one, at least four inches square, with the letters Y (Yukon) and B.C. (British Columbia) cut on opposite sides. The posts are so placed that the letters respectively face north and south. An earth or stone mound is also built around the posts. The correct position of the monuments was obtained by measuring from the trial line and at right angles to it. The formula used in deducing the value of an offset for the curvature was the following:

$$\text{Offset in links} = C. 2. \text{Log. } d.$$

where  $d$  is the distance in chains from the origin of a tangent:  $C$  is a constant calculated for the 60th parallel, and is equal to 14.43619. To the result thus obtained was added the proportional part of the station-error. The distance between the stations was measured with a Lugeol micrometer, the angular value of one revolution of the screw having been ascertained beforehand. The Lugeol micrometer is a double image micrometer; it consists essentially of a telescope with the object-glass cut diametrically in halves, each half being suitably fixed in a frame which slides in another one. Motion is communicated to the frame holding each semi-objective by

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means of a fine screw of the shaft, one-half of which is a right-hand screw, the other half is a left-hand screw, and each part turns in a corresponding nut fixed to its half of the object glass. Each half, of course, gives a full image of any object sighted at. The displacement of the semi-objectives is measured by the revolution of the screw which moves them, and on the head of which is placed a circle divided to hundredths. In my instrument the value of a revolution was about four seconds of arc. Before using the instrument, I determined the exact value in arc of every revolution of the screw, and tabulated the results; from these I determined the value of parts of each revolution. This was done in the following way: A distance of 10·313 chains was carefully measured; at one end a board with a mark at every third link was set at right angles to the line of sight. At the other end of the measured distance, the micrometer was set up and the number of revolutions or parts of a revolution required to pass over the distance between the first mark and each subsequent mark was noted. These were afterwards converted into minutes and seconds, and it was then easy to construct a table of distances for any movement of the screw. In measuring an angle care was taken to always turn the screw in the same direction. The field of the telescope is about  $2^{\circ} 10'$ ; this being the largest angle that could be measured, the following bases were, therefore, the longest that could be taken at corresponding distances.

For distances up to	$\frac{1}{2}$ mile,	the base was	60 feet.
"	"	1 "	" 200 "
"	"	2 miles	" 400 "
"	"	3 "	" 600 "
"	"	4 "	" 800 "

The bases were, when practicable, placed at right angles to the line of sight. Their extremities were marked by straight poles, the bark of which had been peeled off every alternate foot, and a square of black and white cotton was tacked to the top of the poles. The telescope is powerful enough to show these for a distance of several miles.

## NUMBER AND LENGTH OF TANGENTS BETWEEN ATLIN AND TESLIN LAKE.

At the astronomical station established on the east shore of Atlin lake, observations for azimuth were made, and my first trial line started at an angle of  $90^{\circ}$  with the meridian. It was produced on that bearing to a point 3·83 miles east of the station. The point is 3,700 feet above the sea, and is on the northern slope of a group of granitic mountains which rise on the east shore of Atlin lake, and are south of the line and nearly parallel to it. From here, the trial line was deflected north at an angle of  $11' 30''$ , and produced 7·10 miles farther to astronomical station A, which was found to be 163 feet north of my trial line. I had, however, been informed that the position of this monument was erroneous, and that it should be  $57\frac{1}{2}$  feet farther north. I, therefore, moved it, thus making the total offset or station-error 220·5 feet north of my trial line. The distance between the astronomical station on the east shore of Atlin lake and station A is 10·93 miles; thirteen posts and mounds were erected on this portion of the line.

Only one important valley is crossed in that distance; where it is intersected by the line it is 850 feet wide; its banks are high and very steep and are in places denuded of trees, but terminate in terraces so thickly timbered with small pine as to be impassable. The stream in the valley flows towards the north and feeds the numerous lakes which dot the low and swampy country to the north of the line. Station A is marked by an iron post three feet long, and three-quarters of an inch in diameter; driven flush with the ground and alongside of it is a long wooden post, around which a mound of earth five feet square was built. This monument stands on the top of a ridge, running north and south, and between two lakes which are intersected by the line. The western lake is an expansion of the stream which flows northerly through

Happy valley. Where the line intersects the valley, its width measured between the crest of the hills is less than three-quarters of a mile whilst the bottom-lands are scarcely one thousand feet wide. The hills on the east side of the stream are steep, and furrowed by ravines with bare sides; they rise 250 feet above the stream and terminate in a terrace; those on the west side are not quite so high but are thickly timbered.

The stream which flows through Happy valley may be described as a succession of small lakes, or ponds, connected by short stretches of river flowing swiftly over a stony bottom; the water is dark brown in colour, showing that the head waters of the stream and its tributaries drain extensive swamp areas. Grass is plentiful along the river bottom, marshes, and lakes, and is also in abundance on the eastern hillsides which are denuded of timber. The high grass along the marshes and ponds grows so rank that it is not nutritious; the pack animals do not eat it, but prefer the short bunch grass on the hillsides. There are many beautiful varieties of flowers in this part of the country. The ponds are frequently covered with white and yellow water lilies, while on the hillsides are great patches of bright colours. I noticed two varieties of wild roses, they were in bloom in July. A beautiful bright blue flower, with leaves resembling the clover leaf, only a little longer, is seen everywhere and is in bloom all summer. There is also the *Epilobium angustifolium*, the common fire-weed, that springs up on the burnt hillsides and covers acres with pink blossoms. I also noticed blue and yellow violets, anemones, iris, asters, potentillas, pyroleas, all of which flourish in the woods in the vicinity of Ottawa.

We remained two days in Happy valley to give our horses a well deserved rest. In the meantime, some of the party prepared a cache, while others explored for a practicable way over the hills to the east of us, and I was busy myself observing for the next trial line from station A.

Happy valley is well named. Surrounding our camp was an extensive flat with groves of pine and poplar, and just in front of us, the river expanded into a lake, fairly alive with fish. North of us the valley opened, and we had the benefit of a cool breeze, a welcome protection against the mosquitos which had tormented us since our departure from Atlin. Close to our camp was a spruce bough tepee, the winter house of some hunters. No practicable route across the hills to our next camp having been found, I decided, though it would be a long and circuitous way, to follow Happy valley for four or five miles in a south-easterly direction, and then endeavour to enter the valley of one of its tributaries flowing south, and which is intersected by the 60th parallel about one mile and three-quarters east of station A. The position of station A being now correctly established, the survey of the second section of the boundary was begun. The first tangent east of station A was run to a point 6.13 miles distant; here the line was deflected north 18' 20", and produced a distance of 12.80 miles where a deflection amounting to 20' north was made. On being run 3.95 miles farther east it struck 52 feet south of astronomical station C. I had been instructed to move this station 81 feet north, in order to place it in correct position. This made the total station-error at this point equal to 133 feet; the monument in this case is also north of my trial line. The distance between stations A and C is twenty-four miles, and 24 posts define that portion of the line.

This section of the boundary follows for some distance the axis of the drainage system between the waters of Gladys lake and those flowing north and ultimately into Teslin lake. Gladys lake is a fair-sized sheet of water emptying into Teslin lake; it is in a depression bearing northwest and southeast, and its western extremity, which is the nearest point to the boundary, is five miles south of the line. When twelve miles and a half east of station A, I established my camp near the eastern extremity of Proulx lake, the most easterly of two narrow lakes of nearly the same size, each about one mile and a half long, and lying in close proximity to each other. I have called the second one Chabot lake; both are named after two of my men. The supplies we had brought from Atlin were now nearly exhausted, and it became imperative to procure more; we were then less than 40 miles from Surprise city,



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where, during my stay in Atlin in the early summer, I had arranged with Mr. D. H. McDonald to bring my supplies. It was on these that we now depended to carry on the survey. I had been informed that there was a fairly good trail leading from Gladys lake to the head of Surprise lake, but no well defined road around the lake to Surprise city, a distance of about 20 miles. I had in consequence shipped a canvas boat with my outfit, in which I could have my supplies brought to the trail at the north extremity of Surprise lake, in case I found it impossible to reach Surprise City with the pack animals. In order to locate the bearing of Gladys lake from our camp near Proulx lake, I ascended the top of the highest mountain in the range which separates the valley of Proulx and Chabot lakes from that of Gladys lake. From the summit (1,900 feet above our camp) I had a very good view of the surrounding country, and noticed that towards the east the range came to an end, and I could perceive beyond it a valley running south, and which I thought might connect with that of Gladys lake. Upon further examination it was found that there was so much fallen timber in the valley that it would be impossible to take the horses through, so we chose a narrow and higher passage between the east end of the range and an isolated hill, which bore nearly east of our camp. Before reaching the summit of this pass, we had to go through a wide belt of thick brush. From the summit we turned in a southerly direction, and began a gradual descent towards the valley, which would ultimately bring us near the west extremity of Gladys lake. To reach the narrows, where the crossing to the opposite shore of Gladys lake is effected, we kept well above the timber belt which grows along the north shore of the lake. We swam the horses across the narrows, and pitched our camp on the extremity of a narrow and sandy point, a mile long, and which divides the lake into two unequal parts. A raft was built to be used on the return trip to cross our supplies. A mile south of our camp, we struck the government trail; it has been carefully blazed and could easily be followed. From Gladys lake it runs along the east side of Consolation creek. There is only one steep hill on this route before the summit is reached; then the descent towards Surprise lake begins, and the trail is good all the way. Here it follows the left bank of a stream flowing into Surprise lake.

Along Consolation creek the ground has all been staked by miners, but very little developing has been done on the claims.

We reached the head of Surprise lake on the night of August 23, having crossed the divide between Gladys and Surprise lakes early in the day. The head of the lake, where we pitched our tents, must have been a favourite camping ground for the miners, as a considerable clearance has been made by them in cutting firewood.

I started for Surprise City with three men and two boats, one of which was an old canvas boat we found partly imbedded in the sand, and repaired. Two other men, with the pack animals, were to follow the east shore of Surprise lake and join us at the trading post, but they had not gone more than five miles when the trail became so indistinct that they missed it altogether, and coming to some low flats, were unable to proceed any farther. These flats are boggy and covered with tufts of grass growing in water and mud twelve to eighteen inches deep. Travelling over this had so exhausted the horses that they had to be taken back to the camp at the head of Surprise lake, where feed for them could be got.

On my arrival at Surprise City, I found that the agreement which I had entered into with Mr. D. H. McDonald for the transportation of our supplies from Atlin City to the foot of Surprise lake had been only partially carried out. My canvas boat had not been brought over, and I was obliged to dispatch a messenger to hurry its delivery, for as our horses had not arrived, I suspected that the packers were unable to make their way around the lake.

Two days later we started with loaded canoes for our camp, but when about half way, a severe storm arose, and we were compelled to put ashore. In the evening of the second day of the storm the wind abated, and we continued our trip, arriving at

the camp early next morning. On September 10, we retraced our steps to the main camp on the boundary.

The survey of the line was now resumed, and by successive stages was brought to astronomical station C.

Most of the hills crossed by this section of the boundary are covered with groves of pine intermingled with spruce, but the trees are small and in many places have been uprooted by the wind and scattered in every direction, showing the small depth to which their roots reach, and the great force of the wind which at times sweeps over this country.

One mile and a half east of astronomical station A, a tributary of the stream flowing through Happy valley is crossed, it heads from the north and flows through a narrow valley. Another stream is crossed about four miles east of station A. It is in places fifty feet wide with frequent expansions into lakes which abound with fish. Pike of large size were caught here with the net.

We had now only to connect astronomical station C with station D. The latter station is near the west shore of Teslin lake. Two deflections were made on this section: the first one was  $8' 15''$  to the north and 2.75 miles east of station C; the second deflection was made 6.61 miles still farther east and  $11' 40''$  to the north. A further distance of 4.09 miles towards Teslin lake brought the trial line to station D which was found 552 feet south of my line. As this station-error is somewhat larger than any found on the Atlin and Teslin section of the line and is to the south, it is probable that the great mass of the isolated Dawson Peaks, lying some distance south of the line, may cause a deflection of the plumb-line at that point.

The boundary between stations C and D is defined by fourteen monuments erected in a distance of thirteen miles and a half.

Several watercourses are crossed by the line in this section of the boundary, but they are unimportant. The character of the country varies from rolling and somewhat rocky hills to broad marshy areas extending up to the western slope of Dawson Peak. The timber is quite scattered in places, but in other places, it is very thick; it is of little value, being mostly small and scrubby, and the greater part dead or partially so. Travelling with horses in this section is very difficult as the country is nearly all swamp and frequently covered with deep moss and hummocks through which the pack animals continually flounder.

During the months of June, July and August, the weather was almost perfect with very little rain, but in September, continuous rain and even snow storms occurred, and by October 9, when we reached Teslin lake, winter set in. The highest peaks in the neighbourhood had for several weeks been covered with fresh snow, and at each storm the snow crept lower and lower till now it had reached the low lands which were covered to a thickness of ten inches, with no chance of its disappearing this season. The survey being now so far advanced, I desired very much to complete it, although I was not well prepared for the cold season and had no intention of wintering in the country. The work that remained to be done was to open the line through the forest on the return trip. This was the most arduous part of the work and the slowest, but with my party reorganized and reinforced by men who had spent several winters in the country and were accustomed to the only kind of food to be obtained here, I felt greatly encouraged to make the attempt to finish the survey. For several days the weather, though cold, kept fair, and we were able to complete the marking of the line between Teslin lake and Dawson Peak and bring our horses and outfit across the mountains before the deep snow rendered this impossible.

The pack animals suffered greatly through the cold weather and the scarcity of good feed, so when near Teslin lake, they were allowed to roam at liberty for a few days along the foot of the western slope of Dawson Peak, while the line was being opened through the forest of balsam, pine and spruce, which thickly covers the country in this vicinity and extends far to the westward.

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On the eastern slope of Dawson Peak, and as far east as Teslin lake, nearly all the timber has been fire-killed and the ground in the valley is now covered with a new growth of poplar, birch, and scattered clumps of pine. The lower slopes of the mountain are strewn with windfalls and in places covered with thick willows. On the steep side of the mountain, the brush, mainly alders, grows in a dense mass fifteen feet or more in height, and is twisted and intertwined in an indescribable tangle. The heavy snows of winter bend these bushes down to the ground and give them, such a set that when the snow disappears in the spring, they stand out from the ground at an angle of about 40°. As may be imagined, it requires considerable effort to get through this brush on a slope so steep as to scarcely afford a footing, where one is constantly falling, stumbling or grasping at rose bushes and thorny currant bushes.

As soon as the line had been cleared on both slopes of the mountain, I made the ascent of its northern spur (the one crossed by the boundary) in order to photograph it. It was a remarkably bright day for the season; the atmosphere was clear and the high snow-covered peaks were clearly defined against the deep blue sky. I succeeded in taking two photographs of Dawson Peak.

Now that work in this vicinity was completed, the survey of the boundary made favourable progress. A few men were kept on the trail breaking a road for the horses through the snow, and shifting camp, while the others cleared the line and built the monuments. The lakes and morasses were now frozen, and thus greatly facilitated our progress. The cold was uniform and dry, and there was very little wind. It snowed to some extent almost every night; the trees were, therefore, loaded down with snow, which made the work of clearing the line a very disagreeable one. Daylight was very short, and the mornings so foggy that it was difficult to use the transit on the line, and impossible to use the camera to advantage. The survey, however, progressed so well that on December 4, we were back at our main camp and cache near Proulx lake. One half of the line still remained to be cleared and posted. The outlook was most discouraging. Snow lay very deep on the ground and the grass was becoming poorer and scarcer as the season advanced. The horses began to display alarming signs of weakness, their loads in consequence had to be made lighter. By the time we reached station A, two of our horses had dropped exhausted along the road, and attracted the wolves which from that time on followed us closely and made the nights hideous with their howling.

Our next objective point was Atlin lake, which was reached on December 19, thus bringing to completion the survey of the whole line between Teslin and Atlin lakes.

## PHOTOGRAPHIC WORK.

In order to obtain a complete and continuous pictorial record of the work done on the boundary line and to illustrate, in connection with the map, the topographical features of the region traversed, one hundred and fifty photographs were taken.

The photographing, which had to be done only on the true line, was begun on October 15 and continued to December 19, and was performed under most difficult circumstances. There was generally a total absence of sunshine, and with few exceptions the atmosphere was foggy; on some occasions photographs were taken when light snow was falling.

The time of exposure given to the plates varied according to circumstances from one to eight minutes, with stop 18.

The topography of the section of the boundary last surveyed is in marked contrast to that extending from Lake Bennett to Atlin lake. The latter section is very rugged and mountainous, while the former is broken only by low hills, generally timbered to the top, and at no higher altitude than 4,500 feet above the sea level. It did not, therefore, offer any great difficulties as to high ranges, but on the other hand, it was covered with a dense forest of pine and spruce intersected by numerous

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morasses lying between the low ridges frequently crossed by the boundary. The largest timber seen averages about eighteen inches in diameter; it is found only in spots. In a country so little known and with so many natural obstacles and hindrances to travel, the transportation of the requisites of camp life is always a difficult problem to solve. As soon as we started across the country stretching between Atlin and Teslin lakes, many difficulties were encountered. If a sufficient number of pack animals had been at first available, we would have been able to travel more rapidly. As it was, we had at the start to double the trips, for in such a country, no animal can be loaded to his full carrying power. As the country has been very little travelled, no trails or paths of any description have been cut; we had, therefore, to make our own trails all the way to Teslin lake, which was another cause of delay to us. Over a large portion of the route the ground had to be cleared of fallen timber; the trails had also to be cut at least six feet wide to allow the pack animals, with their packs, to pass without continually striking them against the trees, thus tearing everything, as well as bruising their backs; besides, the marshes and small lakes made our course very winding at times.

Some time previous to our return to Atlin lake, the extra consumption of food due to the hard work and cold weather, had necessitated my sending men to Atlin City again to procure more supplies for the party, and also grain for the horses. The freighters in bringing these supplies were compelled to use dog-teams, as the ice on the lake was not safe for horses; on their return trip, the freighters took part of our outfit back to Atlin City.

The survey of the boundary having been completed by December 17, preparations were made for the trip to Atlin City, twenty-five miles from the boundary. It took us four days to cover that distance. On December 24, a portion of the men were paid off, the outfit stored for the present in Atlin, and the horses sold for what they would bring, as it was useless to try to winter them in this country, where oats could only be bought at an exorbitant price, and hay could not be procured at all.

We left Atlin City for Log Cabin on December 26; our route, a new one to me, was through Golden Gate, and across Taku Arm, thence by Otter lake to the summit, a distance of 45 miles. Dog teams were used on the trip; it was my first experience in travelling with dogs. In our train we had six dogs of different breeds pulling a load of 450 pounds, made up of surveying instruments, photographic plates and personal baggage. It being early for winter travel over the lakes, no parties had preceded us for some days, so that we were obliged to break a road, which was difficult, as the crust on the snow did not sustain our weight or that of the loaded sleds. Besides this, several inches of water on the ice caused the under side of the sleds to become loaded with ice, which so increased in bulk and was such a drag through the snow, that frequent stops had to be made to chop it off. From the west end of Otter lake to Log Cabin the country is hilly; the driver frequently found it necessary to help the dogs over places by pulling on the load himself. The dogs pulled very well together over level ground, but failed to do so in broken or hilly country. We reached Log Cabin on December 31, and from here went to Skagway by rail. We had to wait several days in Skagway while repairs were being made to the steamer *Danube*, whose hull had been damaged by an iceberg.

On January 22, I arrived in Ottawa, where I have since been preparing my returns.

I have the honour to be, sir,

Your obedient servant,

ARTHUR SAINT CYR, *D.L.S.*

## APPENDIX No. 24 TO THE REPORT OF THE SURVEYOR GENERAL.

## EXAMINATION PAPERS OF THE BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

## PENMANSHIP AND ORTHOGRAPHY.

*Time, 3 hours.*

Composition of not less than 200 words ; one mark will be deducted for each word less than 200.

Give an outline of the climate of the North-west, and also of the physical characteristics, natural resources and capabilities of the country.

## ARITHMETIC.

*Time, 3 hours.*

	Marks.
1. Add $21\frac{1}{2}$ , $35\frac{1}{8}$ , $\frac{10\frac{3}{4}}{2\frac{3}{8}}$ , and $\frac{7}{17}$ .	10
2. Reduce $\frac{1}{4}$ , $\frac{7}{12}$ , $\frac{2}{3}$ and $\frac{9}{15}$ to their least common denominator.	10
3. How many bricks, 8 inches long, 4 inches wide, and 2 inches thick, will it require to make a wall 25 ft. long, 30 ft. high and 30 inches thick ?	10
4. Multiply 1.735 by .47053.	10
5. Extract the fourth root of .0076542 by logarithms.	10
6. Multiply 748, 3.1416, .05679 by logarithms.	10
7. A bicycle wheel turns 658 times in a mile ; what is the diameter of the wheel ?	10
8. A sphere of radius $r$ has the same volume as a right cone with base of radius $r$ ; what is its height ?	10
9. To what power must 1.06 be raised to equal 2 ?	10
10. A sphere has a radius $r$ , a right cylinder radius $r$ and height $r$ . what must be the relative specific gravity of the two that they weigh alike ?	10

## ALGEBRA.

*Time, 3 hours.*

	Marks.
1. Solve $\frac{5x-1}{7} + \frac{9x-5}{11} = \frac{9x-7}{5}$	11
2. If A can perform a piece of work in 8 days, and B in 10 days, in what time will they perform it together?	11
3. The sum of two numbers is 5760, and their difference is equal to one-third of the greater; find them.	11
4. Solve the simultaneous equations $x + y + z = a + b + c$ $bx + cy + az = cx + ay + bz = ab + bc + ca.$	11
5. $\frac{2x-3}{3x-5} + \frac{3x-5}{2x-3} = \frac{5}{2}$ Find $x$	11
6. Find two numbers such that their sum may be 39, and the sum of their cubes 17199.	11
7. Simplify $\frac{a}{b + \frac{c}{d + \frac{e}{f}}}$	11
8. What are eggs a dozen, when two more in a dollar's worth lowers the price one cent per dozen.	11
9. Solve $x + y = 4$ , $x^4 + y^4 = 82$ .	

## PLANE GEOMETRY.

*Time, 3 hours.*

	Marks.
1. Construct a triangle equal to a given rectilinear figure.	14
2. To find the side of a square equal to a given rectangle.	14
3. Find the shortest chord which can be drawn through a given point within a circle.	15
4. Draw a common tangent to two given circles.	15
5. In a given circle inscribe an equiangular triangle.	14
6. Describe a regular octagon about a given circle.	14
7. Prove that a circle can be inscribed in any rhombus.	14

## SESSIONAL PAPER No. 25

## PLANE GEOMETRY.

*Time, 3 hours.*

	<u>Marks</u>
8. To find a mean proportional between two given straight lines.	17
9. The sum of the squares on the sides of a parallelogram is equal to the sum of the squares on the diagonals.	17
10. Similar triangles are to one another in the duplicate ratio of their homologous sides.	17
11. The perpendiculars drawn from the angles of a triangle on the opposite sides meet at the same point.	17
12. Describe a circle which shall touch a given straight line, and pass through two given points.	17
13. From a given circle to cut off a segment containing an angle equal to a given rectilineal angle.	15

## PLANE TRIGONOMETRY.

*Time, 3 hours.*

	<u>Marks.</u>
1. Give an equivalent expression for $\tan A + \tan B$ .	12
2. Show that $\sin 3A = 3 \sin A - 4 \sin^3 A$ .	12
3. Deduce formula for finding the two angles, when two sides and the included angle are given.	12
4. Find value of $\sin 75^\circ$ .	12
5. Show that $\tan(A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$ .	12
6. The upper two-thirds of a flag staff breaks off, while one end rests on the stump and the other strikes the ground at the end of the shadow cast by the staff at the preceding noon. What was the altitude of the sun?	12
7. In a triangle $ABC$ we have $a = 24$ $b = 36$ $C = 54^\circ$ . Solve the triangle.	14
8. The three sides of a triangle are 8, 10, 12; find the angle opposite the longest side.	14

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## SPHERICAL TRIGONOMETRY.

*Time, 3 hours.*

Marks.

- |  |    |
|--|----|
| 1. Prove $\cos a = \cos b \cos c + \sin b \sin c \cos A$ .                         | 16 |
| 2. Deduce one of Napier's analogies.   | 17 |
| 3. Given three sides of a triangle, deduce formula for finding one of the angles.  | 17 |
| 4. Discuss the ambiguity that may arise when three parts of a triangle are given.  | 16 |
| 5. Given $A = 70^\circ 14'$ , $B = 56^\circ 34'$ , $a = 52^\circ 10'$ ; find $b$ . | 17 |
| 6. Given $A = 60^\circ$ , $B = 70^\circ 10'$ , $C = 80^\circ 20'$ ; find $a$ .     | 17 |

## MENSURATION OF SUPERFICIES.

*Time, 3 hours.*

Marks.

- |   |    |
|---|----|
| 1. The sides of a triangle are 3.67 chs., 5.43 chs., and 6.28 chs. What is the area?  | 14 |
| 2. From the above half an acre, triangular, is cut off by a straight line parallel to the shortest side. Find where the dividing line cuts the two sides. | 14 |
| 3. A right cone, radius of base 10 inches, height 15 inches. What is its total surface?   | 14 |
| 4. What is the radius of the sphere having the same surface as the above cone?  | 15 |
| 5. An equilateral triangle, square and circle have each the same area. What are their relative perimeters?  | 15 |
| 6. In a quadrilateral in which the opposite angles are supplements to each other, the sides are 7, 8, 9 and 10 chains respectively. Find the area.        | 14 |
| 7. Two circles of 5 and 7 inches radius respectively, have their centres 10 inches apart. What is the area common to them?                                | 14 |

(LIMITED EXAMINATION.)

*1st Paper—Time, 3 hours.*

Marks.

- |   |    |
|---|----|
| 1. Write a short description of the mineral resources of your province.                                       | 20 |
| 2. Given the logarithm of 2 = .3010300 and of 3 = .4771213. What are the logarithms of 16 and 54; also of 45? | 7  |



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|--|---|
| 3. The product of two numbers whose difference is 6 equals 17947. Find the numbers.  | 7 |
| 4. $3^{x-1} + 9^x = 84$ . Find $x$ .   | 8 |
| 5. The difference of the squares of two numbers is 120, and their product is 221. Find the numbers.  | 7 |
| 6. $3a + 2b - 2c = 10$<br>$a + b - c = 3$<br>$4a - 3b + c = 7$ . Solve.  | 7 |
| 7. Prove geometrically $a^2 = b^2 + c^2 - 2bc \cos A$ .  | 7 |
| 8. Describe an isosceles triangle having each of the angles at the base double of the third angle.   | 7 |
| 9. Find the locus of the middle points of any system of parallel chords in a circle.   | 7 |
| 10. Prove that the angle made by a chord with the tangent at its extremity is equal to the angle in the opposite segment.  | 7 |
| 11. The area of a circle is 50 sq. inches; what is the area of the inscribed hexagon?  | 8 |
| 12. If a straight line be divided into two equal and also into two unequal parts, then the sums of the squares on the two unequal parts equals twice the square on half the line together with twice the square on the line between the points of section. | 8 |

## EXAMINATION FOR ADMISSION AS ARTICLED PUPIL.

(LIMITED EXAMINATION.)

2nd Paper—Time, 3 hours.

- |   | Marks. |
|---|--------|
| 13. Deduce the general formula $\cos a = \cos b \cos c + \sin b \sin c \cos A$ .  | 10     |
| 14. Give Napier's rules for the solution of spherical right angled triangles.   | 10     |
| 15. In a plane triangle, given two sides and the included angle deduce formulae for finding the other angles.   | 10     |
| 16. In a spherical triangle, given two sides and the included angle, deduce formulae for finding the other angles.  | 10     |
| 17. The volume of a sphere is $\tau^3$ inches and is equal to the volume of a right cone whose height is equal to the diameter of its base. What is the radius of the base of the cone? | 10     |
| 18. The sides of a field are 12, 13, and 15 chains; what is its area?   | 10     |
| 19. In a plane triangle $a = 17$ , $b = 21$ , $C = 72^\circ$ ; find $c$ .   | 10     |
| 20. In a spherical triangle $a = 21^\circ$ , $b = 30^\circ$ , $c = 43^\circ$ ; find $A$ .   | 10     |
| 21. What quantity of canvas is necessary for a conical tent, the altitude of which is 9 feet and radius of base 5 feet.   | 10     |
| 22. Give formulae for surface of a circle, sphere, cone, cylinder and triangle.   | 10     |

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## FULL EXAMINATION FOR ADMISSION AS SURVEYOR.

## ALGEBRA.

*Time, 3 hours.*

	No. of Marks.
1. What is an axiom? Give those generally accepted in Algebra.	8
2. Add $ax+by$ and $bx+ay$ .	
3. Multiply $(a+b)$ , $(a-b)$ , $(a^2+ab+b^2)$ and $a^2-ab+b^2$ together.	8
4. Show that $\frac{a^m-n}{1} = \frac{1}{a^{n-m}}$ . What principles would you infer from this relation?	8
5. Divide $x^m y^n$ by $x^{\frac{m}{2}} - y^{\frac{n}{2}}$ ; give the first four terms.	8
6. Factor the following: $\begin{array}{l} x^2+13x+42 \\ x^3+x^2y+xy^2+y^3 \\ \text{and } a^{16}-b^{16}. \end{array}$	12
7. Reduce $\frac{(a+b)^4-(a-b)^4}{8ab}$	8
8. Add $\frac{a}{a-b}$ , $\frac{b}{b-c}$ , $\frac{c}{c-d}$ .	8
9. Reduce $x^2-xy+y^2 + \frac{3x^2y+3xy^2}{x+y}$ .	8
10. Multiply $\frac{b^2x^4-b^6}{x^2-2bx+b^2}$ by $\frac{x^2-b^2}{bx^2+b^3}$	8
11. In the composition of a certain quantity of gunpowder, $\frac{2}{3}$ of the whole plus 10 lbs. was nitre; $\frac{1}{3}$ of the whole minus $4\frac{1}{2}$ lbs. was sulphur, and the charcoal was $\frac{1}{3}$ of the nitre minus 2 lbs. Find the quantity of the powder, and also the quantity of each of the ingredients.	8
12. <i>A</i> sets off from Montreal to Quebec, and <i>B</i> at the same time from Quebec to Montreal, each travelling at a uniform rate. <i>A</i> reaches Quebec 16 hours, and <i>B</i> reaches Montreal 36 hours after they have met on the road. Find in what time each has performed the journey.	8

## PLANE GEOMETRY.

*Time, 3 hours.*

	Marks.
1. Prove geometrically $(a+b)^2 = a^2 + 2ab + b^2$ .	18
2. Divide a given straight line in mean and extreme ratio.	18
3. Prove geometrically $(a+b)^2 + (a-b)^2 = 2(a^2 + b^2)$ .	19

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- |  |    |
|--|----|
| 4. Prove that the sum of the angles in a triangle is equal to two right angles.  | 19 |
| 5. Show that if in a circle, centre $O$ , $AB$ and $CD$ diameters at right angles to each other, $CO$ bisected at $E$ , $EA$ joined, $EF$ cut off equal to $EO$ , with centre $A$ radius $AF$ a circle be described cutting the other circle in $G$ and $H$ , then is $GHI$ the side of an inscribed pentagon in the given circle. | 19 |
| 6. The circle cutting the middle points of the sides of a triangle also passes through the feet of the perpendiculars drawn from the angles to the opposite sides.   | 19 |
| 7. The perpendiculars drawn from the angles of a triangle to the opposite sides meet in a point.   | 19 |
| 8. Describe a circle which shall touch a given straight line, and pass through two given points.   | 19 |

## SOLID GEOMETRY.

*Time, 3 hours.*

- |  | Marks. |
|--|--------|
| 1. Define right cone, oblique cone, dihedral angle, regular polyhedron, similar, solid figures, inclination of a straight line to a plane, pyramid, cylinder.  | 12     |
| 2. If three straight lines meet all at one point, and a straight line stand at right angles to each of them at that point, the three straight lines shall be in one and the same plane.  | 12     |
| 3. If two parallel planes be cut by another plane, their common sections with it are parallel.   | 12     |
| 4. If a solid angle be contained by three plane angles, any two of them are together greater than the third.   | 12     |
| 5. Within the area of a given triangle lies another triangle; show that sum of the angles subtended by the sides of the interior triangle at any point not in the plane of the triangles is less than the sum of the angles subtended at the same point by the sides of the exterior triangle. | 12     |
| 6. A cylinder five inches long and two inches in diameter is capped at one end by the segment of a sphere of radius two and a half inches, and at the other by a cone of height two inches. Determine the point where this solid should be cut to make the two pieces                          |        |
| (1) of equal volume,   |        |
| (2) of equal surface.  | 15     |

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## SPHERICAL TRIGONOMETRY.

*Time, 3 hours.*

Marks.

1. To find the fundamental relations between the trigonometrical functions of the three sides, and the three angles of any spherical triangle. 18
2. Give Napier's analogies, and prove Napier's rules for the solution of right-angled spherical triangles. 17
3. Show that  $\cos a \sin b = \sin a \cos b \cos C + \sin c \cos A$ . 18
4. The sides of a spherical triangle are each  $111^\circ 28'$ , find its area. 18
5. In a right-angled spherical triangle the hypotenuse is  $44^\circ 35'$  and one of the other sides  $1^\circ 14'$ ; find the two angles. 18
6. In a spherical triangle  $a = 83^\circ 40'$ ,  $b = 1^\circ 14'$ ,  $C = 111^\circ 13'$ ; find  $B$ . 18
7. Discuss fully the ambiguity that exists when two sides and an angle opposite one of them are given as data to solve the triangle. 18

## MEASUREMENT OF AREAS AND SUBDIVISION OF LAND.

*Time, 3 hours.*

Marks.

1. The following are the notes of a survey of a quadrilateral piece of land :—

Station.	Bearings.	Distances.
1	N. $52^\circ 00'$ E.	10.63 chains.
2	S. $29^\circ 45'$ E.	4.10 "
3	S. $31^\circ 45'$ W.	7.69 "
4	N. $61^\circ 00'$ W.	7.13 "

Find the area by the method of Latitudes and Departures, first 'balancing' the courses. 25

2. Express the conditions necessary for a closed survey by two equations.
  - (a) And from them show what missing data in a survey can be supplied.
  - (b) How does the supplying of missing data in a survey affect 'balancing' the survey. 25
3. The centre line of a half-mile race track is composed of two parallel tangents, 10 chains apart, joined by two semi-circles. The track is 30 ft. wide; what is its area? 25
4. In a quadrilateral with sides 6, 7, 8 and 9 chains, the angle between 6 and 7 is  $60^\circ$ ; what is the area of the figure? 25

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## MEASUREMENT OF AREAS AND SUBDIVISION OF LAND.

*Time, 3 hours.*

- |   | <u>Marks.</u> |
|---|---------------|
| 5. What is the azimuth of the straight line, starting from the N. E. corner of Section 36, T. 12, R. IV., which cuts off one quarter of that section ?                                      | 20            |
| 6. In a triangle $ABC$ , $AB = 13$ , $BC = 11$ , $AC = 8$ chains. On $AB$ , 5 chains from $B$ , the straight line to bisect the area is to start. What is the length of the dividing line ? | 20            |
| 7. To divide a triangular field into two equal parts by a line drawn in any given azimuth.  | 20            |
| 8. To divide a triangular field into two parts in a given ratio as $m : n$ by the shortest possible line.   | 20            |
| 9. In a circle, half a mile circumference, what is the length of the chord which cuts off one-quarter of the area ?   | 20            |

## DESCRIPTIONS.

*Time, 3 hours.*

- |  | <u>Marks.</u> |
|--|---------------|
| 1. A man sells the north-west quarter of Section 12, Township 9, Range 3 west of 4th Initial Meridian. Make a description of the part sold for insertion in a deed.  | 20            |
| 2. Off the above were sold four acres in the form of an equilateral quadrilateral adjoining the northern and western section lines; make the necessary description for conveyance.   | 20            |
| 3. Through the above section a railroad runs on a tangent, and for its lands 50 feet on each side of the centre line have been appropriated. The centre line cuts the northern boundary 17 chains and the western boundary of the section 24 chains from the north-west corner of the section. Make a description for a deed of the north-west quarter of the section exclusive of railroad. | 20            |
| 4. A man buys off the above section a piece of land in form of a parallelogram, having a frontage of 100 feet on the northern boundary of the section and 200 feet on the western boundary. Make a description for a deed of the piece sold.   | 20            |
| 5. Draw up a settler's declaration of occupation.  | 10            |
| 6. Draw up an assumed evidence regarding the position of a lost corner post which it is desired to re-establish.   | 10            |

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## ASTRONOMY.

*Time, 3 hours.*

Marks.

- |  |    |
|--|----|
| 1. Define declination, right ascension ; solar, mean and sidereal time ; parallax, refraction and azimuth.   | 16 |
| 2. Define equation of time. Explain the cause of its variation. A graphical representation may be given.   | 16 |
| 3. In latitude $45^{\circ} 25' N.$ , longitude $5^{\circ} 02^m 50^s$ what is the standard time at western elongation of Polaris on Feb. 20, 1901 ? | 16 |
| 4. For the same place and date what is the time of sun-rise ?  | 16 |
| 5. For the same place and date when was the observed altitude of the sun's lower limb $10^{\circ}$ in the forenoon ?                               | 16 |
| 6. For the same place the observed altitude of a star on the prime vertical was $52^{\circ} 17'$ ; what was the declination of the star ?          | 16 |

## ASTRONOMY.

*Time, 3 hours.*

Marks.

- |  |    |
|--|----|
| 7. On an exploratory survey, linear measurements are made with a micrometer, and angular ones with transit; by what astronomic observations can the survey be checked? Explain fully the manner of observing and reducing the observations.  | 15 |
| 8. An observation for time is made on the 2nd Base Line 17.34 chs. west of the north-east corner of S. 34, Range 4, west of 3rd Initial Meridian, and the error of the mean time chronometer was found to be $18^m 32^s 5$ slow, and a daily gaining rate of $2^s 5$ . Ten days afterwards, on the same base line, after projecting it westward, another observation for time was taken and the chronometer found to be $13^m 14^s 0$ slow. Give position on section line where the latter observation was made. | 17 |
| 9. On Feb. 20, 1900, in latitude $45^{\circ} 25'$ , longitude $5^{\circ} 02^m 50^s$ the observed altitude in the forenoon of the sun's lower limb was $28^{\circ} 14'$ , the horizontal circle reading of its centre $213^{\circ} 17'$ , and of the reference object $86^{\circ} 42'$ ; what is the azimuth of the latter ?  | 18 |
| 10. At the 3rd Initial Meridian on the 4th Base Line, the base line was projected westward at its proper azimuth; at 18.24 west of the north-east corner of Section 32, Range 1, the azimuth was found to be $89^{\circ} 57' 30''$ . What was the azimuth error ?  | 17 |
| 11. In question 9 what was the sidereal time of observation ?  | 17 |
| 12. On Dec. 21, 1900, in approximate longitude of $6^{\circ} 30^m W.$ , the observed meridian altitude of the sun's upper limb was $18^{\circ} 04' 30''$ . What is the latitude of the place of observation ?  | 17 |

SESSIONAL PAPER No. 25

## APPENDIX No. 25 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF THE GEOGRAPHER.

DEPARTMENT OF THE INTERIOR,  
OFFICE OF GEOGRAPHER,  
OTTAWA, August 27, 1901.

The Surveyor General,  
Ottawa.

SIR,—I have the honour to report as follows on the work of my office during the past two years :—

As, prior to my appointment, July 1, 1899, the geographer had no assistants my first endeavours were directed to obtaining an efficient staff and furniture, instruments, &c., for a well equipped geographical branch, which I am pleased to report, I have been able to do. The offices rented in the Thistle Chambers have already proved inadequate, and the enlarged accommodation in the new building on Metcalfe Street will be a welcome relief. At the present time the number of maps and plans is increasing at the rate of about 1,000 per annum, and though the rate will undoubtedly decrease in the near future still the annual increment calls for increased cupboard room for storing them and for systematic arrangement. A card catalogue of the plans is in contemplation and will be commenced as soon as possible.

Mr. J. E. Chalifour has compiled sheets 1, 2, 3, 4 and part of sheet 7 of the large Dominion map. He has also prepared for the engraver the tracing of the small Dominion map.

Mr. W. J. Graham has compiled sheets 5, 6 and 7 of the large map of Canada, and also profiles of some of the more important railway lines.

Mr. H. A. Baine was appointed May 13 of the current year, and has compiled four maps for the new Atlas of Western Canada now in the press.

Mr. H. Taehé has prepared most of the cards for the Dictionary of Altitudes, and has also been employed in the compilation and reduction of plans for the large Dominion map.

Mr. G. E. Dumouchel has been employed in the preparation of reductions for the Dominion map.

Mr. N. W. Sharon was appointed June 18, and has been tracing MSS. plans on file in other departments.

Mrs. D. E. Waine was transferred from the secretary's branch, May 2, and has since been employed as stenographer and typewriter. She has also completed the card index for the Dictionary of Altitudes.

In view of the many occasions on which a general map of the Dominion or special maps of provinces or other districts are required in connection with the reports of the various departments it was decided to commence a trustworthy compilation of all authentic geographical data, and subsequently maintain them by the addition of the results of new surveys and explorations. These maps will be available at any time as a basis on which to represent railways, telegraph lines, geological features, economic resources or other facts which it is desired specially to illustrate.

It has up to the present time, been the usual practice, when maps of the kind just alluded to have been required, to have special compilations made and maps drawn for the purpose—a mode of procedure not only causing loss of time but resulting also in the needless expenditure of considerable sums of money while the results, from a geographical point of view, have been far from satisfactory. Old errors have in too many

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instances, been perpetuated while recent surveys which might, very advantageously, have been utilised have frequently been ignored. The time spent in reproducing, on the new scale, former compilations is to a large extent wasted and the labour and cost thus involved might much better have been expended on the fundamental revision of the longitudes, latitudes and geographical features which, if properly carried out, would—over extensive districts—then remain practically accurate for many years.

The difficulty met with in the compilation of such maps arises largely from the number of sources from which information must be sought, rendering it practically impossible for the compiler of a given map—probably pressed to complete his work at a certain date—to consider, collate and familiarize himself with all. Thus, in the North-west Territories, within a comparatively limited district, surveys made under the following branches may have to be included:—Topographical Surveys Branch, Geological Survey, Timber and Mines Branch, Department of Railways, Indian Department, &c. In the older provinces this is additionally complicated by surveys under provincial government auspices, surveys by the Public Works Department and railway companies, charts of the coast by the Admiralty and Department of Marine and other minor surveys not necessary to particularise, all of which have to be consulted for recent additions and changes before maps with any claim to represent the actual state of geographical information can be drawn. It is therefore evident that the construction of these standard maps will not only result in greatly improving the character of those now available, but will also, in so far as the government's departments are concerned, be the means of effecting a substantial economy.

The Standard General map consists of 8 sheets, 25 inches by 26, making, when joined together, a map  $8\frac{1}{2}$  feet by  $4\frac{1}{2}$ . It is now nearly completed, and the last instalment of 'copy' should be ready by the end of August.

The Standard Topographical map will consist of about 50 sheets, 26 inches by 19, to include 3 degrees of latitude and the same of longitude, on a scale of 8 miles to an inch. These sheets, like the General map, will be engraved on copper, that alterations and connections may be made at any time by 'beating up' portions of the surface and re-engraving them and from which 'transfers' can at any time be obtained for reproduction by lithography. While in its essence chiefly topographical, it will show international, provincial, county, township and other fixed boundaries, together with railways, roads, cities, towns, post offices, &c., while boundaries of electoral and military districts, with other such lines likely to be altered from time to time, will be inserted, when required, on the transfers. Special information, such as colonization and mining areas, Indian reserves, timber limits or tracts, geology, postal routes, &c., can be added on the maps for the Interior, Geological Survey, Post Office Department, &c. Railway lines, while distinctly indicated, will not be drawn so heavily as to interfere with the subsequent addition of coloured lines for special railway or postal maps.

It will be compiled as far as possible from the original sources, and the range of inquiry should not be confined to the departments of Ottawa, but should be extended to the Provincial Governments, Colonial and Hudson's Bay Company's offices. No effort will be spared to make the map a standard work, designed to last for the next 50 years.

As the compilation progresses it will be placed in the hands of the engraver, sheet by sheet, that the departments and general public may have the earliest possible benefit to be derived from their publication.

The compilation of these maps will also be utilized in connection with the Geographic Board to revise and officially fix the nomenclature of places throughout the Dominion. Thus far over 2,000 names included in the General map have been submitted to the board.

The attached index map shows the outlines of the sheets of the Standard Topographical and General maps.



## SESSIONAL PAPER No. 25

In connection with the foregoing, I beg to bring under your notice the recommendation of the Civil Service Commission of 1892, as follows :—

'Your commissioners find that maps for various purposes are prepared in several departments, and by the evidence produced, it is shown that differences frequently occur in maps of the same district when issued by more than one department. To prevent this, and to promote accuracy and security, it is recommended that a special cartographical branch be created, and that the duty of this branch of the public service should be to issue reliable maps of the various parts of the Dominion.'

Such a cartographic branch would undoubtedly ensure greater efficiency and economy, and do away with the present wasteful method of duplicating and triplicating maps and plans. It could be carried out by amalgamating the present staffs, thus avoiding any increased expenditure, and should, of course, be under this department.

As the last edition (1894) of the map of Manitoba and North-west Territories is nearly exhausted, and as the numerous surveys since the date of the original publication had made extensive changes in the topography, a new map was commenced. It is in 3 sheets, scale  $12\frac{1}{2}$  miles to 1 inch, and being engraved on copper. The eastern sheet and greater portion of the middle sheet are engraved, but owing to the pressure of work on the large map of the Dominion, the work has proceeded somewhat slowly. With the end of the work on the latter in sight, however, it is hoped to push it to completion at an early date. To meet the demand of a map of Canada in a handy form, a map of the Dominion on a scale of 100 miles to 1 inch, 30 inches by 17, was completed early in 1900, and has gone through three editions, exclusive of the special editions for the immigration handbooks. Special maps of Athabasca, Saskatchewan, Alberta and Northern (New) Ontario have been prepared for the new atlas of Western Canada now in the press.

Supplementary to my report on 'Altitudes in the Dominion of Canada,' now in the press, I have compiled a 'Dictionary of Altitudes,' the railway stations, lakes, mountains, &c., being arranged alphabetically by provinces. This will be a more convenient form for general use, and will be accompanied by a relief map of Canada on a fairly large scale.

The following maps have been published to date :—

Dominion of Canada, scale 100 miles to 1 inch, 36 inches by 17 inches, preliminary edition. Out of print.

Dominion of Canada, map showing water powers, scale 100 miles to 1 inch.

Dominion of Canada, 3rd edition, scale 100 miles to 1 inch.

Map showing area under crop in Manitoba and North-west Territories in 1899, scale 100 miles to 1 inch,  $10\frac{1}{2}$  inches by 7 inches.

Map showing total acreage of land in Manitoba and the North-west Territories, homesteaded, sold, transferred to railway and colonization companies, &c., to December 31, 1899. Scale 100 miles to 1 inch,  $10\frac{1}{2}$  inches by 7 inches.

The following maps are in the hands of the engraver :—

Dominion of Canada, Newfoundland and adjoining portions of the United States, scale 35 miles to 1 inch, 8 sheets, each 26 inches by 25 inches.

Manitoba and North-west Territories, scale  $12\frac{1}{2}$  miles to 1 inch, 3 sheets, each 36 inches by 25 inches.

I have the honour to be, sir,

Your obedient servant,

JAMES WHITE, *Geographer.*

## APPENDIX No. 26 TO THE REPORT OF THE SURVEYOR GENERAL.

## REPORT OF J. W. TYRRELL, D.L.S., EXPLORATORY SURVEY BETWEEN GREAT SLAVE LAKE AND HUDSON BAY. DISTRICTS OF MACKENZIE AND KEEWATIN.

HAMILTON, ONT., August 30, 1901.

E. DEVILLE, Esq.,  
Surveyor General,  
Department of Interior,  
Ottawa, Canada.

SIR,—Herewith I have the honour to submit the report of my exploratory survey of 1900, extending from Great Slave lake to Hudson bay, in the districts of Mackenzie and Keewatin.

## INTRODUCTORY.

In accordance with your instructions, dated January 20, 1900, I have made an exploration of the country between Great Slave lake and Hudson bay, in the districts of Mackenzie and Keewatin, and have now prepared a large map, comprising twenty-two sheets, 32 x 40 inches, on a scale of one inch to one statute mile, of the routes covered by our expedition.

In all seventeen hundred and twenty-nine miles of survey were accomplished, and in the performance of this, four thousand six hundred miles were travelled with sleds and canoes.

Two hundred photographs (5 x 7) were obtained along our route.

A large number of astronomical and magnetic observations were obtained. A complete meteorological record was kept throughout the journey. As complete a botanical collection as could be made in the barren grounds was obtained, and as far as possible notes were kept and specimens procured of the rock formations and minerals met with at various points. If indeed any part of your instructions has not been fully carried out, it has only been because of my inability to do more within the time devoted to the work, but I trust that my efforts may meet with your approval.

## HISTORICAL.

Before proceeding with the report of my own discoveries, I think it will be well to present a brief collection of such scattered fragments of information as have been available to me from the publications of earlier explorers, regarding the district of which information is required.

Several explorers have from time to time touched upon the area in question, and each one has contributed more or less of interest and value.

Some accounts are of interest because of their absurd inaccuracies, some because of their close approximation to what turns out to be fact, and others for various reasons of their own.

## DISCOVERY OF CHESTERFIELD INLET.

The earliest discovery of any part of our route seems to have been that of Chesterfield inlet, in the year 1747, by the officers of the *Dobbs* and *California*—two ships of 180 and 140 tons respectively, sent out from England in 1746 by the North-west Association for the discovery of the north-west passage. The officers reported 'that they

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found an inlet in the latitude of  $64^{\circ}$  north and in the longitude of  $32^{\circ}$  east from Marble island which was three or four leagues wide at its entrance, but upon their sailing eight leagues up, it increased to six or seven leagues wide. That their course so far was N.N.W. by compass, but then it began to turn more to the westward; that sailing ten leagues higher it grew narrower by degrees till it became but four leagues wide; that notwithstanding they could perceive shores open again, they were discouraged from proceeding further because the water from being salt, transparent, and deep with steep shores, and strong currents, grew fresher, thicker and shallower at that height.\*

From the above account it would appear that their discoveries of the inlet ascended to the neighbourhood of Centre island, though this is somewhat uncertain since their statements of distances are very inaccurate, the width of the inlet, for instance, as seen by them being at no place more than twelve miles wide instead of seven leagues (twenty-one miles).

## CAPTAIN CHRISTOPHER.

In the year 1761 Chesterfield inlet was again entered by Captain Christopher, who ascended it for a distance of 100 miles, when finding the waters becoming fresh he turned back.

The following year, he, with the sloop *Churchill*, accompanied by Mr. Morton in a cutter, returned to the inlet and ascended it to Baker lake, at the west end of which they saw the mouth of a river.

On Christopher's chart, opposite the mouth of this river these words are written: 'A small river, full of falls and shoals, not water enough for a boat.' †

This note, it may be mentioned in passing, is very much at variance with the facts as now disclosed, and may be best explained by assuming that Christopher never saw the mouth of the Thelon or Doobaunt river, but got into the mouth of some smaller stream.

## SAMUEL HEARNE.

The next expedition, in order of time, affording any information regarding the region in question, were those famous journeys made by Samuel Hearne in the years 1769-70-71-72, the account of which was published by himself in 1795.

His narrative throughout is an exceedingly interesting one, although not noted for geographical accuracy. It is valuable rather as an early history of a remote region of this country, and I will take the liberty of here quoting from his book certain parts having direct reference to portions of my route of exploration.

Writing of his third journey, page 87, Hearne says:

'We still continued our course to the west and west by south, and on the 8th of April (1771) arrived at a small lake called ‡Thelewey-aza-yeth, but with what propriety it is so called I cannot discover, for the meaning of Thelewey-aza-yeth is Little Fish Hill, probably so called from a high hill which stands on a long point near the west end of the lake.

'On an island in this lake we pitched our tents, and the Indians finding deer very numerous determined to stay here some time in order to dry and pound meat to take with us, for they well knew by the season of the year, that the deer were then drawing out to the barren grounds, and as the Indians proposed to walk due north on leaving this lake it was uncertain when we should meet with any more.

\*Report of Doobaunt, Kazan and Ferguson rivers, by J. Burr Tyrrell, Geol. Survey of Canada, 1896.

†Report of Doobaunt, Kazan and Ferguson rivers, by J. Burr Tyrrell, Geological Survey of Canada, 1896.

‡A lake on the upper portion of the Thelon river.

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'Agreably to the Indians' proposal we remained at Thelewey-aza-yeth ten days, during which time my companions were busily employed (at their intervals from hunting) in preparing small staves of birch wood about 1½ inches square and 7 or 8 feet long. These serve as tent poles all the summer while on the barren grounds, and as the fall advances are converted into snow-shoe frames for winter use.

'Birch rind, together with timbers and other wood work for building canoes, were also another object of the Indians' attention while at this place, but as the canoes were not to be set up till our arrival at Clowey (which was many miles distant), all the wood work was reduced to its proper size for the purpose of making it light for carriage.

'As to myself I had little to do except to make a few observations for determining the latitude, bringing up my journal, and filling up my chart to the present time. I found the latitude of this place 61° 30' north, and its longitude, by my account, 19° west of Prince of Wales Fort. Having a good stock of dried provisions and most of the necessary work for canoes all ready by the 18th, we moved about 9 or 10 miles to the north-north-west, and there came to a tent of Northern Indians who were tenting on the north side of Thelewey-aza river.\* From these Indians Matonabee purchased another wife.

'On the 23rd, as I hinted above, we began to move forward and to shape our course nearly north, but the weather was in general so hot, and so much snow had in consequence been melted, as made it bad walking in snow-shoes, and such exceeding heavy hauling, that it was the 3rd of May before we could arrive at Clowey—though the distance was not above eighty-five miles from Thelewey-aza-yeth.

'In our way we crossed part of two small lakes, called Tittameg lake and Scartaek lake.

'The Lake Clowey is not much more than twelve miles broad in the widest part. A small river which runs into it on the west side is said by the Indians to join the "Athapuscow" lake.†

'Besides the Grand river, already mentioned, † there are several others of less note which empty themselves into the great Athapuscow lake.\*\* There are also several small rivers and creeks on the north-east side of the lake, that carry off the superfluous waters, some of which, after a variety of windings through the barren grounds to the north of Churchill river, are lost in the marshes and low grounds, whilst others by means of many small channels and rivulets are discharged into other rivers and lakes, and at last, doubtless find their way into Hudson bay.††

Later in his narrative, Hearne says :

'From the 13th to the 24th of February we walked along a small river that empties itself into the Lake Clowey, near the part where we built canoes in May, one thousand seven hundred and seventy-one. This little river is that which we mentioned in the former part of this journal as having communicated with the Athapuscow lake ; but from appearances, it is of no consequence whence it takes its rise, or where it empties itself, as one-half of it is nearly dry three-fourths of the year. The intervening ponds, however, having sufficient depth of water, are, we may suppose, favourable situations for beaver, as many of their houses are to be found in those parts.

'The little river lately mentioned, as well as the adjacent lakes and ponds, being well stocked with beavers, and the land abounding with moose and buffalo, we were induced to make but slow progress in our journey.

\*One of the upper branches of Thelon river.

† Athapuscow lake is what we now know as Great Slave lake, and is separated from Clowey by the height of land.

‡ Slave river.

\*\* Great Slave lake.

†† A remarkable example of imagination. In order to perform such a feat, the waters of Lake Athapuscow would have to cross an elevation of 800 feet.

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'Many days were spent in hunting, feasting and drying a large quantity of flesh to take with us, particularly that of the buffalo, for my companions knew by experience that a few days walk to the eastward of our present situation would bring us to a part where we should not see any of those animals.'

In connection with the present report, the following quotation from Hearne is, to my mind, of great interest since it undoubtedly refers to the valley of the lower Thelon river. He is describing a remote Indian settlement from which a wandering band had come, and writes as follows:—

'From the best accounts that I could collect, the latitude of this place must be about  $63\frac{1}{2}^{\circ}$  or  $63^{\circ}$  at least; the longitude is very uncertain. From my own experience I can affirm that it is some hundreds of miles both from the seaside and the main woods to the westward.

'Few of the trading Northern Indians have visited this place, but those who have give a pleasing description of it, all agreeing that it is situated on the banks of a river which has communication with several fine lakes. As the current sets to the north-eastward, it empties itself, in all probability, into some part of Hudson bay, and, from the latitude, no part seems more likely for this communication than Baker's lake, at the head of Chesterfield inlet. This, however, is mere conjecture, nor is it of any consequence as navigation on any of the rivers in those parts is not only impracticable, but would be also unprofitable, as they do not lead into a country that produces anything for trade, or that contains any inhabitants worth visiting.

'The accounts given of this place, and the manner of life of its inhabitants, would, if related at full length, fill a volume; let it suffice to observe that the situation is said to be remarkable for every kind of game that the barren grounds produce at the different seasons of the year, but the continuance of the game with them is in general, uncertain, except that of fish and partridges.

'That being the case, the few who compose this little commonwealth, are by long custom, and the constant example of their fore-fathers, possessed of a provident turn of mind, with a degree of frugality unknown to every other tribe of Indians in this country except the Esquimaux. Deer is said to visit this part of the country in astonishing numbers, both in spring and autumn, of which circumstance the inhabitants avail themselves by killing and drying as much of their flesh as possible, particularly in the fall of the year, so they are seldom in want of a good winter's stock. Geese, ducks and swans visit here in great plenty during their migration, both in the spring and fall, and by much art, joined to an unsurmountable patience, are caught in considerable numbers in snares, and without doubt make a very pleasing change of food. It is also reported, though I confess I doubt the truth of it, that a remarkable species of partridge, as large as English fowls, are found in that part of the country only.'

Those, as well as the common partridge it is said, are killed in considerable numbers with snares, as well as with bows and arrows.

'The rivers and lakes near the little forest where the family above mentioned had fixed their abode, abounded with fine fish, particularly trout and barble which are easily caught, the former with hooks, and the latter in nets. In fact, I have not seen or heard of any part of this country which seems to possess half the advantages requisite for a constant residence, that are ascribed to this little spot. The descendants, however, of the present inhabitants must in time evacuate it for want of wood, which is of so slow a growth in those regions, exclusive of what is cut down and carried away by the Esquimaux, must cost many years to replace. It may probably be thought strange that any part of a community, apparently so commodiously situated and happy within themselves should be found at so great a distance from the rest of their tribes, and indeed nothing but necessity could possibly have urged them to undertake a journey of so many hundred miles as they have done; but no situation is without its inconveniences, and as their woods contain no birch trees of sufficient size, or perhaps none of any size, this party had come so far to the westward to procure birch rind for making two canoes and some of the fungus that grows on the outside of the birch tree, which is used by all the Indians in those parts for tinder.'

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Until the present time, the whereabouts of this northern 'Garden of Eden,' so well described, though never visited, by Hearne, has been a matter of mystery.

No such productive valley or flourishing settlement has been known to exist in the barren lands, and Hearne's story has thus seemed but an Indian fable.

The investigations of the present expedition have, however, established both the existence and location of such an oasis, but, as predicted by Hearne, the primitive settlers have long since departed, although for some other reasons than lack of fuel. The writer's descriptions of the land of these early settlers will appear later in this report.

## CAPTAIN DUNCAN.

The next point of attack tending towards the exploration of our route was from the eastward, when in 1792 Captain Charles Duncan entered Chesterfield inlet, ascended to Baker lake and anchored at its western extremity in the mouth of the Thelon or Doobaunt river.

Thence 'he followed the course of the river by land until he found it came from the northward, in which direction he traced it nearly thirty miles, when, being convinced that it must be the drain of some lake in that line, and not an outlet from the Doobaunt,\* he returned, being satisfied that his following it further could not lead to any useful discovery. Had its course been from the westward, he would not have left it, he says, until he had seen its source.†

Had Captain Duncan pushed his investigations farther, he would have discovered that the river did come from the westward, and not only so but that through it the 'Doobaunt' finds its outlet.

## SIR GEORGE BACK.

Coming down to the explorations of the past century, the first, and that furnishing most information in regard to the divide between Great Slave lake and Hudson bay, is that made by Sir George Back, during the years 1833-34-35, the winters of which he spent at Old Fort Reliance, a beautiful spot at the north-east extremity of Great Slave lake. His explorations extended over parts of Great Slave, Artillery, Clinton-Colden, and Aylmer lakes as well as the whole of Back's river, and from the Indians Back obtained some interesting information regarding the route followed by the writer.

The following notes and quotations are taken from 'Captain Back's Arctic Land Expedition' :—

He reports 4 feet of ice along the shore of Artillery lake on the 15th of June, 1834, and having travelled over it with his sleds on that date. Under date of the 19th of June, on Clinton-Colden lake, he mentions the ice as becoming treacherous and rotten in places, and covered by new snow. Nevertheless he was able to continue his sled journey across Aylmer lake on June the 26th, and on the Back river until July 2nd, after which he was able to travel by boat in open water.

In making his first trip out to Artillery and Clinton-Colden lakes, Back travelled by way of the Hoarfrost river, but on his return to winter quarters at Fort Reliance in the autumn, he made an attempt to descend the 'Ah-nel-dezeth'-Lockhart river, and thus describes his adventures.

'The river by which it (Artillery lake) discharges itself into Great Slave lake, began its descent by an ugly rapid, too hazardous to run and yet scarcely so dangerous as to induce us to make a portage of. We compromised, therefore, by lowering half the way and carrying the rest. A second rapid was run, but we had not calculated on the amazing force of so confined a torrent, and just as we gained the eddy, the old canoe got a twist which nearly broke it in two. Another clump of pines induced me to land, and while the men examined the quality of the timber I obtained a set of

\* Report of Doobaunt, Kazan and Ferguson rivers, by J. Burr Tyrell. Geol. Survey of Canada, 1896.

† A large lake discovered by Hearne.

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sights, which gave the latitude  $62^{\circ} 53' 26''$  N., longitude  $108^{\circ} 28' 24''$  west, and variation  $38^{\circ} 42'$  east.

'The wood was in no way better than that seen in the early part of the morning, and we pushed from the bank with the intention of going carefully down the stream, though a look of indecision, if not of positive apprehension, betokened some inward working in the steersman's mind, for which I was utterly unable to account, until informed that for days past Mawfelly had been talking about the dangers he did know and the dangers he did not know in the Ah-hel-dessy. The Indians, he said, never attempted it in any manner, either up or down, and as he was not in a hurry to die, though he was willing to walk on the rocks, he would not on any account run it in the canoe. I shamed him out of this unmanly resolution, and when he and his companion had indulged in a laugh among themselves, we slipped down another rapid. However, on trying the fourth, the steersman became so unnerved as to lose all self-command, and by not co-operating with De Charlôit, fixed us against a sharp rock that cut the canoe.

'Happily it twirled around and floated till we reached the shore. The man's confidence was gone, and rather than incur any more such risk in the foaming rapids before us, I abandoned an attempt which the Indian persisted in declaring was impossible, and the trusty and battered canoe being left with a few other things in cache, each man was laden with a weight of one hundred and twenty pounds, and began to pick his way up the steep and irregular sides of the hills.

'I took leave, therefore, of the Ah-hel-dessy and had abundant cause to rejoice at having done so, for the whole distance to the mountain appeared to be an unbroken succession of rapids, which must have stopped us, for whether passable or not in a boat, they were evidently impractical in a canoe.

'We had expected that our route would have been by a small river about a mile to the eastward, invariably used by the Chippewyans or Yellowknives, whenever they proceeded in that direction, and as it may be supposed, quite unknown to me until that moment. On subsequent inspection, however, it was found to be too shallow for canoes, being merely the outlet of some small lakes, and the waters of a picturesque fall from four to eight feet distant. There were many small Indian canoes stowed under the branches of the willows, and as it was the lowest and most favourable route to the barren lands, it was preferred, it seems, to those by which I had passed.'

Leaving Fort Reliance on June 7 of the following year, and portaging across to Artillery lake, Back writes as follows:—

'Taking a northerly direction through the woods, we soon got into a succession of swamps, then ascended steep rocks, and subsequently gained a sight of the Ah-hel-dessy, which seems in that part to be navigable, though from the noise it was certain a heavy fall\* was not far distant.

'We passed many sand-hills variegated by the arbutus plant, called by the traders "Sac-a-commis," "Cranbury," or "Crowberry." These hills were generally hemmed in by broken cliffs of red feldspar and barren granite rocks, with here and there thick masses of snow filling up their chasms, or sloping from the lower parts of vertical precipices. A few old tracks of deer were seen.

'Acclivitous rocks intervened between the swamps, and in going over their summits, the Ah-hel-dessy was frequently seen working its rapid course along the base of the mountain range which sometimes assumed the wildest character. The space from the spot where I had left the canoe last year to the first rapid out of Artillery lake was quite open, and immense quantities of ice were floating down the stream.

'The temperature was full 10 degrees colder than at the house; large masses of ice and snow encumbered the banks or borders of the rocks, and the ice on the lake had not decayed nearly so much as was observed at the same season of the year in 1821 at Point lake, more than two degrees to the north.

' . . . . In the evening we reached the bay, and found that the carpenters had just completed the boats . . . . At 3.30 a.m. of June 10, the large boat was

\* Parry's falls.

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dragged about three-quarters of a mile through a half dry swamp, and over some rocks to Artillery lake, where she was placed firmly on runners plated with iron and drawn over the ice by two men and six fine dogs. . . .

'The runners appeared to slide easily, and for half an hour a brisk pace was kept up. By degrees, however, it slackened on account of the badness of the ice, which was literally a bed of angular spikes, of many shapes and sizes, but all so sharp as to make walking a most painful and laborious operation.'

Upon his return journey, after exploring the Back river, Sir George writes as follows :—

'About noon on the 24th (September) we got to the Ah-hel-dessy, where we were greeted with the sight of berries. . . . The descent of this small but abominable river was a succession of running rapids, making portages and lowering down cascades, and much time was occupied in previous examination, without which precaution we dared not stir a yard. Still the rapids increased in number and difficulty, until at last a deep and perpendicular fall\* rushing between mountainous rocks into a vast chasm stopped all further progress. The steersman, unwilling to be arrested even by such obstacles, went some distance farther, but soon returned with an account of more falls and cascades.

'To convey the boat over so rugged and mountainous a country, most of the declivities of which were coated with thin ice, and the whole hidden with snow, so as to render mere walking impossible, and though it was annoying to be forced to leave her, yet as there was no alternative, she was safely hauled up among some willows and secured.

'Each of the crew being laden with a piece weighing 75 pounds, we began our march to the Fort across the mountains now entirely covered with snow four inches deep. The small lakes and swamps were also frozen hard enough to bear a passage across.'

#### PARRY'S FALLS.

'We had not proceeded more than six or seven miles when, observing the spray rising from another fall, we were induced to visit it, and were well consoled for having left the boat where she was.

'From the only point at which the greater part of it was visible, we could distinguish the river coming sharp round a rock, and falling into an upper basin almost concealed by intervening rocks, whence it broke in one vast sheet into a chasm between four and five hundred feet deep, yet in appearance so narrow that we fancied we could almost step across it. Out of this the spray rose in misty columns, several hundred feet above our heads, but as it was impossible to see the main fall from the side on which we were, in the following spring I paid a second visit to it, approaching from the western bank. The road to it which I travelled in snow-shoes, was fatiguing in the extreme, and scarcely less dangerous, for to say nothing of the steep ascents, fissures in the rocks, and deep snow in the valleys, we had sometimes to creep along the narrow shelves of precipices, slippery with the frozen mist that fell on them. But it was a sight which well repaid any risk. My first impression was of a strong resemblance to an iceberg in Smurenvurg Harbour, Spitzbergen. The whole face of the rocks forming the chasm was entirely coated with blue, green and white ice, in thousands of pendent icicles, and there were, moreover, caverns, fissures and overhanging ledges in all imaginable variety of forms, so curious and beautiful as to surpass anything of which I had ever heard or read. The immediate approach was extremely hazardous, nor could we obtain a perfect view of the lower fall, in consequence of the projection of the western cliffs. At the lowest position which we were able to attain we were still more than one hundred feet above the level of the bed of the river be-

\* Harvey falls, 50 feet high.



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neath, and this instead of being narrow enough to step across, as it had seemed from the opposite height, was found to be at least two hundred feet wide.

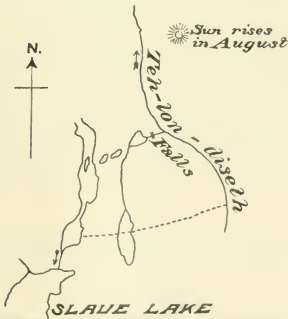
The colour of the water varied from a very light to a very dark green, and the spray, which spread a dimness above, was thrown up in clouds of light gray. Niagara, Wilberforce Falls in Hood's river, the Falls of Kakabikka, near Lake Superior, the Swiss or Italian falls, although they may each "charm the eye with dread," are not to be compared to this for splendor of effect.

It was the most imposing spectacle I had ever witnessed, and as its berg-like appearance brought to mind associations of another scene, I bestowed upon it the name of our celebrated navigator, Sir Edward Parry, and called it "Parry's Falls."\*

Besides the above personal knowledge published by Back, concerning the Ah-hel-de-sy and Artillery lake, he gives us some information gleaned from the Indians, regarding the Thelon river and route to the same.

The following is a copy of an Indian sketch map made for him, illustrating routes from Great Slave lake to Teh-lon-disith.†

**FAC - SIMILE**  
OF  
**INDIAN MAP**  
TAKEN FROM  
**BACK'S BOOK, PAGE 85.**



\* These truly picturesque little falls are worthy of note, but how Back obtained his dimensions, I am at a loss to discover. The total measured height of the falls is eighty-three feet, and width from twenty to fifty feet. Photographs were obtained by me from both banks.

† Thelon river.

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In connection with this subject, Back says, in describing an interview with a party of Slave lake Indians, whose chief was named 'Le camarade de Mandeville,' the information thus collected was made intelligible to me by means of an outline of the north-eastern country, drawn by the Camarade.

'In this sketch the Thlew-ee-chok and Teh-lon were represented as maintaining a nearly parallel direction E. N. E. to the sea, though where that sea was, whether in some of the deep inlets of Hudson bay or as I fervently hoped, more directly north towards Point Turnagain, it was altogether beyond his knowledge to declare.

'In one point alone were they positive and unanimous, and that was, the superiority and many advantages of the Teh-lon over the Thlew-ee-chok. The former was described as being a broad and noble stream, decorated on either bank with tall pine and birch, and flowing in uninterrupted tranquillity to its journey's end. . . .

'They also affirm, agreeing in this respect with the information which had previously been given me at Lake Winnipeg, that the distance between the mouth of the rivers was inconsiderable, and concluded by saying that if the great chief was determined on going to the Thlew-ee-chok.

' . . . "And why," said they, "should the chief wish to go there when the Teh-lon is not only nearer, but affords him so many more advantages, where he will find musk ox, moose, and reindeer, wood, fish and animals wherewith to pass a comfortable winter?"'

In passing through Clinton-Colden lake, Back states that 'east and west it was indented with deep inlets and bays. One of them to the right, presenting a clear horizon, led, as Mawfelly believed, to the Teh-lon.

'Subsequently several Indians who had been there, informed me that by making a portage from the eastern extremity of a deep bay, they got to a small lake and from thence by another portage to a large one; that this discharged itself by a river into the north-east end of a very long but narrow lake, the southern termination of which was about half way between that point and Slave lake.

'To the east they said it was connected by a short line of rapids, with a lake of singular shape, which, by means of a river seventeen miles long, communicated with the Teh-lon at a mean distance from our position of about eighty miles. As to the course of the principal river itself, little seemed to be accurately known, for the Indians never penetrate far, perhaps not more than twenty miles, beyond the part which has just been described. Then it was said to maintain a uniform direction towards the north-east.'

These statements, moreover, corroborated the previous opinions given me of the Teh-lon, which was said to flow through a low marshy tract, connected with an estuary, opening to the sea by a narrow channel, the shores of which were lined by Esquimaux.

Any indication of the existence of the Teh-lon or Thelon river on our old maps has been derived from the above Indian descriptions collected by Back.

DR. JOHN RAE.

During the year 1853, when searching for traces of the ill-fated Franklin expedition, Dr. John Rae added somewhat to our geographical knowledge of Chesterfield inlet, and more especially of Quoich river, which he ascended some distance in the hope of being able to cross to the Back river.

STEWART AND ANDERSON.

Stewart and Anderson, in 1856, retraced much of the ground covered by Back, but beyond the information quoted above, there remained as recently as 1893, an area of over two hundred thousand square miles entirely unknown.

## WARBURTON PIKE.

Hence we read, page 170, of 'The Barren Grounds' by Warburton Pike, 1892 :—  
 'Why has all exploration in the barren grounds ceased? No more is known of the country than was discovered by Franklin and Back sixty years ago in their short summer journeys, and the expeditions sent out in search of the former in the fifties. There are many thousands of square miles on which the foot of white man has never stepped.'

Upon his return journey from the Back river in 1890, Pike obtained the following information from an Indian, known as 'Pierre the Fool,' in regard to the country to the eastward of Clinton-Colden lake :—'He told us that there were fewer lakes in that direction than in any other part of the barren grounds that he had visited, but he was always obliged to take a small canoe with him to cross a big stream running in a southerly direction, three days easy travel from Clinton-Colden lake.

'Once when he had pushed out farther than usual, he had seen smoke in the distance, and came upon a camp that the Esquimaux from Hudson bay had just left; they had been cutting wood for their sleighs in a clump of well grown pines, and Pierre, who shared the dread which every Yellow Knife has of the coast tribes, had been afraid to follow them.' From his own observations, Pike further writes :—'Lockhart river, on leaving Artillery lake, becomes a wild torrent, falling several hundred feet in twenty miles and is quite useless for navigation, so we had to make use of a chain of lakes, eight in number, lying to the south of the stream.

'This is by far the prettiest part of the country that I saw in the north, and it was looking its best under the bright sunshine that continued until we reached the fort. Scattered timber, spruce and birch clothed the sloping banks down to the sandy shores of the lakes; berries of many kinds grew in profusion; the portages were short and down hill; and caribou were walking the ridges and swimming the lakes in every direction. A perfect northern fairyland it was, and it seemed hard to believe that winter and want could ever penetrate here.'

## J. BURR TYRRELL.

No sooner had Pike given expression to his query: 'Why has all exploration in the barren grounds ceased?' than the work was resumed by the Geological Survey Department, and J. Burr Tyrrell, accompanied by the writer, was commissioned to explore the territory to the north-east of Lake Athabasca. This work was carried on during the year 1893 and 1894, and has been fully reported in the Annual Report of Geological Survey of Canada, 1896, so that without quoting extracts, it will suffice to state that the unexplored territory of over two hundred thousand square miles west of Hudson bay, was in those two years reduced by more than one-half, viz., from the valley of the Doobaunt river to the coast of Hudson bay. The country lying to the west of the Doobaunt, and comprising an area of about ninety thousand miles, remained shrouded in mystery.

## OUR JOURNEY OUT.

Arrangements having been completed for our expedition, on January 31, 1900, I was joined by my two assistants, C. C. Fairchild, O.L.S., of Simcoe, Ont., and Archdeacon Lofthouse, formerly of Fort Churchill, Hudson bay, and we proceeded to the west. At Winnipeg we picked up two half-breed voyageurs, named Robert Bear and John Kipling, from the St. Peter's reserve; and as train dogs were reported scarce in the north country, eight of them were also procured here, and shipped to Edmonton, where we ourselves arrived at 11.30 on the night of February 8, in a temperature of 45° below zero.

At Edmonton we were joined by three more of our men, Percy Acres, cook, and Pierre French and Harry Monette, expert Iroquois canoeemen.

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We thus far formed a party of eight in all, with as many dogs.

On account of severe weather and recent heavy snow storms, some difficulty was experienced in securing horse teams for the transport of our outfit to Lac-la-Biche post, one hundred and eighty miles distant to the northward, at the termination of the tote road.

Two men with the dog teams and light sleds, were despatched by themselves, but the rest of our party, accompanied by two horse teams, were unable to get off until February 16. We reached Lac-la-Biche on the evening of the 21st. Here, in order to provide for the transport of our outfit, three additional dog teams were required, and these were procured for me by Mr. Kennedy, the Hudson Bay Company's local agent. We were thus provided with five dog teams in all, one being very poor, having just made a journey of five or six hundred miles from the north, and on the 26th we pulled out, heavily loaded from Lac-la-Biche, and journeyed northward by a winding hilly trail through the woods, a distance of two hundred and fifty-five miles, to Fort McMurray at the junction of the Clearwater and Athabasca rivers.

Thence the course of the latter stream was followed one hundred and seventy-five miles down to Fort Chippewyan on Lake Athabasca. Great difficulty was experienced by the way in procuring food for our many hungry dogs. At one place we were obliged to stop two dogs, whilst an Indian was despatched some distance for the carcasses of two moose which he had cached. At another the carcass of an unfortunate horse was required to sustain our canine steeds, and at another time a dead ox belonging to the Hudson Bay Co. supplied the pressing demand, but as a rule frozen fish, purchased from the Indians at extortionate prices, furnished their bill of fare.

By the time, therefore, that Chippewyan was reached, our dogs were much reduced and fagged, and a stop of four days was necessary to feed and recruit them, to say nothing of men's blistered feet and snow-blind eyes.

One voyageur being required to complete our party, a Chippewyan Indian, known as 'Toura,' and a splendid specimen of physical manhood, was engaged at this place.

Much benefited by the pleasant stop at Chippewyan, where we fell in with many friends, we again moved forward on March 23. On the 26th reached Fort Smith, and on 'All Fools Day,' trooped into Fort Resolution, Great Slave lake, having tramped a distance of six hundred and seventy-six miles from Lac-la-Biche, or eight hundred and fifty-six from Edmonton. Not counting necessary delays, en route, our average daily travel with the dogs from Lac-la-Biche to Resolution amounted to twenty-six miles.

At Fort Resolution we were kindly received by Mr. Gaudette, the Hudson Bay Company's officer in charge at the post, and in his storehouse we found our supplies, amounting in weight to over six thousand pounds, which had been shipped the previous summer. Although you had written to the company requesting that our supplies be forwarded by boat up the lake, such request had not been received by Mr. Gaudette until too late for the performance of the work, and consequently the task of transporting this large amount of stuff now devolved upon us. Three more teams in addition to our own five were with some difficulty procured for the work. Two specially designed long steel shod sleds were constructed, and in order to provide food for the dogs, en route, a fishery was established part way up the lake at White island. Whilst the above preparations were being carried out, the snow on the lake, which had been deep, was rapidly disappearing before the warm sun and April showers, and by the 10th of the month it was thought that the condition of the lake was about at its best for travel.

Accordingly on the morning of the 11th, I despatched a party with light sleds and 3,500 pounds of goods to White island, where they were to deposit three loads, and returning bring back news of the fishery. This news was, unfortunately, not encouraging. A few large 'inconnu,' commonly known as 'conneys' were caught by the nets, when these became entangled by the disruption of the ice in that locality. We were thus dependent for dog food upon what could be carried from Resolution or what

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might by chance be picked up by the way. Accordingly every available pound of dog food at the fort was secured, and the last of our loads set off for White island on April 16 on long sleds, each carrying from nine hundred to one thousand pounds. For the most part the condition of the lake was fairly good for sled travel. The snow had now nearly all melted, leaving ponds of water on the lake, and in places the ice was already becoming 'candled,' making sore footing for both men and dogs. As we proceeded this became serious, and though it was thought a sufficient supply of moose skin dog shoes had been provided, they were cut through so quickly, that our stock became exhausted before the distance up the lake was half covered.

Bags and every available material had to be manufactured into dog shoes in order to enable the poor brutes to keep their feet, for as we advanced the ice became in many places a veritable bed of sharp spikes.

Fortunately we were better provided ourselves with hob-nailed shoes, as nothing less will stand the wear for half a day. Our sleds were also designedly well shod with steel.

Without dwelling further upon the details of this sled journey of two hundred and fifty miles over the ice of Great Slave lake, suffice it to say that the last of our outfit was safely landed on 'Pike's Portage' at the extremity of the lake on May 9, by a lot of starving but faithful dogs. Some had played out altogether and dropped by the way, but the two long sleds drawn by four dogs only, made the latter part of the journey with fifteen hundred pounds each. Were it not for these sleds, which were at first laughed at by the natives, we would never have been able to effect the transport of our outfit so great a distance with but the one base of supplies.

We were now at the point from which our surveys were to commence. Before us lay a twenty-five mile succession of portages to Artillery lake, and this I had hoped to be able to cross by the aid of the dogs. Such was now quite impossible for two very good reasons, viz., that the dogs were played out and we had nothing with which to feed them. Deer hunting parties were at once sent off in different directions, but no deer could be found. And again further transport by the dogs was out of the question, for the reason that the snow had all disappeared from the ground, leaving the portages quite bare. On the lakes the ice was still about seven feet thick, excepting at certain parts where exposed to influence of currents, which were rapidly cutting in-roads, and thinning the ice at such places.

The assistance of our dogs thus being no further available they were sent back in charge of Mr. McKinley, to be cared for at Resolution until our return in the autumn.

Mr. Fairechild, accompanied by Aeres, made a reconnaissance of the portage route to Artillery lake, and marked out the trail for the packers, whilst I proceeded forthwith to make a survey of the most easterly bay of Great Slave lake—named by me 'Charlton harbour.'

## CHARLTON HARBOUR.

This harbour extends in a north-easterly and south-westerly direction, and is about sixteen miles in length by from two to five miles in width. It is connected with McLeod's bay by a narrow but deep channel, less than a mile in width, where the water seldom, if ever, freezes over, there being considerable current. North-east and south-west of the channel, two long and high points of dolomitic limestone stretch out towards each other from the main shores and thus separate the harbour from the outer bay. A convenient way of approach for sleds or small boats from the lake to Old Fort Reliance—which is situated at the head of the harbour close to the mouth of the Lockhart river—is by means of a 700-yard portage, near the base of the north-easterly point, to which I have attached the name of my assistant, 'Fairechild.' Fairchild point, which is about ten miles in length is well wooded with white spruce from six to twelve inches in diameter, and is notable as being the best source of timber in that locality.

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The shores of the harbour on all sides, excepting around Fort Reliance, are bold and rocky, that to the south-east being composed chiefly of pink granite, but sparingly wooded with small spruce and a few Banksian pines. It might be noted here that on Fairchild point a few black poplars were observed, the last seen on our outward journey.

At Pike's portage, which was to be adopted as the initial point of our survey, astronomical as well as magnetic observations were taken with the following results :—

Latitude . . . . .	62°	42'	02.4" N.
Longitude . . . . .	108	44	55
Magnetic Variation . . . . .	37	20	E.
“ Dip. . . . .	..	..	.. N.

## OLD FORT RELIANCE.

At Old Fort Reliance the magnetic variation was ascertained to be 37° 15' east, Back having found it to be 35° 19' east in 1834.

Old Fort Reliance is no more a fort, but a ruin, yet the site is one of the loveliest spots I have ever seen in the north. It was well chosen by Back for the establishment of his winter quarters. Five stone chimneys only now remain of what were 66 years ago three substantial buildings, the bare outlines of which can now be scarcely traced on the ground.

They were situated on a lovely level green terrace about twenty feet above the harbour, and two hundred feet from the shore. The main building which contained three of the great chimneys and five open fire places, measured thirty by fifty feet, and was divided into five rooms with a fireplace in each room.

Two smaller buildings, 18 feet square, and situated a little to one side, appear to have completed the fort.

Back of the buildings the land rises in regular and beautiful terraces to a considerable elevation. These are thinly wooded with young white spruce trees, between which in many places the ground is covered with cranberries and blueberries. Here and there are to be seen the charred remains of large stumps, indicating the comparatively recent destruction of the original forest, as well as offering an explanation for the disappearance of the old fort.

The largest young trees, which showed 34 or 35 years growth, were from four to six inches in diameter two feet from the ground, and were not of stunted appearance.

One of the most striking features of this lovely natural park is the occurrence of numerous broad, winding, well-beaten roadways, leading from nowhere to nowhere.

Upon inspection, not a wheel nor even shoe mark can be detected, but only innumerable tracks of the caribou, occasionally followed by that of a prowling timber wolf.

About one of Back's old stone chimneys, an adventurer known as Buffalo Jones built a small log house three or four years ago. This still remains, being now the property of Messrs. Heslopp and Nagle, of Fort Resolution, and was occupied by my party for several days.

## PARRY FALLS.

Closely associated with the history of this place is that of Lockhart river and its many beautiful cataracts, chief among which is Parry falls, depicted by Back as being the most beautiful in the world. Having read Back's description of them, I had long been looking forward to viewing their marvellous grandeur and beauty, and took occasion to read the description to Mr. Fairchild, who undertook a tramp up the Lockhart in search of deer upon our first arrival. He ascended the river for ten or eleven miles, passing several rapids and falls, but on his return reported that no Parry falls were to be found. Shortly afterwards, accompanied by Messrs. Fairchild and Lofthouse, in making a survey of the river, I renewed the search myself, and at the

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place indicated on Back's map, found Parry falls, and obtained several photographs of them which will speak for themselves in plain ungarbled language.

The fall is certainly a very beautiful little one—something as described by Back, excepting in dimensions, which require to be divided by five in order to be correct.

The total descent of the fall is eighty-three feet, and at the time of our visit was completely bridged over by an ice-bridge, across which we walked, in order to obtain views from both banks, as well as to measure the width of the fall, which at that place was only twenty-five feet.

Besides Parry falls, five others ranging from six to fifty feet in height occur at various points further up the river, but as they are all shown upon my accompanying map, it is not necessary to describe them in further detail, since the Lockhart will never be used as a navigable stream, it having in its length of about twenty-four miles a total fall of six hundred and sixty-eight feet. If not of use for purposes of navigation, however, it may some day prove none the less valuable for the generation of electric power to be utilized in the development of the district, or in conducting traffic through it. As a town site, no place could be more beautifully or advantageously situated than the level park, like terraces, at Fort Reliance.

## PIKE'S PORTAGE.

During the time occupied in surveying Charlton harbour and the Lockhart river, my voyageurs were engaged in transporting our outfit across the 'Pike Portage' route to Artillery lake, a distance of twenty-four miles.

This route first described by Warburton Pike, is by far the best canoe or boat route leading from Great Slave lake to Artillery lake.

It does not appear to have been known to Back in the thirties, when he persistently made three laborious journeys up and down the course of the Lockhart. Back mentions an alternative route by way of a small creek one mile south-easterly from Reliance, but states that this creek was too shallow for canoes, which is quite true.

By adopting Pike's route, advantage is taken of a chain of small lakes—eight in number—which cover more than three-fourths of the twenty-four miles of travel.

For convenience of reference the larger of these lakes have been given the following names in the order of our advance:—1, Harry; 2, French; 3, Acres; 4, Kipling; 5, Burr; and 6, Toura, after the names of our voyageurs.

The only difficult portage on the route is the first in ascending order, viz., that from Charlton harbour to Lake Harry. It is  $3\frac{1}{4}$  miles long, and from end to end has an ascent of 570 feet, besides several ascents and descents on the way. Lake Harry is three miles long and is separated from French lake, which is ten feet lower in elevation, by a portage of four hundred yards.

French lake is over four miles in length, and discharges to the north-eastward into Acres lake, which is six feet lower. A short portage of one hundred yards is necessary between the lakes.

Acres lake, which is of very irregular shape, is the largest of the chain, though its length is only about four miles. It has an elevation of 1,074 feet, and discharges from one of its westerly bays by a stream, which I believe to be the one entering Charlton harbour, about a mile south-easterly from Fort Reliance.

Kipling lake—the fourth link in the chain—discharges into Acres lake with which it is connected by a narrow, winding, sluggish creek, navigable for canoes. It is only two and one half miles in length, but is one of the prettiest lakes of the series, its beautifully wooded shores and sandy beaches sloping down gradually to the water's edge in many places. Thus far the country passed through was found to be fairly well wooded with small white spruce and tamarac; whilst on the first long portage a grove of jack pines—the last seen by us—was passed. Some small white birch trees were also noticed at various points. By May 19 we had our outfit of about three tons weight, in cache at the north end of Kipling lake. The body of the lakes was still covered by ice, but around the shores and for half a mile or so near the inlets and outlets, open water had already formed, and this was causing our voya-

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geurs much care and trouble, for the ice near the edges of the open water, was for some distance treacherous and rotten. Canoes and sleds had to be used alternately in crossing the lakes, and much care and difficulty were often necessary in making the transfer from one conveyance to the other.

From lake to lake, the ground being bare, all goods had of course to be portaged on the men's backs.

Many old Indian camps were to be seen along our route, indicating that it is a much frequented way, but up to this time we had seen no deer. Their tracks were, however, to be seen everywhere, as well as many scattered bones and antlers.

One party of Indians, 'Pierre Fort Smith' and several others, had passed us on their way to Artillery lake, whence they were going to hunt deer, and later in the season musk oxen.

From the north end of Kipling lake, a portage of one thousand yards easterly, took us to a pond which is separated only by a narrow neck from Burr lake, the fifth of the series. This lake is in a straight line not more than twelve miles distant from Old Fort Reliance, with which it is connected by a natural pass having a gradual descent to the westward. It does not afford a favourable canoe route, since it contains few lakes of any size, and too small a stream to be of any service, but as a route for a highway, steam, or electric railway it appears to be the most advantageous, and since the elevation of Burr lake is 1,131 feet, the mean gradient from the lower terrace at Reliance would be fifty feet to the mile.

At the north end of Burr lake there is situated a nice grove of white spruce timber, containing trees of ten and twelve inches diameter. A photograph of this was fortunately obtained, as it proved to be the last timber of any consequence met with before entering the barren lands, excepting some on the west shore of Artillery lake near Timber bay.

The portage from the north end of Burr lake to Toura lake is three-quarters of a mile long, and may be made either in one or two parts, by avoiding or taking advantage of a little lake lying to the east of the straight course. The seventh lake of the chain, which is nearly a mile in length, is reached by a very short portage from Toura lake, and is at an elevation of twelve hundred and eighty-two feet, being at the summit of the divide between Great Slave and Artillery lakes. From it a portage of seven hundred yards to the eastward takes one to the eighth and last lake, which is less than half a mile in length, and one more down hill portage of a quarter of a mile in length lands one at the southern extremity of Artillery lake, so named, though but crudely surveyed, by Sir George Back, after some British artillery men of his party. In addition to the portage route above described, which was followed by our voyageurs, several others were discovered by myself and Mr. Fairchild, and are shown on my accompanying maps, but will not require further description. The district is composed of granite and dolomitic rocky hills, some of which attain elevations of from nine hundred to one thousand feet above the level of Great Slave lake.

The distance from Reliance to the southern extremity of Artillery lake in a straight line is about sixteen miles. The elevation of Artillery lake is 1,188 feet, or 668 feet above Slave lake, which would make a mean gradient of about forty-two feet per mile.

#### ARTILLERY LAKE.

Artillery lake was reached by our outfit on the 26th of May, more than two weeks after it had been first visited by Fairchild and Acres, when exploring and 'brushing' the trail for our voyageurs. Then its ice had been as solid as in winter, showing no signs of disruption or decay, whereas now it was rapidly decomposing, forming what is known as candle-ice, and making much open water along the shores. At camp beside a small grove of scrubby trees a mile and a half up the west shore of the lake, observations were taken of latitude and longitude, as indeed had been done at several other points, but as the results of both astronomical and magnetic observations appear



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on the maps, and will be given elsewhere in tabulated form, they will not always be mentioned in manuscript.

I had cause, however, to congratulate myself for having obtained sights at this place, for the next day I allowed my chronometer to run down, and had only to return a short distance, obtain new sights and redetermine their errors. The first deer met with on our journey were two shot by Mr. Fairchild near this camp, and they formed a most acceptable supply of fresh meat for our party.

In attempting to proceed with our loaded sleds up the lake, we came very near meeting with a serious accident. Although the ice was still of considerable thickness, it had become so 'canded' that in places one could push a pole or foot completely through it, and at one of these bad places, two of our sleds broke through and were only saved by the support of the long canoes which were lashed on top of the loads.

By the exercise of much care, and the occasional use of canoes, instead of sleds, we were able to continue our transport over the ice until June 8, when reaching the most northerly grove of timber on the east shore of the lake, in latitude 63° 04' 10" I decided to go into camp until we might be able to proceed in our canoes. We had met the Indian, 'Pierre Fort Smith,' on the lake, who had not only told us of this advantageous camping place, but also much else of interest in regard to our route and the game of the country. The annexed little map (*see page 114*) is a fac-simile of one drawn by him of Artillery lake and the Thelon river, and is better of the lake than Back's published map.

Thus far with Mr. Fairchild's assistance I had carried on the survey of both shores of the lake, and now though we were unable to proceed further with our loads, we were still able to travel light, and so continue our work until we had nearly completed the survey of the lake, as well as considerable country to the eastward of it. The uncompleted portion at the north end was finished on my return later in the season.

Artillery lake lies in a north-easterly and south-westerly direction, and is fifty-five miles in length by seven miles in width at the widest part which is towards the north end. The southerly end terminates in a long narrow bay, less than half a mile in length, and the superficial area of the lake is about one hundred and ninety square miles. Its shores are bold and high, in some places about two hundred feet above the lake, and for the most part they present a bare, desolate appearance, especially on the easterly shore where few trees of any kind can be seen.

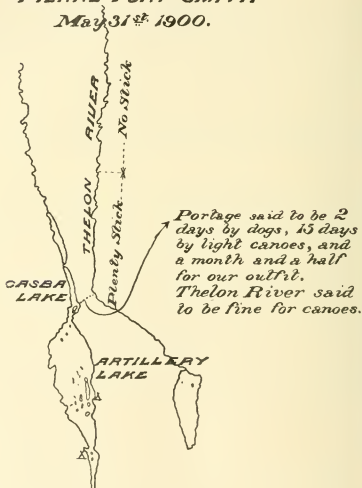
Such small groves as were found are shown on the map, but on the westerly side, about ten miles from the south end, the shore is quite well timbered with small spruce, and they continue northerly, although thinly scattered for a distance of twenty miles, eight miles farther north than the last grove on the east shore. There the woods cease entirely, and beyond the landscape is indeed a picture of desolation, although it produces much grass, mosses and other vegetable life for the support of the numerous bands of caribou which rove its rocky hills. About half way up the lake there is a group of high rocky islands, the largest of which, named 'Crystal island,' lies towards the east main shore, and appears from Back's map to have been taken by him for a part of it.

Its length is about five miles and its width half a mile. It is composed chiefly—as also the smaller islands—of dolomitic limestone with some patches of white quartz conglomerate, and innumerable white quartz stringers everywhere through the limestone. In these stringers in many places were found clusters of small clear quartz crystals, and hence the island's name.

Some growing timber was found on the south end of the island, as well as a large quantity of standing charred trees, making the place a most desirable camping ground. Similar rocks to those of Crystal island are found also on the east shore opposite, and southerly to a point opposite the head of the Lockhart river, where the formation changes to a coarse-grained red granite.

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**SKETCH MAP**  
OF  
**ARTILLERY LAKE AND THELON RIVER**  
MADE BY  
**PIERRE FORT SMITH**  
May 31<sup>st</sup> 1900.



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The west shore near the south end, which is precipitous in places, and attains a height of two hundred feet, is also composed of granite and diorite, together with large quantities of hæmatite ore. Dolomitic and granite are found at many points on the lake, and in some cases contain a considerable amount of iron pyrites.

The easterly shore of the lake is the more regular and unbroken, as well as being nearly in line with the most direct route across the grand divide.

The resources of Artillery lake and vicinity, outside of any mineral wealth it may possess, lie in its fisheries, its furs and meat supplies. In regard to the fisheries, I can testify that its deep cold waters abound with the finest specimens of lake trout as well as whitefish, pike and carp. At one place in about fifteen minutes, with a single spoon hook, one of my men pulled out eighteen fine trout, some of which were brought to camp, strung on a pole and photographed by me. Some of these fish were from sixteen to twenty pounds in weight. In regard to the fish of Artillery lake, I was told a most astonishing story by the Indian, 'Pierre Fort Smith,' and his companion. They affirm that they have frequently seen fish from twenty to thirty feet long in the water, and described them as being of black colour, with long slender horns or feelers. They say that they have never killed one of them—being afraid of them—but that they are frequently seen in the deep waters when crossing the lake. When I smiled at their story with some expression of doubt, they became very indignant and with one accord stoutly declared every word of it to be true.

I offered them 'one hundred skins' if they would capture or kill such a fish for me, but they only said they could not do so, they were too big, and they were afraid of them.

The fur-bearing animals of the district are black bears, timber wolves, carcajous or wolverines, coloured foxes and ermines, although musk oxen are also found at no great distance from Artillery lake, both to the north-east and north-west.

The meat supply of the country, which is abundant, is furnished chiefly by the caribou.

Water fowls are not numerous as the rocky shores and deep water are not such as to provide feed for water fowls, but ptarmigan are quite plentiful on the land where they find abundant varieties of berries which are found everywhere.

## HEIGHT OF LAND.

During the interval of our encampment in the last woods on the east shore of Artillery lake, advantage was taken of the opportunity for making a track survey across country towards the height of land, which was thought to be no very great distance to the eastward.

On June 11, therefore, accompanied by Mr. Fairchild and three voyageurs, I proceeded by canoe, north-easterly along the shore through a channel of open water for a distance of twenty miles where a deep land-locked bay was discovered, which appeared to be the most easterly arm of the lake, and thus to afford the most advantageous point from which to start on our overland journey.

From the east shore of this bay on the following morning our tramp was commenced, and a mean astronomical course of north  $80^{\circ}$  east followed.

The character of the country passed over was that of bare rocky hills, with occasional high sand ridges, and with grassy valleys between them.

The rocks were observed to be granites and gneisses, and many deer were everywhere to be seen moving northward. The slope of the land was found to be to the westward for a distance of seven miles, when suddenly from the summit of a hill—the elevation of which was 1,488 feet—a large lake, one hundred and fifty feet below us, was discovered. It appeared to extend for miles to the northward, having from our elevation a water horizon in that direction. It also stretched for a considerable distance towards the south, and as its surface was now only partially covered by ice, our further progress to the eastward was most effectually obstructed.

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From our elevation a fine view of the lake and surrounding country was obtained, and many conspicuous white sand hills and ridges were visible in various parts. As to the direction of discharge from this lake, we were at first unable to determine the question, but upon surveying the west shore, a distance of ten miles to the southern extremity and finding no outlet there, but several small inlets, and subsequently on completing the survey of the north-east shore of Artillery lake, and finding no stream which could form the outlet of so large a lake, it became evident that the outlet must be to the north or eastward, and that we had consequently crossed the Grand divide at the distance of about seven miles from Artillery lake—the elevation being, as already stated, 1,488 feet. This new discovery was named by me 'Douglas lake,' after my own little boy.

In returning to camp, Mr. Fairchild and the men had some difficulty in getting the canoe back along the shore, as the ice had drifted in tight upon some of the points. As for myself, I walked all the way back to camp across the country—a distance of about twenty-five miles—in order to explore the district.

Many small lakes and ponds were met with, and the rocks were observed to be granite and gneiss in most places.

Glacial striæ were observed on the rocks with a strike of north 88° east (astronomical).

Little else of interest was to be noted, beyond the fact that I had a rough, tire-some tramp, and reached camp in good time to save myself from getting a thorough soaking. Mr. Fairchild and party did not reach camp with the canoe until 11.30 p.m., some two hours later than myself.

Preparatory to proceeding on our journey with the canoes, a small 'cache' of provisions and such other articles as would not be necessary on the Barren lands, such as our sheet iron stove, was placed and securely fastened high up between two small trees, from which the branches and bark were then removed, so that the trees might be smooth and as difficult for carcajous to climb as they could be made.

The carcajou, it may be mentioned, is one of the most troublesome enemies to the Indian or the hunter. It is almost impossible to make anything secure from the reach of this robber brute. What he cannot eat he will destroy, or carry away and hide, and as he is not only very powerful and cunning, but can climb trees, or swim in the water, he is indeed a formidable enemy. Notwithstanding our carefully built 'cache' my Indians said the carcajou would rob it, so as a last resort, I nailed a lot of great strong fish hooks upon the barked trees, and thus left it to take its chances of safety. On the afternoon of June 18, the lake ice being off shore sufficiently, we loaded our entire outfit into the canoes for the first time, and with some difficulty worked our way along shore to the north-eastward. At certain prominent points where the ice was close in upon the shore we had to make portages over the ice, which was now none too strong for such work.

However, on the morning of the 21st we reached the head of Artillery lake and entered the mouth of 'Casba' river, a Chippewyan Indian name, the equivalent of White Partridge river. This river which is only about ten miles long, discharges the waters of Aylmer, Clinton-Colden and Casba lakes, and has a total fall of thirty-two feet. Towards its upper end are three rapids, necessitating, on the upward trip, three portages of 250, 250 and 400 yards respectively. On the down trip, the two upper rapids may be run by canoes, and only the lower 250-yard portage made where there is a fall of 15 feet.

Just above the third rapid Casba lake is reached. It is about 15 miles long, by from two to three miles wide, excepting at the south end where a deep bay extends towards the north-west for a distance of nearly four miles.

As far as this bay we were accompanied by 'Pierre Fort Smith' and his friends, who in that direction were now setting off on a musk ox hunt.

Casba lake was found to be comparatively free from ice, and this was an agreeable surprise to us since we had left so much ice to the south of us.

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Having had the misfortune to lose the spinner of my canoe log on our second day out, I found myself seriously handicapped for want of a measuring instrument. Being wind-bound for half a day, however, I got to work and out of an aluminum fry-pan, manufactured a new spinner which proved to be quite as good as the one I had lost.

Casba lake is connected with Clinton-Colden by only a few hundred yards of current—nothing in the shape of a rapid or fall—and on entering this latter lake we saw the last of the ice on our outward journey. For three miles on Clinton-Colden lake we sailed in a north-easterly direction until we reached the entrance to a deep bay, in the mouth of which, as marked on the Indian maps made both for Back and myself, is a small island. Into this bay, which extends in a south-easterly direction, we turned our canoes and paddled a distance of only three and a half miles, when we found ourselves at its head, and, as we believed, at the commencement of the portage route to the 'Thelon' as described by Back. As it was Saturday evening when we reached this place, 'Sunday camp' was pitched, and the next day a reconnaissance made to the country to the eastward.

A portage of only 100 yards took us to a little lake about one mile long at the east end of which the height of land was crossed; at this point the elevation being only 1,234 feet above the sea.

At the portages we discovered some very old moss-grown fragments of tepee poles, proving that at some time the route had been travelled by Indians.

Since leaving the cache in Artillery lake, we had not seen a growing tree of any description other than a few ground willows. Moss and heather formed the only fuel supply of the country, and with these we boiled our tea, and did our necessary cooking.

The weather was at this time fine and pleasantly warm, ranging from 50° to 70° in the shade, and the mosquitos were out in full force.

The character of the country was much less broken and rugged than about Artillery lake, its surface more level and containing few conspicuous elevations. The most notable perhaps from the height of land portage is a small conical butte bearing south 42° west by compass, and is probably the same one mentioned by Pike as a 'leading mark' to the Casba river.

## HEIGHT OF LAND LAKES.

After crossing the divide, and within a mile and one-half therefrom, we entered a lake bearing away towards the south-east. This lake was named Lac Deville, in honour of our worthy surveyor general. It has an elevation of 1,206 feet, and was found to be about eight miles in length.

From the south-easterly extremity it discharges through two short rapids, when two portages of one hundred and four hundred yards respectively are necessary, into a second lake of four feet lower elevation. This lake I have taken the liberty of naming Smart lake, and through the north end of it we passed for a distance of nine miles. To the south, however, extended a deep bay into which we had no time to enter. This in all probability leads to the main body of the lake extending many miles to the south, as indicated on Back's Indian map. Smart lake outlets to the north-east by means of a rapid half a mile long, and a mile or two more of current, which enters the south arm of Sifton lake—so named in honour of the Minister of the Interior. Sifton lake has an elevation of 1,177 feet, and is of very irregular form, being composed of four large arms, one extending to the south, two to the north, and one to the east and south-east. Judging from the description this is the second large lake shown on Back's Indian map of the route of the Thelon, and such being the case our route lay by way of its eastern arm.

Whilst sailing northward into Sifton lake we encountered a gale which drove us ashore at the focus of the four arms. Thus finding a little leisure time thrust upon us, Mr. Fairchild and I, providing ourselves with compasses and field glasses, made

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an exploratory tramp of a few miles. The season had now advanced to June 27, and at such time in our latitude ( $63^{\circ} 44'$ ) we had no darkness, although the sun dipped below the horizon for a short time. The hours of night were, therefore, as suitable for travel as those of the day, and hence it was 10 p.m. when, scanning the valleys and hill-sides with my powerful stereoscopic field glasses, I observed a band of musk oxen feeding a mile or more to the northward. Fifteen of them were counted in all, and this was a genuine surprise, since we had not expected to see any of these animals for some time to come. They were none the less welcome, for our camp was much in need of fresh meat, and stimulated by this knowledge we procured two rifles from camp and set off in one of the canoes with two Indians, on a midnight hunt. The lake had now become quite calm, and the northern sky a glow of lurid light, making the scene a most enchanting picture, such as can only be seen within the shadow of the Arctic. For three miles our light canoe glided over the glassy surface of the lake in perfect silence, excepting for the faint ripple of the water against its sides, until when near the shore there suddenly appeared over the adjoining ridge, the huge black forms of nine musk oxen.

Even our breathing was now almost stifled until we were able to gain the shore and conceal ourselves from view behind the steep bank of the lake.

After hauling out the canoe upon a sand beach and carefully examining our rifles, we made the ascent of the bank. There we lay for some minutes in silent admiration within sixty yards of the foremost brute, in order to regain breath and steady our nerves, which being accomplished, and the two largest bulls selected, at a given word, we both fired.

They were all taken completely by surprise and at once stricken with panic, and yet they had not yet located their source of danger, and knew not which way to flee. The succeeding ten minutes were assuredly most interesting around 'Musk Ox hill.'

Although our rifles were of the most modern and very powerful, one 'soft nose' was by no means sufficient to bring the bulls to earth. We had to spring to our feet, and defend ourselves from the charge of several of the infuriated band, which was, however, soon despatched before our deadly missiles. One of the large bulls killed was found, upon examination to carry six mortal wounds, and three holes through his heart, all of which he had received before falling. Such was found to be the tenacity of these noble beasts.

A young wounded musk ox which charged upon one of my men, and made matters decidedly lively for a time, was photographed by me before he fell at 1 o'clock, a.m. He had previously been snapped by Mr. Fairchild, as the brute was charging upon him, but the light was not sufficient at that hour for an instantaneous photograph, and nothing resulted.

The whole night had passed without thought of sleep, but we had had a successful hunt, and were now well stocked with fresh meat.

On the summit of Musk Ox hill—seventy feet in height—a great cairn of rocks was built, and the geographical position of the spot determined.

Its latitude was found to be  $63^{\circ} 44' 42''$ , and longitude  $108^{\circ} 17' 11''$ .

The combined length of the south and east arms of Sifton lake by our course was found to be eighteen miles. How far the two northern arms extend, I cannot say, more than that they had water horizons from our points of view.

It is worth noting that at the head of a small bay about one mile east of Musk Ox hill, a few small scrubby spruce trees were observed. They were the first seen since leaving Artillery lake, but were too small to be of much interest.

On a small island in the south-eastern arm of the lake we made our second cache of provisions, to be picked up on our return journey. On this occasion, having no trees, our provisions were merely placed in waterproof bags and covered over with stones, the isolation of the little island being relied upon chiefly for security. On this island some little local magnetic variation was observed—there being a difference of  $3^{\circ}$  between its two sides not one hundred yards apart.

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From Sifton lake, a succession of small lakes and strong currents lead us eight or nine miles to the south-east, bringing us back to the latitude of Smart and Casba lakes.

Thence we turned north-eastward and eastward, passing through several small lakes having irregular and deeply indented shores.

The elevation of the upper of these lakes was ascertained to be about 1,190 feet, and the next ten feet lower.

Lac-du-Bois, so named from the occurrence on its shores of a few thinly scattered spruce trees, has an elevation of 1,148 feet.

On July 1 the water on these lakes was found to have a temperature at the surface of 60°, that of the air at the same time being as high as 72°, which to us felt excessively warm.

The above three lakes are connected by two heavy rapids of ten and thirty feet fall respectively.

At the upper one where a single tree was found, the portage, which is best made on the north side of the stream, is five hundred yards in length. At the lower rapid, though the fall is greater the portage is but four hundred yards long, and is on the south side of the stream.

Lac-du-Bois may be entered by either of the channels, but the southerly is the course of the main stream and contains a strong current.

It discharges by means of a wild rapid of 45 feet fall, when a portage of seven-eighths of a mile is necessary on the south-west side of the river.

Photos were taken of these rapids, one of which at Sta. 321 appears amongst the other photographs at the end of this report, and is numbered 35.

## HANBURY RIVER.

At the foot of this rapid, a little lake two miles long was entered, and at its south end we found the discharging stream, which hereafter assumed more the character of a river, and to it I have attached the name of 'Hanbury,' after David T. Hanbury, the first white man to ascend it.

For about one mile and a half from the lake, the river trends nearly south and consists of one long rapid, falling in that distance about 50 feet. About two-thirds of the rapid may be run by canoe, but the remaining third is too rough and has to be portaged.

At the foot of this long rapid, the river bends to the north-east, and without describing its course in detail, continues in that general direction for about 50 miles, passing through four small lakes and into a fifth, which has been named 'Sandy lake,' because of the very remarkable and high white sand hills to the north of it, and its white sand shores and bottom. The elevation of Sandy lake is 940 feet, its length about four miles, and width less than one mile. Its waters are very shallow and full of sand bars. The general character of the river thus far afforded a fine canoe route, the current ranging from one to five miles an hour, with a mean velocity of probably three and a half miles. Just before entering Sandy lake, it turns sharply towards the south-east and maintains that general direction to its junction with the 'Tison.'

About a mile below Sandy lake, the wildest section of Hanbury river commences. It begins with a beautiful fall of 50 feet, which I have named Macdonald falls. Thence for three miles down stream the river rushes through a narrow deep chasm, which I have named Dickson canyon, and falls a distance of over two hundred feet.

The scenery on this canyon is by far the wildest and grandest met with on our journey, not even excepting Parry falls, and in this assertion I think the accompanying photograph will bear me out.

If, therefore, Sir George Back's opinion of the magnificence of Parry falls is worth anything, what must be the grandeur of the Dickson canyon!

At Macdonald falls a portage of five hundred yards is necessary, and is best made on the left or east side. At the canyon a two-mile portage is necessary, and is best

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made on the right or west side. About one mile below the canyon another fall of sixty feet occurs. This one I have named Ford falls, and it was passed by making a half mile portage on the right bank.

A much shorter portage would have sufficed had we been able to descend the river bank when the falls were passed, but this was not possible on account of the banks being high precipitous walls of sandstone.

At the head of the canyon the rock formation was observed to be gneiss, having a strike nearly due north (astronomical) and a dip of  $75^{\circ}$  towards the west.

Towards the foot of the canyon the formation changes to a soft, white coarse-grained sandstone, into which towards the bed of the stream are many large well-rounded 'pot holes.'

With the change of rock formation a well marked change in the character of the country and its vegetation was also noted.

About the many lakes, forming the head waters of the Hanbury river, the country was of a very barren appearance, with scarcely a growing tree until Lac-du-Bois was reached. Thence to the canyon, occasional groves of small spruce trees had been met with along the river banks, but below the canyon the country assumed a more verdant appearance. Broad, grassy low lands, affording luxuriant feeding grounds for musk oxen, began to make their appearance, whilst the occurrence of trees became more common. Many new variations of flowering plants were also collected below the canyon for the first time.

Ten miles below the canyon, another beautiful fall of 60 feet occurs, and this I have named Helen falls. A portage of 500 yards is necessary here, and a short distance below another fall of ten feet, and portage of 70 yards complete the list on the Hanbury river.

About eight miles more of fine smooth river, took us to the forks or junction with the 'Thelon.'

The Hanbury river and upper lakes as a whole, form an excellent canoe route from Clinton-Colden lake across the grand divide and down to the Thelon river. The whole distance across our winding route measured 165 miles, or in a straight course between the extreme points determined by astronomical observations, 87 miles.

From Fort Reliance to the junction of Hanbury and Thelon rivers, the straight line distance is 150 miles, and by our route, 280 miles. The two extreme points are almost of exactly the same elevation, that of Great Slave lake being 520 feet, and that of the junction of the rivers being 530 feet, as nearly as could be determined from my barometric readings.

The intervening country is composed of bare rocky hills, and intervening stony low lands and lakes of great variety of form and size. Nothing of a mountainous character was found in the 'divide' country, and the greatest elevation to be crossed was the height of land, distant 115 miles from Great Slave lake and 714 feet above it.

Between the height of land and the Thelon river there are in all fifteen portages, aggregating a total length of five and three-quarter miles, the longest one being two miles, the shortest fifty yards, and the average for the whole, 676 yards.

Besides these there are between Great Slave lake and the height of land, twelve portages, making an aggregate of six miles, the longest being three and a quarter miles and the shortest 100 yards.

The total number of portages, therefore, between Great Slave lake and the Thelon river is twenty-seven, and their total length eleven and three-quarter miles.

In regard to game on the Hanbury river and headwater lakes, comparatively little was met with, excepting about twenty musk oxen and a few broods of young geese.

The deer had all preceded us to the northward, only an occasional straggler, which had been unable to keep up with the herd remaining.



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## THELON RIVER.

This fine stream was reached by us on the morning of July 7, about mid-summer. No snow or ice was any where to be seen, and the river had apparently fallen to somewhere near low water mark.

Opposite the first grove of spruce, about two miles below the junction of the Hanbury river, where we made camp, some measurements of the Thelon were made, from which the volume of flow at the time was found to be over 50,000 cubic feet per second. The width of the stream measured 1,227 feet, depth of channel five feet, and velocity three and one-third miles an hour. These measurements being taken near the forks, show a less depth but greater width than exists at most parts.

Eight miles farther down stream soundings were taken, showing a depth of fourteen feet in mid-channel. At this point well grown spruce trees were plentiful on both banks.

About twelve miles below the forks the channel becomes greatly contracted, and when descending the river has the appearance from a distance, of being quite obstructed by bluffs of sandstone, 400 feet in height. Upon nearer approach, however, a gap is observed through which the river passes without falls or rapids, contrary to one's expectations. The 'Gap' being passed the river at once widens out beyond its usual width, and is confined by low sandy banks. Three miles below the 'Gap' the stream is divided during high water, by a large low island, which I have named 'Grassy island,' because of the rank growth of grass covering it, upon which musk oxen were observed to be feeding. At times of low water the western channel is almost or entirely dry. Soundings at several places showed eleven and twelve feet of water in the channel, but at other places sand bars were found to exist where the water was not more than three feet in depth.

About thirty and thirty-two miles below the forks, two slight rapids occur where ridges of rock project into the stream, but they are so slight as not to seriously interfere with navigation of the river, either by canoes or large river boats.

Here, and for many miles below, the Thelon is a really fine and beautiful river, having grassy banks—well wooded in places by spruce trees—some of which measured fifteen inches in diameter.

## GAME, &amp;c.

As we glided quickly and quietly down the river, one of the most interesting features met with was the occurrence of numerous bands of musk oxen feeding upon the luxuriant grass or sleeping on the river bank. Attempts were made to obtain photographs of some of these noble brutes, but such were not very successful, for two reasons, first, because of the weariness of the animals, and second, because of the weariness of the photographers.

It was observed that when bands of cows with their young were met with, they were usually very timid and fled at first approach of danger, but in the case of straggling bulls which were frequently seen, they were much more fearless and allowed us to approach as closely as prudence and their defiant attitudes would permit. On one occasion, when Mr. Fairchild climbed the river bank in order to photograph a fine specimen, he had no sooner snapped his camera and turned his back, than the brute charged and followed him to the bank. He was at once covered by our rifles, but as Fairchild stepped safely into his canoe no shots were fired. Indeed, day after day we passed numbers of musk oxen, without molesting them in any way other than trying to photograph them. A notable fact in regard to the musk oxen was that every animal seen, with but one exception, was on the north side of the Thelon, or on islands in the river. On one occasion when three musk oxen were met with upon an island, they immediately plunged into the water and swam rapidly to the north shore, after gaining which they could be seen galloping across the plains for miles.

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Besides the musk oxen, the Thelon was evidently frequented on both sides by great numbers of caribou, as their tracks were everywhere to be seen, though few of the deer were met with until the lower stretches of the river were reached, their northward migration having preceded us.

Many broods of geese were also observed along the low grassy banks of the Thelon. They were of small gray species, with black necks and heads and white bands around the latter. Later in the season great numbers of moulting geese were met with, and thirty or forty of them knocked over with sticks for supplying our kettles.

Ducks and ptarmigan were also met with, though not in great numbers, whilst the spruce woods were enlivened by the songs of singing birds, notably American robins.

Bear tracks were twice observed on the banks of the Thelon, and on the return journey Mr. Fairchild was fortunate enough to fall in with and slay Mr. Bruin, after an interesting scrimmage. It was not a black bear, but a small silvery gray, or doubtless the barren land grizzly, as reported by Sir John Franklin to have been found by him north of Great Slave lake. Unfortunately, the interesting hide was lost in a canoe accident the day after it was procured.

Upon two occasions moose antlers were found imbedded in the sand of the river bank, and this is an interesting fact, proving the existence of the animals somewhere on the river, possibly higher up, as the antlers might have been carried down by the spring ice. This discovery proves the truth of the report made by the Indians to Sir George Back in 1834, regarding the game on the Thelon, as well as assisting in identifying this river valley as the site of the early and remote but highly-favoured Indian settlement so well described but vaguely located by Samuel Hearne.

In support of Hearne's story, and my belief that his reference was to the valley of the Thelon, it may be noted that some very old choppings were observed, as well as the decayed moss-grown remains of some very old camps, whilst scarcely any recent signs of habitation exist.

The wooded, or partially wooded, banks of the Thelon, extend for a distance of about one hundred and seventy miles below the forks of the Hanbury. This distance is not to be understood as a continuous stretch of timber, but over that distance many fine spruce groves, as well as more or less continuous thinly-scattered trees are found. The largest trees measured from twelve to fifteen inches in diameter, but the average diameter would be about six inches.

The dimensions of the Thelon are noted from place to place where taken upon the map, but the following may be assumed as approximate averages for the measurements of the river from the confluence of the Hanbury to that of the Doobaunt, a distance of two hundred and twenty-four miles:—Width 250 yards, depth 6 feet, current 3 miles per hour.

The depth of channel in most places measured from 10 to 14 feet, but in a few places sand bars were observed where there were not over three feet of water. Over the entire length of the above stretch of river not a single rapid, worthy of the name, exists. At several points very swift currents were met with, but nothing too heavy to run either down or up with our canoes, for in ascending the river—having a strong, fair breeze—we sailed up through the worst places.

#### MEETING ESKIMOS.

About twenty miles below the last woods on the Thelon, some conspicuous land marks, evidently recently erected by natives, were observed on a high point of the main shore as well as on an island opposite to it. Here the river made a sharp bend to the eastward, and upon following it we noticed the whole atmosphere permeated by an abominable stench, the cause of which was soon explained by the occurrence of the putrifying carcasses of hundreds of dead deer, strewn thickly along both shores for a mile or more. The cause of this unwonted slaughter was not very apparent, but it

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was thought at first that the poor brutes might have been caught by the spring ice floe and drowned. The subsequent discovery that a few of them were carved and deprived of their choice parts, created the suspicion that it was the work of natives, and the belief was strengthened by the discovery of an Eskimo encampment at the lower end of the string of carcases. Upon going ashore I made inquiries as to the cause of the fearful slaughter of deer, and was told that it was due to the spring ice, the truth of which, however, I am inclined to doubt.

The encampment consisted of three or four lodges, and thirty-three souls in all, chief amongst whom was an old coast Eskimo, named 'Ping-n-wa-look,' commonly known by the traders at Fort Churchill as 'Cheesecloth.' With him, as well as with one or two others our archdeacon was acquainted, and one of them had met me in 1893, so we found ourselves amongst warm friends.

Suspecting that we would be in need of more mooseasins on our return journey, I took occasion to order as many pairs as could be made by these people against our coming, and after distributing a few presents of tobacco and ammunition, and taking their photographs, we pushed on down stream a further distance of about twenty-five miles, when a small lake was reached. Upon sailing into it we were suddenly overtaken by a severe gale which obliged us to put to shore and seek a friendly harbour, which we happily found in the nick of time; for we had no sooner got ashore than the surface of the lake was a sheet of foam. Nor did the gale pass as quickly as it had come, but continued the next day and the next. Although we were now beyond the limits of the growing timber we were happily not without fuel, for the little bay in which we had found refuge was filled with drift wood, and knowing such a commodity must soon become scarce, advantage was taken of our enforced detention by baking up a lot of flour, as well as obtaining a set of observations for the determination of our position.

From such determination as well as from my survey, I found ourselves to be no great distance from the confluence of the Doobant river, where we had first seen drift wood in 1893, and deeming it inexpedient that our whole party should proceed farther to Hudson bay, over a route which I had already half surveyed, I decided to divide our party here, sending Mr. Fairchild, accompanied by Archdeacon Lofthouse, to complete the survey of Aberdeen, Schultz and Baker lakes, and to resurvey the whole of Chesterfield inlet, whilst I should return up the Thelon and devote my personal attention to the upper part of the river and the divide country.

Acting upon this decision, I prepared the following instructions and handed them to Mr. Fairchild:—

## INSTRUCTIONS TO C. C. FAIRCHILD, C.E.

July 13, 1900.

C. C. FAIRCHILD, C.E.,

Slave Lake, Chesterfield Inlet Expedition.

DEAR SIR,—Since in the best interests of the exploratory work we have on hand, it seems advisable that henceforth our party should be divided. I hereby transfer to your charge that section of our work extending from the mouth of the Thelon river at Aberdeen lake to Hudson bay.

You will take with you two of our canoes and four men as voyageurs, viz.:—Monette, French, Acres and Kipling. Mr. Lofthouse will also accompany you as far as Hudson bay and assist you with micrometer and other work. He will probably leave you at the coast, but before he does so you will obtain from him his meteorological record and instruments, as well as any natural history specimens he may have, and carefully preserve the same for me.

From the time of his separation from your party you will endeavour to continue until the conclusion of your work the meteorological records with as much regularity as possible.

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For the performance of your survey, I commit to your charge the following instruments, viz. :—

1 dip circle, 1 solar compass with tripod, 1 prismatic compass, 1 micrometer telescope, 1 pair of field glasses, 1 canoe log, 1 chronometer, No. 0350, and 1 aneroid. And as I am personally responsible to the 'department' for these instruments, I request that you take every reasonable care of them.

Your method of survey will be as follows :—When practicable your distances will be measured by the canoe log, and your bearings with the prismatic compass. As frequently as possible you will ascertain the magnetic variation by means of your solar, and also latitude and time observations by means of the dip circle. With the same instrument, as frequently as practicable, you will also determine the 'dip' and total force. In Chesterfield inlet where the currents may be too swift or variable to admit of the advantageous use of the log, you will measure your distances by means of the micrometer and discs, which in order that the graduation of the scale may correspond to tenths of a mile may be set at a distance of 18·36 feet centres.

With a view to solving the problem of navigation, you will as often as time will permit, ascertain the depths of lakes, rivers and the inlet. As portions of Aberdeen, Schultz and Baker lakes were surveyed by me in 1893, and maps of such works are submitted to you herewith, you will devote your attention chiefly to the unsurveyed shores, whilst in the Chesterfield inlet the whole requires to be surveyed if time permits.

For the support of your party you will have seven weeks provisions to take you to the bay and back to the Hanbury river or west branch of the Thelon, from which point to Fort Reliance you will have ample supplies in the four caches along our route, the location of which you will know. In addition to the above supplies you will take two rifles and 300 rounds of ammunition, besides two fish nets and hooks for the purpose of providing your camp with fresh meat and fish.

It is probable that you may reach Hudson bay by the 25th of this month, and if so you will be able to commence your return journey within a day or two. In any case do not leave the coast later than August 1, as it is necessary that you shall reach Fort Reliance by September 15, in order to meet the steamboat which I have engaged to take you and party to Fort Smith. At Reliance or Resolution you will likely receive official instructions addressed to me. If so, you may open and read them and act in accordance with the same.

The cost of transport of our party and outfit, including dogs, to Fort Smith, was agreed upon at (\$100), one hundred dollars. Keep of dogs was to be seven skins each and four nets. These, and any other accounts of our party, you will please certify in my name. I will arrange for the payment of your party at Winnipeg, and in the meantime you will be able to obtain what goods or cash you may require from any of the officers of the Hudson Bay Company.

Such of our goods as were left in cache at Resolution and elsewhere, you will please take out with you or ship to my address at Hamilton, depending upon your facilities for transport. You will also be governed in this regard by instructions you may receive from Ottawa. Herewith I inclose a note addressed to the officers of the Hudson Bay Company, instructing them to supply you with what goods or cash you may require and to charge the same to my account. Please have all accounts made out in triplicate and retain one copy for my use in making a final settlement of accounts.

In regard to your survey of Chesterfield inlet it is desirable that you should ascertain the range of the tides at various dates and localities, also the direction and rates of tidal currents, the depth of water and nature of bottom at places suitable for anchorage, as these are questions which affect navigation.

Requisitions for railway tickets for yourself and party will be supplied you at Edmonton.

I have the honour to be,

Your obedient servant,

J. W. TYRRELL, *D.L.S.*

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In response to these instructions Mr. Fairchild assumed charge of the eastern section of our work, and carried it through most successfully.

The following is his own report :—

## MR. C. C. FAIRCHILD'S REPORT.

CHIPPEWYAN, November 12, 1900.

J. W. TYRRELL, D.L.S., &c.

Slave Lake, Chesterfield Expedition.

DEAR SIR,—Acting under instructions from you, bearing date of July 13, 1900, I beg leave to report as follows :—

I proceeded from our point of separation with the survey, according to instructions, as far as Hudson bay, where I arrived on July 31, and returning completed the survey on the inlet on August 4.

Owing to the high winds prevailing during the trip, I was unable to make such headway as would warrant a micrometer survey of the inlet, but I tied the traverses of north and south shores together, and also took observations for time and latitude as often as possible.

The magnetic variation on Chesterfield inlet I found very erratic or variable, and no doubt any difficulty in plotting the survey will be due chiefly to this fact.

I was unable, owing to the short time at my disposal to make anything but a cursory examination of the general depths of the water traversed, but I took soundings enough to satisfy myself that vessels drawing 10 feet of water would have no difficulty in travelling from Hudson bay to the west end of Baker lake. Here boat navigation must end as far as the river between Schultz and Baker lakes is concerned, owing to rapids at either end of the river that would in low water not permit of the passage of any craft larger than a York boat.

The south shore of Aberdeen lake we found generally low sandy soil, with a few rocky ridges. The shore was strewn with driftwood for about 30 miles from the west end of the lake ; beyond this point not a vestige of driftwood was seen, excepting of willow, which grows along the whole route traversed.

The south shore of Baker lake is also generally low and sandy as far as the point about 20 miles from the east end ; here the contour plunges suddenly into bold rocky ridges, similar to the shores of Chesterfield inlet.

Chesterfield inlet in the main channel exceeded five fathoms in depth at all points tried, and soundings were only taken when I could see the bottom, which was plainly visible at 30 feet and even more.

Some difficulty would be experienced at the west end of Baker lake to find a suitable landing place for a vessel of any size, owing to the prevalence of sand bars.

During my return trip I succeeded in killing a bear, which I believe was of the species spoken of by Richardson as the barren land grizzly ; however, I do not believe that they abound in any numbers, as we saw only one other track during the entire trip.

I regret exceedingly to have to report that while I regard the trip as highly successful inasfar as I covered all the ground laid out, I had a canoe accident on the Thelon river on my return trip. My canoe was capsized in about 24 feet of water, and while no lives were lost, the solar compass, prismatic compass and camera could not be recovered.

The plans and field notes, which I transmit to you herewith, will give you the information gathered during the trip.

I have the honour to be,  
Your obedient servant,

C. C. FAIRCHILD.

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## UPPER THELON.

On the morning of July 16, the gale having subsided sufficiently to admit of travel, Mr. Fairchild, with two canoes and party of five, set off for Hudson bay, whilst I, with the one remaining canoe and two men returned up the Thelon, with the intention of exploring the upper part of the river, and possibly getting through to Lake Athabasca, in which case I might be able to catch the last Hudson Bay Company steamer going up to the landing, and get out somewhat earlier than Mr. Fairchild. However, this was all uncertain, as it was impossible for me to know what I should be able to do in these regards. At 'Ping-a-wa-look's' camp on our way up stream, I procured the few moccasins they had for us, and they were much needed before we got out of the country, for as my men tracked the canoe up stream, the sharp rocks and stones over which they had to walk, cut through two or three pairs of shoes a day.

On July 23, as we were working our way up stream, we overtook a large band of caribou moving southward, and we were highly pleased to meet them, since we were quite out of meat. Several were shot, and a good supply of venison taken along with us, to be dried at the earliest opportunity.

The weather, which had set in bad about the middle of the month, continued so for two weeks, causing us some delay, and a more unpleasant trip up the river than we would otherwise have had.

In passing some of our former camping places, it was observed that the water of the river had fallen about two feet from its level of two weeks previously.

On the 28th, we reached our old camp at the Forks and there remained for a day or two in order to get a rate for my chronometer as well as to dry our meat. These objects having been accomplished on the last day of July, I turned my attention to the upper portion of the Thelon, which was found from the forks up to be obstructed in several places by shallow rapids. The general trend of this part of the river is southerly, and its banks which are more thinly wooded than farther north are comparatively low and sandy with grassy flats at some places—particularly towards Eyeberry lake—about fifty miles up. This lake was so named because of the abundance of eye-berries which we found on its shores and islands. About ten miles above or south of Eyeberry lake, a small river fifty yards wide was observed emptying into the Thelon, and south of it the river banks became suddenly much higher, and the river channel more confined and tortuous.

Spruce and tamarac groves were also becoming more frequent, though still scanty enough. The average elevation of land was from 50 to 80 feet above the river, which in width varied from 100 to 250 yards, and in depth from two to six feet.

Its mean velocity was about three and one-half miles per hour. Flood water marks here as well as on the lower part of the river were observed as high as thirty feet above ordinary water level.

In August it was observed by Fairchild to be three feet higher.

At about ninety miles the country again becomes more open and prairie like, with low sandy river banks. A few miles further up the banks are composed of coarse gravel, and rise to a height of eighty or ninety feet. The rock formation which makes its appearance at several points along the river banks, was observed to be sandstone, and so on the general character of the river and country continued much the same for a distance of 128 miles, when the stream becomes divided again, and both branches rapid and shallow. At their confluence was also observed the junction of sandstone and granite rocks. It was now August 9, and judging from my progress during the last two weeks, and the prospect of increased difficulties ahead, I came to the conclusion that it would be unwise to attempt to push through to Lake Athabasca—a probable distance of 500 miles further by my route. It seemed to me preferable and more strictly in line with your instructions, that I should rather endeavour to explore a second route across the 'Divide' to Artillery lake, and recollecting the small river flowing in from the west at the Sixty mile, I determined to return thus far, ascend it as far as possible and thence cross by the easiest route to Artillery lake.

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## ACROSS COUNTRY 160 MILES.

Having decided upon the above plan of action, we easily returned down stream to my new point of commencement, and on the 13th began to ascend my west branch. Its course took me as nearly as could be in the direction of Artillery lake, but I was not long to follow it, for by noon of the same day we had reached the head of navigation for so heavily loaded a canoe as ours. Not wishing to be thwarted in my object, I now decided to send my two men with the canoe, around by the way we had come, to Artillery lake, and that I would walk across alone.

It seemed that there could be no great difficulty in doing so, for the distance in a straight line I knew to be only about eighty miles; the season was still early and there were now plenty of deer roving over the country. Thus viewing the problem, I sent my men back with the canoe and its contents, and having selected my necessary outfit for the tramp, bundled it up into a neat pack of about fifty pounds and started off. It did not feel heavy at first, and the weather being fine I made fair progress, but as the day wore on, my pack became burdensome and by evening I was quite ready to lay it down and creep into my sleeping bag. This first day's march, which covered thirteen miles, was along the course of the stream, over rough hills of gneiss sparingly wooded for a distance of ten miles only from the Thelon. At a point eight miles distant I discovered a beautiful little fall of 50 feet drop, and it was here that the gneiss formation was first noted. Its strike was observed to be north  $15^{\circ}$  east (astronomical) and dip  $70^{\circ}$  east.

My first day's march took me to the shore of a small lake, which of itself formed no serious obstruction to travel, but may be mentioned as the first link of a chain which was to cause trouble. The lake is about four miles long, but of very irregular shape. Its east shore is conspicuous because of a high ridge of white sand which has a bearing of south  $63^{\circ}$  east. Because of the irregularities of the shore and the impossibility of seeing any great distance ahead, it required a twelve mile tramp to get free from this lake, and that represented my second day's journey. My rations were obtained from the carcass of a deer which I had shot, and some biscuits which I had brought in my pack.

On the morning of my third day, only three miles from my 'camp' I came upon a large lake—to which I have taken the liberty of attaching my own name—since I am sure it has never been, and perhaps never will be, of as much interest to any one else as it proved to me.

Ascending the highest convenient hill, I examined the lake as critically as possible with my fine field glasses. Its general bearing lay nearly north-east and south-west. Its southerly shores appeared to be only five or six miles distant; but its northerly boundary I could not determine, being apparently limited only by the blue hazy distant hills. Having no boat or timber of any description with which to make a raft, I turned my steps towards the south, as the seemingly easiest way of getting past this obstacle, and for three miles or thereabouts I got along all right. Then I was suddenly confronted by a large stream forming the outlet of the lake. This I descended for some distance in the hope of finding a ford, but finding none, I stripped myself and waded in, hoping to find some place where I could get my outfit across, but in this I was disappointed, and the water, too, was very cold.

I had no alternative but to return and try the north end of the lake, which I did, and, to make a short story of a long weary tramp, over rocky hills and through soft muskegs, ankle deep in water, after three days of coasting it, I reached the north-west angle of Tyrrell lake, and there was no love lost in parting. I had now been five days on my tramp, but out of a distance of sixty-three miles covered, I had only made sixteen miles westerly out of a necessary eighty; and the contemplation of this was anything but encouraging, for I had counted on reaching Artillery lake within ten days at the longest. There was, however, no possibility of rejoining my canoe now, so my only possible course was to push ahead regardless of what time the journey might take, or what new difficulties it might present.

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The character of the country continued much the same, the rounded bare hills of gneiss being separated by wet muskegs, or as commonly, small lakes and ponds which covered a large percentage of the country and formed a great impediment to travel.

The morning of my sixth day set in with a chilling north-east wind and pelting rain, which not only saturated my clothing, but also the moss, so that I could make no fire. Having a small flask of brandy with me I refreshed myself with a little of it in water and a biscuit, and tramped on, making thirteen miles during the day. The night being dark at this season, it was not possible to travel continually, so, wet and shivering as I was, I lay down on the rocks in the pelting rain to try and sleep, but this was not to be, for my bed soon became a puddle of water, and I was uncomfortable indeed. I earnestly longed for the daylight, so that I might get up and travel, and at length it came, but still the cold rain came down, so that I could only wring out my single blanket and start on without breakfast. A deer skin which I had carried in addition to my blanket had become so water-soaked as to be too heavy to carry and was left behind. Fortunately by noon on the seventh day, the clouds broke and let the warming sunlight stream through upon me. Thus I was enabled to dry my clothes, and still better, ere long, to make a fire and cook some venison, which was much appreciated. At night as I went into camp (more properly my blanket), I shot a fine fat buck, and cooked as much of it for future use as I could, with the little moss I could find.

The 20th of August was my eighth day out, and I had made only thirty-three miles of westing, but now the weather seemed to have cleared, so I pushed on with fresh courage, passing several small lakes and bringing up on the summit of a hill overlooking a larger one.

Here, observing the approach of a heavy storm, I proceeded to fortify myself as well as my blanket and canvas wrapper would admit of, and so fairly well weathered out a bad night. But the next day was intolerable. I endeavoured to push on, but so cold and drenching was the rain that I shivered even as I travelled, under my water-soaked burden. Later in the day the weather became so thick, that I was as one walking in the dark—not knowing what was before me—and soon found myself almost entirely surrounded by water. I was now forced to await an improvement in the weather, and so, partaking of a wet biscuit, for I had nothing dry, and a drink of brandy, I lay down on the sand.

All night the cold rain came down in torrents, so that I was perfectly saturated with it. As the morning dawned conditions were not improved, for the rain had changed to snow and clothed the landscape in her chilling garment of white. It left me in an extremely uncomfortable condition, to say the least, being without shelter, fire or cooked food, but the worst seemed to have passed, for at eleven o'clock the next day the sunlight broke forth again and brought me much needed relief.

With the clearing weather I found myself to be on a long high point of sand, reaching far out into a lake, from which it would be necessary to retreat and make a detour, but anything was better than lying shivering in the darkness and rain, so I resumed my tramp, or track survey as a real pleasure, and hoped for better days, but they were not to come just yet. I took advantage of all the daylight the 22nd could afford me for travel and made a good day, but the next brought a repetition of the storm, a gale from the north-east, with driving rain and sleet—so severe that I was forced to seek shelter, which to some extent I found on the lee side of a rock. Here I spread my canvas, and wrapping my wet blanket about me, remained for two days until the storm of wind, rain and snow had spent its fury. My biscuits were now all gone, and the only available stimulant I had at this camp was the remainder of my flask of brandy, of which I gladly availed myself.

My condition had become decidedly serious. I had not slept a night since I had left my canoe, and this wretched weather and lack of food was already telling seriously upon me. The barren ground is a most inhospitable place in bad weather, but having exposed myself to its inhospitality there was only one thing for me to do, and that was to get out again as best I could, and this I was quite resolved to do.



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The morning of the 25th brought a slight improvement in the state of the weather, so that I was able to get on my feet again and stagger along under my load—made doubly heavy by its weight of water.

By noon the rain ceased entirely, when I was able to make a heather fire and cook some venison which revived me much. The next morning I found a quarter of an inch of new ice on the ponds, but getting under way I soon came to the shore of a very large lake—the one I believe shown by Back on his Indian sketch, and recently named Campbell lake.

Its shores are formed of high white sand ridges, and afforded good travel which was most acceptable to my sore feet and worn out moecasins. The country in the vicinity of Campbell lake presented a less rugged and more pleasing appearance than it had done since leaving Thelon. Berries of several kinds had again made their appearance and deer trails were well defined and deep, although it should be noted that these latter were everywhere to be seen throughout my journey.

Fifteen miles were travelled during the day, chiefly along the shores of Campbell lake, and the next day, my fifteenth out, a similar distance was covered and my first sight of a growing tree obtained since leaving the Thelon valley. There was but a small grove of them, but they meant much to me, not only in administering to my immediate comfort, but as foreshadowing the end of my difficult journey.

Before noon of the following day I had reached my supply cache on the shore of Artillery lake, and completed an uncomfortable tramp of 160 miles.

## REUNION OF PARTY.

At the 'cache' my fish hooks had evidently done effective work, judging from the claw marks on the trees, and the broken condition of several of the hooks. The provisions were found just as I had left them, and I was not long in getting them down and making a snug camp in the spruce grove. My canoe and two men had not yet reached the 'cache,' but only two days after my arrival they made their appearance with the load in good condition.

A rest of several days was now indulged in, since the weather continued very bad, but it gave me an opportunity to overhaul my outfit, repair moecasins, and pack specimens, &c., for shipment home. On September 4 and 5, I was enabled to complete my unfinished survey of the north end of Artillery lake, and having done so, I left a letter at the mouth of the Casba river for Fairchild, instructing him where to meet me, and turned about to proceed to Fort Reliance.

A head wind springing up, however, I was induced to go ashore until it might moderate, and meanwhile was overtaken by Fairchild, who had received my note within an hour of the time I had posted it up. We were now again a united party, and all in the best of health and spirits.

Mr. Fairchild's report has already been submitted, and there was now nothing left for us to do but get home as quickly as possible. High winds in Artillery lake caused us some delay, but by the evening of September 13 we were all once more encamped at Old Fort Reliance.

## RETURNING HOME.

As arranged with Mr. Gaudette in the spring, we were met by him in his steamer *Argo* at the old fort on the 15th, and the next day were taken in tow, bound for Forts Resolution and Smith. Unfortunately on the 20th, at *Stony Island*, only twenty-five miles from Resolution, we encountered a gale which drove the *Argo* on to the rocks, smashing her wheel, keel and rudder.

Fortunately no further damage was done, and after effecting temporary repairs, we got her into Resolution on Sunday morning, September 23, three days behind time.

Four more days were then spent in repairing the *Argo* more substantially for her trip up the Slave river to Fort Smith, so that it was late on the 27th before we were again under way.

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At Resolution I learned with regret that many of our faithful dogs had died during the summer under the tender (?) care which they had received, but the surviving ones were placed in the canoes and taken with us.

On the evening of the 30th, when about half way to Fort Smith, we were again doomed to misfortune. This time it was our engine that broke down, and one day was lost in repairing it. Besides, her steaming capacity was seriously affected through the accident, so that it was the evening of October 4 when we reached Smith, and the 10th when with our three canoes we sailed up to Chippewyan. Through our unfortunate steamboat experiences we had lost just ten days on my reckoning, and were consequently too late by all accounts to make Athabasca landing by open water.

I decided, therefore, to accept what seemed the inevitable and remain at Chippewyan where we could obtain supplies and lodgings, until such time as we might be able to proceed with our dogs. This we did, and through the kindness of Mr. Drever, Mr. Fraser, Rev. Mr. Warrick, and others, our stay was made very pleasant indeed. One of my canoes was disposed of to the Hudson Bay Company, whilst the remaining two were well painted and placed in the company's charge for safe keeping.

By November 14 the lake ice had become set and sufficiently strong to admit of our passage, so with three teams of our own, and two others which I hired to assist us, we set out upon the final stage of our journey, and without entering into details thereof, arrived at Edmonton on December 6, nine months and twenty days from the date we had left there.

#### SUMMARY NOTES.

The more important material results derived from my exploration are briefly as follows:—

1st. The obtaining of a correct topographical map of the routes traversed, in connection with which may be mentioned the discovery of the Thelon river—one of the finest in Canada—navigable for river steamers or other boats of light draught all the way from Hudson bay to the forks of the Hanbury, a distance of 550 miles, excepting perhaps at two rapids on the river above Baker lake, where some improvement to the channel might be made. Just what length of time this route may be open for navigation I am unable to say precisely, but would judge that the river portion must be open at least five months, and the inlet and larger lakes about a month less, i.e., during the months of July, August, September and October.

Thus the possibilities and extent of navigation from Hudson bay towards the west, by way of Chesterfield inlet, have been pretty well determined.

In the Mackenzie basin, Charlton harbour, at the head of Great Slave lake, limits navigation from the west, and on its northern shore by the mouth of the Lockhart river is as pretty a town site as can be found in Canada. Between these two terminal points the only existing way of communication is by means of the excellent canoe route followed by my party.

For heavy commercial traffic a railway could be constructed without serious engineering difficulties, by avoiding the lakes along the Hanbury river route, there being no great elevations or other great difficulties to overcome, unless it be the remoteness of the district and the scarcity of timber.

Should any kind of electric transmission become desirable, the two grand water powers of the Lockhart river and Dickson canyon could be utilized to great advantage during the open season.

Because of the remoteness of the locality, the severity of the climate, the scarcity of timber and high cost of freighting supplies, &c., construction work of any description on the divide must necessarily be expensive; but beyond this, with the information obtainable of so wide a district in one short season, it would be impossible for me to prepare anything like a reliable estimate of the cost of either a steam or electric road.

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Besides the discovery of the Thelon as a commercial waterway the resources of its valley should be of great interest, particularly its timber supply and herds of musk oxen, both of which are of great value to Canada.

For the preservation of the musk oxen—which may be so easily slaughtered—and are already rapidly diminishing in numbers, I would suggest that the territory between the Thelon and Back rivers be set apart by the government as a game preserve.

The chief food supply of the country lies in its great bands of caribou and its fish of various kinds, which are abundant in all the lakes and streams of the district.

The Thelon valley, though affording fine grazing lands for musk oxen and caribou can scarcely be looked upon as a desirable agricultural district, although I judge from the growth and great variety of plants observed there, that some of our cereals and most of our hardy vegetables could be grown in the Thelon valley.

I regret that the classified list of my collection of plants, which Professor Macoun, of the Geological Survey Department, has kindly undertaken to prepare, is not yet available, but hope that it may be before this report goes to print.

As to mineral products, from what mention has already been made of the rocks, it may readily be judged that the Thelon valley has little to offer.

With the Eskimos, however, many articles, such as arrow heads, spear heads, skinning knives, &c., were observed, which have been beaten into form from native copper, which as they explained to me had been picked up as pebbles from the ground somewhere far to the northward near the salt water.

To this report, for convenience of reference, I am attaching, 1st. A table of distances and elevations. 2nd. A table of information in regard to portages. 3rd. A table of determination of latitude and magnetic declination. 4th. A complete meteorological record, and 5th. (if it is available in time) a classified list of the plants collected on our journey.

I have the honour to be, sir,

Your obedient servant,

J. W. TYRRELL, *C.E.*,

*Dominion Land Surveyor.*



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## APPENDIX No. 3.—Latitudes, Longitudes and Declinations.

Place.	Date.	Latitude.	Longitude.	Declination.
1900.				
Resolution	April 2	61-10-14	113-46-30	38-20 E.
11 miles E. of Fond-du-Lac	" 24	62-43-20	111-23-07	37-15 "
Fort Reliance	May 8	"	108-19-17	37-15 "
Pike's portage, Sta. 0.	" 11	62-42-02	108-44-55	37-20 "
N. end French lake	" 18	62-43-44	108-24-43	41-50 "
N. end Kipling lake	" 22	62-48-05	108-25-31	38-40 "
N. end Burr lake	" 25	62-49-29	108-20-06	39-50 "
S. end Artillery lake	" 29	62-51-39	108-21-52	38-45 "
Sta. 142 F., Artillery lake	" 30	62-56-13	108-14-03	38-45 "
S. end Crystal island	June 2	63-02-02	107-33-10	"
Camp in last Woods, Artillery lake.	" 9	63-04-10	107-37-45	39-00 "
Casba lake, Sta. 192	" 22	63-34-04	107-00-06	35-40 "
Clinton-Colden lake, Sta. 212.	" 24	63-41-48	107-08-46	"
" 219.	" 25	63-40-12	"	"
" 230	" 25	"	"	41-00 "
" 248	" 26	"	"	38-35 "
Sifton lake	" 28	63-44-42	"	29-10 "
" 258	" 28	"	"	48 & 51 "
" 297	July 1	63-39-15	105-45-03	37-00 "
" 314	" 2	63-40-15	"	27-00 "
" 321	" 3	63-35-45	105-35-36	44-10 "
" 324	" 3	63-32-56	"	"
" 338	" 3	"	"	22-50 "
" 362	" 4	"	104-37-45	29-00 "
" 372	" 4	63-39-07	"	"
" 437	" 5	63-44-35	"	"
" 443	" 6	63-43-00	104-30-34	28-15 "
Forks	" 7	63-37-52	104-17-46	32-00 "
" 491	" 9	63-48-01	"	"
" 505	" 9	"	"	32-50 "
" 529	" 10	"	"	30-00 "
" 586	" 11	61-17-40	"	"
" 625	" 12	64-22-09	"	"
" 640	" 12	"	"	34-20 "
" 648	" 13	"	"	35-00 "
" 664	" 13	64-55-31	"	"
Beverly lake	" 14	64-55-26	100-33-00	"
" 681	August 1	63-33-12	"	34-00 "
" 759	" 4	"	"	30-00 "
" 760	" 4	63-00-59	"	30-00 "
" 766	" 6	62-56-00	104-34-55	"
" 773	" 6	"	"	27-00 "
" 817	" 7	"	"	28-00 "
" 869	" 8	62-32-22	104-01-04	"
" 889	" 9	62-25-14	"	36-00 "
Doobant river	July 16	"	"	31-30 "
Abe-deen lake	" 19	"	"	27-00 "
"	" 20	"	"	29-00 "
Baker lake	" 24	"	"	16-30 "
"	" 25	"	"	11-20 "
Chesterfield inlet	" 26	"	"	4-45 "
"	" 27	"	"	6-50 W
"	" 28	"	"	1-15 "
"	" 30	"	"	5-45 "
"	" 31	"	"	7-50 "
"	" 31	"	"	16-00 "
"	August 4	"	"	13-00 E.
Delta of Doobant and Thelon rivers, Sta. 402 F.	" 16	"	"	31-30 "

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## APPENDIX No. 4.—Meteorological Observations recorded upon Expedition by Rev. J. Lofthouse.

Place.	Date.	Hour	Barometer.	Thermometer.	Wind.	Weather—Notes.
	1900.		°	°		
Fort Resolution, G. S. L.	April 1.	6.00 a.m.	29.46	22.0	S. E.	Fine, willow buds opening.
"	"	1.. 12.00 noon	.....	.....	S. E.	Fine.
"	"	1.. 6.00 p.m.	.....	.....	S. E.	"
"	"	2.. 6.00 a.m.	29.24	20.0	S. E.	Fine, strong breeze and cold.
"	"	2.. 12.00 noon	29.16	42.0	S. E.	"
"	"	2.. 6.00 p.m.	29.04	41.0	S. E.	Fine, wind falling.
"	"	3.. 6.00 a.m.	29.00	33.0	S. W.	Fine, fair breeze.
"	"	3.. 12.00 noon	29.04	40.0	S. W.	"
"	"	3.. 6.00 p.m.	29.14	35.0	W.	Fine, almost calm.
"	"	4.. 6.00 a.m.	29.17	22.0	N.	"
"	"	4.. 12.00 noon	29.16	42.0	S. W.	Fine, slight breeze, very mild.
"	"	4.. 6.00 p.m.	29.11	38.0	N.	Fine, slight rainfall to-night.
"	"	5.. 6.00 a.m.	28.89	34.0	S. E.	Fine, heavy rain during night.
"	"	5.. 12.00 noon	28.99	33.0	W.	Fine, strong breeze.
"	"	5.. 6.00 p.m.	29.04	30.0	W.	Fine, slight breeze.
"	"	6.. 6.00 a.m.	29.09	20.0	S. E.	"
"	"	6.. 12.00 noon	29.04	50.0	S. E.	"
"	"	6.. 6.00 p.m.	28.96	44.0	S. E.	"
"	"	7.. 6.00 a.m.	28.76	37.0	E.	"
"	"	7.. 12.00 noon	28.68	44.0	E.	Fine, heavy rain all morning.
"	"	7.. 6.00 p.m.	28.75	40.0	S.	Fine, slight showers.
"	"	8.. 6.00 a.m.	29.14	30.0	W.	Fine.
"	"	8.. 12.00 noon	29.36	32.0	N. W.	Fine, hundreds of snowbirds about.
"	"	8.. 6.00 p.m.	29.56	33.0	N. W.	Fine, willows in full bud.
"	"	9.. 6.00 a.m.	29.97	19.0	N.	Fine, strong breeze.
"	"	9.. 12.00 noon	30.07	26.0	N.	"
"	"	9.. 6.00 p.m.	30.12	26.0	N.	Fine.
"	"	10.. 6.00 a.m.	30.15	22.0	N.	Fine, slight breeze.
"	"	10.. 12.00 noon	30.18	28.0	N. W.	Snow falling and soft.
"	"	10.. 6.00 p.m.	30.18	22.0	N. W.	Fine.
"	"	11.. 6.00 a.m.	30.19	20.0	N.	"
16 miles N. E. Ft. Resolution.	"	11.. 12.00 noon	30.14	36.0	S. E.	"
Stoney Island, Grt. Slave L'ke	"	11.. 6.00 p.m.	30.04	40.0	S. E.	"
"	"	12.. 6.00 a.m.	29.77	26.0	S. E.	"
"	"	12.. 12.00 noon	29.59	41.0	S. E.	"
White Island	"	12.. 6.00 p.m.	29.45	32.0	S. E.	Very strong wind.
White Island, about 50 miles N. of Fort Resolution.	"	13.. 6.00 a.m.	29.41	28.0	N. E.	"
"	"	13.. 12.00 noon	29.46	32.0	N.	Regular blizzard.
"	"	13.. 6.00 p.m.	29.56	12.0	N.	"
"	"	14.. 6.00 a.m.	29.80	6.0	N.	Blizzard still raging as hard as ever.
"	"	14.. 12.00 noon	29.88	22.0	N.	Gale decreasing.
"	"	14.. 6.00 p.m.	29.94	21.0	N.	Fine, gale over.
"	"	15.. 6.00 a.m.	30.03	16.0	N.	Fine.
"	"	15.. 12.00 noon	29.99	32.0	S. E.	"
"	"	15.. 6.00 p.m.	29.82	30.0	S. E.	"
"	"	16.. 6.00 a.m.	29.42	30.0	S. E.	"
"	"	16.. 12.00 noon	29.26	44.0	S. E.	Cloudy, strong wind.
"	"	16.. 6.00 p.m.	29.69	38.0	S.	"
"	"	17.. 6.00 a.m.	28.99	34.0	S. E.	Cloudy.
"	"	17.. 12.00 noon	28.91	44.0	S.	"
"	"	17.. 6.00 p.m.	28.86	38.0	S. W.	Cloudy, rather strong breeze.
"	"	18.. 6.00 a.m.	28.84	32.0	W.	Fine, calm.
"	"	18.. 12.00 noon	28.86	34.0	N. W.	Fine, strong breeze.
"	"	18.. 6.00 p.m.	28.99	29.0	N. W.	Fine.
"	"	19.. 6.00 a.m.	29.21	24.0	N.	Cloudy, fresh breeze.
"	"	19.. 12.00 noon	29.30	31.0	N.	Fine.
"	"	19.. 6.00 p.m.	29.39	32.0	S.	Fine, no wind.
"	"	20.. 6.00 a.m.	29.39	24.0	S.	Fine, slight snowfall.

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## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
White Island, about 50 miles N. of Fort Resolution.....	April 20.	12.00 noon	29.30	48.0	S. E.	Fine, snow melting fast.
" " " " " " " " " "	" 20.	6.00 p.m.	29.18	40.0	S. E.	Fine.
" " " " " " " " " "	" 21.	6.00 a.m.	29.06	34.0	S. E.	"
" " " " " " " " " "	" 21.	12.00 noon	29.00	49.0	S. E.	Fine, snow birds about.
" " " " " " " " " "	" 21.	6.00 p.m.	28.99	49.0	S. E.	Fine.
" " " " " " " " " "	" 22.	6.00 a.m.	29.09	42.0	S. E.	Fine, summerlike weather.
" " " " " " " " " "	" 22.	12.00 noon	29.08	50.0	S. E.	Fine, flies numerous, geese heard
" " " " " " " " " "	" 22.	6.00 p.m.	29.03	44.0	E.	Fine.
White island, G. S. L.	" 23.	6.00 a.m.	29.06	44.0	S. W.	Fine, heavy rain during night.
" " " " " " " " " "	" 23.	12.00 noon	29.16	42.0	S. W.	" very soft snow, melting quickly.
" " " " " " " " " "	" 23.	6.00 p.m.	29.24	40.0	S. W.	"
" " " " " " " " " "	" 24.	6.00 a.m.	29.32	42.0	E.	" slight fall of rain.
" " " " " " " " " "	" 24.	12.00 noon	29.32	50.0	S. E.	"
" " " " " " " " " "	" 24.	6.00 p.m.	29.38	52.0	S. E.	" moths and flies numerous.
" " " " " " " " " "	" 25.	6.00 a.m.	29.46	38.0	N. E.	" ducks about.
" " " " " " " " " "	" 25.	12.00 noon	29.45	42.0	N. E.	"
" " " " " " " " " "	" 25.	6.00 p.m.	29.44	40.0	N. W.	" mosquito observed.
" " " " " " " " " "	" 26.	6.00 a.m.	29.49	30.0	N.	"
" " " " " " " " " "	" 26.	12.00 noon	29.46	47.0	N.	"
" " " " " " " " " "	" 26.	6.00 p.m.	29.48	37.0	N.	"
" " " " " " " " " "	" 27.	6.00 a.m.	29.59	30.0	N. E.	" very strong breeze.
" " " " " " " " " "	" 27.	12.00 noon	29.59	34.0	N. E.	" robin observed.
" " " " " " " " " "	" 27.	6.00 p.m.	29.60	34.0	N. E.	" geese observed to-day.
" " " " " " " " " "	" 28.	6.00 a.m.	29.71	34.0	E.	" geese passing north.
" " " " " " " " " "	" 28.	12.00 noon	29.66	59.0	E.	"
" " " " " " " " " "	" 28.	6.00 p.m.	29.50	44.0	S. E.	" mosquitos numerous.
" " " " " " " " " "	" 29.	6.00 a.m.	29.50	34.0	S. W.	" very warm, lake watery.
" " " " " " " " " "	" 29.	12.00 noon	29.55	41.0	S. E.	"
" " " " " " " " " "	" 29.	6.00 p.m.	29.59	40.0	S. W.	"
Red Rock island " "	" 30.	6.00 a.m.	29.49	34.0	N.	"
" " " " " " " " " "	" 30.	12.00 noon	29.56	34.0	N.	"
" " " " " " " " " "	" 30.	6.00 p.m.	29.66	40.0	W.	"
Mean for month.			29.39	34.77		
Red Rock island, G. S. L. . . . .	May 1.	6.00 a.m.	29.82	28.0	N. E.	
" " " " " " " " " "	" 1.	12.00 noon	29.87	36.0	N.	
Deer island " " " "	" 1.	6.00 p.m.	29.89	30.0	N.	
" " " " " " " " " "	" 2.	6.00 a.m.	29.86	29.0	N. E.	
" " " " " " " " " "	" 2.	12.00 noon	29.76	30.0	N. E.	
Fond du Lac " " " "	" 2.	6.00 p.m.	29.62	23.0	N. E.	
" " " " " " " " " "	" 3.	6.00 a.m.	29.52	22.0	N. E.	Fine.
" " " " " " " " " "	" 3.	12.00 noon	29.46	38.0	N. E.	"
" " " " " " " " " "	" 3.	6.00 p.m.	29.41	36.0	N. E.	"
" " " " " " " " " "	" 4.	6.00 a.m.	29.48	28.0	N. E.	"
" " " " " " " " " "	" 4.	12.00 noon	29.44	36.0	N. E.	"
Glacier island " " " "	" 4.	6.00 p.m.	29.34	34.0	N. E.	"
" " " " " " " " " "	" 5.	6.00 a.m.	29.31	28.0	N. E.	"
" " " " " " " " " "	" 5.	12.00 noon	29.34	40.0	N. E.	"
" " " " " " " " " "	" 5.	6.00 p.m.	29.16	36.0	N. E.	"
" " " " " " " " " "	" 6.	6.00 a.m.	29.05	36.0	N.	Wet, heavy rain all night
" " " " " " " " " "	" 6.	12.00 noon	29.17	30.0	N.	- snow and drift.
Helen island, G. S. L. " "	" 6.	6.00 p.m.	29.40	25.0	N.	Snow decreasing.
" " " " " " " " " "	" 7.	6.00 a.m.	29.70	16.0	N. E.	Fine.
" " " " " " " " " "	" 7.	12.00 noon	29.79	28.0	S. W.	"
Fort Reliance, G. S. L. " "	" 7.	6.00 p.m.	30.12	34.0	N. E.	"
" " " " " " " " " "	" 8.	6.00 a.m.	29.84	36.0	N. E.	"
" " " " " " " " " "	" 8.	12.00 noon	29.81	46.0	N. E.	Fine.
" " " " " " " " " "	" 8.	6.00 p.m.	29.72	40.0	N. E.	"
" " " " " " " " " "	" 9.	6.00 a.m.	29.49	31.0	E.	"
" " " " " " " " " "	" 9.	12.00 noon	29.34	33.0	E.	Wet, snow and drift.
Pike's portage " " " "	" 9.	6.00 p.m.	29.27	42.0	S. E.	Fine, readings 16 ft below sea level.

1-2 EDWARD VII., A. 1902

## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
	1900.					
Pike's portage	May 10	16.00 a.m.	29 29	36 0	S. E.	Wet, rain all night.
"	" 10	2.00 noon	29 88	40 0	N. W.	Misty, rain.
"	" 10	6.00 p.m.	29 46	34 0	N. E.	" showers.
"	" 11	6.00 a.m.	29 56	36 0	N. E.	Fine.
"	" 11	12.00 noon	29 54	44 0	E.	"
"	" 11	6.00 p.m.	29 51	35 0	E.	"
"	" 12	6.00 a.m.	29 49	31 0	N. E.	"
"	" 12	12.00 noon	29 45	43 0	N. E.	" very strong wind.
"	" 12	6.00 p.m.	29 47	35 0	N. E.	" wind decreasing.
"	" 13	6.00 a.m.	29 54	36 0	N. E.	" jack pine on this port.
"	" 13	12.00 noon	29 53	48 0	N. E.	"
"	" 13	6.00 p.m.	29 49	44 0	N. E.	"
"	" 14	6.00 a.m.	29 51	42 0	N. E.	Fine.
"	" 14	12.00 noon	29 44	60 0	S.	"
"	" 14	6.00 p.m.	29 42	43 0	S.	Cloudy.
"	" 15	6.00 a.m.	29 29	42 0	S. W.	Fine.
"	" 15	9.00 a.m.	29 32	57 0	S. W.	"
"	" 15	12.00 noon	29 29	60 0	S. W.	" ducks, geese and loons on Lockhart river.
"	" 15	3.00 p.m.	29 27	62 0	S. W.	"
"	" 15	6.00 p.m.	29 29	61 0	S. W.	"
"	" 16	6.00 a.m.	29 32	33 0	N. E.	"
"	" 16	9.00 a.m.	29 30	67 0	N. E.	"
"	" 16	12.00 noon	29 28	75 0	N. E.	"
"	" 16	3.00 p.m.	29 67	66 0	N. E.	"
"	" 16	5.00 p.m.	29 26	...	...	Level of Great Slave lake.
"	" 16	6.00 p.m.	29 67	60 0	N. E.	" Harry lake.
"	" 16	8.00 p.m.	29 67	...	...	" French lake.
French lake, Pike's port. route	" 17	6.00 a.m.	29 48	54 0	S. E.	"
"	" 17	9.00 a.m.	29 47	59 0	S. E.	Fine.
"	" 17	12.00 noon	29 49	48 0	S. W.	Wet, rain commenced at 9.30 a.m.
"	" 17	3.00 p.m.	29 50	52 0	S. W.	Fine, heavy showers until 3.30 p.m.
"	" 17	6.00 p.m.	29 53	50 0	...	Fine, weather cleared.
"	" 18	6.00 a.m.	29 80	37 0	S. W.	"
"	" 18	9.00 a.m.	29 85	41 0	S. W.	"
"	" 18	12.00 noon	29 86	52 0	W.	" summer weather.
"	" 18	3.00 p.m.	29 82	61 0	S. E.	"
"	" 18	6.00 p.m.	29 82	54 0	S. E.	"
"	" 19	6.00 a.m.	29 84	40 0	S.	"
Acres lake	" 19	9.00 a.m.	29 84	50 0	S. E.	"
Kipling lake	" 19	12.00 noon	29 76	58 0	E.	"
"	" 19	3.00 p.m.	29 72	66 0	S. E.	Wet, showery.
"	" 19	6.00 p.m.	29 75	51 0	S. E.	Heavy thunder for $\frac{1}{2}$ hour.
"	" 20	6.00 a.m.	29 69	52 0	S. E.	" rain from 8 p.m. till mid-night.
"	" 20	12.00 noon	29 71	60 0	S. E.	Very fair.
"	" 20	6.00 p.m.	29 67	59 0	S. E.	"
"	" 21	5.00 a.m.	29 71	36 0	E.	Thunder and heavy rain during night.
"	" 21	9.00 a.m.	29 64	50 0	E.	Fine.
"	" 21	12.00 noon	29 62	53 0	E.	"
"	" 21	3.00 p.m.	29 59	56 0	E.	"
"	" 21	6.00 p.m.	29 61	48 0	E.	Showery.
"	" 22	6.00 a.m.	29 56	45 0	E.	Rain nearly all night
"	" 22	9.00 a.m.	29 57	49 0	E.	Cloudy.
"	" 22	12.00 noon	29 58	54 0	E.	Fine.
"	" 22	3.03 p.m.	29 58	59 0	E.	"
"	" 22	6.01 p.m.	29 62	51 0	E.	"
"	" 23	6.00 a.m.	29 75	36 0	E.	Cloudy.
"	" 23	6.20 a.m.	29 76	36 0	E.	"
"	" 23	6.40 a.m.	29 66	...	E.	"
Burr lake	" 23	7.45 a.m.	29 70	...	E.	Level of Burr lake.
"	" 23	9.00 a.m.	29 73	40 0	N. E.	"
"	" 23	12.00 noon	29 73	41 0	N. E.	"



## SESSIONAL PAPER No. 25

## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour	Barometer.	Thermometer.	Wind.	Weather Notes
	1900.					
Burr lake, Pike's port, route.	May 23.	3 00 p.m.	29.74	44 0	N. E.	
" "	" 23.	6 00 p.m.	29.77	39 0	N. E.	
" "	" 24.	6 00 a.m.	29.82	32 0	N. E.	Fine, cool.
" "	" 24.	9 00 a.m.	29.80	38 0	N. E.	"
" "	" 24.	12 00 noon	29.78	49 0	N. E.	"
" "	" 24.	3 00 p.m.	29.74	46 0	N. E.	"
" "	" 24.	6 00 p.m.	29.77	43 0	N. E.	" strong breeze.
" "	" 25.	6 00 a.m.	29.66	32 0	N. E.	"
" "	" 25.	9 00 a.m.	29.61	48 0	N. E.	"
" "	" 25.	12 00 noon	29.59	54 0	N. E.	"
" "	" 25.	3 00 p.m.	29.56	60 0	N. E.	"
" "	" 25.	6 00 p.m.	29.53	58 0	N. E.	" wind decreasing.
" "	" 26.	6 00 a.m.	29.54	44 0	N. E.	Slight wind.
Touza lake	" 26.	8 00 a.m.	29.46			
" "	" 26.	9 00 a.m.	29.36	58 0	N. E.	
Pike's portage	" 26.	9 40 a.m.	29.42			Fine.
" "	" 26.	12 00 noon	29.39	60 0	N. E.	
Artillery lake.	" 26.	12 40 p.m.	29.47	60 0	N. E.	Nest of young ravens discovered.
" "	" 26.	3 00 p.m.	29.36	52 0	N. E.	Cloudy.
" "	" 26.	6 00 p.m.	29.36	49 0	N. E.	Light rain.
" "	" 27.	9 00 a.m.	29.21	54 0	N. E.	Heavy rain all night.
" "	" 27.	12 00 noon	29.25	48 0	N. W.	Hail storm and thunder.
" "	" 27.	3 00 p.m.	29.32	52 0	N. W.	Fine.
" "	" 27.	6 00 p.m.	29.36	53 0	N. W.	"
" "	" 28.	6 00 a.m.	29.34	48 0	N. W.	"
" "	" 28.	12 00 noon	29.30	60 0	N. W.	Fine, very strong breeze.
" "	" 28.	3 00 p.m.	29.34	60 0	N. W.	"
" "	" 28.	6 00 p.m.	29.37	54 0	N. W.	"
" "	" 29.	6 00 a.m.	29.51	48 0	N. W.	" breeze decreasing.
" "	" 29.	7 15 a.m.	29.55			Lake level.
" "	" 29.	9 00 a.m.	29.52	54 0	N. W.	Fine.
" "	" 29.	12 00 noon	29.53	53 0	N. W.	Cloudy.
" "	" 29.	6 00 p.m.	29.63	48 0	N. W.	Cloudy, bulldog flies observed.
" "	" 30.	6 00 a.m.	29.69	31 0	N. E.	Cloudy, slight fall snow and sleet.
" "	" 30.	9 00 a.m.	29.74	32 0	N. E.	Fine, ptarmigan's eggs found.
" "	" 30.	12 00 noon	29.74	32 0	N. E.	" cool day.
" "	" 30.	3 00 p.m.	29.76	32 0	N. E.	"
" "	" 30.	6 00 p.m.	29.77	33 0	N. E.	"
" "	" 30.	9 00 p.m.	29.77	32 0	N. E.	"
" "	" 31.	6 00 a.m.	29.76	32 0	N. E.	" heavy frost during night.
" "	" 31.	9 00 a.m.	29.77	39 0	N. E.	"
" "	" 31.	12 00 noon	29.77	42 0	N. E.	"
" "	" 31.	3 00 p.m.	29.76	47 0	N. E.	"
" "	" 31.	6 00 p.m.	29.76	42 0	N. E.	"
Mean for the month			29.75	44 46		
Artillery lake	June 1	7 00 a.m.	29.69	30 0	N. E.	Fine, very strong breeze.
" "	" 1	12 00 noon	29.64	32 0	N. E.	Stormy, very heavy gale with snow.
" "	" 1	3 00 p.m.	29.66	30 0	N. E.	"
" "	" 1	6 00 p.m.	29.66	30 0	N. E.	" snow ceased.
" "	" 2	6 00 a.m.	29.74	29 0	N. E.	Cloudy, strong breeze and 2 in. snow fall during night.
" "	" 2.	9 00 a.m.	29.76	34 0	N. E.	Fine.
" "	" 2.	12 00 noon	29.75	38 4	N. E.	"
" "	" 2.	3 00 p.m.	29.72	45 0	N. E.	"
" "	" 2.	6 00 p.m.	29.72	37 0	N. E.	"
" "	" 3	6 00 a.m.	29.77	32 0	N. E.	"
" "	" 3	9 00 a.m.	29.69	42 0	N. E.	3 in. new ice during night.
" "	" 3	12 00 noon	29.68	48 0	N. E.	"
" "	" 3	3 00 p.m.	29.66	47 0	N. E.	"
" "	" 3	6 00 p.m.	29.62	45 0	N. E.	"

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## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
	1900.		"	"		
Artillery lake.	June 4.	6 00 a.m.	28 57	42 0	S.	Fine.
"	"	9 00 a.m.	28 52	50 0	S.	"
"	"	12 00 noon	28 47	62 0	S.	"
"	"	3 00 p.m.	28 41	58 0	S.	" eagle's eggs found.
"	"	6 00 p.m.	28 39	55 0	S.	Dull, gloomy weather.
"	"	5 00 a.m.	28 24	45 0	N.E.	Gloomy, slight rain.
"	"	9 00 a.m.	28 22	46 0	N.E.	Rain started 6.30 a.m.
"	"	12 00 noon	28 21	45 0	N.E.	"
"	"	3 00 p.m.	28 22	45 0	N.E.	"
"	"	6 00 p.m.	28 23	42 0	N.E.	Showers.
"	"	6 00 a.m.	28 30	40 0	N.E.	Cloudy.
"	"	9 00 a.m.	28 38	42 0	N.E.	" drizzling showers.
"	"	12 00 noon	28 43	43 0	N.E.	" "
"	"	3 00 p.m.	28 49	44 0	N.E.	" clearing.
"	"	6 00 p.m.	28 54	46 0	N.E.	Fine, breeze decreasing.
"	"	7 00 a.m.	28 73	42 0	S.E.	"
"	"	9 00 a.m.	28 74	42 0	S.E.	"
"	"	12 00 noon	28 69	50 0	S.E.	"
"	"	3 00 p.m.	28 67	54 0	S.E.	"
"	"	6 00 p.m.	28 66	52 0	S.E.	Passing clouds.
"	"	7 00 a.m.	28 61	46 0	S.	Fine, showers all night.
"	"	9 00 a.m.	28 62	54 0	S.	" few mosquitos.
"	"	12 00 noon	28 61	52 0	S.E.	Cloudy.
"	"	3 00 p.m.	28 62	54 0	S.E.	Cloudy.
"	"	6 00 p.m.	28 62	54 0	S.E.	"
"	"	7 00 a.m.	28 67	48 0	S.E.	Fine.
"	"	12 00 noon	28 67	54 0	S.E.	"
"	"	3 00 p.m.	28 65	55 0	S.E.	"
"	"	6 00 p.m.	28 66	55 0	S.E.	"
"	"	10 00 a.m.	28 64	50 0	S.E.	" pools frozen over in night.
"	"	12 00 noon	28 61	62 0	N.	"
"	"	3 00 p.m.	28 59	62 0	N.	"
"	"	6 00 p.m.	28 59	54 0	N.	"
"	"	11 00 a.m.	28 62	45 0	S.	" $\frac{1}{2}$ in. new ice during night, and frost.
"	"	9 00 a.m.	28 62	58 0	S.	"
"	"	12 00 noon	28 59	62 0	N.W.	"
"	"	3 00 p.m.	28 59	64 0	N.W.	" flies bad.
"	"	6 00 p.m.	28 57	68 0	N.W.	"
"	"	6 00 a.m.	28 54	54 0	S.W.	"
"	"	9 00 a.m.	28 54	69 0	S.W.	"
"	"	12 00 noon	28 51	61 0	S.W.	" strong breeze.
"	"	3 00 p.m.	28 44	56 0	S.W.	" threatening.
"	"	6 00 p.m.	28 46	56 0	N.W.	"
"	"	6 00 a.m.	28 68	36 0	N.	" slight snowfall during night.
"	"	9 00 a.m.	28 69	42 0	N.	Calm.
"	"	12 00 noon	28 67	49 0	S.W.	Fine.
"	"	3 00 p.m.	28 63	53 0	S.W.	"
"	"	6 00 p.m.	28 61	52 0	S.W.	"
"	"	6 00 a.m.	28 49	48 0	S.W.	"
"	"	9 00 a.m.	28 48	58 0	S.W.	Rain.
"	"	12 00 noon	28 44	66 0	S.W.	Showers, passing shower during a.m.
"	"	3 00 p.m.	28 41	70 0	S.W.	Fine.
"	"	6 00 p.m.	28 40	66 0	S.W.	Showers and rainbow.
"	"	6 00 a.m.	28 38	62 0	S.W.	Fine.
"	"	9 00 a.m.	28 38	64 0	S.W.	"
"	"	12 00 noon	28 40	51 0	S.W.	Heavy showers.
"	"	3 00 p.m.	28 32	58 0	S.W.	Thunder showers.
"	"	6 00 p.m.	28 30	68 0	S.W.	"
"	"	6 00 a.m.	28 54	36 0	N.W.	Fine, heavy thunder storm during night.
"	"	12 00 noon	28 74	44 0	N.W.	Slight snow flurries in morning.
"	"	3 00 p.m.	28 77	52 0	N.W.	Fine.

## SESSIONAL PAPER No. 25

## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
Artillery lake.	June 16.	6.00 p.m.	28.80	48.0	N.W.	Very fair.
"	"	17 6.00 a.m.	28.78	52.0	S.	Fine.
"	"	17 9.00 a.m.	"	"	"	"
"	"	17 12.00 noon	28.70	60.0	S.	Fine.
"	"	17 3.00 p.m.	28.67	67.0	S.S.	"
"	"	17 6.00 p.m.	28.62	63.0	S.S.	"
"	"	18 6.00 a.m.	28.62	52.0	S.S.	Calm.
"	"	18 12.00 noon	28.61	74.0	E.	hot day.
"	"	18 3.00 p.m.	28.65	74.0	E.	readings at lake level.
"	"	18 3.00 p.m.	28.58	"	"	readings at camp.
"	"	18 6.00 p.m.	28.59	70.0	E.	"
"	"	19 6.00 a.m.	28.54	52.0	S.E.	Fine.
"	"	19 12.00 noon	28.44	65.0	S.E.	fresh gale.
"	"	19 6.00 p.m.	28.41	47.0	S.E.	Slight rain.
"	"	20 6.00 a.m.	28.36	46.0	S.E.	Wet, moderate gale.
"	"	20 12.00 noon	28.34	64.0	S.E.	Fine, moderate gale.
"	"	20 6.00 p.m.	28.29	64.0	S.E.	"
"	"	21 6.00 a.m.	28.23	56.0	S.E.	Wet, wind moderating.
Casba river	"	21 1.00 p.m.	28.12	70.0	S.	Fine, head of first rapids.
"	"	21 2.00 p.m.	28.11	"	"	foot of second rapids.
"	"	21 2.40 p.m.	28.114	"	"	head of second rapids.
"	"	21 " " "	28.113	"	"	foot of third rapids.
"	"	21 " " "	28.10	"	"	head of third rapids.
"	"	21 6.00 p.m.	28.14	62.0	S.W.	"
Casba lake.	"	22 6.00 a.m.	28.12	52.0	S.E.	"
"	"	22 12.00 noon	28.16	68.0	S.W.	fresh gale.
"	"	22 6.00 p.m.	28.28	52.0	W.	"
"	"	23 6.00 a.m.	28.58	44.0	N.E.	Fine.
"	"	23 12.00 noon	28.78	48.0	N.E.	"
Clinton-Colden lake.	"	23 3.00 p.m.	28.83	54.0	N.E.	"
"	"	24 9.00 a.m.	28.87	52.0	N.E.	"
"	"	24 12.00 noon	28.83	64.0	S.E.	"
"	"	24 6.00 p.m.	28.73	62.0	W.	"
"	"	25 6.00 a.m.	28.72	50.0	N.E.	Fine, heavy showers dur. night.
"	"	25 7.30 a.m.	28.74	"	"	"
"	"	25 7.40 a.m.	28.73	"	"	"
Height of land	"	25 8.35 a.m.	28.73	"	"	"
"	"	25 10.00 a.m.	28.73	"	"	"
Lac Deville	"	25 10.15 a.m.	28.76	"	"	"
"	"	25 12.00 noon	28.73	53.0	E.	Fine.
Smart lake	"	25 7.00 p.m.	28.75	50.0	N.E.	"
"	"	26 6.00 a.m.	28.77	43.0	N.E.	"
"	"	26 12.00 noon	28.76	54.0	N.E.	"
Sifton lake.	"	26 6.00 p.m.	28.73	52.0	N.	"
"	"	27 12.00 noon	28.85	46.0	N.E.	Wet, strong breeze all night.
"	"	27 7.00 p.m.	28.82	54.0	N.E.	Fine.
"	"	28 6.00 a.m.	28.86	41.0	N.E.	"
"	"	28 12.00 noon	28.88	60.0	N.	"
"	"	28 6.00 p.m.	28.87	57.0	"	Calm.
"	"	29 9.00 a.m.	28.90	58.0	W.	Fine.
"	"	29 12.00 noon	28.90	61.0	W.	"
"	"	29 6.00 p.m.	28.85	60.0	W.	"
"	"	30 6.00 a.m.	28.86	54.0	W.	"
"	"	30 12.00 noon	28.88	52.0	S.	"
Hanbury river	"	30 6.00 p.m.	28.83	62.0	S.	"
Mean for month	"	"	28.58	52.29	"	"
Hanbury river	July 1	12.00 noon	28.75	70.0	S.	Fine.
"	"	1 3.00 p.m.	28.69	72.0	S.W.	"
"	"	1 6.00 p.m.	28.66	72.0	S.W.	"
"	"	2 6.00 a.m.	28.66	58.0	S.W.	"
Timber rapids, Hanbury R	"	2 9.00 a.m.	28.67	50.0	S.W.	"
Hanbury river	"	2 12.00 noon	28.62	64.0	S.E.	"
"	"	2 3.00 p.m.	28.67	60.0	S.E.	"

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## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
Hanbury river.	July 2.	6 00 p.m.	28 71	64 0	S. E.	Calm, mosquitos very numerous.
"	"	3 9 00 a.m.	28 62	56 0	W.	Fine.
"	"	3 12 00 noon	28 65	70 0	W.	"
"	"	3 6 00 p.m.	"	66 0	W.	"
"	"	4 6 00 a.m.	28 68	60 0	W.	"
"	"	4 9 00 a.m.	28 69	62 0	W.	"
"	"	4 12 00 noon	28 67	77 0	W.	"
"	"	4 3 00 p.m.	28 69	65 0	W.	"
Macdonald falls, Hanbury r.	"	4 6 00 p.m.	28 66	64 0	W.	"
"	"	5 6 00 a.m.	28 64	58 0	W.	"
Hd. Dickson canyon, Han. r.	"	5 9 00 a.m.	28 76	58 0	W.	"
C.	"	5 12 00 noon	28 83	64 0	W.	"
"	"	5 6 00 p.m.	29 08	62 0	W.	"
"	"	6 6 00 a.m.	29 22	54 0	N.	"
Hanbury river	"	6 9 00 a.m.	29 27	54 0	N.	"
"	"	6 12 00 noon	29 31	56 0	N.	"
"	"	6 3 00 p.m.	29 34	60 0	N.	"
Helen falls, Hanbury river	"	6 6 00 p.m.	29 35	60 0	N.	"
Hanbury river	"	7 9 00 a.m.	29 52	60 0	E.	"
Camp July 7th, Thelon river.	"	7 12 00 noon	29 48	60 0	E.	"
"	"	7 3 00 p.m.	29 47	67 0	S.	"
"	"	7 6 00 p.m.	29 43	67 0	S.	"
"	"	8 9 00 a.m.	29 38	69 0	S. W.	"
"	"	8 12 00 noon	29 36	68 0	S. W.	"
"	"	8 3 00 p.m.	29 32	70 0	S. W.	"
"	"	8 6 00 p.m.	29 30	70 0	S. W.	"
"	"	9 6 00 a.m.	29 30	56 0	"	Calm.
Thelon river	"	9 9 00 a.m.	29 31	66 0	"	"
"	"	9 12 00 noon	29 28	73 0	S. E.	"
"	"	9 3 00 p.m.	29 30	70 0	"	Calm.
"	"	9 6 00 p.m.	29 34	56 0	N. E.	Fine, fresh breeze.
"	"	10 6 00 a.m.	29 41	50 0	N. E.	" strong breeze.
"	"	10 9 00 a.m.	29 42	56 0	N. E.	" " "
"	"	10 12 00 noon	29 42	58 0	N. E.	Fine, breeze moderating.
"	"	10 3 00 p.m.	29 43	60 0	N. E.	" " "
"	"	10 6 00 p.m.	29 45	60 0	N. E.	" slight breeze.
"	"	11 6 00 a.m.	29 49	52 0	W.	"
"	"	11 9 00 a.m.	29 51	58 0	W.	"
"	"	11 12 00 noon	29 56	62 0	W.	"
"	"	11 3 00 p.m.	29 57	60 0	W.	"
"	"	11 6 00 p.m.	29 54	60 0	W.	"
"	"	12 6 00 a.m.	29 62	52 0	W.	"
"	"	12 9 00 a.m.	29 64	60 0	N. W.	"
"	"	12 12 00 noon	29 61	64 0	N. W.	"
"	"	12 3 00 p.m.	29 57	65 0	N. W.	"
"	"	13 6 00 a.m.	29 39	61 0	W.	"
"	"	13 9 00 a.m.	29 39	64 0	W.	"
"	"	13 12 00 noon	29 36	66 0	S.	"
"	"	13 3 00 p.m.	29 38	58 0	N.	Fine, sudden strong breeze at 2 p.m.
"	"	13 6 00 p.m.	29 41	50 0	N.	Fine, moderate gale.
"	"	14 9 00 a.m.	29 32	48 0	N.	" light rain during night, moderate gale.
"	"	14 12 00 noon	29 27	50 0	N.	Fine, moderate gale.
"	"	14 3 00 p.m.	29 26	54 0	N.	" " "
"	"	14 6 00 p.m.	29 24	54 0	N.	" gale decreasing.
"	"	15 9 00 a.m.	29 12	52 0	N. W.	" strong breeze.
"	"	15 12 00 noon	29 16	52 0	N. W.	"
"	"	15 3 00 p.m.	29 20	57 0	N. W.	"
"	"	15 6 00 p.m.	29 22	52 0	N. W.	"
"	"	16 6 00 a.m.	29 23	48 0	S. W.	"
"	"	16 9 00 a.m.	29 12	52 0	S. W.	Wet.
Macdonald Decadent river	"	"	"	"	"	"
Thelon river	16.	12 00 noon	29 10	48 0	N. W.	Fine, fresh gale blowing.

SESSIONAL PAPER No. 25

APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900						
Thelon river	July 16	3 00 p.m.	29 17	50 0	N.W.	Fine, heavy gale.
"	" 16	6 00 p.m.	29 23	50 0	N.W.	" gale decreasing.
"	" 17	6 00 a.m.	29 25	42 0	W.	" strong breeze.
"	" 17	12 00 noon	29 19	44 0	W.	Showers.
Aberdeen lake	" 17	9 00 p.m.	29 33	40 0	N.W.	"
"	" 18	6 00 a.m.	29 38	45 0	W.	Showers, heavy hoar frost the morning.
"	" 18	9 00 a.m.	29 41	46 0	W.	Showers.
"	" 18	6 00 p.m.	29 44	45 0	W.	" moderate gale.
"	" 19	6 00 a.m.	29 44	42 0	W.	Fine, gale decreasing.
"	" 19	9 00 a.m.	29 44	48 0	N.W.	" heavy gale.
"	" 19	12 00 noon	29 45	53 0	N.	" gale over.
"	" 19	3 00 p.m.	29 45	54 0	N.	" fresh breeze.
"	" 19	6 00 p.m.	29 45	50 0	N.W.	"
"	" 20	6 00 a.m.	29 39	46 0	N.W.	"
"	" 20	9 00 a.m.	29 39	46 0	N.W.	"
"	" 20	12 00 noon	29 36	48 0	W.	"
"	" 20	3 00 p.m.	29 33	48 0	W.	"
"	" 20	6 00 p.m.	29 31	44 0	"	Calm.
"	" 21	6 00 a.m.	29 24	48 0	"	"
Schultz lake	" 21	9 00 a.m.	29 24	44 0	S.W.	Fine.
"	" 21	12 00 noon	29 24	47 0	S.	"
"	" 21	3 00 p.m.	29 26	45 0	S.E.	Wet.
"	" 21	6 00 p.m.	29 27	45 0	E.	"
"	" 22	12 00 noon	29 41	50 0	E.	" strong gale.
"	" 22	6 00 p.m.	29 51	52 0	E.	"
"	" 23	6 00 a.m.	29 68	46 0	E.	Fine, heavy rain during night, gale decreasing.
"	" 23	9 00 a.m.	29 75	56 0	E.	Fine.
"	" 23	12 00 noon	29 80	50 0	N.E.	"
Thelon river	" 23	3 00 p.m.	29 78	52 0	N.E.	"
"	" 23	6 00 p.m.	29 81	52 0	N.E.	"
Head of rapid, Thelon river.	" 23	"	29 82	"	"	"
Foot of rapid,	" 23	"	29 85	"	"	"
Mouth of Thelon river.	" 24	3 15 a.m.	30 09	48 0	W.	Fine.
"	" 24	6 00 a.m.	30 11	52 0	N.W.	"
Baker lake	" 24	12 00 noon	30 13	55 0	N.W.	"
"	" 24	3 00 p.m.	30 14	60 0	N.W.	"
"	" 24	6 00 p.m.	30 12	53 0	N.W.	"
"	" 25	6 00 a.m.	30 12	45 0	N.W.	"
"	" 25	9 00 a.m.	30 10	48 0	N.W.	"
"	" 25	12 00 noon	30 07	54 0	N.	"
River into Chesterfield inlet.	" 25	3 00 p.m.	30 03	60 0	N.	"
"	" 25	6 00 p.m.	30 00	54 0	N.	"
"	" 26	9 00 a.m.	29 94	62 0	"	Calm.
"	" 26	12 00 noon	29 94	55 0	E.	Fine.
"	" 26	3 00 p.m.	29 94	56 0	E.	"
Chesterfield inlet	" 26	6 00 p.m.	29 92	58 0	E.	"
Qui-oh river, Chesterf'd inlet	" 27	9 00 a.m.	29 93	54 0	E.	"
Chesterfield inlet	" 27	12 00 noon	29 95	54 0	S.E.	"
"	" 27	3 00 p.m.	29 97	56 0	S.E.	"
"	" 27	6 00 p.m.	29 96	58 0	S.E.	"
"	" 28	6 00 a.m.	29 89	50 0	S.E.	"
"	" 28	9 00 a.m.	29 88	50 0	S.E.	Fine, fresh breeze.
"	" 28	12 00 noon	29 86	47 0	S.E.	Fine, showers during morning.
"	" 28	3 00 p.m.	29 82	52 0	S.E.	Fine.
"	" 28	6 00 p.m.	29 80	49 0	S.E.	"
Promise point, Chesterf'd inlet	" 29	12 00 noon	29 72	54 0	E.	"
"	" 29	3 00 p.m.	29 74	55 0	E.	"
"	" 29	6 00 p.m.	29 76	52 0	E.	"
"	" 30	6 00 a.m.	29 79	54 0	W.	Fine, showers during night.
Father Hope point	" 30	9 00 a.m.	29 80	54 0	W.	Fine.
Chesterfield inlet	" 30	12 00 noon	29 81	51 0	N.W.	"
"	" 30	3 00 p.m.	29 81	54 0	N.W.	"
"	" 30	6 00 p.m.	29 82	50 0	N.W.	Fine, strong breeze.

1-2 EDWARD VII., A. 1902

## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
hesterfield inlet.....	" 31..	6.00 a.m.	29.91	52° 0	N. W.	Fine.
" .....	" 31..	9.00 a.m.	29.95	52° 0	N. W.	"
" .....	" 31..	12.00 noon	29.96	52° 0	N. W.	"
Peter's Cairn, Chesterfield inlet	" 31..	3.00 p.m.	29.96	56° 0	N. W.	"
" .....	" 31..	6.00 p.m.	29.96	57° 0	N. W.	"
Mean for month.....			29.44	55.51		
Mouth of Chesterfield inlet ..	Aug. 1..	6.00 a.m.	30.07	46° 0	N. W.	Fine.
Chesterfield inlet.....	" 1..	9.00 a.m.	30.02	50° 0	...	Calm.
" .....	" 1..	12.00 noon	30.05	59° 0	...	"
" .....	" 1..	3.00 p.m.	30.09	52° 0	W.	Fine.
" .....	" 1..	6.00 p.m.	30.12	64° 0	W.	"
Dangerous point, Ch'st'fd inlet	" 2..	6.00 a.m.	30.19	48° 0	S. E.	"
Chesterfield inlet.....	" 2..	9.00 a.m.	30.15	49° 0	E.	"
" .....	" 2..	12.00 noon	30.09	50° 0	E.	"
" .....	" 2..	3.00 p.m.	30.01	49° 0	E.	Heavy breeze and rain.
" .....	" 2..	6.00 p.m.	29.90	49° 0	S. E.	Heavy gale, rain.
" .....	" 3..	6.00 a.m.	29.50	50° 0	S. W.	Wet, gale decreasing.
" .....	" 3..	9.00 a.m.	29.49	50° 0	S. E.	Fine, thunder, threatening.
" .....	" 3..	12.00 noon	29.38	51° 0	S. E.	Heavy showers.
" .....	" 3..	3.00 p.m.	29.32	50° 0	S. E.	"
" .....	" 3..	6.00 p.m.	29.22	52° 0	...	"
" .....	" 4..	6.00 a.m.	29.47	47° 0	N.	Fine.
" .....	" 4..	9.00 a.m.	29.56	56° 0	N.	Fine, stormy night.
" .....	" 4..	12.00 noon	29.57	56° 0	N.	Fine, strong breeze.
Quioch river, mouth Chesterfield inlet.....	" 4..	3.00 p.m.	29.60	56° 0	N.	"
" .....	" 4..	6.00 p.m.	29.66	52° 0	N.	Fine.
Head of Chesterfield inlet....	" 5..	9.00 a.m.	29.84	48° 0	W.	"
" .....	" 5..	12.00 noon	29.88	50° 0	W.	"
" .....	" 5..	3.00 p.m.	29.91	52° 0	W.	"
" .....	" 5..	6.00 p.m.	29.93	51° 0	W.	"
River into Chesterfield inlet..	" 6..	6.00 a.m.	29.96	46° 0	W.	"
" .....	" 6..	9.00 a.m.	29.92	48° 0	S.	"
" .....	" 6..	12.00 noon	29.89	48° 0	S.	"
Baker lake .....	" 6..	3.00 p.m.	29.85	50° 0	E.	"
" .....	" 6..	6.00 p.m.	29.81	48° 0	N. E.	Wet, heavy thunder showers.
" .....	" 6..	9.00 p.m.	29.76	46° 0	N. E.	very heavy rain.
" .....	" 7..	6.00 a.m.	29.71	48° 0	W.	Fine, fresh gale.
" .....	" 7..	9.00 a.m.	29.69	52° 0	W.	"
" .....	" 7..	12.00 noon	29.68	58° 0	W.	"
" .....	" 7..	3.00 p.m.	29.68	57° 0	W.	"
" .....	" 7..	6.00 p.m.	29.70	57° 0	N. W.	gale moderating.
" .....	" 8..	9.00 a.m.	29.91	50° 0	N. W.	"
" .....	" 8..	12.00 noon	29.95	50° 0	W.	"
" .....	" 8..	3.00 p.m.	29.97	50° 0	W.	"
" .....	" 8..	6.00 p.m.	29.95	50° 0	W.	"
Thelon river .....	" 9..	6.00 a.m.	29.95	46° 0	N. W.	Fine.
" .....	" 9..	9.00 a.m.	29.94	48° 0	N. W.	"
" .....	" 9..	12.00 noon	29.94	48° 0	N. W.	"
" .....	" 9..	3.00 p.m.	29.87	48° 0	N. W.	"
" .....	" 9..	6.00 p.m.	29.89	46° 0	N. W.	Fine, strong breeze.
" .....	" 10..	6.00 a.m.	29.96	44° 0	N. W.	Fine.
" .....	" 10..	9.00 a.m.	29.95	48° 0	N. W.	"
" .....	" 10..	12.00 noon	29.94	51° 0	N. W.	"
" .....	" 10..	3.00 p.m.	29.89	52° 0	N. W.	"
" .....	" 10..	6.00 p.m.	29.84	52° 0	N. W.	"
" .....	" 11..	6.00 a.m.	29.73	50° 0	S. W.	"
" .....	" 11..	9.00 a.m.	29.67	54° 0	S. W.	"
Schultz lake .....	" 11..	12.00 noon	29.63	60° 0	S. W.	"
" .....	" 11..	3.00 p.m.	29.60	60° 0	S. W.	strong breeze,
" .....	" 11..	6.00 p.m.	29.55	57° 0	W.	Fine.
" .....	" 12..	6.00 a.m.	29.50	54° 0	N. E.	"

SESSIONAL PAPER No. 25

APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
Schultz lake	Aug. 12.	9 00 a.m.	29 46	58 0	S.	Fine.
"	"	12 12 00 noon	29 43	60 0	S. S.	"
"	"	12 3 00 p.m.	29 38	60 0	S. S.	" strong breeze.
"	"	12 6 00 p.m.	29 35	60 0	S.	"
"	"	13 6 00 a.m.	29 27	60 0	S.	Fine, heavy thunder storm and rain during night.
"	"	13 9 00 a.m.	29 23	56 0	S. W.	"
Aberdeen lake	"	13 12 00 noon	29 25	60 0	S. W.	"
"	"	13 3 00 p.m.	29 27	60 0	S. W.	"
"	"	13 6 00 p.m.	29 30	59 0	S. W.	"
"	"	14 6 00 a.m.	29 44	44 0	N. W.	" light rain during night, strong breeze.
"	"	14 9 00 a.m.	29 50	48 0	N. W.	" strong breeze.
"	"	14 12 00 noon	29 56	48 0	N. W.	"
"	"	14 3 00 p.m.	29 60	48 0	N. W.	"
"	"	14 6 00 p.m.	29 66	46 0	N. W.	"
"	"	15 6 00 a.m.	29 81	40 0	N.	nearly calm.
"	"	15 9 00 a.m.	29 87	49 0	N.	"
"	"	15 12 00 noon	29 90	51 0	N.	moderate breeze.
"	"	15 3 00 p.m.	29 90	54 0	N.	nearly calm.
"	"	15 6 00 p.m.	29 88	57 0	W.	"
Mouth of Thelon river.	"	16 6 00 a.m.	29 90	49 0	S.	"
"	"	16 9 00 a.m.	29 87	51 0	S. W.	"
"	"	16 12 00 noon	29 83	56 0	S. E.	"
Thelon river	"	16 3 00 p.m.	29 81	56 0	S. E.	"
"	"	16 6 00 p.m.	29 73	57 0	W.	"
"	"	17 6 00 a.m.	29 61	51 0	S.	"
"	"	17 9 00 a.m.	29 60	56 0	S.	"
"	"	17 12 00 noon	29 50	60 0	S.	" strong breeze.
"	"	17 3 00 p.m.	29 17	60 0	S.	"
"	"	17 6 00 p.m.	29 36	60 0	S.	"
"	"	18 6 00 a.m.	29 43	52 0	N. W.	heavy rain during night
"	"	18 9 00 a.m.	29 51	54 0	N. W.	"
"	"	18 12 00 noon	29 55	54 0	N. W.	"
"	"	18 3 00 p.m.	29 57	58 0	N. W.	"
"	"	18 6 00 p.m.	29 57	56 0	N. W.	"
"	"	19 6 00 a.m.	29 54	48 0	N. W.	Fine.
"	"	19 9 00 a.m.	29 53	50 0	N. E.	"
"	"	19 12 00 noon	29 54	57 0	N. E.	" black currants found.
"	"	19 3 00 p.m.	29 54	53 0	N. E.	"
"	"	19 6 00 p.m.	29 51	53 0	N. E.	"
"	"	20 6 00 a.m.	29 55	58 0	S. E.	Wet.
"	"	20 9 00 a.m.	29 60	52 0	N. W.	Fine.
"	"	20 12 00 noon	29 63	54 0	N. W.	"
"	"	20 3 00 p.m.	29 66	56 0	N. W.	"
"	"	20 6 00 p.m.	29 70	50 0	N. W.	"
"	"	21 6 00 a.m.	29 65	36 0	N. E.	Heavy blizzard, sleet, snow and rain.
"	"	21 9 00 a.m.	29 59	33 0	N. E.	Snowing hard.
"	"	21 12 00 noon	29 38	40 0	N. E.	Wet, strong gale.
"	"	21 3 00 p.m.	29 24	38 0	N. E.	"
"	"	21 6 00 p.m.	29 20	38 0	N. E.	"
"	"	22 6 00 a.m.	29 14	36 0	N.	Fine, gale decreasing.
"	"	22 9 00 a.m.	29 19	38 0	N.	" water risen about 2 feet.
"	"	22 12 00 noon	29 20	46 0	N.	"
"	"	22 3 00 p.m.	29 19	42 0	N.	"
"	"	22 6 00 p.m.	29 18	42 0	N.	"
"	"	23 6 00 a.m.	29 16	32 0	E.	" very heavy hoar frost
"	"	23 9 00 a.m.	29 16	40 0	E.	"
"	"	23 12 00 noon	29 10	46 0	E.	Snow flurries.
"	"	23 3 00 p.m.	29 08	43 0	E.	Rain showers.
"	"	23 6 00 p.m.	28 99	42 0	E.	Rain and snow flurries.
"	"	24 6 00 a.m.	28 94	35 0	E.	Fine, ground covered with sn. w.
"	"	24 9 00 a.m.	28 99	38 0	E.	heavy gale.
"	"	24 12 00 noon	28 98	38 0	N. E.	"
"	"	24 3 00 p.m.	29 00	36 0	N. E.	"

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## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
	1900.					
Thelon river.....	Aug. 24.	6.00 p.m.	29.03	34.0	N. E.	Stormy night.
"	" 25.	6.00 a.m.	29.18	32.0	N. W.	Fine, ground covered with snow.
"	" 25.	9.00 a.m.	29.22	38.0	N. W.	Fine.
"	" 25.	12.00 noon	29.26	43.0	N. W.	"
"	" 25.	3.00 p.m.	29.26	48.0	W.	"
"	" 25.	6.00 p.m.	29.28	45.0	W.	"
"	" 26.	6.00 a.m.	29.25	40.0	S. W.	" pools covered with ice.
"	" 26.	9.00 a.m.	29.24	46.0	S. W.	" strong breeze.
"	" 26.	12.00 noon	29.34	40.0	N. W.	"
"	" 26.	3.00 p.m.	29.40	44.0	N. W.	"
"	" 26.	6.00 p.m.	29.46	41.0	N. W.	"
Forks camp, Thelon river..	" 27.	6.00 a.m.	29.58	39.0	E.	"
Hanbury river.....	" 27.	9.00 a.m.	29.56	44.0	E.	"
"	" 27.	12.00 noon	29.52	48.0	E.	"
"	" 27.	3.00 p.m.	29.52	46.0	S.	"
"	" 27.	6.00 p.m.	29.39	44.0	S.	"
"	" 28.	6.00 a.m.	29.30	40.0	S.	"
"	" 28.	9.00 a.m.	29.26	46.0	S.	"
"	" 28.	12.00 noon	28.95	56.0	S.	"
"	" 28.	3.00 p.m.	28.86	54.0	S.	"
"	" 28.	6.00 p.m.	28.82	50.0	S. E.	"
"	" 29.	6.00 a.m.	28.83	40.0	N. W.	Wet.
"	" 29.	9.00 a.m.	28.85	42.0	N.	Fine.
"	" 29.	12.00 noon	28.83	46.0	N.	"
"	" 29.	3.00 p.m.	28.81	44.0	N.	"
"	" 29.	6.00 p.m.	28.82	43.0	E.	"
"	" 30.	6.00 a.m.	28.76	39.0	N. E.	"
"	" 30.	9.00 a.m.	28.72	43.0	N. E.	" fresh gale.
"	" 30.	12.00 noon	28.64	45.0	N. E.	"
"	" 30.	3.00 p.m.	28.59	44.0	N. E.	"
"	" 30.	6.00 p.m.	28.46	46.0	N. E.	"
"	" 31.	6.00 a.m.	28.36	46.0	S. E.	"
"	" 31.	9.00 a.m.	28.28	54.0	S. E.	"
"	" 31.	12.00 noon	28.26	58.0	S. E.	"
"	" 31.	3.00 p.m.	28.24	56.0	S. E.	"
"	" 31.	6.00 p.m.	28.21	54.0	S. E.	"
Mean for Month.....			29.47	48.96		
Hanbury river.....	Sept. 1.	6.00 a.m.	28.27	44.0	W.	Fine.
"	" 1.	9.00 a.m.	28.30	44.0	N. W.	"
"	" 1.	12.00 noon	28.31	46.0	N. W.	"
Sifton lake.....	" 1.	3.00 p.m.	28.38	46.0	W.	"
"	" 1.	6.00 p.m.	28.39	43.0	W.	"
"	" 2.	6.00 a.m.	28.39	34.0	N. W.	Snow flurries.
"	" 2.	9.00 a.m.	28.40	36.0	N. W.	Fine.
Musk Ox hill, Sifton lake ..	" 2.	12.00 noon	28.39	46.0	N. W.	"
"	" 2.	3.00 p.m.	28.38	43.0	N. W.	"
"	" 2.	6.00 p.m.	28.38	40.0	N. W.	"
"	" 3.	6.00 a.m.	28.45	39.0	N. E.	"
Smart lake.....	" 3.	9.00 a.m.	28.49	32.0	N. E.	Snow flurries.
Height of land.....	" 3.	12.00 noon	28.56	33.0	N. E.	"
"	" 3.	3.00 p.m.	28.59	34.0	N. W.	"
Clinton-Colden lake.....	" 3.	6.00 p.m.	28.62	32.0	N. W.	Fine.
"	" 4.	6.00 a.m.	28.76	32.0	W.	" ice on all the rocks.
"	" 4.	9.00 a.m.	28.76	36.0	N. W.	"
Casha lake.....	" 4.	12.00 noon	28.77	44.0	W.	"
"	" 4.	3.00 p.m.	28.74	42.0	S. W.	"
Casha river.....	" 4.	6.00 p.m.	28.72	42.0	S. W.	"
"	" 5.	6.00 a.m.	28.62	38.0	S. E.	"
"	" 5.	9.00 a.m.	28.52	42.0	S. E.	"
Artillery lake.....	" 5.	12.00 noon	28.42	48.0	S. E.	" strong gale.
"	" 5.	3.00 p.m.	28.39	50.0	S. E.	"
"	" 5.	6.00 p.m.	28.39	48.0	S. E.	"
"	" 6.	6.00 a.m.	28.41	40.0	N. E.	"



SESSIONAL PAPER No. 25

APPENDIX No. 4. Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather Notes.
1900.						
Artillery lake	Sept. 6	9 00 a.m.	28 45	46 0	S	Fine.
"	"	6 12 00 noon	28 47	49 0	S.W.	"
"	"	6 3 00 p.m.	28 48	50 0	S.W.	"
"	"	6 6 00 p.m.	28 48	50 0	S.W.	"
"	"	7 6 00 a.m.	28 54	41 0	N.E.	"
"	"	7 9 00 a.m.	28 55	45 0	N.E.	"
"	"	7 12 00 noon	28 55	41 0	N.E.	Showers.
"	"	7 3 00 p.m.	28 58	39 0	N.E.	"
"	"	7 6 00 p.m.	28 72	36 0	N.E.	Snow flurries.
"	"	8 6 00 a.m.	28 84	38 0	N.	Fine.
"	"	8 9 00 a.m.	28 80	42 0	W.	"
"	"	8 12 00 noon	28 87	45 0	W.	black currant bushes.
"	"	8 3 00 p.m.	28 82	47 0	S.W.	"
"	"	8 6 00 p.m.	28 78	47 0	S.W.	"
"	"	9 6 00 a.m.	28 76	40 0	S.W.	fresh gale.
"	"	9 9 00 a.m.	28 74	44 0	S.W.	"
"	"	9 12 00 noon	28 73	46 0	S.W.	"
"	"	9 3 00 p.m.	28 70	48 0	S.W.	almost calm.
"	"	9 6 00 p.m.	28 68	50 0	S.W.	calm.
"	"	10 6 00 a.m.	28 52	46 0	S.	"
"	"	10 9 00 a.m.	28 50	50 0	S.	"
Pike's portage	"	10 12 00 noon	28 36	60 0	S.W.	"
"	"	10 3 00 p.m.	28 38	58 0	S.W.	"
"	"	10 6 00 p.m.	28 38	56 0	S.W.	"
"	"	11 6 00 a.m.	28 32	43 0	"	calm.
"	"	11 9 00 a.m.	28 37	53 0	S.E.	"
"	"	11 12 00 noon	28 32	60 0	N.W.	"
"	"	11 3 00 p.m.	28 35	56 0	N.W.	"
"	"	11 3 30 p.m.	28 37	"	"	"
Great Slave lake	"	11 4 40 p.m.	28 98	"	"	"
"	"	11 4 00 p.m.	29 63	50 0	N.W.	Fine.
"	"	12 6 00 a.m.	29 39	38 0	N.W.	"
"	"	12 9 00 a.m.	29 40	49 0	N.W.	"
"	"	12 12 00 noon	29 41	52 0	W.	"
"	"	12 3 00 p.m.	29 41	53 0	W.	"
"	"	12 6 00 p.m.	29 42	50 0	W.	"
"	"	13 6 00 a.m.	29 54	40 0	W.	"
"	"	13 9 00 a.m.	29 54	47 0	W.	"
"	"	13 12 00 noon	29 56	52 0	W.	"
"	"	13 3 00 p.m.	29 57	52 0	W.	"
"	"	13 6 00 p.m.	29 61	45 0	W.	"
Fort Reliance, Gt. Slave lake	"	14 6 00 a.m.	29 80	34 0	E.	"
"	"	14 9 00 a.m.	29 80	42 0	S.W.	"
"	"	14 12 00 noon	29 79	50 0	S.W.	"
"	"	14 3 00 p.m.	29 78	52 0	S.W.	"
"	"	14 6 00 p.m.	29 73	50 0	W.	"
"	"	15 6 00 a.m.	29 63	40 0	S.W.	"
"	"	15 9 00 a.m.	29 66	48 0	S.W.	"
"	"	15 12 00 noon	29 60	54 0	S.W.	"
"	"	15 3 00 p.m.	29 57	58 0	S.W.	"
"	"	15 6 00 p.m.	29 51	51 0	S.W.	"
"	"	16 6 00 a.m.	29 40	47 0	S.W.	"
Great Slave lake	"	16 9 00 a.m.	29 40	52 0	S.W.	"
"	"	16 12 00 noon	29 36	56 0	S.W.	"
"	"	16 3 00 p.m.	29 33	57 0	N.	"
"	"	16 6 00 p.m.	29 29	49 0	N.	"
"	"	17 6 00 a.m.	29 19	39 0	N.E.	"
"	"	17 9 00 a.m.	29 17	50 0	S.E.	"
"	"	17 12 00 noon	29 19	53 0	N.W.	"
"	"	17 3 00 p.m.	29 22	57 0	N.W.	"
"	"	17 6 00 p.m.	29 29	54 0	N.W.	"
Fond du lac, Gt. Slave lake.	"	18 6 00 a.m.	29 39	40 0	N.E.	"
"	"	18 9 00 a.m.	28 36	50 0	N.E.	"

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## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
Great Slave lake	Sept. 18	12.00 noon	29 32	60° 0	N. E.	Fine.
"	" 18	3.00 p.m.	29 32	58° 0	N. E.	"
"	" 18	6.00 p.m.	29 32	54° 0	N. E.	"
"	" 19	6.00 a.m.	29 63	52° 0	S. E.	"
"	" 19	9.00 a.m.	29 01	58° 0	S.	"
"	" 19	12.00 noon	29 01	60° 0	S. W.	"
"	" 19	3.00 p.m.	29 01	60° 0	S. W.	"
"	" 19	6.00 p.m.	28 99	56° 0	S. W.	"
Stoney Island, Gt. Slave lake	" 20	6.00 a.m.	28 78	50° 0	S. W.	"
"	" 20	9.00 a.m.	28 74	58° 0	S. W.	" strong breeze.
"	" 20	12.00 noon	28 74	60° 0	S. W.	" heavy gale.
"	" 20	3.00 p.m.	28 78	56° 0	"	"
"	" 20	6.00 p.m.	28 82	50° 0	W.	"
"	" 21	6.00 a.m.	28 84	42° 0	N. W.	"
"	" 21	9.00 a.m.	28 96	46° 0	N. W.	"
"	" 21	12.00 noon	29 16	56° 0	N. W.	"
"	" 21	3.00 p.m.	29 22	54° 0	N. W.	"
"	" 21	6.00 p.m.	29 26	54° 0	N. W.	"
"	" 22	6.00 a.m.	29 30	38° 0	S. E.	" gale decreasing.
"	" 22	9.00 a.m.	29 36	47° 0	S. E.	"
"	" 22	12.00 noon	29 36	50° 0	S. E.	"
"	" 22	3.00 p.m.	29 38	47° 0	S. E.	"
Great Slave lake	" 22	6.00 p.m.	29 44	44° 0	S. E.	"
Ft. Resolution, Gt. Slave lake	" 23	6.00 a.m.	29 39	31° 0	S. E.	"
"	" 23	9.00 a.m.	29 67	42° 0	S. E.	"
"	" 23	12.00 noon	29 72	50° 0	N. W.	"
"	" 23	3.00 p.m.	29 74	44° 0	N.	"
"	" 23	6.00 p.m.	29 77	37° 0	N. W.	"
"	" 24	6.00 a.m.	29 82	39° 0	E.	"
"	" 24	9.00 a.m.	29 82	32° 0	E.	"
"	" 24	12.00 noon	29 78	49° 0	E.	"
"	" 24	3.00 p.m.	29 74	50° 0	E.	"
"	" 24	6.00 p.m.	29 72	47° 0	E.	"
"	" 25	6.00 a.m.	29 72	28° 0	S. E.	" slight fall of snow.
"	" 25	9.00 a.m.	29 71	33° 0	S.	"
"	" 25	12.00 noon	29 69	38° 0	S.	"
"	" 25	3.00 p.m.	29 64	38° 0	S.	"
"	" 25	6.00 p.m.	29 58	37° 0	S.	"
"	" 26	6.00 a.m.	29 09	38° 0	S.	"
"	" 26	9.00 a.m.	29 02	48° 0	S.	"
"	" 26	12.00 noon	28 94	50° 0	S.	"
"	" 26	3.00 p.m.	28 82	54° 0	S.	"
"	" 26	6.00 p.m.	28 74	50° 0	S.	"
"	" 27	6.00 a.m.	28 81	42° 0	N. W.	"
"	" 27	9.00 a.m.	28 83	44° 0	N. W.	"
"	" 27	12.00 noon	28 88	42° 0	N. W.	"
"	" 27	3.00 p.m.	28 92	46° 0	N. W.	"
"	" 27	6.00 p.m.	28 99	44° 0	N. W.	"
Slave river.	" 28	6.00 a.m.	29 09	44° 0	S. E.	"
"	" 28	9.00 a.m.	29 18	45° 0	S. E.	"
"	" 28	12.00 noon	29 26	50° 0	E.	"
"	" 28	3.00 p.m.	29 34	46° 0	E.	"
"	" 28	6.00 p.m.	29 41	35° 0	E.	" Snow during day.
"	" 29	6.00 a.m.	29 39	39° 0	N. E.	" Pools frozen over during night.
"	" 29	9.00 a.m.	29 62	40° 0	N. E.	" Fine.
"	" 29	12.00 noon	29 64	40° 0	N. E.	"
"	" 29	3.00 p.m.	29 63	36° 0	N. E.	"
"	" 29	6.00 p.m.	29 64	36° 0	N. E.	" Snow flurries.
"	" 30	6.00 a.m.	29 60	34° 0	N. W.	" Fine.
"	" 30	9.00 a.m.	29 66	42° 0	N. W.	"
"	" 30	12.00 noon	29 69	40° 0	N. W.	" Heavy snow fall.
"	" 30	3.00 p.m.	29 69	40° 0	N. W.	"
"	" 30	6.00 p.m.	29 72	32° 0	N. W.	" Fine.
Mean for the month.			29 06	45 51		

## SESSIONAL PAPER No. 25

## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer	Thermometer.	Wind.	Weather—Notes.
	1900.					
Slave river.	Oct. 1.	6 00 a.m.	29 74	30 0	N. E.	Snow still falling.
"	"	1 9 00 a.m.	29 76	36 0	"	Fine.
"	"	1 12 00 noon	29 79	40 0	"	"
"	"	1 3 00 p.m.	29 79	36 0	"	"
"	"	1 6 00 p.m.	29 79	28 0	"	"
"	"	12 6 00 a.m.	29 61	27 0	S. W.	Fine, at 4 a.m. temp. was 19.
"	"	12 9 00 a.m.	29 61	32 0	S. W.	Fine.
"	"	12 12 00 noon	29 58	36 0	S. W.	"
"	"	12 3 00 p.m.	29 56	40 0	S. W.	"
"	"	12 6 00 p.m.	29 54	49 0	S. W.	"
"	"	3 6 00 a.m.	29 62	38 0	S. W.	"
"	"	3 9 00 a.m.	29 64	40 0	S. W.	"
"	"	3 12 00 noon	29 66	44 0	"	"
"	"	3 3 00 p.m.	29 66	44 0	"	"
"	"	3 6 00 p.m.	29 66	37 0	"	"
Salt river, Slave river	"	4 6 00 a.m.	29 56	40 0	S. E.	"
"	"	4 9 00 a.m.	29 59	38 0	S. E.	"
Slave river.	"	4 12 00 noon	29 56	44 0	S. E.	"
"	"	4 3 00 p.m.	29 49	41 0	S. E.	"
Fort Smith, Slave river	"	4 6 00 p.m.	29 46	40 0	S. E.	"
"	"	5 6 00 a.m.	29 19	30 0	"	"
"	"	5 9 00 a.m.	29 18	40 0	"	"
Portage	"	5 12 00 noon	29 16	42 0	"	"
"	"	5 3 00 p.m.	29 14	40 0	"	"
Smith's landing	"	5 6 00 p.m.	29 14	34 0	S. E.	"
"	"	6 6 00 a.m.	29 11	26 0	"	"
"	"	6 9 00 a.m.	29 10	30 0	"	"
Slave river.	"	6 12 00 noon	29 11	40 0	"	"
"	"	6 6 00 p.m.	29 14	36 0	"	"
"	"	7 6 00 a.m.	29 24	26 0	"	"
"	"	7 9 00 a.m.	29 22	35 0	"	"
"	"	7 12 00 noon	29 12	36 0	"	"
"	"	7 3 00 p.m.	29 20	36 0	"	"
"	"	7 6 00 p.m.	29 18	34 0	"	Fine.
"	"	8 6 00 a.m.	29 09	30 0	"	"
"	"	8 9 00 a.m.	29 09	36 0	"	"
"	"	8 12 00 noon	29 10	44 0	"	Fine
"	"	8 3 00 p.m.	29 74	44 0	"	"
"	"	8 6 00 p.m.	29 55	42 0	"	"
"	"	9 6 00 a.m.	29 72	44 0	"	"
"	"	9 9 00 a.m.	29 72	48 0	S. W.	"
De Roche river, Slave river.	"	9 12 00 noon	29 72	52 0	S. W.	Fine.
"	"	9 3 00 p.m.	29 74	50 0	S. W.	"
"	"	9 6 00 p.m.	29 80	48 0	S. W.	"
"	"	10 6 00 a.m.	29 94	40 0	"	"
Slave river.	"	10 9 00 a.m.	29 94	42 0	"	"
"	"	10 12 00 noon	29 88	46 0	"	"
Ft. Chipewyan, L. Athabasca	"	10 3 00 p.m.	29 74	45 0	"	"
"	"	10 6 00 p.m.	29 74	42 0	"	Rain.
"	"	11 6 00 a.m.	29 57	38 0	"	"
"	"	11 9 00 a.m.	29 58	47 0	"	Fine.
"	"	11 12 00 noon	29 68	44 0	"	"
"	"	11 3 00 p.m.	29 64	44 0	S. W.	"
"	"	11 6 00 p.m.	29 60	43 0	S. W.	Fine.
"	"	12 6 00 a.m.	29 77	32 0	S. E.	100
"	"	12 9 00 a.m.	29 78	35 0	S. E.	"
"	"	12 12 00 noon	29 76	36 0	S. E.	"
"	"	12 3 00 p.m.	29 77	32 0	"	"
"	"	12 6 00 p.m.	29 78	30 0	"	Ground covered with snow.
"	"	13 6 00 a.m.	29 98	24 0	"	Fine.
"	"	13 9 00 a.m.	29 04	24 0	"	"
"	"	13 12 00 noon	29 08	29 0	S. W.	"
"	"	13 3 00 p.m.	29 09	36 0	S. W.	"
"	"	13 6 00 p.m.	29 09	35 0	S. W.	"
"	"	14 6 00 a.m.	29 14	28 0	S. E.	"

1-2 EDWARD VII., A. 1902

## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
	1900.					
Ft. Chippewyan, L. Athabasca	Oct.	14.	9 00 a.m.	29 14	29 0	S. E. Fine.
"	"	14.	12 00 noon	29 17	35 0	S. W. "
"	"	14.	3 00 p.m.	29 19	36 0	S. W. "
"	"	14.	6 00 p.m.	29 24	36 0	S. W. "
"	"	15.	6 00 a.m.	29 27	39 0	S. "
"	"	15.	9 00 a.m.	29 24	36 0	S. "
"	"	15.	12 00 noon	29 16	40 0	S. "
"	"	15.	3 00 p.m.	29 04	40 0	S. "
"	"	15.	6 00 p.m.	28 98	40 0	S. "
"	"	16.	6 00 a.m.	28 78	42 0	S. W. rain during night.
"	"	16.	9 00 a.m.	28 78	46 0	S. W. "
"	"	16.	12 00 noon	28 80	52 0	S. W. "
"	"	16.	3 00 p.m.	28 82	50 0	W. "
"	"	16.	6 00 p.m.	28 86	45 0	W. "
"	"	17.	6 00 a.m.	29 16	32 0	W. "
"	"	17.	9 00 a.m.	29 16	37 0	W. "
"	"	17.	12 00 noon	29 16	41 0	N. E. "
"	"	17.	3 00 p.m.	29 10	40 0	N. E. "
"	"	17.	6 00 p.m.	29 04	42 0	N. E. "
"	"	18.	6 00 a.m.	28 64	42 0	S. E. "
"	"	18.	9 00 a.m.	28 60	43 0	S. E. "
"	"	18.	12 00 noon	28 54	48 0	N. E. "
"	"	18.	3 00 p.m.	28 44	47 0	N. E. "
"	"	18.	6 00 p.m.	28 34	44 0	N. E. "
"	"	19.	6 00 a.m.	28 09	42 0	S. W. heavy rain in early morn.
"	"	19.	9 00 a.m.	28 08	46 0	S. W. "
"	"	19.	12 00 noon	28 08	49 0	W. "
"	"	19.	3 00 p.m.	28 10	48 0	W. "
"	"	19.	6 00 p.m.	28 11	46 0	W. "
"	"	20.	6 00 a.m.	28 40	40 0	W. "
"	"	20.	9 00 a.m.	28 42	42 0	W. "
"	"	20.	12 00 noon	28 42	52 0	W. "
"	"	20.	3 00 p.m.	28 42	56 0	W. Hail.
"	"	20.	6 00 p.m.	28 40	44 0	W. Rain, heavy thunder & lightning.
"	"	21.	6 00 a.m.	28 47	36 0	W. Fine.
"	"	21.	9 00 a.m.	28 50	36 0	W. "
"	"	21.	12 00 noon	28 52	40 0	W. "
"	"	21.	3 00 p.m.	28 62	38 0	W. "
"	"	21.	6 00 p.m.	28 66	34 0	N. "
"	"	22.	6 00 a.m.	28 86	26 0	N. "
"	"	22.	9 00 a.m.	28 87	26 0	N. W. Light fall of snow.
"	"	22.	12 00 noon	28 94	27 0	N. W. Fine.
"	"	22.	3 00 p.m.	29 02	26 0	N. W. "
"	"	22.	6 00 p.m.	29 17	24 0	N. W. "
"	"	23.	6 00 a.m.	29 16	29 0	N. W. "
"	"	23.	9 00 a.m.	29 17	24 0	N. W. "
"	"	23.	12 00 noon	29 12	26 0	N. W. "
"	"	23.	3 00 p.m.	29 07	24 0	S. "
"	"	23.	6 00 p.m.	29 07	22 0	S. "
"	"	24.	6 00 a.m.	28 77	28 0	S. W. "
"	"	24.	9 00 a.m.	28 77	30 0	S. W. "
"	"	24.	12 00 noon	28 72	38 0	S. W. "
"	"	24.	3 00 p.m.	28 70	40 0	S. W. "
"	"	24.	6 00 p.m.	28 67	34 0	S. W. "
"	"	25.	6 00 a.m.	28 52	32 0	S. "
"	"	25.	9 00 a.m.	28 52	36 0	S. "
"	"	25.	12 00 noon	28 52	42 0	S. "
"	"	25.	3 00 p.m.	28 50	40 0	S. "
"	"	25.	6 00 p.m.	28 54	36 0	S. "
"	"	26.	6 00 a.m.	28 74	32 0	S. "
"	"	26.	9 00 a.m.	28 76	36 0	S. "
"	"	26.	12 00 noon	28 78	40 0	S. "
"	"	26.	3 00 p.m.	28 84	42 0	W. "
"	"	26.	6 00 p.m.	28 88	36 0	W. "
"	"	27.	6 00 a.m.	29 08	29 0	S. "

SESSIONAL PAPER No. 25

APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather Notes.
1900.						
Ft. Chippewyan, L. Athabasca	Oct.	27	9 00 a.m.	29 11	32 0	S. Fine.
"	"	27	12 00 noon	29 11	32 0	"
"	"	27	3 00 p.m.	29 08	30 0	E. "
"	"	27	6 00 p.m.	29 04	38 0	E. "
"	"	28	6 00 a.m.	28 82	36 0	S. E. "
"	"	28	9 00 a.m.	28 73	42 0	S. E. "
"	"	28	12 00 noon	28 76	46 0	S. E. "
"	"	28	3 00 p.m.	28 80	42 0	S. E. Light rain.
"	"	28	6 00 p.m.	28 86	38 0	S. E. Fine.
"	"	29	6 00 a.m.	28 90	32 0	S. W. "
"	"	29	9 00 a.m.	28 92	34 0	W. "
"	"	29	12 00 noon	28 22	34 0	W. "
"	"	29	3 00 p.m.	"	34 0	W. "
"	"	29	6 00 p.m.	29 02	32 0	W. "
"	"	30	6 00 a.m.	28 97	30 0	E. "
"	"	30	9 00 a.m.	28 98	34 0	E. "
"	"	30	12 00 noon	28 94	38 0	E. "
"	"	30	3 00 p.m.	28 90	38 0	E. "
"	"	30	6 00 p.m.	28 90	36 0	E. "
"	"	31	6 00 a.m.	28 92	27 0	S. E. "
"	"	31	9 00 a.m.	28 95	"	S. "
"	"	31	12 00 noon	28 95	"	S. "
"	"	31	3 00 p.m.	28 98	34 0	S. "
"	"	31	6 00 p.m.	29 02	30 0	S. "
Mean for month				28 95	37 11	
Ft. Chippewyan, L. Athabasca	Nov.	1	6 00 a.m.	29 08	30 0	N. Fine, slight snow fall.
"	"	1	9 00 a.m.	29 08	33 0	S. Fine.
"	"	1	12 00 noon	29 12	36 0	N. "
"	"	1	3 00 p.m.	29 07	36 0	N. "
"	"	1	6 00 p.m.	29 12	33 0	N. "
"	"	2	6 00 a.m.	29 02	28 0	W. "
"	"	2	9 00 a.m.	29 02	30 0	W. "
"	"	2	12 00 noon	29 05	32 0	W. "
"	"	2	3 00 p.m.	28 99	32 0	W. "
"	"	2	6 00 p.m.	28 97	30 0	W. "
"	"	3	6 00 a.m.	28 75	28 0	S. W. "
"	"	3	9 00 a.m.	28 72	30 0	S. W. "
"	"	3	12 00 noon	28 70	32 0	S. W. "
"	"	3	3 00 p.m.	28 69	34 0	S. W. Fine, very strong breeze.
"	"	3	6 00 p.m.	28 67	34 0	S. W. Fine.
"	"	4	6 00 a.m.	28 99	18 0	N. W. Fresh gale with snow.
"	"	4	9 00 a.m.	29 01	22 0	W. Ice forming along shore.
"	"	4	12 00 noon	29 03	24 0	W. Fine.
"	"	4	3 00 p.m.	29 05	24 0	W. "
"	"	4	6 00 p.m.	29 12	21 0	W. "
"	"	5	6 00 a.m.	29 33	10 0	N. E. "
"	"	5	9 00 a.m.	29 35	12 0	N. E. "
"	"	5	12 00 noon	29 37	20 0	N. E. "
"	"	5	3 00 p.m.	29 41	18 0	N. E. "
"	"	5	6 00 p.m.	29 42	19 0	N. E. "
"	"	6	6 00 a.m.	29 46	14 0	E. "
"	"	6	9 00 a.m.	29 49	16 0	E. "
"	"	6	12 00 noon	29 52	18 0	E. "
"	"	6	3 00 p.m.	29 49	20 0	E. "
"	"	6	6 00 p.m.	29 47	20 0	E. "
"	"	7	6 00 a.m.	29 22	22 0	S. "
"	"	7	9 00 a.m.	29 17	24 0	S. "
"	"	7	12 00 noon	29 12	30 0	S. "
"	"	7	3 00 p.m.	29 07	31 0	S. "
"	"	7	6 00 p.m.	29 02	32 0	S. "
"	"	8	6 00 a.m.	28 82	30 0	S. "
"	"	8	9 00 a.m.	28 83	32 0	S. "

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## APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather—Notes.
1900.						
Ft. Chippewyan, L. Athabasca	Nov. 8.	12 00 noon	28 80	34 0	S.	Fine.
"	"	8. 3 00 p.m.	28 80	34 0	N.E.	"
"	"	8. 6 70 p.m.	28 82	34 0	N.E.	Fine, 7 p.m. rain falling, rainbow observed, 10 p.m. snow.
"	"	9. 6 00 a.m.	29 32	20 0	N.E.	Fine.
"	"	9. 9 00 a.m.	29 35	21 0	N.E.	"
"	"	9. 12 00 noon	29 47	21 0	W.	"
"	"	9. 3 00 p.m.	29 51	20 0	W.	"
"	"	9. 6 00 p.m.	29 57	20 0	W.	"
"	"	10. 6 00 a.m.	29 27	30 0	S.	"
"	"	10. 9 00 a.m.	29 27	31 0	S.	"
"	"	10. 12 00 noon	29 27	36 0	N.W.	"
"	"	10. 3 00 p.m.	29 27	31 0	N.E.	"
"	"	10. 6 00 p.m.	29 27	27 0	N.E.	"
"	"	11. 6 00 a.m.	29 27	16 0	N.E.	"
"	"	11. 9 00 a.m.	29 29	18 0	N.E.	"
"	"	11. 12 00 noon	29 31	14 0	N.E.	"
"	"	11. 3 00 p.m.	29 41	12 0	N.E.	"
"	"	11. 6 00 p.m.	29 47	10 0	N.E.	"
"	"	12. 6 00 a.m.	29 47	2 0	N.E.	"
"	"	12. 9 00 a.m.	29 47	6 0	N.E.	"
"	"	12. 12 00 noon	29 47	12 0	N.E.	"
"	"	12. 3 00 p.m.	29 61	16 0	N.	"
"	"	12. 6 00 p.m.	29 61	+8 0	N.	"
"	"	13. 6 00 a.m.	29 47	-2 0	S.E.	"
"	"	13. 9 00 a.m.	29 47	+5 0	S.	ice set fast in channel.
"	"	13. 12 00 noon	29 42	10 0	S.	"
"	"	13. 3 00 p.m.	29 39	7 0	N.E.	"
"	"	13. 6 00 p.m.	29 42	7 0	N.E.	"
"	"	14. 6 00 a.m.	29 47	7 0	N.E.	"
"	"	14. 9 00 a.m.	29 47	8 0	N.	"
"	"	14. 12 00 noon	29 52	8 0	N.	"
"	"	14. 3 00 p.m.	29 52	10 0	N.	"
"	"	14. 6 00 p.m.	29 54	8 0	N.	"
Athabasca river.	"	15. 6 00 a.m.	29 57	3 0	N.W.	"
"	"	15. 9 00 a.m.	29 57	2 0	N.W.	"
"	"	15. 12 00 noon	29 57	1 0	N.W.	"
"	"	15. 3 00 p.m.	29 57	+1 0	N.W.	"
"	"	15. 6 00 p.m.	29 57	-2 0	"	"
"	"	16. 6 00 a.m.	29 62	-12 0	"	"
"	"	16. 9 00 a.m.	29 72	-10 0	S.W.	Fine.
"	"	16. 12 00 noon	29 70	-10 0	N.W.	"
"	"	16. 3 00 p.m.	29 70	-8 0	N.W.	"
"	"	16. 6 00 p.m.	29 70	+6 0	N.W.	"
"	"	17. 6 00 a.m.	29 70	-30 0	N.W.	"
"	"	17. 9 00 a.m.	29 70	-25 0	S.	"
"	"	17. 12 00 noon	29 70	-18 0	S.	Fine.
"	"	17. 3 00 p.m.	"	"	"	"
"	"	17. 6 00 p.m.	29 62	-24 0	S.	Fine.
"	"	18. 6 00 a.m.	29 57	-32 0	W.	"
"	"	18. 9 00 a.m.	29 57	-25 0	W.	"
"	"	18. 12 00 noon	28 52	-12 0	W.	"
"	"	18. 3 00 p.m.	29 52	-12 0	"	"
Fort McKay, Athabasca river	"	18. 6 00 p.m.	29 47	-12 0	W.	"
"	"	19. 6 00 a.m.	29 52	-16 0	W.	"
"	"	19. 9 00 a.m.	29 53	-8 0	W.	"
"	"	19. 12 00 noon	29 55	+2 0	W.	"
"	"	19. 3 00 p.m.	29 47	-8 0	W.	"
"	"	19. 6 00 p.m.	29 47	-8 0	W.	"
"	"	20. 6 00 a.m.	29 07	-18 0	S.	"
"	"	20. 12 00 noon	28 97	-3 0	S.	"
"	"	20. 6 00 p.m.	28 85	0 0	S.	"
Athabasca river	"	21. 6 00 a.m.	28 87	6 0	N.	Fine.
"	"	21. 9 00 a.m.	28 91	4 0	N.	"
Ft. McMurray, Athabasca riv.	"	21. 12 00 noon	28 93	-2 0	N.	"

SESSIONAL PAPER No. 25

APPENDIX No. 4.—Meteorological Observations—Continued.

Place.	Date.	Hour.	Barometer.	Thermometer.	Wind.	Weather.
1900.						
Athabasca river	Nov. 21	3 00 p.m.	28 57	- 6 0		
Trail, Athabasca river.	" 21	6 00 p.m.	28 57	- 20 0	N.	Fine.
"	" 22	6 00 a.m.	28 57	- 32 0	S. S.	"
"	" 22	9 00 a.m.	28 57	- 30 0	S. S.	"
Red Willow lake	" 22	12 00 noon	28 57	- 10 0	S. S.	Fine.
"	" 22	3 00 p.m.	28 57	12 0	W.	"
"	" 22	6 00 p.m.	28 33	16 0	W.	"
"	" 23	6 00 a.m.	28 32	- 23 0	S. W.	"
Trail.	" 23	12 00 noon	28 52	8 0	S. W.	"
"	" 23	3 00 p.m.	28 52	8 0	S. W.	"
"	" 23	6 00 p.m.	28 52	- 16 0	S. W.	"
"	" 24	6 00 a.m.	28 37	- 13 0	S.	"
"	" 24	9 00 a.m.	28 37	- 10 0	S.	Fine.
"	" 24	12 00 noon	28 12	0 0	S.	Slight snow.
"	" 24	6 00 p.m.	28 12	2 0	S.	Fine.
"	" 25	6 00 a.m.	28 02	5 0	S. E.	Snow.
"	" 25	9 00 a.m.	28 07	10 0	S.	"
Pembina river	" 25	12 00 noon	28 12	13 0	S.	"
"	" 25	3 00 p.m.	28 07	12 0	S.	"
Trail.	" 25	6 00 p.m.	28 65	12 0	S.	Snow.
"	" 26	6 00 a.m.	28 07	12 0	S.	Fine.
"	" 26	12 00 noon	28 11	22 0	W.	"
"	" 26	6 00 p.m.	28 87	16 0	W.	"
Big Jackfish lake	" 27	6 00 a.m.	28 12	26 0	S. W.	"
"	" 27	12 00 noon	28 21	32 0	S. W.	"
"	" 27	6 00 p.m.	28 21	34 0	S. W.	"
"	" 28	6 00 a.m.	28 52	25 0	S. W.	"
"	" 28	12 00 noon	28 37	39 0	S. W.	"
Trail.	" 28	6 00 p.m.	27 17	26 0	S. W.	Fine.
"	" 29	6 00 a.m.	27 37	26 0	S. W.	"
"	" 29	12 00 noon	27 37	30 0	S. W.	"
Hart lake.	" 29	6 00 p.m.	27 87	28 0	E.	Fine.
"	" 30	6 00 a.m.	27 77	24 0	E.	"
"	" 30	12 00 noon	27 75	28 0	W.	"
Lac la Biche	" 30	6 00 p.m.	27 73	20 0	W.	"
Mean for month			28 97	10 81		
Lac la Biche	Dec. 1	6 00 a.m.	27 97	30 0	N. W.	Fine, very little snow here.
"	" 1	12 00 noon	28 07	38 0	N. W.	Fine.
Pat Prudens	" 1	6 00 p.m.	28 14	24 0	N. W.	"
"	" 2	6 00 a.m.	28 97	26 0	S. W.	"
Trail.	" 2	12 00 noon	28 87	34 0	S. W.	"
Whitefish lake	" 2	6 00 p.m.	28 87	32 0	S. W.	"
Whitefish lake	" 3	6 00 a.m.	28 87	28 0	S. W.	Fine.
Good Fish lake.	" 3	12 00 noon	28 80	38 0	N. W.	"
Duck lake	" 3	6 00 p.m.	27 72	26 0	N. W.	"
"	" 4	6 00 a.m.	27 67	14 0		"
"	" 4	12 00 noon	27 67	24 0	N. W.	Fine.
Victoria	" 4	6 00 p.m.	27 72	20 0	S. W.	"
"	" 5	6 00 a.m.	27 90	13 0	S. W.	"
Eggs lake	" 5	12 00 noon	27 62	32 0	S. W.	"
Warsaw	" 5	6 00 p.m.	27 57	22 0	S. W.	"
"	" 6	6 00 a.m.	27 67	32 0	S. W.	"
"	" 6	12 00 noon	27 87	42 0	S. W.	"
Mean for month			27 83	27 70		

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APPENDIX No. 4.—Meteorological Observations—*Continued.*

Month.	BAROMETER.			THERMOMETER.		
	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.
1900.						
April.	29.39	30.19	28.68	34.77	59.0	+ 6.0
May.	28.75	30.12	28.21	44.46	75.0	16.0
June.	28.58	28.90	28.10	52.29	74.0	29.0
July.	29.44	30.14	28.62	55.51	77.0	40.0
August.	29.47	30.19	28.21	48.96	64.0	30.0
September.	29.06	29.82	28.27	45.51	60.0	28.0
October.	28.93	29.79	28.06	37.11	52.0	20.0
November.	28.97	29.72	27.17	10.81	36.0	-32.0
December.	72.83	28.14	27.57	27.76	42.0	+10.0



## SESSIONAL PAPER No. 25

## APPENDIX No. 4.—Barometer Readings taken at Fort Resolution by F. C. Gaudett.

Date.	6 a.m.	Noon.	6 p.m.	Weather.
1900.				
April 14	29.77	29.88	29.91	Cloudy.
" 15	30.02	30.00	29.87	Clear.
" 16	29.59	29.32	29.12	"
" 17	29.01	28.94	28.90	Cloudy.
" 18	28.82	28.91	29.02	"
" 19	29.22	29.32	29.41	Snowing.
" 20	29.42	29.31	29.17	Clear.
" 21	29.02	28.98	28.98	Cloudy.
" 22	29.06	29.01	29.01	rain.
" 23	29.07	29.17	29.26	Clear and warm.
" 24	29.31	29.33	29.38	"
" 25	29.44	29.45	29.43	Cloudy.
" 26	29.46	29.49	29.48	Clear and warm.
" 27	29.57	29.51	29.60	Cloudy.
" 28	29.72	29.73	29.52	"
" 29	29.51	29.60	29.62	"
" 30	29.47	29.48	29.66	Snowing.
Mean for month			29.38	
May 1	29.86	29.88	29.87	Clear.
" 2	29.83	29.72	29.58	Cloudy.
" 3	29.34	29.31	29.34	"
" 4	29.37	29.32	29.05	Clear.
" 5	29.17	29.02	28.93	Cloudy.
" 6	29.00	29.18	29.33	"
" 7	29.63	29.76	29.77	Clear.
" 8	29.75	29.70	29.53	Cloudy.
" 9	29.27	29.27	29.31	"
" 10	29.38	29.48	29.46	Clear.
" 11	29.45	29.45	29.38	Cloudy.
" 12	29.31	29.31	29.32	Clear.
" 13	29.42	29.47	29.40	"
" 14	29.40	29.38	29.32	Cloudy.
" 15	29.27	29.29	29.27	Clear.
" 16	29.22	29.18	29.17	Rainy.
" 17	29.13	29.21	29.31	Clear.
" 18	29.46	29.46	29.41	"
" 19	29.33	29.36	29.23	"
" 20	29.33	29.35	29.28	"
" 21	29.22	29.13	29.14	Cloudy.
" 22	29.19	29.26	29.28	Clear.
" 23	29.36	29.36	29.33	"
" 24	29.36	29.31	29.22	"
" 25	29.21	29.18	29.16	"
" 26	29.07	28.95	28.93	Rain.
" 27	28.96	29.07	29.11	Rainy.
" 28	29.11	29.16	29.23	Clear.
" 29	29.31	29.41	29.43	"
" 30	29.47	29.51	29.50	"
" 31	29.54	29.43	29.36	Rainy.
Mean for month			29.31	
June 1	29.27	29.24	29.27	Heavy rain.
" 2	29.42	29.43	29.40	Clear.
" 3	29.37	29.34	29.27	"
" 4	29.14	29.02	28.95	Heavy rain.
" 5	28.85	28.84	28.43	Cloudy.
" 6	28.91	29.02	29.12	"
" 7	29.30	29.39	29.25	"
" 8	29.40	29.40	29.31	Clear.
" 9	29.24	29.31	29.26	Cloudy.
" 10	29.22	29.22	29.23	Clear.
" 11	29.50	29.48	29.43	"
" 12	29.37	29.32	29.32	Cloudy.
" 13	29.50	29.48	29.31	S.E. wind.
" 14	29.22	29.12		"

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## APPENDIX No. 4.—Barometer Readings—Continued.

Date.		6 a.m.	Noon.	6 p.m.	Weather.
1900.					
June	15	28 26	29 12	29 04	N. wind.
"	16	29 57	29 51	29 57	"
"	17	29 51	29 43	29 35	Clear.
"	18	29 36	29 39	29 23	Cloudy.
"	19	29 06	29 04	28 96	"
"	20	28 95	28 93	28 88	"
"	21	28 80	28 93		
"	22	29 02	29 18	29 28	Cloudy, storm.
"	23	29 51	29 60	29 61	Clear.
"	24	29 63	29 63	29 52	
"	25	29 49	29 55		
"	26	29 51	29 56	29 54	N. wind.
"	27	29 62	29 68	29 66	"
"	28	29 72	29 66	29 59	Clear.
"	29	29 57	29 51	29 47	"
"	30	29 51	29 52	29 48	
Mean for month.				29 31	
July	1	29 48	29 46	29 41	Clear.
"	2	29 45	29 42	29 41	"
"	3	29 43	29 42	29 32	"
"	4	29 26	29 20	29 12	"
"	5	29 16	29 17		
"	6	29 32	29 41	29 44	Clear.
"	7	29 52	29 51	29 45	"
"	8	29 37	29 29	29 22	"
"	9	29 24	29 25	29 31	Cloudy.
"	10	29 42	29 47		Clear.
"	11	29 60	29 58	29 54	"
"	12	29 50	29 49	29 31	Cloudy.
"	13	29 17	29 13	29 22	Clear.
"	14	29 37	29 37	29 33	"
"	15	29 24	29 20	29 14	"
"	16	29 02	28 97	29 06	"
"	17	29 30	29 38	29 43	"
"	18	29 49	29 51	29 43	"
"	19	29 28	29 21	29 12	Raining.
"	20	29 16	29 18	29 20	Clear.
"	21	29 21	29 23	29 18	Raining.
"	22	29 32	29 43	29 51	
"	23	29 58	29 46	29 63	
"	24	29 61	29 56	29 42	
"	25	28 51	29 10	29 12	
"	26	29 33	29 27	29 72	
"	27	29 33	29 38	29 36	
"	28	29 36	29 38	29 37	
"	29	29 34	29 38		
"	30	29 40	29 42	29 37	Clear.
"	31	29 38	29 39	29 36	
Mean for month.				29 34	
Aug.	1	29 36	29 25	29 16	
"	2	29 07	29 00	28 97	Raining.
"	3	29 01	29 06	29 28	
"	4	29 41	29 43	29 37	
"	5	29 35	29 36	29 31	
"	6	29 33	29 34	29 33	
"	7	29 34	29 32	29 29	Clear.
"	8		29 32	29 48	Cloudy.
"	9	29 61	29 61	29 61	"
"	10		29 48	29 36	"
"	11	29 27	29 22	29 14	"
"	12	29 12	29 13	29 16	"
"	13	29 32	29 34	29 33	"
"	14	29 32	29 33	29 31	Cloudy.
"	15	29 34	29 40	29 41	
"	16	29 40	29 33	29 20	Clear.

## SESSIONAL PAPER No. 25

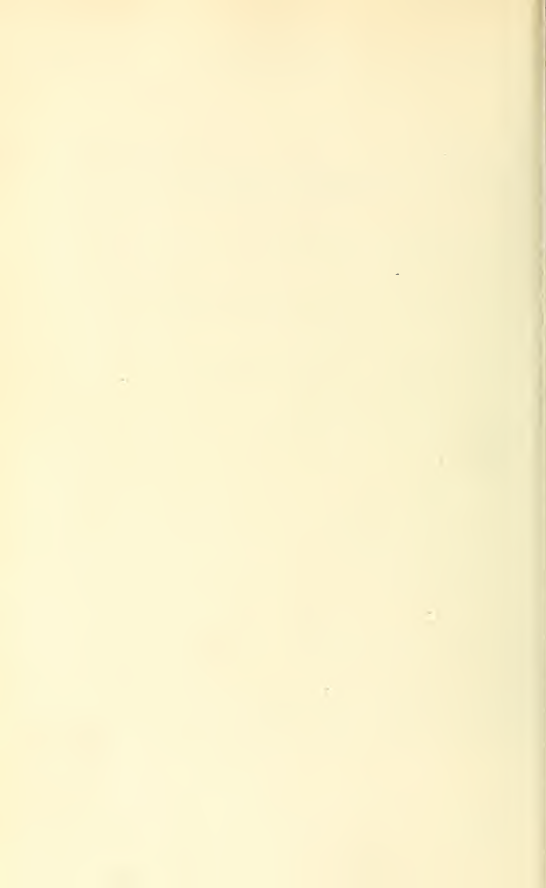
## APPENDIX No. 4.—Barometer Readings—Continued.

Date.	6 a.m.	Noon.	6 p.m.	Weather.
1900				
Aug. 17	29.02	29.04	29.16	Cloudy.
" 18	29.31	29.30	29.31	"
" 19	29.37	29.42	29.42	"
" 20	29.34	29.32	29.51	Raining.
" 21	29.32	29.46	29.47	Cloudy.
" 22	29.18	29.02	28.88	"
" 23	28.80	28.92	28.95	Stormy.
" 24	28.92	29.04	29.26	Raining.
" 25	29.45	29.47	29.37	Clear.
" 26	29.34	29.37		
" 27	29.50	29.47	29.43	
" 28	29.32	29.32	29.31	Cloudy.
" 29	29.29	29.25	29.13	
" 30	29.00	28.97	28.94	
" 31	28.97	28.99	29.07	Clear.
Mean for month.....			29.25	
Sept. 1	29.23	29.32	29.28	Clear.
" 2	28.99	28.94	28.93	Raining.
" 3	29.23	29.34	29.48	"
" 4	29.61	29.62	29.47	Clear.
" 5	29.12	29.05	29.12	"
" 6	29.14	29.17	29.26	Raining.
" 7	29.43	29.46	29.60	
" 8	29.62	29.68	29.56	
" 9	29.48	29.42	29.36	
" 10	29.23	29.14	29.14	Clear.
" 11	29.04	29.02	29.07	Raining.
" 12	29.51	29.42	29.42	Clear.
" 13	29.71	29.74	29.74	"
" 14	29.83	29.89	29.81	"
" 15	29.76	29.71	29.58	"
" 16	29.47	29.38	29.26	"
" 17	29.22	29.31	29.37	
" 18	29.38	29.33	29.22	Clear.
" 19	29.16	29.06	29.02	"
" 20	28.82	28.83	28.89	S.W. wind.
" 21	29.12	29.22	29.28	N.W. wind.
" 22	29.32	29.37	29.39	
Mean for month.....			29.34	



LIST OF PLATES TO ACCOMPANY REPORTS OF GEORGE WHITE-FRASER, D.T.S., AND  
ARTHUR SAINT CYR, D.L.S.

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STORM ON LAKE BENNETT, NEAR WATSON RIVER.

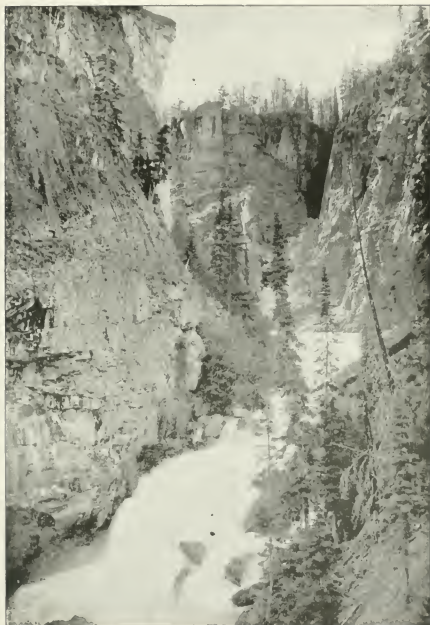






WATSON RIVER.





[GORGE AT HEAD OF WEST] ARM.





VIEW FROM SERRAJO MOUNTAINS WEST AND WILMANTON RIVER, LOOKING SOUTH





ON PASS FROM WEST ABRE TO VICTORIOS RIVER.







VIEW OF WHEATON RIVER VALLEY, FROM SUMMIT





NEW RIVER RANGE, W. AND S. FROM COTTAGE IN THE WOODS RIVER





NEW RIVER FROM LAKE SIDE, LOOKING NORTH





LAKE ON SUMMIT OF MOUNTAIN TAKEN RIVER







TAKHINI RIVER FROM NEAR POST L, LOOKING SOUTH.





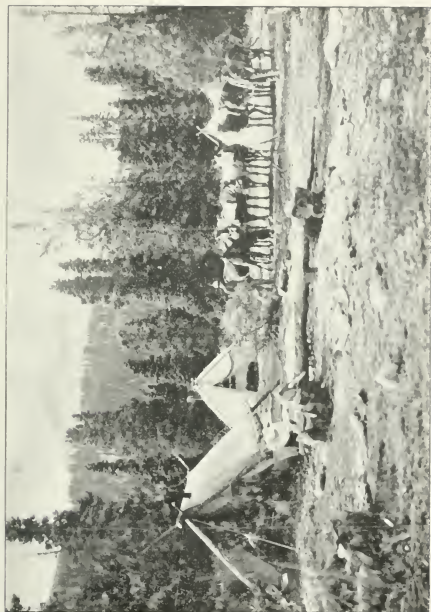
PACKING UP DALING TRAIL, RIVER BOTTOM.





TABLET





CAMP OF A NATIVE INDIAN, PINE CO.







N. W. M. P. POST AT DALTON HOUSE.





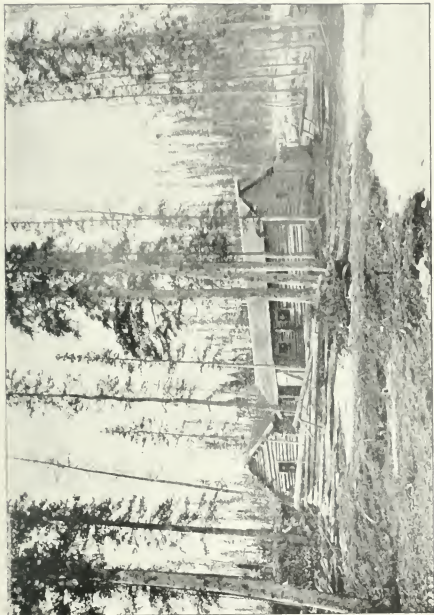
CATTLE AND HORSES AT DUTTON HOUSE.





MOUNTAINS WEST OF KASRAWULSH.





THE MAINE HOTEL, LAKE UMBAGOG.



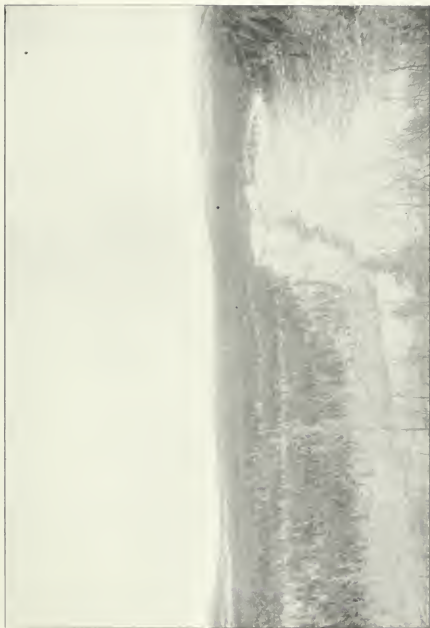




HAPPY VALLEY.

Photo by A. Saint Cyr.

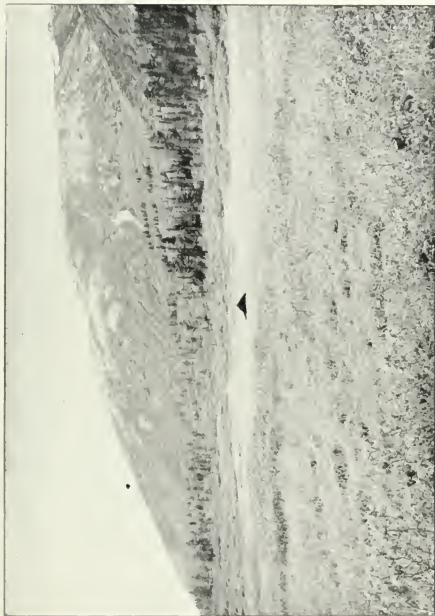




DRY BEDS OF OLD RIVER IN THE HAPPY VALLEY.

Photo by A. Saint Cyr

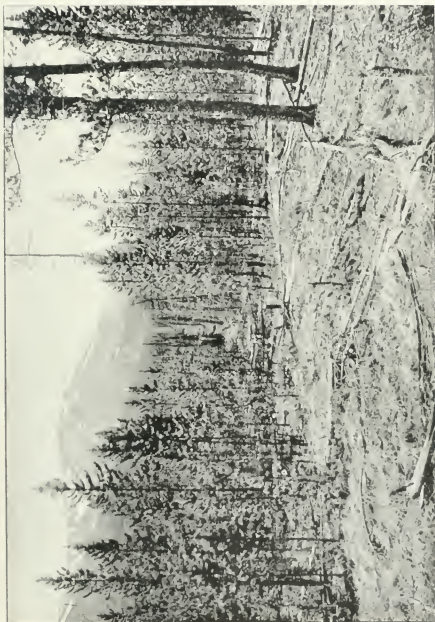




ONE MILE WEST OF MORIN MT., LOOKING WEST.

Photo by A. Saint Cyr.





FOOT OF WHITE RANGE, FACING WEST.

Photo by A. Saint Cyr.







Foot of Red Rider, facing East, Post 51.

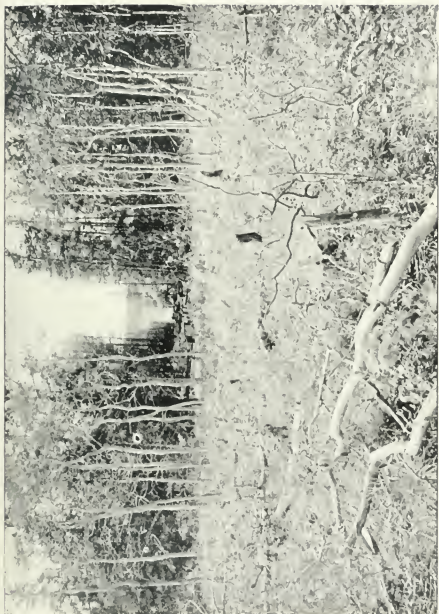
Photo by A. Saint Cyr.





BOUNDARY LINE, 120 FEET WEST OF POSE 56, LOOKING WEST. Photo by A. Salat Cyr.





BOUNDARY LINE, 840 FEET WEST OF POST 56, LOOKING WEST. Photo by A. Saint Cyr.



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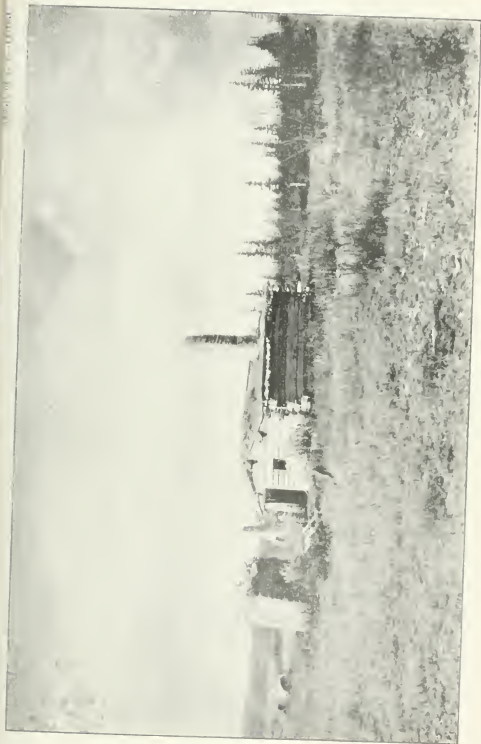




MEMBERS OF EXPEDITION AT CAMPBAYAN

Photo. N. J. W. Tye





Coastal British Columbia, 1900

Photo by W. Terrell





SECOND RAPIDS, LOCKHART RIVER, MAY, 1911.

Photo. by J. W. Tyrrell



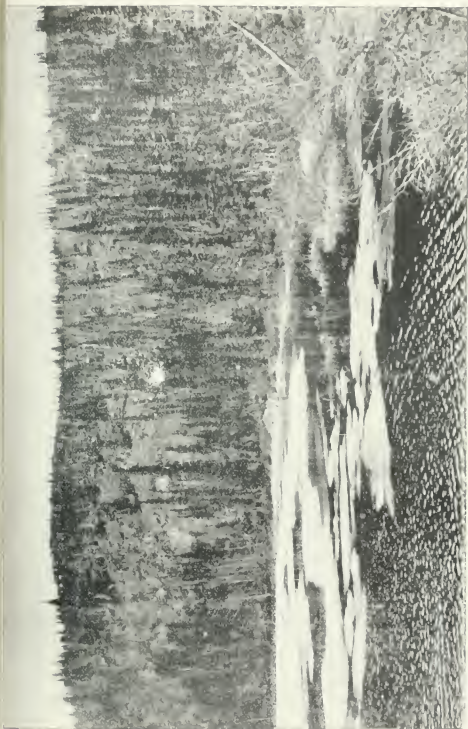


Photo by J. W. Tyrrell

Looking Down at PARRY FALLS, MAY 15, 1900.







AN EARLY SPRING BATH, KIRKTON LAKE

Photo. by J. W. Tyrrell





Landing at Crossing of Saskatchewan River

Photo. by J. W. Tyrrell





Photo by J. W. Tyrell

Lawrence, Kansas, May 1908



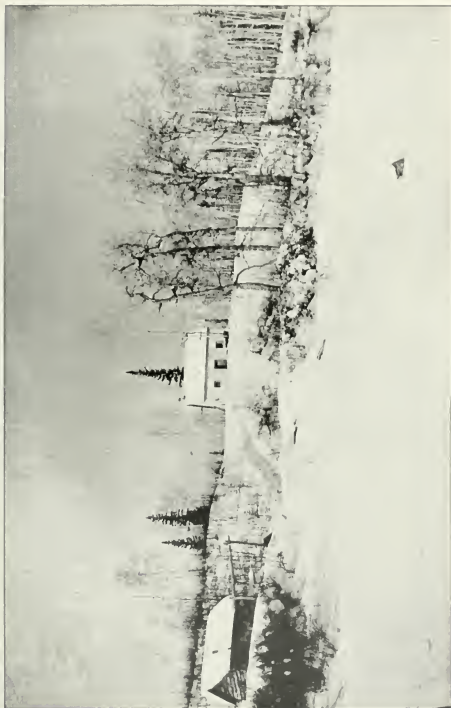


A HALT FOR LUNCH AT A HUNTER'S CAMP.

Photo. by J. W. Tyrrell







FORT MCKAY, ATHABASCA RIVER.

Photo. by J. W. Tyrrell





FOUR CHIPPYVAN.

Photo. by J. W. Tyrrell





SALT FLATS, NORTH END OF FORT SMITH.



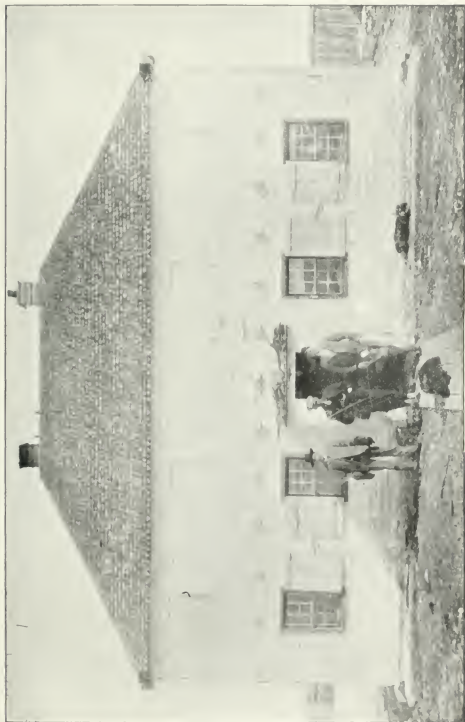


FORT RESOLUTION, GREAT SLAVE LAKE

Photo by J. W. Tyrrell







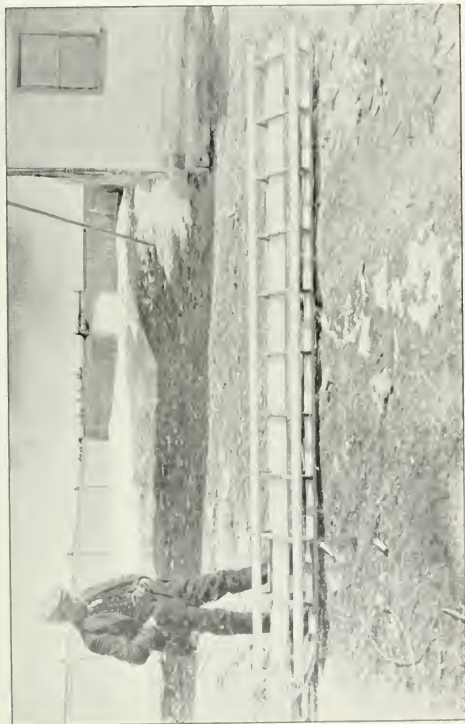
HUTTON'S BAY CO. DWELLING, FORT RESOLUTION.





INTERIOR ROMAN CATHOLIC CHURCH, FORT RESOLUTION. Photo. by J. W. Tyrrell





SLEDS CONSTRUCTED AT FORT RESOLUTION, FOR EXPEDITION.

Phot. by J. W. Tyrrell



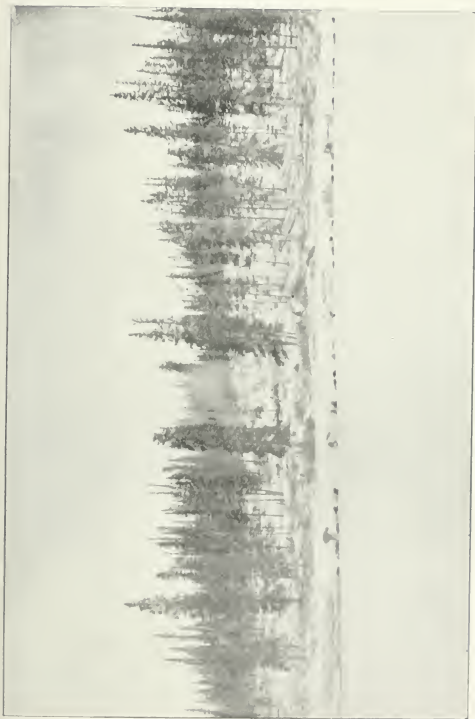


Photo. by J. W. Tyrrell

ICE FLOES ON GREAT SALT LAKE, AUGUST 1910



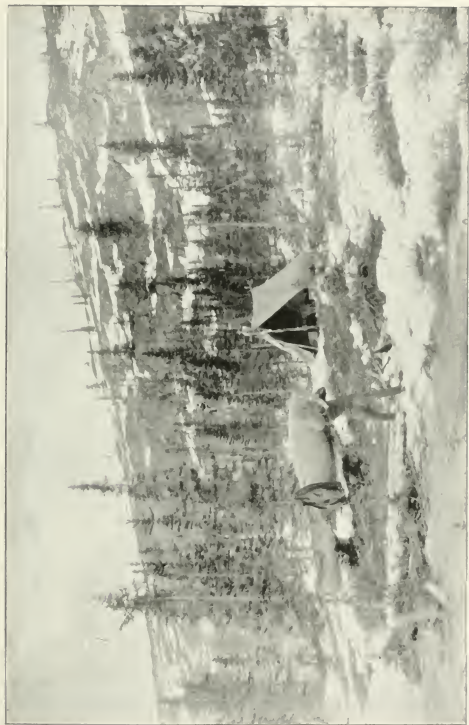




HALT FOR LUNCH AT BIG POINT, GREAT SLAVE LAKE

Photo. by J. W. Tyrrell





CAMP 11 MILES.

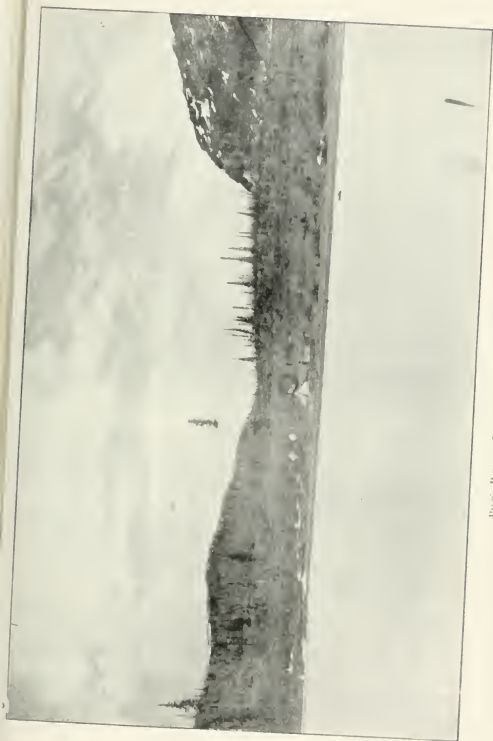
Photo. by J. W. Tyrrell





SLEEPS AT SWALLOW ISLANDS, GREAT SLAVE LAKE





PIKE'S PORTAGE LANDINGS, GREAT SLAVE LAKE, MAY 8TH.

Photo by F. W. Tyrrell



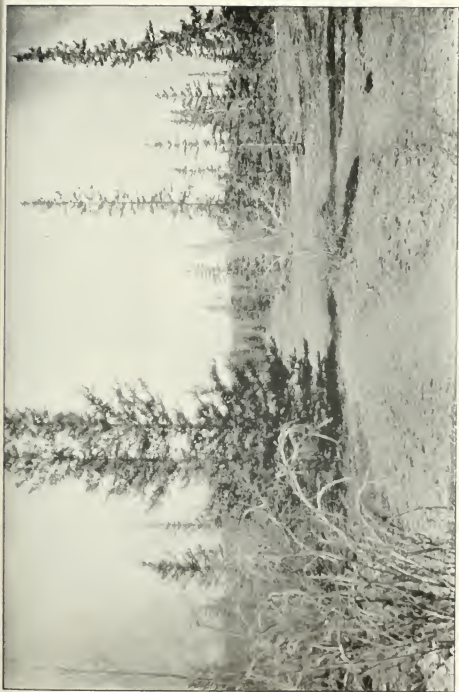




GLACIER CHIEK, CHARLES HAUBOLD, MAY 14th.

From by J. W. Tyrrell

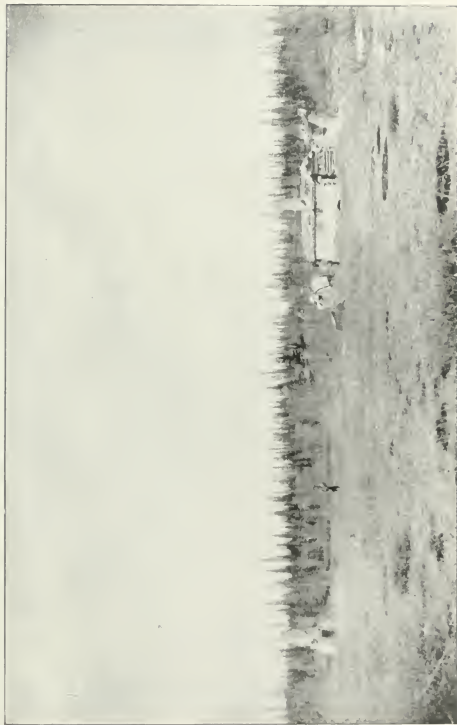




DEER TRAILS AT FORT RELIAN<sup>T</sup>, MAY 8TH.

Photo by J. W. Tyrrell.





Old Fort Reliance Sept. 1860



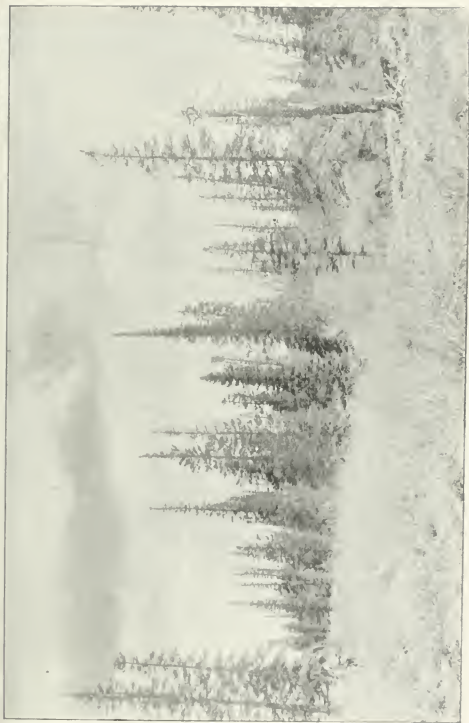


FABRY FALLS FROM WEST BANK, MAY 15TH.

Photo. by J. W. Tyrrell







WHITE SPRUCE TIMBER, BEAR LAKE, PIKE'S PEAK, COLO. PHOTO BY J. W. TYRELL

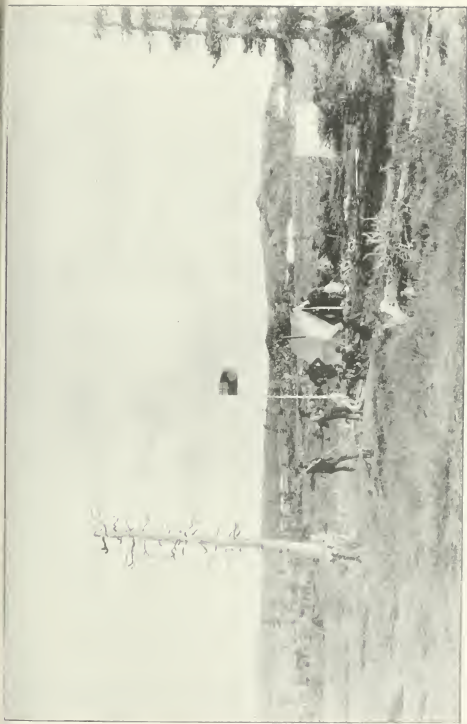




*View on White Sulphur Mountain, Virginia, Lake.*

Photo. by J. W. Tyrrell

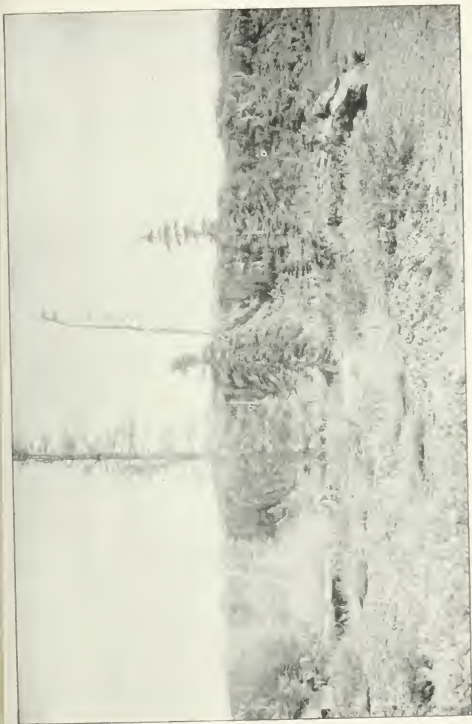




CAMP IN EAST WOODS, ON EAST SHORE, ARTILLERY LAKE.

Photo. by J. W. Tyrrell



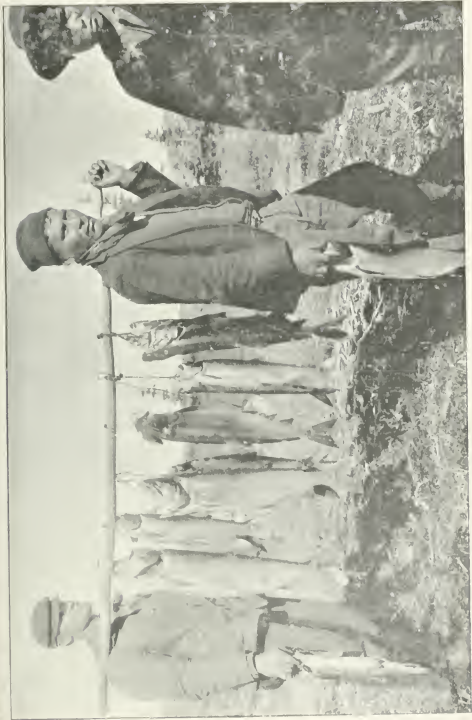


PH. 06 by J. W. Tyndal

ROCKY SHORELINE, LAKE JEFFERSON, WASH.







A FIFTY-FIVE MINUTE CATCH, ARTHUR LAKES.

Photo. by J. W. Tyrrell

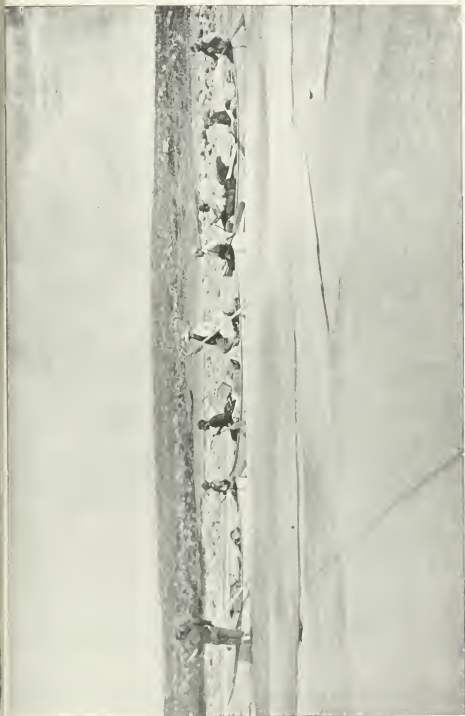




CAMP OF PROSPECTORS, ANCHORAGE LAKE

Photo by J. W. Tyrrell

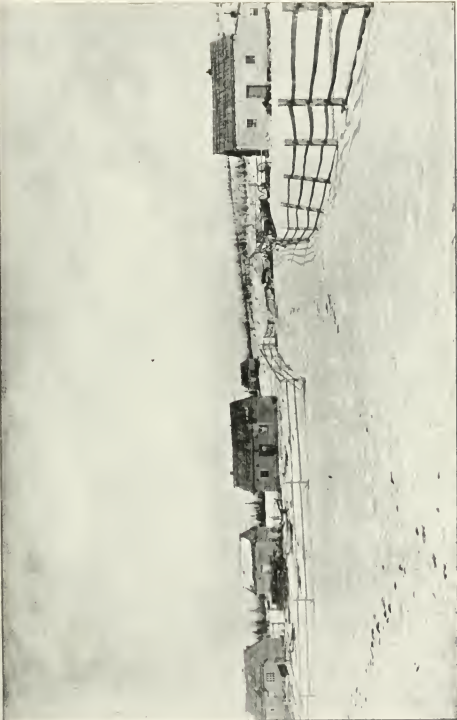




BEACH AT CASSE NAVIGATION, JUNE 21st

PHOTO BY F. W. TRACY





CAMP AT HEIGHT OF LAND.

Photo. by J. W. Tyrrell



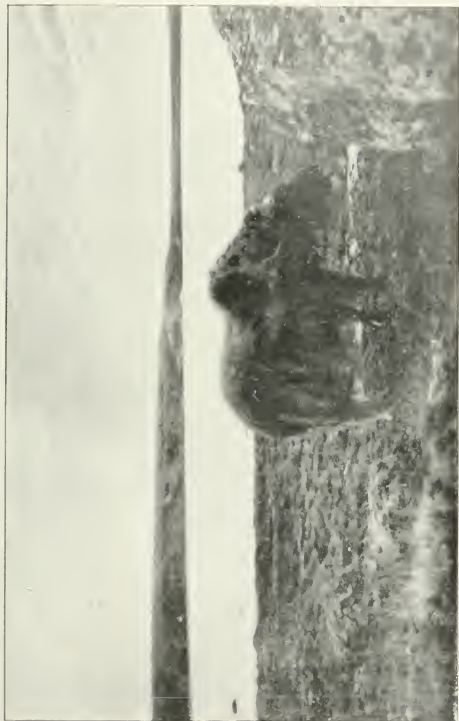




SUTTON LAKE AND CAIRN ON MUSH OAK HILL

Photo. by J. W. Tyler, III

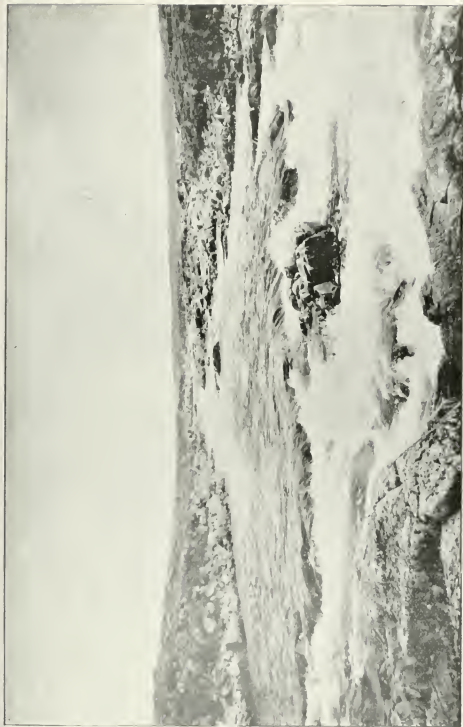




BAD MUSK OX, SLETON LAKE, 1.30 A. M.

Photo. by J. W. Tyrrell





RAPIDS AT STATION 821, HANBURY RIVER.

Photo. by J. W. Tyrrell





Photo. by J. W. Tyrrell

IBEXES, CANYON, HATCHBY RIVER







DICKSON CANYON, HANDEY RIVER.

PHOTOGRAPH BY J. W. TYRRELL.

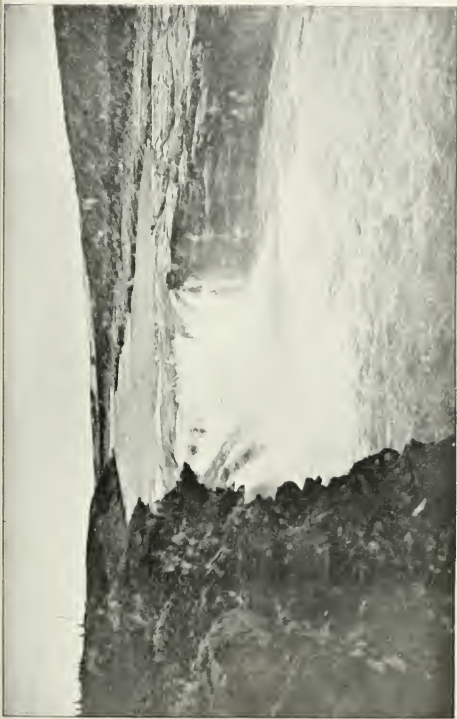




HANBURY RIVER, BELOW DICKSON CANYON.

Photo. by J. W. Tyrrell





HELEN FALLS, SIXTY FEET, HANBURY RIVER.

Photo. by J. W. Tyrrell



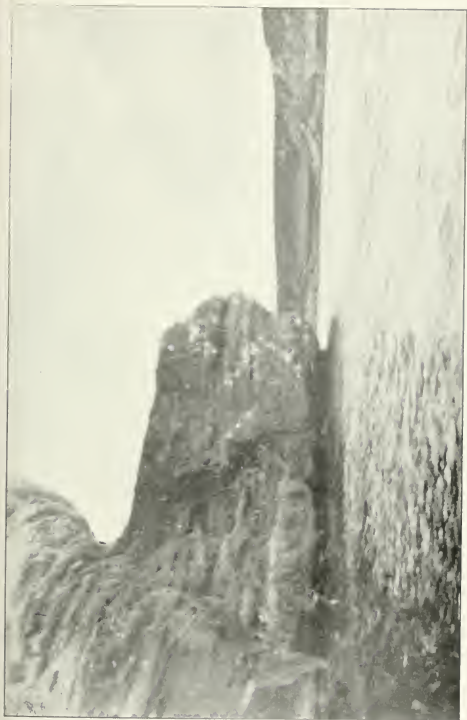


JUNCTION OF THELOS AND HANSHUB RIVERS

Photo. by J. W. Tyndal







SANDSTONE CLIFFS, AT FORKS OF HANBURY AND THELON.





ESKIMOS ON THULEN RIVER.

Photo by J. W. Tyrrall





CANOE SAILING ON UPPER THELON RIVER.

Photo. by J. W. Tyrrell





ESKIMOS ON TUIELO RIVER.

Photo by J. W. Tyrrell







ESKIMOS IN KVAKS ON THELOS RIVER.

Photo. by J. W. Tyrrell





PETER FRENCH, IRONWOOD STEEP-SIDE

Photo. by J. W. Tyrrell





PORTAGING. FIRST RAPIDS ON UPPER THURCOX.

Photo by J. W. TYLER.



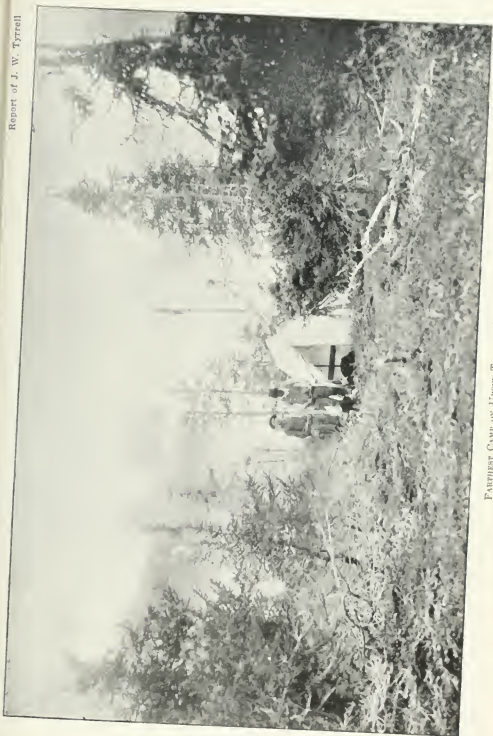


Photo. by J. W. Tyrrell

LAUNCH ON SANDY SHORE OF UPPER TUDON RIVER



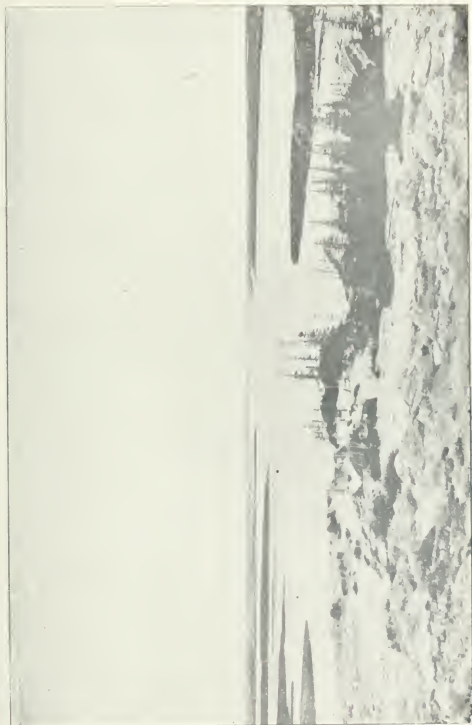




FARTHEST CAMP ON UPPER THELON, AUG. 1898.

Photo. by J. W. Tyrrell

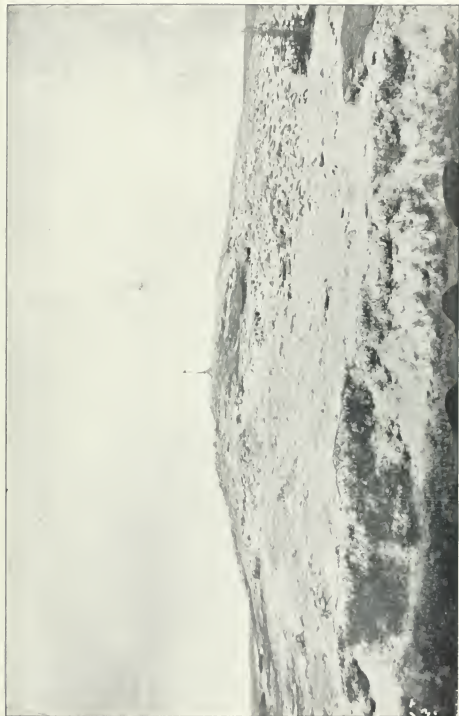




VIEW ON UPPER THELON FROM CAIRN HILL.

Photo. by J. W. Tyrrell





CANYON HILL AT CARIBBEAN POINT ON UPPER THURGOOD RIVER

Photo. by J. W. Tyrrell

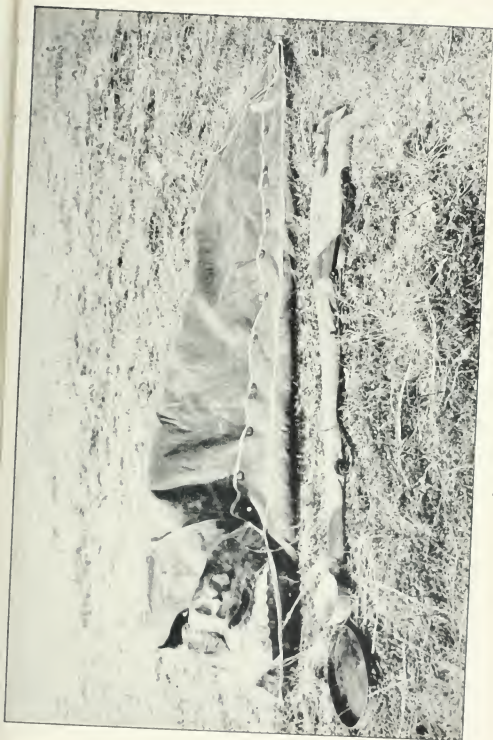




W. TYRRELL, ASSESSOR 100 MILE TRAMP. Photo. by J. W. Tyrrell



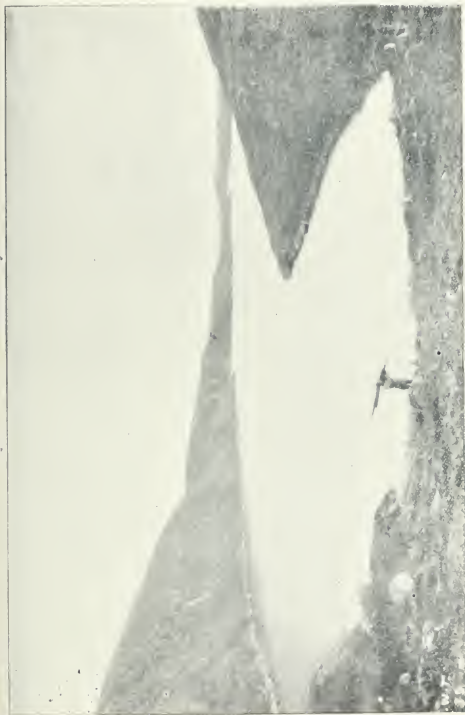




J. W. TYRELL, AS CAMPED ON 160 MILE TRAIL.

Photo. by J. W. Tyrell





SOUTH EXTREMITY ARTILLERY LAKE, SEPT. 10TH.

Photo. by J. W. Tyrrell

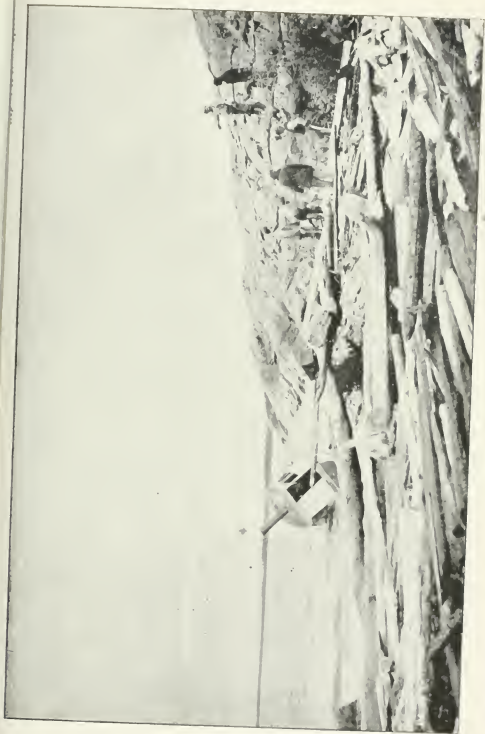




SHIP AT STONY ISLAND, GIB AT SLAVE LAKE, SEPT. 20TH

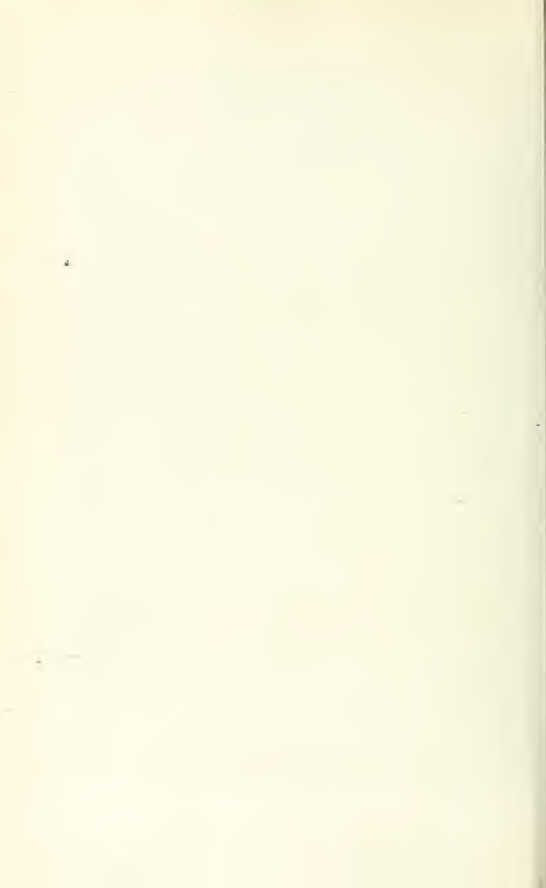
Photo by J. W. Tyrrell



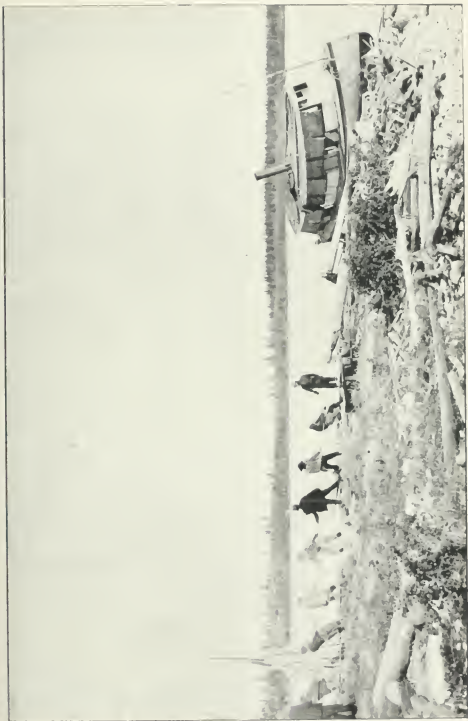


WHEED ON STONY ISLAND, GREAT SLAVE LAKE.

Photo. by J. W. Tyrrell







HUNDREDS OF FISH RESCUED FOR BEAUMONT

Photo. by J. W. Tyrrell

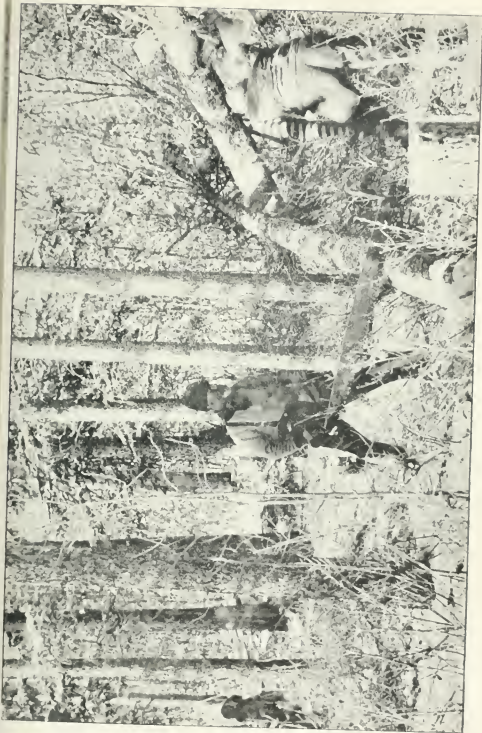




WOODING UP AT POINT BRULÉ, SLAVE RIVER, OCT. 2ND.

Photo. by J. W. Tyrrell





CUTTING WOOD FOR ABOD ON SLAVE RIVER, O. T. 2ND.

Photo. by J. W. Tyrrell





Photo. by J. W. Tyndall

Mountain Comanche Saddle Pottery







FIG. 1. THE GREAT HOUSE AT BOSTON, MASS.

Copyrighted by W. W. Freeman



PART IV.

ROCKY MOUNTAINS PARK



# ROCKY MOUNTAINS PARK OF CANADA

## REPORT OF THE SUPERINTENDENT.

SUPERINTENDENT'S OFFICE,

BANFF, July 31, 1901.

To the Honourable CLIFFORD SIFTON,  
Minister of the Interior,  
Ottawa.

SIR,—I have the honour to report on the works of construction and other matters of interest connected with the Rocky Mountains park from July 1, 1900, to June 30, 1901.

The work during the past year has been mainly of a routine nature under established conditions, which differ little from previous years, and consist chiefly in the construction and maintenance of roads and bridges.

The most important work done during the year was the construction of a new road, about one and a half miles in length, between Banff and Anthracite. The old tote road that had formerly been in use was one of the most dangerous drives in the park, and to avoid this the new road was projected. It is one of the best pieces of road building in the park, and makes the travel comparatively easy, besides bringing into view many picturesque objects that could not be seen from the old road.

The design of this road requires it to connect with the high road on the table land lying between the Bow and Cascade rivers, and will continue along this table land, which stands at an elevation of from 400 to 500 feet above the Bow, and will make the drive probably the most attractive in the park. It will give access to many interesting points, among others, 'The Hoodoos' or natural monuments, which curious formations at present cannot be approached and can only be examined from the further side of the Bow river.

This road will ultimately connect with the Loop road which at present skirts Rundle mountain, and the whole, when completed, will afford a succession of panoramic views over a distance of some fifteen miles, the beauties of which it would be impossible to describe. To make the circuit complete, a bridge will be required on the Lower Bow, at a site, however, which will involve a very moderate cost, the river being narrow and shallow.

The road leading out of Anthracite towards Canmore, known as the old tote road, was improved by decreasing grades, straightening curves and erecting guard rails along precipitous hillsides. About eight miles of the road is within the park limits, and it is intended next year to further improve this portion of the road.

High water carried away the centre pier of the small bridge over Stony creek during the month of June. This was promptly repaired without any interruption to traffic.

Quantities of small brushwood have sprung up alongside of the roads, encroaching gradually on the travelled part and interfering with the traffic, besides being a disfigurement to the appearance of the highway. The removal of this constitutes part of the work of repairs. Most of the roads in the park have been in use for about twelve years, and each year calls for additional repairs. The culverts and smaller bridges built of such timber as this section of the mountains affords cannot be

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expected to last more than ten or twelve years, consequently the annual repairs are becoming more necessary, with frequent and careful inspections to guard against accidents.

#### THE FLOODS.

The rivers in the park this season did not attain to more than normal height, and consequently no damage was done of any account ; any damage to the roads from this cause was of minor character and requires no special mention.

#### FIRES.

No extensive fires occurred within the park. The spring was late, and the frequent showers of snow and rain prevented the possibility of any large fires. Two or three small local fires were started, but were discovered in time to be extinguished before they had a chance to spread.

#### HAY CROP.

Notwithstanding the superabundance of irrigation the hay meadows in the park received this year, the crop was unusually good. The only drawback was the limited time which the high water allowed for harvesting, and which prevented the whole crop from being saved. This hay crop appears to be thoroughly reliable, no matter how the season affects the crop in other places. The natural irrigation on the Bow river flats can always be depended on, at least that is the experience for the last ten years. In spite of the contention that the annual cutting of the hay would exhaust the crop, the contrary appears to be the effect. After reserving what was required for the buffalo and other animals in the park, the balance was put up to tender, and given to the highest bidder.

#### BUFFALO AND OTHER ANIMALS.

The buffalo continue to thrive and do well, and the increase has been most satisfactory. The herd now numbers thirty head, being an increase during three years of fifteen, and a loss of one, which was killed during the winter while fighting with several of the younger bulls.

The elk are also doing well, although there is no increase as yet.

The antelope, which were procured a year ago, did not do well, and although every care was given them they all died during the winter. In my opinion they were captured too young ; they never seemed to recover from the shock of shipping them in. It is my intention to try and secure some old ones during the coming winter.

Thirteen head of Angora goats were added to the collection during last winter. They are very beautiful little animals, and four little kids, the increase this year, are very much admired by the visitors. They will, no doubt, do well here and increase rapidly.

Four young moose were also procured during the year, and in time will be a still further source of interest to visitors. It is hoped during the present year to add considerably to our present collection, and eventually to have a zoological museum in keeping with the National Park of Canada. The situation is beyond doubt an ideal one, and can be made large enough to maintain any number during the summer, while hay can be cut near by for winter feeding at small cost. The total number of animals in the enclosure now, is as follows :—Buffalo, 30 ; elk, 5 ; moose, 4 ; Angora goats, 17. Total, 56 head. These animals prove a never-failing source of interest to visitors to the park. The caretaker, who keeps a register, reports that 2,300 persons were through the gates during the year, and in one day recently 85 people were in the inclosure. I am fully convinced that the cost of looking after and maintaining these animals, as

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well as any additional money that may be spent in procuring other animals, will prove a valuable and permanent investment to the Dominion annually.

## THE SPRINGS.

The reputation of the sulphur springs continues to increase from year to year, as their beneficial and curative properties become more widely known and recognized.

It will be necessary to make an addition to the present buildings at the Cave and Basin baths before another season, as during the months of July and August, this year, the accommodation was not nearly sufficient for the number of bathers.

The question of improving the middle springs is also a matter for consideration in the near future.

## MUSEUM.

The museum continues to be a source of attraction to visitors, 2,300 persons having resorted there during the season, a considerable increase over former years.

The exhibits lack a good deal of being as complete as they should be, in the matter of geological, botanical, and other specimens of the natural productions of the mountains, the lack of which is very much felt by scientific men and other persons visiting the park, whose time is limited, but who are desirous of obtaining all the information possible on these subjects during their short stay.

The museum should have a reference library attached, with maps and plans for easy reference.

Specimens of the mineral productions of the mountains, classified, labelled and catalogued, would enable persons who take an interest in these things to make the park their headquarters when exploring the mountains in every direction.

The ancient glacial action, as indicated in the several valleys of the park, was a matter of great interest to several gentlemen who made a short visit here last summer, and who expressed their intention of returning this year to resume their observations on these interesting problems. They felt the want, however, of books and maps that are already published of the geology of the mountains, but to which they had not means of access.

## VISITORS.

It is highly satisfactory to observe the increase in the number of visitors from year to year.

It is noticeable that many of these repeat their visit annually and bring many others with them to enjoy what they describe as the finest scenery and the most healthful atmosphere they have ever experienced.

The aggregate number of visitors to the park from July 1, 1900, to June 30, 1901, was 8,156.

To determine whether or not the park is becoming more travelled and fulfilling gradually the mission for which it was created, namely as a health and pleasure resort for the benefit and enjoyment of the people, the following comparison of the totals is made from the records for the last five years: 1897, 5,087; 1898, 5,537; 1899, 7,387; 1900, for ten months, 6,533; 1901, 8,156.

The gradually extending knowledge of the park is thus illustrated from year to year by the number of persons from all parts of the world who visit it, and there is no reason to doubt its increasing popularity as a resort for health and pleasure. To hold out and create greater inducements towards the development of this annual influx of visitors should be a primary object, and with this view all the attractions that the park is capable of should be brought out and developed.

In the National Park, in its northern situation, its bracing air, its fine water, its varied scenery, there is every gradation of rustic beauty, beautiful rivers and lakes.

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towering mountains and broad valleys, surrounded by the virgin forests, beautiful beyond description. There is not in all the mountains a single dangerous animal, reptile or poisonous insect; one may sleep in perfect security and safety under his blankets anywhere.

It is variously estimated by those best qualified to judge that at a very conservative estimate not less than half a million dollars was expended in the park by visitors during the past season.

#### FUTURE REQUIREMENTS.

At the heads of the several smaller streams falling into the Bow river, and on the Bow itself, many small lakes are found well stocked with fish, and the surrounding country abounds with game of various sorts.

In my last annual report I referred to this matter, and suggested the extension of the bridle roads through the several passes leading up from the Bow valley. I am aware this could not be done under the present Park Act, and that the annual appropriation for works in the park must be expended within the limits laid down therein.

These bridle roads, however, are of such importance to the park, and their necessity is so generally remarked upon by tourists, sportsmen and others coming here, that it is suggested that the bounds of the park should be extended to take in the watershed of the Bow river.

This extension of the limits of the park does not necessarily involve any additional expense or outlay further than is required to make these bridle roads passable for pack horses. The extension of the limits would be simply to create a reservation or preserve for game, to be controlled by the park management.

The benefit of and the necessity for extensive park reservations in the country are becoming generally admitted. The provinces of Ontario and Quebec have now each very extensive tracts reserved for the protection and propagation of game, fish, &c., and these reservations far exceed in area the National Park of Canada.

The customary meteorological tables are appended.

I have the honour to be, sir,

Your obedient servant,

HOWARD DOUGLAS,

*Superintendent.*



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## CANADIAN PACIFIC HOTEL, BANFF.

NUMBER of Visitors from July 1, 1900, to June 30, 1901.

Where from.	No.	Where from.	No.
United States.....	1,886	Germany.....	6
Canada.....	892	Italy.....	5
England.....	282	Switzerland.....	5
Australia.....	61	Phillipines.....	5
Hawaiian Islands.....	40	Sweden.....	2
China.....	36	Bermuda.....	2
Japan.....	28	South Africa.....	2
Scotland.....	20	Isle of Man.....	1
New Zealand.....	19	Holland.....	1
India.....	12	Egypt.....	1
France.....	12		
Ireland.....	8	Total.....	3,244
Russia.....	8		

## SANITARIUM HOTEL.

NUMBER of Visitors from July 1, 1900, to June 30, 1901.

Where from	No.	Where from.	No.
Canada.....	1,790	South Africa.....	3
United States.....	201	Sweden.....	2
England.....	45	Cape Colony.....	2
China.....	11	Channel Islands.....	2
Australia.....	9	Mexico.....	2
Scotland.....	7	South America.....	1
France.....	7	Ceylon.....	1
New Zealand.....	7	Cochin China.....	2
Japan.....	5		
India.....	4	Total.....	2,104
Germany.....	3		

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## GRAND VIEW HOTEL.

NUMBER of Visitors from July 1, 1900, to June 30, 1901.

Where from.	No.	Where from.	No.
Canada .....	306	England .....	1
United States .....	43	South Africa .....	1
China .....	3		
Hawaiian Islands .....	2	Total .....	357
Scotland .....	1		

## BEATTIE'S HOTEL.

NUMBER of Visitors from July 1, 1900, to June 30, 1901.

Where from.	No.	Where from.	No.
Canada .....	432	England .....	1
United States .....	14	South Africa .....	1
Hawaiian Islands .....	2		
Ireland .....	1	Total .....	451

NUMBER of Visitors to the Rocky Mountains Park, from July 1, 1900, to June 30, 1901.

Where located.	No.	Where located.	No.
Canadian Pacific Hotel .....	3,244	Summer visitors residing in cottages and boarding houses .....	500
Sanitarium .....	2,104	Excursion from Calgary, etc .....	1,500
Beattie House .....	451		
Grand View Hotel .....	357	Total .....	8,156

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## MUSEUM.

NUMBER of Visitors from July 1, 1900, to June 30, 1901.

Where from.	Number.	Where from.	Number.
Canada.....	1,417	Switzerland.....	4
United States.....	575	South Africa.....	2
England.....	148	Sweden.....	2
Australia.....	39	Hungary.....	2
Hawaiian Islands.....	21	Phillipines.....	1
Scotland.....	18	Germany.....	1
Japan.....	18	Russia.....	1
Ireland.....	12	West Africa.....	1
China.....	9	Ceylon.....	1
New Zealand.....	9		
India.....	6	Total.....	2,291
France.....	4		

CARETAKER of the Cave and Basin's Annual Report, showing Number and Nationality of Visitors from July 1, 1900, to June 30, 1901.

Where from.	Number.	Where from.	Number.
Canada.....	1,565	Honolulu.....	30
England.....	205	China.....	25
Scotland.....	35	Japan.....	19
Ireland.....	15	Germany.....	12
Australia.....	30	Switzerland.....	7
New South Wales.....	15	Italy.....	3
New Zealand.....	20	Austria.....	3
Queensland.....	10	France.....	10
Newfoundland.....	3	Sweden.....	20
South Africa.....	8		
India.....	21	Total.....	2,891
United States.....	835		

D. D. GALLETLY,

*Caretaker Cave and Basin.*

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## ROCKY MOUNTAINS PARK.

MAXIMUM and Minimum Temperatures and the General State of the Weather between July 1, 1900, and June 30, 1901.

		THERMOMETER READINGS.				Weather.
Date.	Maximum.		Minimum.			
	6 a.m.	6 p.m.	6 a.m.	6 p.m.		
1900.	°		°	°		
July 1....	47.7	55.3	37.0	39.8	Cloudy, rain.	
" 2....	47.0	56.0	38.8	39.0	"	
" 3....	52.6	55.1	40.9	41.6	Cloudy, rain, hail and thunder.	
" 4....	52.7	65.2	32.2	31.8	Fair, light rain.	
" 5....	61.1	61.1	47.0	48.5	Fair.	
" 6....	55.5	62.6	44.8	44.2	Cloudy.	
" 7....	59.3	68.4	41.8	42.8	"	
" 8....	67.4	69.4	40.3	41.2	Fair, rain, thunder.	
" 9....	59.5	67.4	44.7	45.8	Fair.	
" 10....	65.6	77.4	37.2	38.2	Fair, perfect day.	
" 11....	75.6	77.0	44.8	45.8	"	
" 12....	73.0	57.7	41.2	41.2	Cloudy, rain, heavy thunder.	
" 13....	52.7	65.7	45.2	45.5	Fair.	
" 14....	62.8	70.9	33.9	34.5	"	
" 15....	67.8	67.4	41.5	42.0	Fair, light rain.	
" 16....	63.6	71.9	38.7	39.8	Cloudy, rain, thunder.	
" 17....	54.8	57.9	43.0	43.8	Cloudy, rain.	
" 18....	49.2	66.2	36.2	36.8	Fair.	
" 19....	56.9	67.9	36.8	38.0	Fair, very light rain.	
" 20....	66.9	76.4	39.7	41.0	Fair, perfect day.	
" 21....	72.0	71.1	45.0	46.0	"	
" 22....	67.8	77.0	44.5	45.2	"	
" 23....	74.8	84.7	45.8	47.2	"	
" 24....	78.6	83.4	42.9	43.5	Fair, rain, thunder and lightning, very squally wind.	
" 25....	77.6	71.5	46.4	47.0	Cloudy, thunderstorm.	
" 26....	68.8	65.7	48.8	49.5	Cloudy, rain, thunder.	
" 27....	57.4	64.5	46.8	47.2	Cloudy, rain.	
" 28....	61.6	71.4	39.3	40.5	Fair.	
" 29....	67.0	75.2	50.1	55.0	Fair, perfect day.	
" 30....	73.0	77.4	39.0	42.5	"	
" 31....	75.7	83.7	41.1	42.5	"	
Aug. 1....	82.4	80.4	49.8	58.1	Fair, thunderstorm.	
" 2....	76.1	55.3	44.1	44.8	Cloudy, light rain, very squally wind.	
" 3....	52.2	55.8	46.2	47.0	Cloudy, rain.	
" 4....	52.6	55.3	39.8	40.5	"	
" 5....	52.5	63.4	36.7	37.3	Fair.	
" 6....	58.8	57.4	39.2	39.8	"	
" 7....	55.7	63.5	31.2	31.0	Fair, light rain, thunder.	
" 8....	55.2	64.9	30.2	30.2	Fair, rain.	
" 9....	52.2	46.0	44.8	42.8	Cloudy, rain.	
" 10....	44.8	53.7	39.8	39.4	"	
" 11....	53.7	56.1	43.5	43.0	"	
" 12....	53.2	65.3	46.0	45.8	Fair.	
" 13....	62.8	64.4	40.0	40.5	Fair, light rain.	
" 14....	63.6	70.4	39.3	39.8	Fair.	
" 15....	69.6	71.5	38.2	38.1	Fair, light rain.	
" 16....	65.5	54.9	41.7	42.0	Cloudy, rain.	
" 17....	54.0	58.1	42.3	42.5	Cloudy, very light rain.	
" 18....	52.3	62.7	47.2	47.8	Cloudy, light rain.	
" 19....	58.6	66.4	43.2	42.8	Fair.	
" 20....	62.6	72.0	37.0	37.0	Fair.	
" 21....	68.4	64.0	37.2	37.5	Fair, light rain.	
" 22....	50.2	63.4	38.2	38.2	Fair.	
" 23....	59.9	60.4	49.8	50.0	Cloudy, rain.	
" 24....	55.9	60.5	47.6	47.8	Fair, light rain.	

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## MAXIMUM and Minimum Temperatures, &amp;c.—Continued.

Date.	THERMOMETER READINGS.				Weather.
	Maximum.		Minimum.		
	6 a.m.	6 p.m.	6 a.m.	6 p.m.	
1900.					
Aug. 25	55.8	43.0	43.8	33.2	Cloudy, rain and snow-storm.
" 26	33.6	51.9	28.5	28.2	Fair.
" 27	50.4	62.3	33.6	33.5	"
" 28	54.7	54.9	36.7	36.8	Cloudy, rain.
" 29	51.9	62.4	35.8	35.8	Fair.
" 30	59.8	63.8	34.5	34.2	Fair, rain.
" 31	54.5	56.7	44.8	44.3	"
Sept. 1	47.7	58.9	32.5	32.6	Fair.
" 2	51.7	66.2	34.1	34.4	"
" 3	61.6	57.6	43.0	43.5	Cloudy, rain.
" 4	47.7	46.1	38.2	37.4	Cloudy.
" 5	45.7	64.9	39.0	38.7	Fair, perfect day.
" 6	59.7	69.2	33.2	32.9	"
" 7	65.4	59.3	35.5	35.4	Cloudy, squally wind.
" 8	53.5	54.5	45.5	44.8	Cloudy, very light rain.
" 9	50.9	59.2	43.7	43.7	Fair, very light rain.
" 10	58.4	64.0	43.2	42.8	Fair, perfect day.
" 11	60.6	70.3	32.0	33.5	"
" 12	65.6	61.3	36.5	37.5	"
" 13	57.8	55.1	31.8	32.0	Fair, very light rain.
" 14	47.7	37.2	35.7	34.8	Cloudy, rain and snow.
" 15	34.9	42.2	33.0	32.2	Cloudy.
" 16	38.5	47.2	29.5	29.9	Cloudy, light rain.
" 17	42.9	53.7	38.6	38.7	Fair.
" 18	50.8	62.4	29.2	29.8	Fair, perfect day.
" 19	54.8	60.9	31.8	31.6	"
" 20	54.7	58.4	30.3	29.6	Fair.
" 21	55.7	56.3	45.2	45.0	Fair, rain.
" 22	53.7	55.2	46.0	45.7	Cloudy, rain.
" 23	48.7	41.7	39.8	38.2	Cloudy, rain and snow flurries.
" 24	38.5	36.5	33.2	32.5	Cloudy, snow flurries, thin ice on still water.
" 25	34.4	41.1	19.5	19.2	Fair, perfect day, thin ice on still water.
" 26	32.6	48.5	17.5	17.2	Fair, perfect day.
" 27	44.8	55.9	29.2	29.2	Cloudy.
" 28	52.3	53.4	36.1	37.5	"
" 29	48.9	39.6	31.1	31.0	Fair, snow flurries with soft hail.
" 30	35.7	38.0	28.5	28.1	Fair, snow flurries and light snow.
Oct. 1	34.4	32.2	25.6	25.0	Cloudy, snow flurries and light snow.
" 2	29.9	33.4	23.5	22.7	Cloudy, $\frac{3}{4}$ inch of snow on ground 10 a.m.
" 3	30.8	28.8	20.6	20.7	Cloudy, snow flurries with light snow.
" 4	27.8	37.8	22.4	21.9	Fair, light rain and snow during night.
" 5	33.0	32.8	24.6	25.0	Cloudy, snow, 5 inches on ground a.m.
" 6	29.5	39.2	15.2	14.8	Fair.
" 7	35.8	46.2	24.8	24.1	"
" 8	42.9	52.0	32.5	30.3	"
" 9	48.0	54.7	34.2	40.8	Fair, rain.
" 10	44.7	47.2	31.8	30.8	Fair.
" 11	43.7	48.8	30.8	30.1	Cloudy.
" 12	46.9	50.6	43.1	43.2	Fair.
" 13	48.0	52.3	35.3	35.5	Cloudy.
" 14	47.9	52.6	43.0	41.8	Fair, light rain.
" 15	47.7	56.2	31.5	31.8	Fair.
" 16	52.1	59.0	43.2	43.0	"
" 17	55.9	56.0	33.0	31.7	"
" 18	56.8	59.4	39.3	39.1	Fair, light rain.
" 19	48.7	45.6	40.2	36.5	Cloudy, rain.
" 20	37.0	42.8	35.0	34.2	Cloudy, snow flurries, light snow and rain.
" 21	40.0	42.8	33.5	34.6	Cloudy, rain.
" 22	42.0	36.9	32.5	31.0	Cloudy, light snow, soft hail.
" 23	31.0	34.2	24.5	23.4	Cloudy, light snow.

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## MAXIMUM and Minimum Temperatures, &amp;c.—Continued.

Date.	THERMOMETER READINGS.				Weather.
	Maximum.		Minimum.		
	6 a.m.	6 p.m.	6 a.m.	6 p.m.	
1900.	°	°	°	°	
Oct. 24.....	31.0	36.7	28.2	27.4	Cloudy,
" 25.....	34.6	33.7	32.8	31.2	Cloudy, snow and light rain; large flock of grosbeaks about.
" 26.....	31.6	36.0	29.0	28.1	Fair.
" 27.....	29.8	35.0	15.5	14.3	Fair, skating on ponds.
" 28.....	27.0	39.5	25.0	25.0	Fair.
" 29.....	33.7	37.0	23.6	22.8	"
" 30.....	31.8	35.8	25.6	24.4	Cloudy.
" 31.....	32.8	39.0	30.8	30.2	Fair.
Nov. 1.....	34.9	37.1	30.5	29.8	"
" 2.....	29.8	35.8	22.8	23.5	Cloudy, snow flurries; Bow River partly frozen over.
" 3.....	34.6	35.8	32.0	30.3	Fair, squally wind.
" 4.....	31.8	35.2	29.8	28.7	Fair, perfect day.
" 5.....	32.8	35.9	21.0	22.5	Fair.
" 6.....	33.5	41.6	31.2	31.2	Cloudy.
" 7.....	40.0	43.8	31.0	29.5	Fair, perfect day.
" 8.....	40.8	46.1	30.8	33.0	Cloudy, light rain, soft hail.
" 9.....	38.7	33.3	27.8	23.0	Fair, perfect day.
" 10.....	26.2	36.0	14.7	13.9	" "
" 11.....	33.3	42.2	18.5	17.5	" "
" 12.....	38.0	47.2	27.1	35.2	Cloudy, light rain.
" 13.....	35.6	41.8	21.8	20.2	Fair, perfect day.
" 14.....	40.0	27.6	28.8	19.2	Cloudy, snow flurries.
" 15.....	19.8	13.1	12.5	9.6	Cloudy, light snow.
" 16.....	10.2	3.0	3.2	-4.0	Cloudy, snow; Bow River frozen over to boat house.
" 17.....	-3.2	-5.0	-9.2	-10.0	Cloudy, snow; first sleighing.
" 18.....	-9.2	-10.8	-14.8	-18.6	Fair, snow flurries.
" 19.....	-10.5	-8.2	-14.3	-14.7	Fair.
" 20.....	-12.4	-6.8	-30.6	-32.4	"
" 21.....	-11.2	2.6	-16.5	-13.2	Cloudy, light snow.
" 22.....	-3.0	-1.5	-12.7	-8.1	Cloudy, very light snow.
" 23.....	0.2	30.2	-8.2	0.0	Cloudy, light snow and sleet; chinook.
" 24.....	27.8	34.6	26.0	26.5	" " chinook wind,
" 25.....	31.8	41.8	30.6	31.0	Cloudy, light snow.
" 26.....	37.5	37.1	32.5	30.6	Fair.
" 27.....	32.8	34.7	29.2	29.5	Cloudy.
" 28.....	32.8	39.0	27.2	27.8	Fair.
" 29.....	34.5	37.2	31.2	29.6	Cloudy, snow flurries.
" 30.....	39.0	42.0	34.3	34.0	Cloudy, light rain; Bow River ice breaking up.
Dec. 1.....	39.7	36.2	32.0	30.5	Fair, perfect day.
" 2.....	31.0	35.7	23.9	26.0	Cloudy.
" 3.....	34.6	33.3	26.0	23.8	Fair.
" 4.....	29.0	37.7	18.5	21.2	Cloudy, light snow and soft hail.
" 5.....	35.8	42.8	34.0	35.5	Cloudy, light rain.
" 6.....	43.0	42.9	35.9	36.2	Cloudy.
" 7.....	42.2	44.3	37.7	38.0	Fair.
" 8.....	44.0	19.3	20.0	14.0	Cloudy, snow flurries.
" 9.....	15.2	28.9	12.1	14.0	Fair.
" 10.....	24.5	24.0	13.2	11.4	"
" 11.....	23.2	29.8	18.2	21.0	Fair, very squally wind.
" 12.....	29.6	29.8	25.5	24.4	Cloudy. Lake Minnewanka free of ice.
" 13.....	31.5	36.0	28.0	31.5	Cloudy.
" 14.....	33.2	36.1	28.1	27.9	Fair.
" 15.....	36.0	38.1	31.1	32.0	"
" 16.....	35.0	39.8	31.8	32.2	Cloudy, light snow.
" 17.....	33.5	33.9	29.8	29.0	Fair, snow flurries.
" 18.....	29.5	32.0	21.8	24.2	Fair.
" 19.....	30.0	39.0	27.9	27.6	Cloudy.
" 20.....	36.8	36.0	31.6	32.0	Cloudy, rain and snow.
" 21.....	34.8	38.3	32.5	31.8	Fair.

SESSIONAL PAPER No. 25

MAXIMUM and Minimum Temperatures, &c.—Continued.

Date.	THERMOMETER READINGS.				Weather.
	Maximum.		Minimum.		
	6 a.m.	6 p.m.	6 a.m.	6 p.m.	
1900.					
Dec. 22	31.8	24.9	21.2	17.6	Fair, perfect day.
" 23	17.8	23.7	5.8	7.0	Cloudy.
" 24	23.0	31.3	19.8	20.5	Cloudy, snow flurries.
" 25	30.4	28.0	22.2	24.2	Cloudy.
" 26	27.2	26.9	20.0	18.9	Cloudy, snow flurries.
" 27	24.8	22.2	6.2	4.5	Fair.
" 28	18.0	25.1	11.4	16.0	Cloudy, very squally wind, light snow.
" 29	24.1	21.1	18.8	8.4	Fair.
" 30	8.8	3.0	-16.1	-18.4	"
" 31	-0.3	2.7	-11.0	-12.3	" ice on Bow River about 10 inches.
1901.					
Jan. 1	-0.2	5.9	-8.5	-6.6	Cloudy, snow flurries, light snow.
" 2	2.5	-7.5	-7.6	-12.6	" light snow, squally wind.
" 3	-12.0	-14.0	-19.4	-20.9	Fair, light snow, squally wind.
" 4	-14.7	-11.1	-18.3	-19.2	Cloudy, snow.
" 5	-13.5	13.0	-20.1	-13.2	Fair, squally wind.
" 6	8.5	8.6	-10.6	-8.3	Cloudy, light snow, very squally wind.
" 7	1.8	-2.1	-12.5	-10.2	Fair.
" 8	-10.0	-4.9	-18.6	-15.3	" light snow; sleighing good.
" 9	-11.0	8.2	-17.2	-15.5	"
" 10	6.0	15.2	-10.0	-5.9	Cloudy, squally wind.
" 11	15.2	23.2	12.1	12.7	" snow flurries.
" 12	24.5	32.2	22.3	24.5	" snow.
" 13	35.2	37.9	30.4	31.8	" light snow.
" 14	35.0	32.5	29.8	28.3	"
" 15	29.6	24.3	21.2	30.8	"
" 16	23.8	33.4	21.7	23.5	" very squally wind.
" 17	30.8	36.2	21.9	20.2	Fair, perfect day.
" 18	28.3	25.2	20.5	18.8	" squally wind.
" 19	26.0	34.2	20.8	21.7	"
" 20	33.5	30.8	26.0	25.0	" perfect day.
" 21	29.6	26.8	7.2	6.8	"
" 22	23.8	29.2	11.4	14.5	Cloudy, snow flurries.
" 23	25.8	24.3	6.8	4.0	"
" 24	26.0	33.7	20.2	21.4	Fair.
" 25	30.8	26.2	26.0	22.8	Cloudy.
" 26	23.2	27.5	19.0	17.9	"
" 27	28.0	36.5	24.9	27.5	" squally wind, light snow.
" 28	34.5	33.0	30.0	28.0	" light snow.
" 29	29.5	22.0	9.7	9.2	Fair.
" 30	13.4	21.1	1.0	2.7	Cloudy.
" 31	19.6	20.3	3.5	2.7	Fair; ice on Bow River about 20 inches.
Feb. 1	19.0	25.8	10.5	10.1	Cloudy.
" 2	23.8	21.8	10.9	8.9	" light snow.
" 3	17.1	12.8	5.4	3.7	" snow flurries.
" 4	3.8	1.0	-12.7	-14.9	Fair.
" 5	-4.6	16.2	-17.6	-19.0	"
" 6	11.6	24.0	-7.7	-8.6	"
" 7	22.6	19.9	17.0	13.2	Cloudy, light snow.
" 8	13.6	18.2	-12.4	-13.7	Fair.
" 9	18.0	19.3	0.4	1.2	Cloudy.
" 10	17.4	25.1	-1.5	-3.0	Fair.
" 11	24.4	35.9	21.3	18.8	Cloudy.
" 12	33.1	38.3	25.5	22.4	Fair, squally wind, chinook.
" 13	36.9	39.0	25.8	24.3	Cloudy, chinook wind.
" 14	37.6	40.0	33.8	35.2	Fair.
" 15	35.0	24.5	17.0	15.3	Cloudy, snow.
" 16	25.2	35.0	23.4	25.0	"

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## MAXIMUM and Minimum Temperatures, &amp;c.—Continued.

Date.	THERMOMETER READINGS.				Weather.
	Maximum.		Minimum.		
	6 a.m.	6 p.m.	6 a.m.	6 p.m.	
1901.	°	°	°	°	
Feb. 17 ...	27.8	16.9	11.0	9.1	Fair, snow.
" 18....	9.5	11.0	-0.1	-2.2	" snow flurries.
" 19....	2.8	5.2	-19.6	-21.6	" squally wind.
" 20....	12.2	10.3	-3.8	-4.3	Cloudy.
" 21....	0.9	8.9	-18.4	-20.4	Fair.
" 22....	-0.2	11.5	-23.6	-25.3	"
" 23....	6.7	27.9	-10.7	6.5	Cloudy, squally wind.
" 24....	26.5	38.2	23.0	22.5	"
" 25....	34.0	41.7	26.8	25.5	Fair.
" 26....	37.5	39.9	28.2	27.8	Cloudy.
" 27....	36.0	45.6	33.0	34.5	Fair.
" 28....	42.2	44.9	40.5	38.5	Cloudy, rain, ice on Bow River, 24 inches.
Mar. 1....	38.9	44.0	34.5	33.7	Fair.
" 2....	37.8	30.8	29.0	23.9	Cloudy, snow flurries squally wind.
" 3....	24.6	18.4	16.2	6.9	Cloudy, snow.
" 4....	6.8	18.1	-17.5	-19.2	Fair, perfect day.
" 5....	14.9	34.8	1.0	2.5	Fair.
" 6....	31.6	38.1	12.8	12.2	Fair, ice on Bow River, 28 inches.
" 7....	33.8	39.1	20.5	19.6	Cloudy.
" 8....	35.8	31.2	27.5	26.2	Cloudy, light snow.
" 9....	28.2	35.0	7.2	6.8	Fair.
" 10....	30.2	36.2	10.0	11.0	Fair, sleet
" 11....	31.2	32.0	16.8	17.8	Fair, light snow.
" 12....	27.8	32.2	10.0	9.8	Fair.
" 13....	31.0	38.0	19.2	19.5	"
" 14....	34.2	44.0	29.8	29.2	Fair, perfect day.
" 15....	42.2	45.8	33.0	33.0	" "
" 16....	43.5	49.5	23.8	23.0	" "
" 17....	45.0	47.2	32.0	31.2	Fair, snow flurries.
" 18....	33.0	38.5	27.8	28.0	Fair, perfect day.
" 19....	34.0	42.2	15.0	14.0	" "
" 20....	39.2	44.2	27.5	34.0	Fair.
" 21....	40.5	42.0	28.0	28.0	Fair, snow.
" 22....	36.0	39.2	12.8	12.0	Cloudy.
" 23....	37.7	36.6	28.2	28.5	Cloudy, snow.
" 24....	31.6	39.3	21.7	21.2	Fair.
" 25....	34.1	39.8	26.2	25.8	"
" 26....	34.6	38.4	14.5	13.8	"
" 27....	34.8	38.3	13.8	13.0	Fair, sleighing over.
" 28....	31.6	38.2	8.1	8.8	Fair.
" 29....	34.4	40.5	15.9	16.5	"
" 30....	35.5	36.1	11.0	10.2	"
" 31....	33.6	38.0	23.2	22.9	Fair, Mt. bluebirds, finches, poplars budding, ice on Bow River, 19 inches.
April 1....	32.6	36.9	20.5	22.0	Cloudy, snow flurries, waxwings.
" 2....	32.8	33.8	25.1	25.5	Cloudy, snow.
" 3....	28.8	33.8	20.9	21.0	Cloudy, light snow, juncos about.
" 4....	29.5	33.9	4.2	3.9	Cloudy.
" 5....	31.6	37.8	21.7	21.9	Cloudy, light snow.
" 6....	30.9	33.0	21.0	22.5	Cloudy.
" 7....	29.5	38.4	14.3	15.5	Fair, perfect day.
" 8....	37.5	46.4	9.8	10.8	Fair, perfect day, anemones in flower.
" 9....	43.8	49.7	18.3	18.8	Fair, perfect day, robins about.
" 10....	46.0	51.6	23.6	24.8	Fair, Bow River open, perfect day.
" 11....	49.5	52.3	43.2	43.5	Cloudy, light rain.
" 12....	49.6	44.9	27.5	27.3	Fair, geese and duck flying N.E.
" 13....	43.2	43.2	19.0	19.5	Fair.
" 14....	38.9	35.7	23.8	23.8	Cloudy, snow flurries.



## SESSIONAL PAPER No. 25

## MAXIMUM and Minimum Temperatures, &amp;c.—Continued.

Date	THERMOMETER READINGS.				Weather.
	Maximum.		Minimum.		
	6 a.m.	6 p.m.	6 a.m.	6 p.m.	
1901.					
April 15....	33.6	36.1	20.3	20.7	Fair.
" 16....	31.8	45.8	16.0	19.0	"
" 17....	44.7	50.3	28.7	28.8	"
" 18....	44.7	47.0	26.9	26.9	Fair, grass becoming green.
" 19....	43.7	48.0	31.0	30.8	Cloudy.
" 20....	44.9	45.2	35.3	33.3	Cloudy, snowstorm.
" 21....	33.6	40.6	26.7	26.4	Cloudy.
" 22....	38.4	50.8	27.3	27.0	Fair.
" 23....	49.5	45.0	33.9	35.5	Cloudy, soft hail and snow.
" 24....	38.4	40.2	26.4	26.8	Fair.
" 25....	37.8	40.3	20.0	20.0	Cloudy.
" 26....	36.0	36.0	26.5	26.2	Cloudy, snow, purple finches.
" 27....	35.8	43.5	18.5	19.0	Fair.
" 28....	41.7	53.3	20.2	21.5	Fair, bees about, catkins on poplars.
" 29....	51.7	61.0	29.2	29.7	Cloudy, house flies about.
" 30....	58.8	53.8	34.3	34.2	Cloudy, rain, mosquitoes about.
May 1....	53.5	67.1	35.8	35.8	Fair, butterflies, frogs piping.
" 2....	63.5	60.6	35.7	36.7	Fair, light rain, river rising, no snow on ground.
" 3....	52.9	49.6	38.9	38.3	Cloudy.
" 4....	48.8	58.9	26.5	26.8	Fair, light rain.
" 5....	48.2	52.9	31.1	32.8	Fair, warblers.
" 6....	49.9	56.1	32.8	32.6	Fair.
" 7....	54.9	56.8	28.2	29.8	Fair, light rain.
" 8....	47.6	45.2	30.2	35.9	Cloudy.
" 9....	40.2	43.8	27.4	27.7	Fair, snow flurries.
" 10....	39.8	52.4	21.3	22.2	Fair.
" 11....	50.5	62.7	27.2	29.9	"
" 12....	57.3	63.9	40.9	41.0	"
" 13....	61.5	63.0	43.2	45.2	"
" 14....	59.7	63.3	38.0	42.0	"
" 15....	61.5	64.8	32.8	38.5	Fair, tanagers about.
" 16....	59.6	65.7	44.3	50.3	Cloudy, Lake Minnewanka free of ice,
" 17....	55.3	52.4	40.8	40.9	Cloudy, rain.
" 18....	48.6	53.9	35.0	35.5	Fair, light rain.
" 19....	43.0	42.2	30.0	32.0	Cloudy, rain.
" 20....	42.1	56.8	33.5	35.0	Fair.
" 21....	53.7	47.2	31.5	38.5	Cloudy, rain.
" 22....	40.9	55.9	32.0	33.5	Cloudy, swallows about.
" 23....	51.8	52.3	41.2	41.2	Cloudy, rain, humming birds.
" 24....	47.7	66.7	38.8	42.5	Fair.
" 25....	62.4	75.0	33.2	40.8	Fair, perfect day.
" 26....	72.6	77.9	36.0	42.5	"
" 27....	74.7	79.4	38.0	42.8	Fair.
" 28....	75.8	70.4	44.0	48.7	"
" 29....	66.6	58.9	43.0	47.7	Cloudy, rain.
" 30....	53.6	49.4	38.9	39.5	Cloudy.
" 31....	48.4	60.4	32.5	34.8	"
June 1....	55.4	63.0	46.1	47.0	Cloudy, rain.
" 2....	59.8	62.0	41.9	42.8	Fair, rain.
" 3....	55.6	59.3	39.4	41.8	Cloudy, rain.
" 4....	46.9	40.5	30.0	30.5	Cloudy, light rain and snow.
" 5....	40.0	47.3	30.9	31.5	Fair, light rain.
" 6....	45.2	50.4	30.0	32.6	Cloudy, light rain and snow
" 7....	42.7	47.4	32.3	33.3	Cloudy, snow.
" 8....	45.5	52.3	34.8	35.5	Cloudy, light rain and snow.
" 9....	48.5	50.9	37.5	37.6	Cloudy, rain.
" 10....	44.5	51.5	31.2	31.8	" "
" 11....	45.4	43.1	37.6	37.4	" "
" 12....	39.7	47.3	32.8	33.0	" "

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MAXIMUM and Minimum Temperatures, &c.—*Concluded.*

Date.	THERMOMETER READINGS.				Weather.
	Maximum.		Minimum.		
	6 a.m.	6 p.m.	6 a.m.	6 p.m.	
1901.	°	°	°	°	
June 13....	44.0	57.3	32.2	33.0	Fair, rain.
" 14....	55.2	53.4	37.9	38.8	Cloudy, rain.
" 15....	46.5	48.3	33.9	34.5	Fair.
" 16....	53.8	64.9	30.7	31.7	"
" 17....	62.9	71.0	33.8	34.2	Fair, perfect day.
" 18....	67.6	74.1	32.8	34.5	Fair.
" 19....	72.2	71.5	33.8	37.8	Fair, rain.
" 20....	70.6	69.4	45.8	48.8	Fair.
" 21....	64.6	66.4	45.2	46.7	Fair, rain.
" 22....	62.9	64.4	34.9	37.2	Fair, rain, hailstorm, thunder.
" 23....	60.8	50.7	39.7	39.7	Cloudy, rain.
" 24....	43.7	42.1	32.9	32.8	" "
" 25....	41.0	57.4	35.4	37.0	Fair.
" 26....	57.0	65.5	30.2	35.5	"
" 27....	61.0	59.4	47.4	47.8	Fair, light rain.
" 28....	52.9	61.3	37.6	40.0	Fair.
" 29....	55.7	54.9	39.9	40.0	Fair, rain.
" 30 ..	47.0	59.7	33.9	36.8	Fair, light rain.

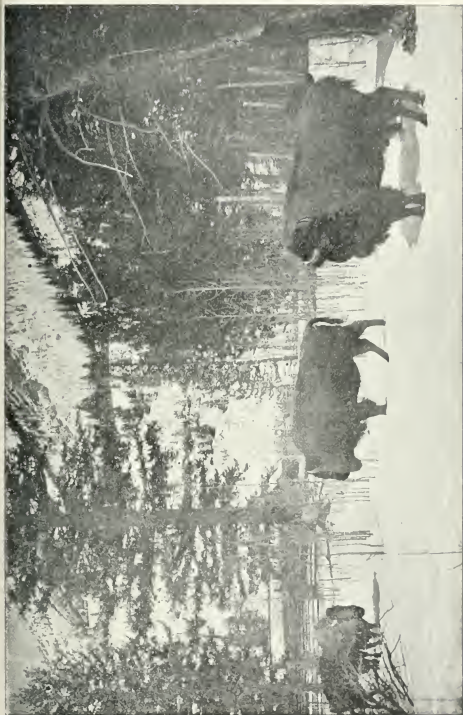
NORMAN B. SANSON,

*Observer.*

## LIST OF PLATES ACCOMPANYING ROCKY MOUNTAINS PARK REPORT

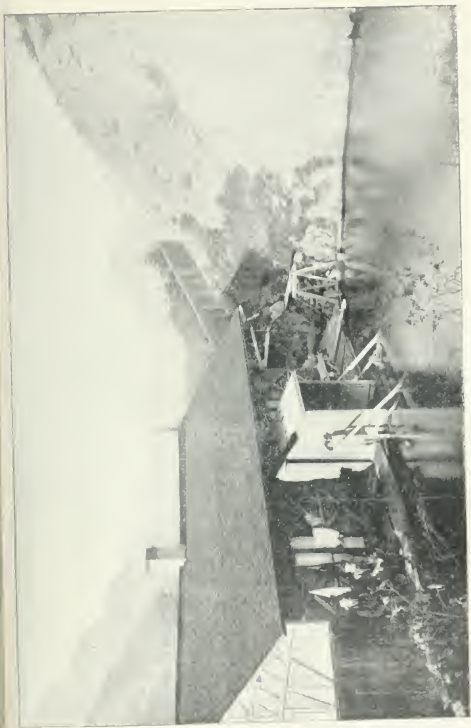
	Page
1. Bowing, Banff, Alta .....	19
2. Bowing, Banff .....	21
3. Cascade Mountain, Banff .....	23
4. Fair Valley, from Q. P. R. Hotel, Banff .....	25
5. Horns Head Canyon, Banff .....	27
6. Rocky Mountain Park, Banff .....	29





BUFFALO, BANFF, ALTA





LOW FALLS, ILLINOIS







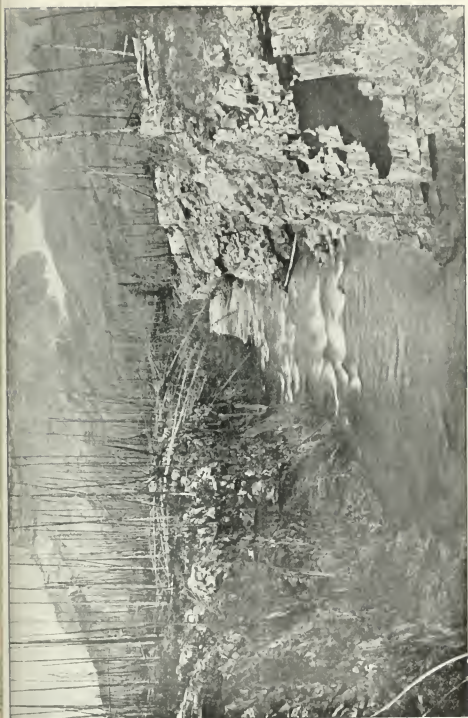
CASCADE MOUNTAINS, BASTOP





How Valley from C. F. R. Hotel - BAMP





DEVILS HEAD CANYON, TEXAS





Rocky Mountain Park, Bismarck





PART V.

NORTH-WEST REGISTRARS



# NORTH-WEST REGISTRARS.

## REPORT OF INSPECTOR OF LAND TITLES OFFICES.

REGINA, July 31, 1901.

JAS. A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR.—I have the honour to make the following report of the work done in the Land Titles Offices of the North-west Territories for the year ending June 30, 1901.

The total amount of fees received in all the offices was \$28,230.96.

In 1899 and 1900 the total fees were \$22,239.44.

An increase for this year of \$5,993.52.

These fees were collected by the different offices as follows :—

Offices.	1900-1901.	1899-1900.	Increase.
Assiniboia Land Titles Office.	\$14,317 20	\$11,222 05	\$3,093 15
North Alberta	6,991 50	5,594 20	1,397 30
South Alberta	5,207 43	4,078 34	1,129 09
East Saskatchewan	1,662 70	1,354 10	308 60
West Saskatchewan	51 13	189 15	Dec. 138 02

The numbers of instruments registered and certificates issued were as follows :—

### NUMBER OF INSTRUMENTS.

Offices.	Number of Instruments.		
	1900-1901.	1899-1900.	Increase.
Assiniboia Land Titles Office.	5,374	4,843	531
North Alberta	2,704	2,216	488
South Alberta	1,597	1,280	317
East Saskatchewan	—	643	—
West Saskatchewan	22	62	Dec. 40

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## NUMBER OF CERTIFICATES.

Offices.	Number of Certificates Issued.		
	1900-1901.	1899-1900.	Increase.
Assiniboia Land Titles Office	2,650	2,415	235
North Alberta	1,351	1,174	177
South Alberta	1,164	881	283
East Saskatchewan		369	
West Saskatchewan	9	43 Dec.	34

The work in all the offices has increased during the last year with the exception of the Battleford office.

During the last year I have inspected the land titles offices for north and south Alberta and west Saskatchewan, but I have not yet been able to give the registrars their annual vacation, but will do so at once.

Annexed hereto are the reports from the several registrars.

I am, sir, your obedient servant,

H. W. NEWLANDS,  
*Inspector, L.T.O.*

RETURN showing the work done at and receipts of the office of the Registrar, West Saskatchewan Land Registration District, for the year ending June 30, 1901, with a comparative statement of the year previous.

Month.	Instruments Regist'd		Free Certificates Issued.		Fees Collected.		Increase.	Increase.
	1899-1900	1900-1901	1899-1900.	1900-1901	1899-1900.	1900-1901		
July	19				8 cts.	8 cts.	8 cts.	8 cts.
August	16		4		74 50	19 90	74 50	19 90
September	1				15 51		15 51	
October	7				28 70		28 70	
November	2		2					
December	1	2			4 85	9 61		4 76
January	2	3	1		13 15	13 15		13 15
February	2	1			9 20	4 35	4 85	
March	8	8	2	8	13 31		13 31	
April	6	6	1	1	7 00	15 12		8 12
May	3	2			11 43	8 90	2 53	
June	1				4 75		4 75	
Net decrease.	62	22	10	9	189 15	51 13	164 05	26 03
							138 09	

Plan of road filed in January, 1900, treated as instrument registered.

R. F. CHISHOLM,  
*Registrar.*

SESSICAL PAPER No. 25

STATEMENT of Receipts, &amp;c., in the Land Titles Office, East Saskatchewan Land Registration District, for the Year ending June 30, 1901.

## RECEIPTS.

1900.		1901.	
	8 cts.		8 cts.
July	165 30	January	113 50
August	131 30	February	187 50
September	129 40	March	165 35
October	85 25	April	125 70
November	77 30	May	138 45
December	143 25	June	180 40
	751 80		910 90
			751 80
			1,662 70

Increase over previous year, \$304.15.

S. BREWSTER,  
*Registrar.*

STATEMENT of Registration, &amp;c., Land Titles Office for the Assiniboia Land Registration District, Regina.

Year and Month.	Number of Instruments.	Certificates Issued Free.	Number of Certificates Issued.	Assurance Fees.	Total Fees.
1900.					
July	294	48	165	122 80	919 10
August	433	126	244	122 30	1,088 70
September	333	60	163	108 05	859 65
October	303	25	138	111 95	961 85
November	433	58	166	122 90	1,062 75
December	522	62	207	211 10	1,388 25
1901.					
January	427	22	158	178 10	1,220 85
February	390	24	183	180 50	1,160 80
March	539	95	252	195 90	1,341 90
April	529	131	233	164 70	1,385 35
May	647	182	352	269 00	1,401 45
June	524	127	340	554 70	1,797 35
	5,374	960	2,591	2,282 00	14,317 20

F. F. FORBES,  
*Deputy Registrar, A. I. R. D.*

## SOUTH ALBERTA LAND REGISTRATION DISTRICT, CALGARY.

COMPARATIVE Statement of Registrations, etc., in the Land Titles Office, South Alberta Land Registration District, for the years July 1, 1899, to June 30, 1900, and July 1, 1900, to June 30, 1901.

Year and Month.	1900 1901.				1899 1900.				1900.			
	Number of Instruments Registered.	Free Certificates Only.	Aggregate Number of Certificates.	Assurance Fees. \$ cts.	Total Fees. \$ cts.	Year and Month.	Number of Instruments Registered.	Free Certificates Only.	Aggregate Number of Certificates.	Assurance Fees. \$ cts.	Total Fees. \$ cts.	
July .....	125	31	90	40 85	363 65	1899 1900.	108	18	67	35 30	373 60	
August .....	115	38	99	47 35	363 70	July .....	69	14	45	30 70	296 85	
September .....	125	44	100	67 29	377 29	August .....	90	2	56	43 90	360 85	
October .....	87	2	58	62 25	375 55	September .....	142	51	104	30 75	366 30	
November .....	123	31	84	41 20	370 60	October .....	88	6	46	30 40	369 85	
December .....	114	23	70	34 80	354 50	November .....	61	5	35	53 00	214 55	
						December .....						
						1900.						
January .....	132	62	148	11 65	311 90	1900.	140	60	106	86 50	348 25	
February .....	87	8	52	36 05	308 80	January .....	94	32	78	28 65	270 45	
March .....	123	13	88	84 45	521 95	February .....	116	36	84	44 81	320 31	
April .....	176	25	107	91 00	605 10	March .....	156	49	117	63 90	452 40	
May .....	208	52	147	404 75	649 50	April .....	130	18	85	79 65	470 60	
June .....	182	49	121	136 30	604 80	May .....	76	10	58	34 43	294 33	
						June .....						
Irrigation plans .....	1,507	378	1,164	787 53	5,907 43	Irrigation Plans.	1,280	301	881	561 29	4,678 34	
	6				6 00		6				6 00	

W. ROLAND WINTER,  
Registrar.

## SESSIONAL PAPER No. 25

STATEMENT of Registrations, &amp;c., in the Land Titles Office, North Alberta Land Registration District, Edmonton, for the year ending June 30, 1901.

Year and Month.	Number of Titles Issued.	Number of Free Certificates.	Number of Instruments Registered.	Assurance Fees.	Total Fees Collected.
1900.				\$ ds.	\$ cts.
July	74	36	141	57 56	322 18
August	96	45	230	87 10	481 95
September	114	78	190	49 75	465 50
October	77	40	146	40 20	324 20
November	58	15	125	35 45	363 75
December	74	22	107	58 35	520 55
1901.					
January	173	22	299	178 35	954 75
February	123	34	267	77 95	746 70
March	163	78	313	114 00	789 40
April	120	42	298	73 45	720 15
May	127	47	244	106 45	689 05
June	122	56	254	92 20	616 35
	1,351	515	2,704	971 40	6,994 50

GEO. ROY,  
*Registrar.*





PART VI.

HALF-BREED COMMISSIONERS



# HALF-BREED COMMISSIONERS

## REPORT OF COMMISSIONERS MCKENNA AND WALKER.

DEPARTMENT OF THE INTERIOR,  
OTTAWA, March 11, 1901.

The Honourable CLIFFORD SIFTON, K.C., P.C.,  
Minister of the Interior,  
Ottawa.

SIR,—We have the honour to report that in accordance with Letters Patent issued to us under the Great Seal on the 13th day of March, 1900, and your letter of instructions of the 5th May last, we met the commissioners named to deal with the claims of half-breeds in the Saskatchewan country at Regina on the 12th May, and arranged as to the procedure to be followed.

We then proceeded to the investigation of the claims of half-breeds in Assiniboia and Alberta and such claims of Athabasca half-breeds as might be preferred, and held sittings for that purpose at the following places; the dates set opposite the names of the places show the time occupied at each point :—

### ASSINIBOIA.

Willow Bunch . . . . .	from May 16 to May 25, 1900
Fort Qu'Appelle . . . . .	" May 29 " June 23, "
Touchwood Hills . . . . .	" June 25 " June 29, "
Fort Qu'Appelle . . . . .	" June 30.
Swift Current . . . . .	" July 3 " July 7, "
Maple Creek . . . . .	" July 9 " July 17, "
Medicine Hat . . . . .	" July 18 " July 21, "

### ALBERTA.

Lethbridge . . . . .	from July 23 to July 26, 1900
Macleod . . . . .	" July 26 " Aug. 4, "
Pineher Creek . . . . .	" Aug. 6 " Aug. 8, "
Calgary . . . . .	" Aug. 10 " Aug. 16, "
Edmonton . . . . .	" Aug. 21 " Aug. 23, "
Victoria . . . . .	" Aug. 29 " Sept. 5, "
Saddle Lake . . . . .	" Sept. 7 " Sept. 8, "
St. Paul des Métis . . . . .	" Sept. 10 " Sept. 14, "
Lac la Biche . . . . .	" Sept. 18 " Sept. 25, "
Athabasca Landing . . . . .	" Oct. 1 " Oct. 3, "
St. Albert . . . . .	" Oct. 9 " Oct. 20, "
Lac Ste. Anne . . . . .	" Oct. 19 " Oct. 26, "
Edmonton . . . . .	" Oct. 29 " Nov. 15, "
Fort Saskatchewan . . . . .	" Nov. 15 " Nov. 17, "
Edmonton . . . . .	" Nov. 19.
Wetaskiwin . . . . .	" Nov. 20 " Nov. 24, "
Duhamel . . . . .	" Nov. 26 " Nov. 30, "
Lacombe . . . . .	" Dec. 3 " Dec. 6, "

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We received and dealt with 3,505 distinct written applications, representing claims by or on account of 4,397 half-breeds.

These claims may be classified as follows :—

Claims allowed for living half-breeds. . . . .	2,209	
Claims allowed to 2,149 heirs of 1,097 deceased half-breeds. . . . .	1,097	
		3,306
Claims disallowed. . . . .		235
Claims reserved for various reasons, of which the following are the principal :—		
Insufficient evidence to establish title to scrip. . . . .		856
Born prior to July 15, 1870 . . . . .		
Foreign residence . . . . .		
Manitoba birth. . . . .		
Non-appearance of rightful claimants. . . . .		
Questions connected with Indian Treaty <i>et al.</i> . . . . .		
Total. . . . .		4,397

Scrip certificates have been issued by us as follows :—

MONEY SCRIP.

Form C.—876 certificates for living half-breeds. . . . .	\$210,240 00
Form D.—1,417 certificates for shares of scrip in favour of the heirs of 439 deceased half-breeds. . . . .	105,360 00
Total . . . . .	\$315,600 00

LAND SCRIP.

	Acres.
Form E.—1,333 certificates for living half-breeds. . . . .	319,920
Form F.—732 certificates for shares of scrip in favour of the heirs of 658 deceased half-breeds. . . . .	157,920
Total. . . . .	477,840

As will appear by the above statement, scrip certificates were issued covering claims of 3,306 half-breeds, living or deceased, as follows :—

Money Scrip. . . . .	1,315
Land Scrip. . . . .	1,991
Total . . . . .	3,306

A few scrip certificates (Forms C and E), for living half-breeds, as well as a number of certificates (Forms D and F) to heirs of deceased half-breeds, have been issued by the commissioners in favour of the parties entitled to receive them, but have not yet been delivered to the half-breeds in whose favour they are drawn, chiefly because these parties were resident in other localities and were not present to receive them. These certificates are still in the hands of the commission awaiting delivery. They have been included in the above statement of scrip certificates issued, as it is the intention to take such steps for the prompt delivery of the same as may be deemed advisable.

These undelivered scrip certificates amount to as follows :—

284 certificates for money scrip (Forms C and D). . . . .	\$14,640 00
32 certificates for land scrip (Forms E and F) . . . . .	5,760 acres.

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A few claims of Athabasca half-breeds were taken by us, but not of sufficient importance numerically to warrant a separate statement, and they have, therefore, been included in the totals already given herein.

Owing to the delay occasioned by so large a number appearing at the first sittings of the commission, we were unable to attend at certain points on the dates first fixed. A number of claimants were unable to await the arrival of the commissioners, and in order to remove any ground of complaint, we undertook to recommend that special sittings be held at a few principal points in the Territories during the coming summer. These could be arranged for when provision is being made to investigate the claims of the half-breeds of the territory included in the province of Manitoba as now constituted, which was not included in the province as constituted by the Manitoba Act, 33 Victoria, Chapter 3. The commissioners were unable to deal with these claims last year.

J. A. J. MCKENNA,  
JAMES WALKER,

*Commissioners.*

## REPORT OF COMMISSIONERS COTE AND McLEOD.

DEPARTMENT OF THE INTERIOR,

OTTAWA, March 29, 1901

The Honourable CLIFFORD SIFTON, K.C.,  
Minister of the Interior.

SIR.—We have the honour to report that in conformity with the commission issued to us bearing date March 21, 1900, and the order in council of the 2nd of the same month, as amended by subsequent orders in council, vesting in us power to investigate and adjudicate upon the claims to land or scrip arising out of the extinguishment of the Indian title, preferred by or on behalf of half-breeds born between July 15, 1870, and the end of the year 1885, in the organized districts of the North-west Territories, or in that portion of territory included in the province of Manitoba as now constituted, which was not within the said province, as constituted under the Manitoba Act, 33 Victoria, Chapter 3, we heard evidence in support of 2,111 individual claims to share in the grant authorized by the aforesaid orders in council and paragraph 'f' of clause 90 of the Dominion Lands Act, as amended by section 4 of the Act 62-63 Victoria, Chapter 16 (1899), at sittings held between May 15 and December 11 last, in the Saskatchewan district, at the following places:—

Prince Albert, St. Louis, Batoche, Snake Plains, Sandy Lake, Deerp's Lake, Green Lake, Battleford, Onion Lake, Bresaylor, Fort à la Corne, Sturgeon River, Cumberland, Birch River Portage, The Pas, Cedar Lake, Grand Rapids, Saskatoon and Red Deer Lake.

Having ascertained that there were no half-breeds to come before us at Montreal Lake, we held a sitting at Red Deer Lake instead of at the former place as had been previously arranged.

In accordance with the instructions contained in the letter of May 5, 1900, from the Hon. James Sutherland, then acting Minister of the Interior, we also heard evidence in respect of thirty-five claims from half-breeds who were born prior to July 15, 1870.

All the foregoing claims have been entered in the Registers of Claims, Nos. 1 and 2, in which is also recorded the action taken by us on each case. An alphabetical index to such claims containing all necessary information in relation thereto has also been carefully prepared. These books, the unused blank certificates entrusted to us (C 2093 to 2199, inclusive, D 1873 to 1999, inclusive, E 711 to 799, inclusive, F 359 to 399, inclusive, odd numbers only), the stubs of the certificates we issued and the certificates we cancelled, have been handed into your department.

We issued in all 1,851 certificates (money scrip) calling for scrip redeemable in the purchase of Dominion Lands, aggregating \$344,268.55, and 492 land certificates

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covering an area of 117,680 acres of land. The certificates so issued may be classified as follows :—

974 for \$240 each to persons claiming in their own right.	
343 for \$240 each to the heirs of deceased persons.	
<hr/>	
1,317 for \$240 . . . . .	\$316,080 00
18 for \$190 each . . . . .	3,420 00
1 for \$30 . . . . .	30 00
515 for fractional scrip to the heirs of deceased half-breeds. . . . .	24,736 55
<hr/>	
1,851	\$344,266 55
492 Land Certificates covering an area of . . . . .	117,680 acres.
<hr/>	
2,343	

Of these 492 land certificates, 487 certificates were for 240 acres each, 164 of which were issued to the heirs of deceased half-breeds, and five were for 160 acres each.

The tabulated statement appended hereto shows in detail the scrip certificates issued at each place visited by the commission, as well as the dates of its sittings.

The claims dealt with by us may be classified as follows :—

Claims allowed, preferred by persons in their own right. . . . .	1,352
Claims allowed, preferred on behalf of the heirs of deceased half-breeds. . . . .	638
Claims preferred by persons born before the 15th July, 1870. . . . .	35
Claims reserved for further evidence or special recommendation . . . . .	23
Claims disallowed in addition to those, which, upon preliminary examination, were not entertained . . . . .	98
<hr/>	
	2,146

Lists of disallowed and reserved claims, as well as of the claims preferred by persons born prior to July 15, 1870, have been filed in the department with the records of the commission.

Among the claims which have been allowed, there are 45 which have not been satisfied by an issue of certificates, as the persons entitled thereto were absent. In these cases, however, upon the claimants applying therefor to the department, the scrip can be sent to them. This course may also be followed with respect to shares of scrip which have not yet been delivered to the heirs of deceased persons.

The claims already referred to of persons born prior to July 15, 1870, are barred on account of their not having been presented within the time prescribed by the orders in council of April 20, 1885, and March 12, 1892, the former fixing May 1, 1886, and the latter May 1, 1894, before which dates Manitoba claims and North-west claims, respectively, had to be submitted.

We also find from the evidence taken in these cases, that some of the applicants were residents on July 15, 1870, in a portion of the North-west Territories which has not yet been ceded by the Indians under treaty, but that for many years they have been living in ceded territory, most of them having their domicile in Prince Albert. In view of these facts, we are of the opinion that these claimants should be treated as North-west half-breeds, and if it is proposed to reopen the latter class of claims, that their claims should be dealt with on the merits of the evidence submitted, irrespective of their residence at the transfer in territory not yet ceded.

As it seems to us expedient and in the public interest now that a final settlement is being made with the North-west half-breeds, that all claims, including Manitoba claims as well, which have been refused by the department from time to time, merely on account of their being barred by the two orders in council last mentioned, should

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be allowed, we beg to recommend that steps be taken to deal with this class of claims in the same manner as if they had been presented in due time.

A good deal of evidence also had to be taken in many cases, after a claim had been allowed, with regard to powers of attorney which had previously been obtained—most of them some years ago—by intending buyers of the claimant's scrip, which clearly showed that, with the exception of a few cases, no consideration whatever had been paid, and that the price mentioned in the agreement which was to be paid for the scrip was far below the current price. In dealing with these cases, we were guided entirely by the instructions contained in the order in council of March 13, 1900, which stipulated that, unless we were satisfied that such powers of attorney, or assignments, did not operate to the disadvantage of the half-breed, they were not to be accepted; and in no case did we deviate from the position we took at the outset of exacting the payment in our presence to the claimant of the full current price paid for scrip before delivering the scrip to the holder of a power of attorney or assignment. While this course proved satisfactory to the claimants, strong objection was taken to it by some of the buyers.

Had these powers of attorney been recognized, as a matter of course, much dissatisfaction would have been created among the half-breeds generally, whether personally concerned in the transaction or not; and, in our opinion, a great injustice would have been done to the claimants, who, according to the evidence obtained by us, were ignorant of the purport of the documents they had been induced to sign, and which they most emphatically repudiated.

There were, however, a few bona fide transactions where a substantial sum had been paid on account of the purchase price of the scrip; but, where the powers of attorney in such cases were presented to us and the price agreed upon was found to be below the established price, the attorney was also required, before receiving the scrip certificate from us, to pay over the balance due the claimant at the rate at which scrip was being bought for at the time.

At Green lake we met a number of Isle à la Crosse half-breeds who were very anxious that the Indians of their section of the territories should be treated with, in order that they, the half-breeds, might receive their scrip for themselves and their children. There are also, it was represented to us, a few half-breed families at Stanley Mission and Pelican Narrows, all of which places will, no doubt, be covered by the same treaty when the tract of land lying north of the easterly portion of the land included in Treaty No. 6 is ceded by the Indians of that part of the country.

With the exception of a few isolated claims which were not presented to us last summer on account of the absence of the claimants, our work in the Saskatchewan district has been completed, and we are pleased to be able to state that the settlement made appears to have given entire satisfaction to all concerned.

There still remain, however, to be investigated and dealt with under our commission the claims of half-breeds in that portion of the province of Manitoba, already referred to, which heretofore formed part of the Territories; and we would have proceeded, after the completion of our investigation in the Saskatchewan district, to deal with these claims had we not received instructions to the contrary.

In closing our report, we desire to mention that we received much assistance in the performance of our duties from Messrs. Charles Fisher, M.L.A., and Edouard Bourgeois, the secretary and clerk of the commission, respectively. Mr. Fisher's thorough knowledge of the English, French and Cree languages, and of the people whose claims we had to deal with, rendered his services most valuable to us.

We have the honour to be, sir,

Your obedient servants,

N. O. COTE,

S. McLEOD,

*Commissioners.*

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STATEMENT of Scrip issued in the Saskatchewan District,  
By Messrs. N. O. Coté and S. McLeod, Commissioners.

Where issued.	When issued.	C.		D.		Total \$ on C and D.	E.		F.		Total of acres E and F.
		8240	8190-830	Hours.			Acres 100	Acres 240	Acres 100	Acres 240	
				Fractional Shares.							
Prince Albert	15th May to 6th June.	363	2	153	4,942	32	140	1	36	1	42,500
"	24th July to 31st July.	12		8	706	90	23		6		6,900
"	4th to 6th September.	11		3	840	00	4		2		1,440
"	23rd October.	2		1	397	32	2		1		720
"	26th October to 11th December.	17		2	2,346	60	23		18	2	10,320
St. Louis.	8th and 9th June.	17		3	286	68	1		2		720
Duck Lake.	11th to 21st June.	140		44	3,877	34	35		44		18,900
Batoche	22nd to 28th June.	80		12	2,570	98	21		26		11,280
Susako Plain	30th June to 3rd July.	29	2	14	554	43	9		7		3,840
Sandy Lake	19th July.	7					1				240
Devil's Lake	5th July.				17	78					1,697
Trail to Green Lake.	6th July.	3					00				720
Green Lake.	11th to 14th July.	82	2	28	1,182	86					27,062
Battleford	6th to 15th August.	116	3	27	3,254	62	44		14		13,920
Union Lake.	20th and 21st August.	34		3	793	28	5		2		1,680
Bresaylar.	24th August.	10					6		1		2,400
Fort à la Corne.	10th September.			2	567	62	2		1		1,047
Sturgeon River.	14th September.	3		1	1,108	57					1,108
Cumberland	17th to 21st September.	44	3	25	1,494	61	1				18,624
Birch River Portage.	22nd September.	3		5							2,110
The Pas	27th and 28th September.	31	1	21	585	24	3				13,775
Godar Lake.	3rd October.	34	1				1				190
Grand Rapids.	8th to 10th October.			11	240	00	2		1		11,040
Saskatoon	24th and 25th October.	2					480				60
		974	18	1	343	55	323	2	164	3	117,680

Total issued at Prince Albert on C and D \$126,283.14, E and F 62,000 acres.

OTTAWA, January 16th, 1901.

CHAS. FISHER, <sup>Minister</sup> Secretary.



PART VII.

REPORT

OF THE

LIEUTENANT GOVERNOR OF KEEWATIN



## REPORT OF THE LIEUTENANT GOVERNOR OF KEEWATIN.

GOVERNMENT HOUSE,  
WINNIPEG, August 31, 1901.

THE HON. CLIFFORD SIFTON,  
Minister of the Interior,  
Ottawa.

SIR,—I have the honour to report that since my appointment I have been unable, personally, to make a journey into the territorial district of Keewatin, but shall endeavour to make arrangements to do so in the near future. I have, however, had the opportunity of meeting some of the few principal residents, and have been furnished by them with much general information as to the conditions obtaining in Keewatin during the past season.

In that part of the district bordering on the province of Manitoba the natives, besides being the wards of the government, have enjoyed a fairly prosperous year, most of them being engaged in the prosecution of the fishing on and around Lake Winnipeg, and in the various employments which hinge upon the fisheries. I am glad to say that the past season's reports which have reached me regarding these fisheries are very favourable, and especially so since, in a successful year, there is no occasion for anxiety as to the means of livelihood of the natives.

Throughout the country from the lake to the Hudson's bay, the information I have been able to gather indicates generally that the natives who are not in treaty with the government have been able to support themselves without recourse having to be made to charitable relief to any serious extent, and I am led to understand it is probable that the coming year will be marked by the usual food supply of the country, upon which dependence is placed, being less scarce than it seems to have been during the past two or three years. Years of scarcity in respect of rabbits and other animals, upon which the natives largely depend for food, run in cycles, and it would appear as if the worst portion of a period of depression in this respect had been passed.

With regard to the most distant parts of the district, I have made inquiries of Mr. C. C. Chipman, the Commissioner of the Hudson Bay Company, who informs me that the natives in that part of the country have enjoyed better fortune during the past winter than for some years back. From so distant a point as the mouth of the Weenusk river, I have heard incidentally that the Indians had a supply of fish stored for the winter so plentifully that when spring came they had not quite exhausted it. The annual ship by which the Hudson Bay Company supply their stations on that coast nearly suffered disaster last season by running upon a shoal at some distance from York Factory upon her outward journey. She was, however, able to complete her voyage safely, and the stations all received their supplies, and she has since been replaced by an ex-man-of-war vessel of a very strong type.

I am pleased to be able to report a continued general absence of crime in the district. With the exception of the one crime, hereinafter referred to, no crimes whatever have been reported to me, and I think it extremely probable that if any had occurred they would have been brought to my attention.

The justices of the peace, Indian agents and Hudson Bay officials, throughout the district, are zealous in the preservation of the law and order, and are ably seconded by the chiefs and councillors of the several bands; so much so that with the exception before mentioned I have had to deal with no breaches of the peace.

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I regret to say that the exception is the serious charge of murder. In the month of March last an Indian woman, named Helen Frogg, was brought to Winnipeg from Norway House on the Nelson river, charged with the murder of her husband, Charles Frogg.

The preliminary investigation had been conducted by Mr. J. K. Macdonald, Hudson Bay factor at Norway House, who committed the prisoner for trial after an exhaustive investigation.

Two methods of trial of the prisoner were available, namely, either at Winnipeg at the regular sitting of the court for the trial of criminal cases, or by a judge of the Court of King's Bench proceeding to the district and holding the trial there. Under the Keewatin Act the Court of King's Bench for Manitoba has jurisdiction to try offences committed within the district, but the sittings of that court for the trial of criminal matters with a jury are holden in March and November, the one before the opening of navigation and the other after it had closed in the fall.

In this particular case it appeared that some twenty-five Indians from Cross lake, a large number of whom were women, had been called as witnesses on the preliminary investigation and all of whom it would be necessary to bring to Winnipeg, a distance of some four hundred miles by dog train, should the trial take place in Manitoba. The removal of so large a number of witnesses and their families (when an Indian moves his family goes with him) so great a distance in winter time would involve, not only a very large expenditure, but a considerable danger to life. Under the circumstances it was arranged that Mr. Justice Richards, one of the judges of the Court of King's Bench, should go to Norway House to hold the trial there on or about the second day of August when the witnesses would be in the neighbourhood for the purpose of treaty payment.

I had reason to believe that in addition to the saving of expense this method of trial would entail, the trial of the prisoner in the neighbourhood, surrounded by all the solemn forms of law, would have a good moral effect upon the Indians and would be an object lesson not soon forgotten. It would bring home to them the fact that they are within the protection and punishment of the law, and that there is no place too remote to be reached by the strong arm of justice.

Mr. Justice Richards, accompanied by Sheriff Inkster, T. G. Mathers, Crown prosecutor, and James Perkins, court stenographer, left Winnipeg on July 27, and on the same day sailed from Selkirk on the steamer *Princess* for Norway House. They arrived there on August 3, and on the 6th the trial began in one of the Hudson Bay Company's storehouses, which had been kindly fitted up for that purpose, before a jury of six settlers from the neighbourhood.

The trial lasted until August 13, and resulted in a verdict of acquittal, with which verdict his lordship concurred.

The good effect anticipated from holding the trial in the neighbourhood was fully realized. Until the trial the Indians of the prisoner's band, including the chief and councillors, were thoroughly convinced of the woman's guilt and were much exercised in case punishment should not be meted out to her. After, however, being present at the trial and having heard the judge's charge to the jury, which was sentence by sentence, translated into Cree, their opinions changed and they became convinced that the woman was not guilty and so expressed themselves.

Those best able to judge have testified to the wisdom of holding the trial in the vicinity. Rev. John MacDougall, who has spent forty years amongst the Indians, and who is now Superintendent of Indian Missions under the Methodist Church, who was present during the whole trial, in a published interview, says:

'This whole community were interested in this trial which had become famous in their minds, having been an omnipresent thought with the most of these people since last autumn. For the first time these people were to witness the administration of justice as in force under British rule. Certainly the government could not have been more fortunate than they were in the selection of the judge sent north, for Judge

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Richards fully impressed all men in that country with the righteousness and equity as well as charity of our English law. The full dignity of the bench, as well as the equality of manhood under our British institutions were fully impressed upon the minds of both native and foreigner. The holding of this court at that point was a great object lesson, and doubtless will result in the suppression of crime and in the maintaining of order and good living amongst these people as possibly nothing else would have done.'

The territory would appear to be fairly well cared for as a field for missionary enterprise; the Episcopalian, Roman Catholic and Methodist Churches have each several mission stations, and all the natives have been brought under the influence of Christian teaching. Considerable progress is being made in the education of children, particularly in connection with the Industrial Home at Norway House, and there is some prospect of many of them growing up to be useful and creditable citizens of the Dominion.

I look forward with some pleasure to travelling into the district at an early date.

I must express my great appreciation of the assistance afforded me by Mr. C. C. Chipman, Commissioner of the Hudson Bay Company, in obtaining for me, from the officials under him resident in the district, many particulars regarding the condition of the people and state of affairs throughout the district of Keewatin.

I have the honour to be, sir,

Your obedient servant,

D. H. McMILLAN,

*Lieutenant Governor.*



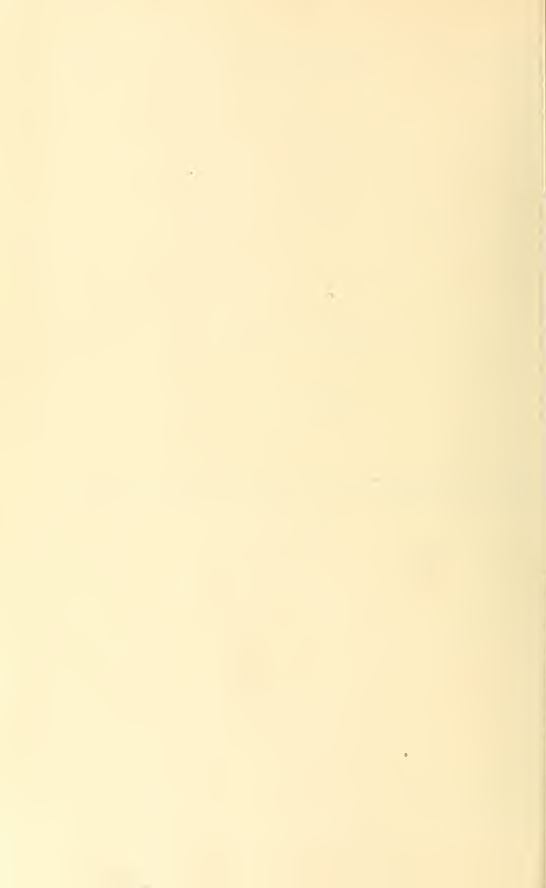
PART VIII

REPORT

OF THE

SUPERINTENDENT OF FORESTRY FOR CANADA

1901





# FORESTRY

## REPORT OF THE SUPERINTENDENT OF FORESTRY

DEPARTMENT OF THE INTERIOR,

FORESTRY BRANCH,

OTTAWA, September 20, 1901.

JAMES A. SMART, Esq.,  
Deputy Minister of the Interior,  
Ottawa.

SIR.—I have the honour to submit the Annual Report on Timber and Forestry for 1901, being the third report from this branch.

In previous reports the details of the work of this office were referred to under several headings, and it will be well to adhere to this practice as far as possible in each subsequent report for convenience and comparison. Before doing this, however, in the present case it is necessary to refer to some matters that cannot be conveniently dealt with under any of these headings.

Owing to the development of the work, especially that relating to forest tree planting in Manitoba and the North-west Territories, it was found necessary to have an assistant superintendent, and in March last, Mr. Norman M. Ross, B.S.A., was appointed. Mr. Ross has special qualifications for the position. In addition to his course at the Agricultural College, at Guelph, where he made a specialty of botany, he attended for some time the Biltmore School of Forestry under Dr. C. A. Schenek, and also accompanied the latter in forest investigations in Germany. He is familiar with our North-west, having spent several years in the country. Since his appointment he has been employed almost exclusively in the Territories in assisting in the development of the system of co-operation that has been adopted, by which the department undertakes to assist the settlers in the growing of shelter belts and forest plantations on their homesteads. The details of the system adopted will be found under the proper heading. Mr. A. P. Stevenson, of Nelson, has during this season also been employed in connection with the same work in the province of Manitoba. Mr. Stevenson is recognized as an authority on arboriculture in that province.

Appended will be found reports from both Mr. Ross and Mr. Stevenson.

### FOREST PROTECTION.

A system of forest fire guarding is now in operation, and following will be found several reports from those engaged in the service. The manner of their employment is as follows:—Forest fire rangers are selected from men residing in or near the district where they are to be employed. They are notified that they will be under the direction of a supervising officer, usually the Crown Timber Agent, regular forest ranger or homestead inspector for the district in which they are employed. When this officer considers their services are required he notifies them to commence work, furnishes them with copies of the Fire Act, a copy of general instructions defining their duties, and also with notices for posting up and distributing, warning the public against the careless use of fire. Where horses can be used they supply themselves with them. Their remuneration in such cases is three dollars per day, which includes expenses for both man and horse. When the supervising officer considers it unnecessary for the

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ranger to continue the work longer, he recalls him and instructs him to make out his account, which is certified to by the supervising officer and is paid on being forwarded to the department accompanied by a diary detailing how the ranger has been employed each day. By this system the ranger is employed only when his services are necessary, and in case the season is very wet he may not be employed during the whole season.

During the past two seasons the weather was so wet that but little danger arose from forest fires, but since the early spring of this year up to the present there has scarcely been a time when it was not necessary to have rangers at work in one or other of the districts under supervision. In the early part of the season they were required in Manitoba and Eastern Assiniboia, while in British Columbia it was then so wet that they were not needed; but for the past two months these conditions have been reversed so that in Manitoba and the Territories their services were for the time dispensed with, while in British Columbia, as will be seen from Mr. Leamy's report, they have had almost constant work in fighting fire. It was very gratifying to see on my recent visit there that by their exertions they had in several cases succeeded in confining the fire within the limits of territory that had formerly been burnt over and thereby saved from destruction large quantities of merchantable timber. In one district south of New Westminster, a fierce fire broke out which at one time threatened to sweep for miles through excellent timber, but by the timely action of the Crown Timber Agent in employing assistance it was prevented from even entering the green timber. In this one instance alone millions of feet of timber were certainly saved. But the chief benefit derived from the employment of the fire ranger is in what he does in preventing fires. The extent of good done in this way can never be ascertained. As one of the rangers, whose nationality will be surmised, said, 'the best time to stop a fire is before it starts.'

The country is also greatly indebted to the North-west Mounted Police in this respect. The members of this force have for years been most active in educating the people regarding the necessity of the careful use of fire at certain seasons of the year; in making known and enforcing the laws relating thereto, and also in their efforts in the field in suppressing or controlling fires which if allowed free course would prove destructive. The police being well mounted and familiar with the prairie, no better fire guardians could be desired, but a moment's consideration will show that they are insufficient to guard the whole area deserving attention. In the first place, owing to their other duties, they cannot be expected to be always in readiness for such work. Again, their duties are mostly on the prairie and not in the forest; while they are also confined to the Territories and are not supposed to do service in either Manitoba or British Columbia; so that all that can be expected of them is that they will give more or less attention to this service on the prairie and in the partially wooded districts of the Territories. It is, therefore, obvious that in order to have an effective fire service for both the prairie and wooded regions we require to supplement the efforts of the police on the prairie by fire guardians in the settled prairie districts, and by forest fire rangers in the timbered districts.

#### TIMBER RESERVES.

There is no work at present demanding greater attention than that of selecting and setting apart certain areas of the country for the production of timber. The older settled parts of eastern North America are now paying the bitter penalty for the ruthless destruction of the forests at the sources of their rivers and streams. Each spring is to many localities a season of anxiety, and never one passes without leaving behind its record of destruction of life and property. And this is not all, for on in the summer the very element that was wasted a few months before is sadly wanting. The springs and creeks become dry and soon the deep wells also fail, and this is due directly to the denudation of the natural reservoirs by the destruction of the forest which once covered them. Our aim should be to work in harmony with and not in opposition to nature. She does not ask for the forest growth on the fertile and productive valleys,

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but only on the rough mountain tops and hill sides where the altitude is frequently too great for the growth of cereals, or where the land is rough and difficult to work. There she asks us to spare the forest in order that she may weave a net to hold back the water at these heights. Moreover, it will in most cases be found that the timber produced by this land is of more value than all the grain that could be grown thereon.

The several forest reservations or timber reserves already set apart as such will be referred to later on, and steps are being taken to increase their number. It may be well here to correct a popular impression regarding such reservations. A very general opinion seems to prevail that in setting apart these lands and reserving them from sale or homestead entry the country is deprived of all benefit from such territory. This is very far from the facts of the case. The true policy for any country like Canada, having still in its possession large areas of ungranted lands, would certainly be to explore the country in advance of settlement and then divide it according to its character into agricultural, timber and mineral lands. The agricultural lands can then be dealt with as seems wisest, for agricultural purposes, and the mineral lands for mineral purposes, but when we come to the timber areas we find that the utility of the forest is at least two-fold—first, for the merchantable value of its products, and secondly, on account of the functions it performs in modifying the climate in the distribution of moisture, and lastly, in its great office when growing on mountain and hill sides, as previously stated, in holding back the water and causing a more even flow to the rivers and streams that always have their sources in those elevations. Captain Eads made a most pertinent remark when engaged on the improvements on the lower Mississippi, that he was working at the wrong end of the stream. A sound forest policy is one that recognizes the elements of growth and decay and takes means to harvest the crop at maturity, and even on those reserves whose chief value is in forming a natural water reservoir, there is no reason why the mature timber should not be cut, and it will be a matter for consideration as to the best policy to adopt in this respect.

There are also in our Dominion territory large areas of timber growing on comparatively level land, but which is not well adapted for agriculture, and within the past year certain of these have been set apart for timber purposes for the benefit of the prairie settlers.

## RIDING MOUNTAIN RESERVE.

This reserve is well chosen and deserves the greatest care at the hands of the people of Manitoba, from the fact that it covers an area of elevated land from which flow most of the streams in that province west of the Red river. It is really the reservoir that supplies the water to a large section of the province, and to allow the forest covering on those hills to be destroyed would be, as sure as effect follows cause, to bring about a water famine too disastrous in its effects to be contemplated. Recognizing this fact, it has been the aim of the department to do all in its power to guard this reserve from fire. Two fire rangers, under Forest Ranger Thompson, have been employed on the south side of the mountain when necessary this season, while Forest Ranger Thos. Young has had three employed during the season of danger in guarding the north side and the timbered country beyond to the north-west along the line of the Canadian Northern Railway. In the early part of the season frequent fires were started, and the reports of the rangers show that some timber was burnt, but that by active work the fire was confined to a limited area and prevented from causing much loss.

## SPRUCE WOODS RESERVE.

This reserve covers about 190,000 acres of land in what is known as the Sand Hills along the Assiniboine river, east of Brandon. It offers an excellent field for forest tree planting on a large scale. The land consists of sand hills, and between these are swamps where small spruce grow in abundance. The hills are very open, only an occasional spruce tree being seen. Some of these are of good size and demonstrate that

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the soil is not too barren to grow certain varieties of trees, and it is likely that in addition to the spruce the Banksian and Scotch pine, both of which furnish useful timber, could be successfully grown here. There is also along the edges of the swamps, and where the land is not too light, a fair growth of aspen and balsam poplar. This reserve is under the care of a forest ranger.

#### TURTLE MOUNTAIN RESERVE.

This reserve lies along the international boundary and consists of ranges 19, 20 and 21 in township 1. The eastern part is well timbered with aspen and balsam poplar with a few scrub or mossy cup oak. It is difficult to protect this reserve from fire owing to the adjacent timber land south of the boundary being opened for settlement. During the early part of the present season, Forest Ranger Walkinshaw had the assistance of one man in guarding the timber, and great difficulty was experienced for a few weeks in May in keeping the fire from spreading from the burnings of the settlers along the boundary who were clearing their land. A fire guard along the west side has now been completed for the most part of the distance. As many of the fires come from the west this is a very necessary work. This reserve, being surrounded by bare prairie extending for many miles in each direction, is resorted to by the settlers from long distances for timber for building, fencing and other purposes.

#### MOOSE MOUNTAIN RESERVE.

This reserve consists of townships 9, 10 and 11 in ranges 2, 3, 4 and 5 west of the second meridian. It contains about 103,000 acres, and is surrounded on all sides by fertile prairie land. It contains not only a considerable extent of timbered land, but also numerous small lakes. Fish lake, which is the largest, is a fine sheet of good water in which fish are abundant. It is made the resort of campers in the summer season, and affords a very refreshing change from the monotony of the treeless prairie. A fire guard has been built around the reserve by the North-west Territorial government, while this department has opened up a road and fire guard from north to south through it. The prevailing timber consists of aspen and balsam poplar with some birch. The reserve is under the care of a forest ranger, who in the dry season is allowed two fire rangers to assist him.

#### THE FOOTHILLS RESERVE.

This reserve embraces the eastern slope of the Rocky Mountains, between the Bow river and the international boundary. Numerous streams flow down this elevation, all of which go finally to feed the South Saskatchewan. Along these streams at high elevations more or less timber is met with, the varieties being principally jack pine (*Pinus Murrayana*), white spruce, aspen, and balsam poplar. The spruce in some cases is large enough for lumber, and a few mills are now engaged in manufacturing from limits in this reserve. Two forest fire rangers are employed when required.

#### ROCKY MOUNTAINS PARK.

Reference was made in last year's report to the necessity of guarding the park, and on May the 1st, of this year, Mr. W. A. Brewster was appointed as forest ranger under the direction of the Park Superintendent. His territory, however, is not confined to the park limits, but extends along the Canadian Pacific Railway from the summit of the Rockies east to the prairie. He is also expected to see to the proper observance of the park regulations regarding the preservation of fish and game. Instructions have recently been given for the building of a fire guard which will cut off the territory embraced in the lumbering operations of the Eau Claire Company from that portion of the park upon which buildings and other improvements have been made and which

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will very much lessen the danger from fire in this quarter. This park is yearly becoming better known to and appreciated by the travelling public. As a national resort it well deserves to be regarded with pride by the Canadian people. It would be difficult to choose another place that combines so many advantages as Banff. The mountain scenery is unsurpassed; the lakes, rivers and small mountain streams, all deriving their waters from the glaciers, are as clear as crystal; while the hot springs afford the most delightful bathing, and the curative properties of the water attract invalids from all parts of the country. It would be well to extend the limits of the park to include the whole of the upper watershed of the Bow river. This is a matter that has been frequently referred to in former reports as very desirable for several reasons. It is, for instance, impossible successfully to enforce fishing regulations where these regulations apply to only a small part of a stream beyond which no supervision is exercised. The same will apply to game. Where a territory is very limited in extent, and the game is not confined therein, the shooting done outside the limits is very little less injurious than if done within the territory.

## THE RAILWAY BELT IN BRITISH COLUMBIA.

This consists of a territory about 500 miles in length by 40 in width, being twenty miles on each side of the main line of the Canadian Pacific Railway in British Columbia. It contains a large quantity of valuable timber. The varieties of greatest value are the douglas fir (*Pseudotsuga Douglasii*), the western white pine (*Pinus monticola*), the western white cedar (*Picea alba*), the Menzies spruce (*Picea Sitchensis*), the white fir (*Abies amabilis*), the western hemlock (*Tsuga Mertensiana*) and the yellow pine (*Pinus ponderosa*).

Reference has already been made to the forest fires recently so prevalent on the Pacific slope and the exertions that this department is making to preserve the timber under its control in this belt. During the past two months six forest fire rangers have been employed under Mr. James Leamy, the Crown Timber Agent for the district. H. A. Eastman, of New Westminster, is employed north of the Fraser river in the New Westminster district. John Ball looks after the territory in the neighbourhood of Abbotsford, south of the Fraser river. John McGee's territory is in the Kamloops district. To G. W. McLeod, of Salmon Arm, is assigned the timber district around the Shuswap lakes. To Alex. McRae is assigned the lower Columbia river and country adjacent thereto in the vicinity of Revelstoke, while R. H. Milligan, of Golden, is employed on the upper Columbia and along the railway between the summits of the Selkirk and Rocky Mountains.

## TREE PLANTING ON THE PLAINS.

Ever since the inauguration of the forestry branch it has been recognized that the complement to the preservation of the forests in these districts where trees grew naturally was the propagation of them, at least to a limited extent, in those parts of the country which were entirely devoid of tree growth; that preservation and propagation were equally worthy of the active attention of the office.

Exception has been taken to the policy of assisting the settlers on the open prairie in the growth and cultivation of shelter belts and forest plantations. Is the government of the state exceeding its functions in giving instructions to the settlers regarding tree culture in the first place, or secondly, in furnishing them with seeds or seedling trees with which to plant limited areas on their homesteads? In considering these questions many phases of the subject present themselves. As regards the giving of instruction on the subject, it has long been recognized as a duty in all civilized countries to aid in the dissemination of knowledge on all subjects by which the people would be benefited. Grants to schools, mechanics' institutes, agricultural colleges, and agricultural societies, farmers' institutes, and others too numerous to mention are annually made, the object being the education of the people of the country in the various

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pursuits of life in which they are engaged. Now, if it is wise to expend money in instructing the people in the growing of grain or grasses, which can only be of benefit to the individual who grows the same, surely it cannot be contended that it is unwise to do so in the growing of trees which in addition to the benefits they confer on the owner or occupant of the land on which they grow are beneficial in various ways to the whole community. Then, as to furnishing seeds or other plant material for those who agree to set apart a small portion of their land for the growing of trees, and to plant and keep the same in a proper state of cultivation, it is surely not asking much that they be supplied with proper material for planting these areas. Every one who has travelled through the prairie in the winter season knows the change in temperature experienced as he approaches the shelter of even a small bluff of timber along the roadside. There are other reasons why the Dominion government is warranted in expending public money in the territory outside the limits of the older provinces that do not apply with respect to the latter, owing to the fact that in the older provinces the public domain is owned by these provinces and the land and timber are sources of revenue for them, whereas, any revenue derived from the lands or timber of the North-west goes into the Dominion exchequer. These provinces recognize this and are beginning to move in the direction of conserving the timber which they possess and to take measures for propagating the growth of trees within their own territory, and similarly the Dominion is obviously acting within its legitimate sphere in spending a portion of its revenue in aiding in the growth of a limited number of trees which will do more than can be done by any other known agency in transforming the bleak plains of the west from the uninviting aspect which they present in their natural state and tend to make the country more attractive to the immigrants which it is doing so much to procure. Nearly every country of Europe has long given special attention to forestry matters, and even Russia with its vast territory has in recent years inaugurated a system of afforestation. In North America, both the United States and Canada have been decidedly slow in moving in this matter. The United States, however, are now alive to the necessity of giving greater attention to the subject, and within the past year the federal government at Washington has trebled its appropriation for the encouragement of forestry, and has raised the office to a bureau, and one of the principal features of its work is the encouragement of tree growth on the homesteads of the prairie settlers. Various attempts have been made, both here and in the United States, within recent years to encourage the prairie settlers to grow trees. One of these was what was known as the Forest Trees Culture Claims, by which a certain amount of land was granted by the government to the settler who planted a certain area with trees. This system in both countries was not found to be effective, and the reasons are apparent. The trees were planted, in many cases, without regard to proper preparation of the soil. In other cases the varieties chosen were unsuited to the soil or climate. Again, too frequently little attention was given to the care after planting. In most cases the object of those who planted them was to earn a certain portion of land, and having planted the required area they demanded their land for doing so, and when the trees failed to grow they could always assign reasons for the failure to conditions over which they had no control, and it was difficult to disprove their contention. The result was that they usually received their land, but in few cases was the object of granting it attained.

In devising a system for our North-west it was obvious that we would have to adopt one suited to the conditions prevailing there. It would be an easy matter to copy any one of the European systems, such as that of France, Belgium or Germany, but to do this and expect it to succeed in our North-west where the climatic conditions are so dissimilar and where the governmental machinery is so different would be about as wise as it would be to import all the trees of those countries and expect them to thrive under such altered conditions as prevail there. As was truly said by an eminent forester, 'We can no more adopt German methods than Chinese methods.' Though we can learn very much in the details of cultivation from these countries when we come to framing a system for adoption here we have to work out one of our own, taking into

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account not only the diversified conditions prevailing in a country of vast extent, and making our system flexible enough to overtake these, but also to adapt it to the convenience as far as possible of the people to whose exertions we have largely to look for making it successful. The system adopted is, as will be seen from the outline given hereafter, one of co-operation with the settlers. In fact this seems the only way in which it would be wise to proceed. To attempt tree culture in advance of the agricultural development of the country would certainly prove a failure. As has been truly said by an American writer, 'Wherever large areas have been brought under cultivation, tree culture has been more successful than before the advent of the plough.'

For several years the experimental farms at Brandon and Indian Head have been doing excellent work in experimentation, and the results of their labours furnish most valuable object lessons and demonstrate beyond doubt that a considerable variety of forest trees can be successfully grown in the districts where these farms are located. They have also distributed to the settlers a large quantity of tree seeds, seedlings and cuttings, but it was impossible for those in charge of the farms to exercise any system of supervision over those receiving the plant material, and it is well known that in many cases the seed and nursery stock sent out in excellent condition were planted in soil unsuited to the varieties sent, and more frequently the land had not been brought into a fit state of cultivation before planting, and even where these conditions were filled it was too often the case that insufficient attention was given after planting. It will be seen that the system adopted endeavours to overcome these obstacles.

The following circular, which has been widely distributed in the prairie districts, sets forth the system adopted by the department. It is in some respects similar to that followed by the federal government of the United States, but differs from it in many important particulars.

## DEPARTMENT OF THE INTERIOR, CANADA—FORESTRY BRANCH.

## GOVERNMENT CO-OPERATION IN FOREST TREE PLANTING.

The Forestry Branch of the Department of the Interior is prepared, as far as the means at its disposal will permit, to assist farmers and others in the prairie sections of Manitoba and the North-west Territories in the growing of forest plantations and shelter-belts.

The system adopted may be stated as follows:—

1. It is proposed that any owner of land wishing to avail himself of the co-operation of the government in the planting and cultivation of a permanent forest plantation or shelter-belt shall make application to the Forestry Branch at Ottawa, stating the number of the lot on which the plantation is proposed to be made, the nature of the soil and how cultivated, the nearest railway station and distance thereto and his post office address.

2. On receipt of this application an agent of the department will be instructed to visit and examine the land, and if he is satisfied that trees can be successfully grown thereon he will see to the execution by the applicant of a certain form of agreement which has been authorized by the department, setting forth the conditions on which the government proposes to assist in this work. The agent will also confer with the applicant while on the ground and arrange for the location of the said forest plantation or shelter-belt, advising the applicant as to the preparation of the soil, the varieties of trees to be grown, proper system of planting and other details. When necessary he will prepare a plan or sketch for the use of the applicant, showing how the trees are to be planted.

3. By the agreement the applicant contracts to set apart and cultivate a certain area of land for a permanent forest plantation or shelter-belt and agrees that the trees to be grown thereon shall not at any time in the future be cut off or removed so as to injure the plantation, except with the advice or consent of the department, but it is

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understood that the wood and other products of the said plantation or shelter-belts shall belong to the owner of the property. It is, however, provided that the department shall have the right to take the cuttings and the seedling trees that may be growing up on the plantation, and tree seeds, when these are not required by the owner to extend his own plantation. It is also provided that the applicant shall properly prepare the soil and plant and care for the trees after planting in accordance with the directions of the agent of the department. This will include his providing protection against animals by fencing or otherwise, and against fire by fire guards or other effective means.

4. The department, as far as the means placed at its disposal for the purpose will permit, will furnish seed or other plant material for planting the said forest plantation or shelter-belt.

5. The department agrees to render the services above specified wholly without charge.

It will be observed that this system is distinctly co-operative in character. The department furnishes officers to give expert advice and to see to the carrying out of the terms of the agreement, and in addition to this assists the owner of land by supplying him with seeds, cuttings or young trees; while on the other hand, the owner is required permanently to set apart a small portion of his land for tree growth and to do all the actual work of preparation and cultivation of the land so set apart, to plant the seed, trees or cuttings and to take proper care of the young growth after planting, according to the directions of the said agent of the department.

Although the department desires to meet the wishes of the settlers as far as possible, it must be understood that, owing to the difficulty sometimes experienced in obtaining seeds or other plant material, the government will not guarantee to furnish any specific quantity, and as in many localities tree seeds, young trees and cuttings can be obtained from natural woods in the vicinity, it is advisable for those contemplating planting to provide themselves in this way as far as possible.

Those desiring the assistance of the government as here outlined should apply before the first of September in each year, so as to enable the department to provide ahead for the supply of nursery stock for spring planting and to allow time for the agent to visit the land. Applications which are not received by that time are likely to be left over until the following year.

The department will also be prepared to co-operate with municipal corporations, railway companies and other corporate land holders on lines similar to those above stated for the purpose of assisting them in growing trees along the public highways, railway tracks, and in streets and parks in cities, towns and villages.

E. STEWART,

*Superintendent of Forestry.*

The following is the form of agreement referred to in the circular:—

## DEPARTMENT OF THE INTERIOR.

### TREE PLANTING AGREEMENT.

OTTAWA,

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The Department of the Interior of Canada and

, of

, mutually agree as follows:—

1. The Department of the Interior shall, as far as the means at its disposal for the purpose will permit, assist in the growing of a forest plantation, wood-lot, shelter-belt or wind-break by directing through an agent of the department as to preparation



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of the soil, varieties to plant and manner of planting and as to proper care after planting on \_\_\_\_\_ acres of the land of the said situated and described as follows:—

2. The said department will also endeavour to furnish tree seeds, seedling trees or cuttings for the planting of the aforesaid area, or in case the quantity of plant material that can be given is not sufficient to plant the whole area in any one season, then such part of it as the supply will allow.

3. The Department of the Interior shall render all services under this agreement wholly without charge to the said

4. The said \_\_\_\_\_ on his part agrees to set apart the above named area of land for a permanent forest plantation, wood-lot, shelter-belt or wind-break, and agrees that the trees to be grown thereon shall not at any time in the future be cut off or removed in such manner as to injure it for the purpose intended, except with the advice and consent of the department, but it is understood that the wood and other products of the said forest plantation, wood-lot, shelter-belt or wind-break shall be the property of the said \_\_\_\_\_ It is, however,

provided that the department shall have the right to take the cuttings and seedling trees that may be growing up thereon and also tree seeds when not required by the owner to extend his own plantation. It is also provided that the said

shall properly prepare the soil and plant and care for the trees after planting and do all the actual work in connection with the said forest plantation, wood-lot, shelter-belt or wind-break, in accordance with the directions of the agent of the department. This will include his providing protection against animals by fencing or otherwise, and against fire by fire guards or other effective means.

(Signed)

*Owner.*

(Signed)

*Superintendent of Forestry.*

Post Office of Owner

Date

As the plan is one of co-operation between the government and the settlers, it was considered wise that the latter should be consulted in advance regarding it. With this object in view, and before publicly announcing the policy to be pursued, I made a visit to Manitoba and the North-west, and had the opportunity of attending about twenty meetings in the country where an outline of the scheme was laid before the people and discussion invited regarding it. These meetings were well attended throughout, and the line of action proposed met with such favour as to warrant the departments in taking active measures to carry it into effect.

It was scarcely expected that anything could be done this season beyond making preparations for next spring's planting, but it was found in some cases that the applicants had their land in a fit state to plant up last spring, and it was thought unwise in such cases to lose a year's time. Accordingly 44 settlers were supplied with seedling trees or cuttings to the number of 58,800, which were planted under the above regulations. The reports of Mr. Ross and Mr. Stevenson give further information regarding this branch of the work.

Up to the present time the number of applicants desiring to avail themselves of the co-operation of the government is 625. Their farms are being inspected this season, and preparations are being made to furnish those whose land is properly prepared with tree seeds, seedling trees or cuttings for planting next spring.

The supplying of plant material is a matter of considerable importance. The superintendents of the experimental farms at Brandon and Indian Head, by the kind permission of the Minister of Agriculture, set apart last spring a few acres at each place for raising nursery stock for this purpose. Owing to the early spring months being very dry, the quantity growing is not as large as desired, and it will probably be

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necessary to purchase some elsewhere. Means have been taken, however, to gather a large quantity of tree seeds which will help to meet the demands that will be made. Forest nurseries where seedling trees would be raised and stored for early delivery could be carried on at comparatively small cost and this matter should receive attention in the near future. In the meantime, as stated above, the work is being done at the experimental farms. Both Mr. Bedford, the Superintendent of the Brandon farm, and Mr. McKay, Superintendent of the one at Indian Head, have very kindly added to their other duties by giving attention to this matter, and this branch is very much indebted not only to these gentlemen but to the Minister of Agriculture and to Dr. Saunders, the director of these farms, for their hearty co-operation and assistance in the efforts that are being made in this connection.

## THE CANADIAN FORESTRY ASSOCIATION.

The report of the second annual meeting of this association has just appeared. It contains many valuable papers with discussions thereon presented in a very attractive form. The association is now firmly established, and though it is only a year and a half since its organization, it now embodies in its membership a good list of leading citizens from all parts of the Dominion. The columns under its control in *Rod and Gun in Canada*, the official organ of the association, are ably edited by Mr. R. H. Campbell, the assistant secretary, and afford an excellent means for the interchange of thought among its members. The meeting which was held in Ottawa in March last was well attended by representative men from all parts of the country. One noticeable feature was the lively interest taken in the discussions by many of our leading lumbermen as well as by those engaged in scientific pursuits. It is hoped that the association will be active in giving to the public its opinions by resolution or otherwise regarding any matters pertaining to forestry in this country. The influence of such a body of men on public opinion with reference to correct forestry methods in Canada must necessarily be of benefit to the people of every section of the Dominion and fully justifies the department for the assistance it has given in furthering the interests of the organization.

I have the honour to be, sir,

Your obedient servant,

E. STEWART,  
*Superintendent of Forestry.*

## APPENDIX No. 1 TO THE REPORT OF THE SUPERINTENDENT OF FORESTRY.

REPORT OF THE ASSISTANT SUPERINTENDENT, NORMAN M. ROSS, B.S.A.

INDIAN HEAD, ASSA., September 16, 1901.

E. STEWART, Esq.,  
Superintendent of Forestry,  
Ottawa.

SIR,—I have the honour to submit herewith a report of the work done by me, under your direction, since I entered the Forestry Branch.

I commenced work in the Forestry Branch on March 14, 1901, and up to the middle of April I remained in your office at Ottawa engaged in work principally in connection with the scheme of co-operative tree planting in the west, which is being brought into operation for the first time this season. I left Ottawa for the west on April 17, and since that date I have been in the North-west Territories, visiting the farms of applicants for tree planting and arranging for the collection of seed and nursery stock for distribution next spring. I also prepared an exhibit of native woods, seedlings, seed, &c., to be shown at the summer fairs at Brandon and Winnipeg.

*Applications for Tree Planting.*—This spring I had on my list only fifteen names of those who desired to avail themselves of the co-operation of this branch in tree planting. The applicants were, however, scattered over the North-west from Calgary to Moosomin, and owing to the bad state of the roads it was some time before I could get to all of them. Of the fifteen applicants three have their farms in Alberta and twelve in Assiniboia. Only eleven out of the fifteen had land properly prepared for planting trees. The number of trees distributed amongst these was 35,000. These consisted chiefly of Manitoba maple (box elder) and Dakota cottonwood, with a small proportion of native green ash and elm.

When visiting applicants I inspect the ground which they wish to plant up, to see that it is in a suitable condition for growing trees, and also to note which varieties are best suited to the soil and locality, and, where necessary, make a rough sketch or plan to show the manner in which the trees are to be planted out.

The inspection of the ground before allowing trees to be set out is, I think, one of the most important features in the present scheme. At least 50 per cent of the settlers visited have, at one time or another, attempted to grow trees around their buildings, and in most cases the lack of proper preparation of the soil in the first place is to blame for the non-success attending their efforts. Many applicants with whom I have had correspondence before visiting their farms have stated in their letters that they have land well prepared for tree planting, and on visiting their farms I have often found that the soil is very far from being in a suitable condition for tree growth. The prevailing idea is that trees should grow any where so long as their roots are in the soil, but unluckily this does not hold good on the prairies. Very few indeed of the applicants have any knowledge as to the details of planting and setting out trees to the best advantage, and a few minutes' conversation with these men is much more instructive to them than the reading of circulars to which many do not seem to pay much attention.

So far I have had the opportunity of seeing only three of the plantations set out this spring. Two of these are very good indeed, the trees being healthy and strong and well looked after. In the third case some of the trees were planted rather too shallow, and owing to the extreme heat we had here in the spring a good many of the trees died.

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Of the different kinds of trees distributed the elm seems to stand transplanting rather better than the other varieties, although they do not make such a quick growth from the start as some of the others. Of the trees I have seen planted this spring, the following are the percentages living this fall:—Elm, 88 per cent; maple, 87 per cent; cottonwood, 71 per cent. The reason that so many of the cottonwoods failed to strike root is no doubt due to the fact that, owing to delay during shipment from Dakota and more delay on account of the customs, many of the bundles of young seedlings became heated and musty before arriving at the final destination.

The young trees distributed this spring were obtained from H. L. Patmore at Brandon.

The number of applications for next season's distribution is increasing very rapidly, reaching up to the present 183, distributed over the west as follows:—Assiniboia, 135; Saskatchewan, 3; Alberta, 45. Some of these applicants I have already visited this fall, and the greater number have land well prepared for next spring's planting. In some cases the farms and buildings of applicants were so well sheltered by natural bluffs of native poplar that more trees were not necessary, the trees being desired chiefly for ornament. In such cases I thought it advisable not to promise any trees for next spring, as the stock we shall have available for distribution is rather limited and should be divided amongst those really needing trees. Later on when we can get our nurseries well stocked it may be advisable to encourage these men to plant out blocks with a view to obtaining a supply of fuel and fencing material in the future. Nearly all those applying for trees next spring state that they intend gradually to increase the area devoted to tree growing year by year. In such cases the applicants may very easily themselves raise every year a number of such easily grown trees as maple and ash, if they are supplied with the seed; and in this way the demand upon this branch for nursery stock will be greatly lessened. It will be necessary to distribute to such applicants the seedlings of those trees only which it is more difficult to raise and which the ordinary farmer cannot afford to grow from seed.

*Raising of Nursery Stock.*—Immediately after my arrival in the west this spring I visited Mr. Bedford, of the Experimental Farm, at Brandon, and Mr. McKay, of the Experimental Farm, at Indian Head, and, as instructed by you, made arrangements with them for the growing of young seedlings at both places.

At Indian Head, Mr. McKay placed about four acres at our disposal which was planted up principally with Manitoba maple (box elder), green ash, and elm seed, also cuttings of willow and Russian poplar. The poplar cuttings have not proved a success this year as, owing to a lack of rain and the great heat following directly after setting out, they all dried up before they had a chance to strike root.

At Brandon, Mr. Bedford sowed about three acres in maple seed, with only fair results; the great heat about the beginning of June scorching up thousands of the young seedlings soon after they appeared above the ground.

This fall at Indian Head, Mr. Lang collected and sowed some native birch seed. So far the experimental farms have not been able to raise birch from seed, but as it is such a good tree throughout the west it will be a great advantage if we can manage to grow it in the nursery.

As the scheme develops it will be almost necessary to have nursery stations at different points along the line so that the young plants may be raised under climatic conditions as nearly as possible similar to those they will have to face when planted out permanently. There are also trees which will grow well in some parts of the west, and will not thrive at all in others. For instance, in eastern Manitoba the basswood and scrub oak grow to a large size, and the Ontario maple seems hardy as far east as Brandon, as I have seen specimens growing at Portage la Prairie, Nelson and Brandon. A nursery situated in eastern Manitoba would raise these trees suitable to that district better than they could be raised further west, and although all the trees which will grow in the west could be readily raised in the eastern part the great change of climate, and more especially of elevation from east to west, would in all probability prove fatal to a large percentage of the stock.

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The Scotch pine, white spruce and tamarack are all very hardy throughout the west, and as they are valuable trees their growth should be encouraged; they need, however, a little more careful handling in planting than do the ordinary broad leaf varieties.

*Collection of Seeds.*—Owing to the increasing number of applications a very large supply of seed will be necessary both for distribution and for our own use. Unfortunately the native maple, which is the best tree we have for pioneer planting, has this year in the western part of Manitoba and Assiniboia been attacked by some disease which has made all the seed in the affected districts quite useless. To all appearance the seed is found to be quite brown and watery. The trees were very badly affected this season with a small green aphid, and whether these insects are the indirect cause of the seed going bad or not I do not know but fancy they have something to do with it, as those trees having healthy seed are free from the aphid. At Oak Lake, Manitoba, the maple seed is fairly good, and I made arrangements to get as large a supply as possible picked there. The green ash is bearing a very heavy crop of excellent seed this year all over the west, and there will be no difficulty in getting any quantity of seed needed. About the middle of August I collected a large number of the cones of the native white spruce growing on the sand hills south of Sewell, Manitoba. The crop of cones is rather heavy this year and the seed very good. Elm seed was picked the first week in June and sown immediately. The young seedlings came up well, and have made a good growth this season. A small quantity of birch seed was picked in August.

*Forestry Exhibit.*—Towards the end of June I received instructions to get up an exhibit to be shown at the summer fairs in Brandon and Winnipeg held at the end of July and beginning of August. Owing to the short time given for the preparation of the exhibit the collecting of native woods was necessarily done hurriedly, and only average specimens were obtained. Some varieties we had not time to procure at all. The wood being green, it was not possible to finish it off at all to show the grain. The exhibit consisted of sections of as many of the native woods as we could collect in the time, and alongside of these were shown sections of the same and other introduced varieties grown under cultivation, affording a good comparison as to the rates of growth under natural and artificial conditions. The varieties of native woods shown were: Elm, scrub oak, basswood, white spruce, iron wood, green ash, birch (white), native white poplar, Manitoba maple, balm of gilead, and western black willow. Most of these were cut near Nelson, in southern Manitoba, and a few in the Turtle mountains. The spruce came from the Riding mountains. Seedlings, one, two and three years old, of the varieties of trees best suited for planting in this country were shown growing in boxes. Seed and cones were put up in glass jars, and the leaves of the principal trees were pressed and mounted on sheets. A series of enlarged photographs taken in Manitoba and the Territories gave an illustration of what had already been done in tree planting in this country.

I should like to take this opportunity to thank Mr. Bedford, Superintendent of the Experimental Farm at Brandon, and Mr. McKay, Superintendent of the Experimental Farm at Indian Head, for their kindness in helping me in many ways with my work.

I am, sir, your obedient servant,

NORMAN M. ROSS,  
*Assistant Superintendent of Forestry.*

## APPENDIX No. 2 TO THE REPORT OF THE SUPERINTENDENT OF FORESTRY.

REPORT OF THE GOVERNMENT AGENT FOR TREE PLANTING IN MANITOBA, MR. A. P. STEVENSON.

SOURIS, MAN., September 17, 1901.

E. STEWART, Esq.,  
Dominion Superintendent of Forestry,  
Ottawa.

SIR,—I have the honour to submit the following brief report on the work in which I have been engaged during the past summer as forestry agent in connection with the work carried on in this province by the Forestry Branch of the Department of the Interior.

In accordance with instructions received from you, on April 16, 1901, I proceeded to Winnipeg, and there met your assistant superintendent, Mr. Ross. After consulting together as to the management of the work we went to Brandon and arranged with Mr. Patmore for the furnishing of plant material. Afterwards we began the inspecting of land prepared by applicants for trees. These were scattered widely over the province, ranging from Morden to Melita, Reston, Virden, Brandon, Baldur and Morris. Thirty-six parties were furnished with trees and three were refused on account of the soil not being in a fit state for trees. In all 23,800 were planted in Manitoba during last spring under the co-operative scheme of the Forestry Branch. The varieties planted consisted largely of the ashleaved maple, cottonwood, elm and green ash. Recent inspection of the greater number of these plantations shows the following results:—Percentage of trees planted now alive: Maple (seedlings), 85 per cent; cottonwood (cuttings) 40 per cent; elm (seedlings) 50 per cent; green ash (seedlings) 65 per cent; care of trees fairly good; growth this season extra good. The poor showing made by the cottonwood arises from their rather unhealthy state when received from the nursery. These trees were imported in the spring. I would suggest that in future importations be made in the fall should it be necessary to import.

At the close of the planting season arrangements were made to visit applicants who were desirous of availing themselves of the benefits of the scheme in the spring of 1902 and wished advice as to the proper laying out and preparation of the soil. By the 24th of June 75 farms had been inspected, extending from Morris to the western boundary of the province at Pearson, and up the Souris valley to Brandon, where I met the assistant superintendent, and arrangements were made for the collection of material for a Dominion forestry exhibit at Brandon and Winnipeg fairs.

On July 8 I began addressing a series of Farmers' Institute meetings at the following places: MacGregor, Austin, Carberry, Pipestone, Swan Lake, Belmont, Baldur and Blyth. On the whole the meetings were fairly well attended. The subjects under discussion at all the meetings were tree planting and the proper preparation of the soil previous to planting, outlining the Dominion government co-operative scheme and distributing circulars. These meetings appeared to be appreciated by those present, judging by the number of questions that had to be answered. At the close of the series of Farmers' Institute meetings assistance was given in the distribution of circulars and advice in tree planting to visitors at the Brandon and Winnipeg fairs, where a forestry exhibit was shown which attracted great attention. After this I again took up the work of inspecting the farms and advising applicants for planting in 1902 and getting agreements made out and signed. Up to the present time 91 farms of intending planters have been examined and the necessary agreements made out.

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With reference to the work as a whole and the general view taken of it by our people, I note that the scheme is universally looked upon with the greatest favour. The people throughout all sections of the province approve and heartily endorse it, and only regret it was not brought into existence sooner. One thing noticeable among our people is their growing anxiety for trees. New houses and new barns are being built in all parts of the province to replace those first put up, and trees are wanted to shelter and adorn these permanent buildings; hence the demand for your agent to advise regarding the varieties to grow, the proper cultivation and the laying out of the grounds for trees around these new buildings on farms where not a single tree was ever planted. It is noticed that in a good many cases the advice as to laying out and proper management of windbreaks is as much appreciated as the giving of the plant material. Where planting has already been done the mistake has been made in the majority of cases of planting too close to the buildings. It is difficult sometimes to convince parties of the future dimensions of the trees and the advantage of having the trees at a proper distance in order to avoid deep snowdrifts around the buildings in winter. In all advice given this point is never lost sight of.

As to the future of the scheme. It will without doubt grow to large dimensions as it becomes better known. Even at the present time but a hazy idea of the scheme prevails with the majority of our prairie farmers. There are already 423 names on the list of applicants, and the number is increasing daily. In a short time it will tax all the powers of the Forestry Branch to meet the demands upon it.

I have the honour to be, sir,  
Your obedient servant,

A. P. STEVENSON.

## APPENDIX No. 3 TO THE REPORT OF THE SUPERINTENDENT OF FORESTRY.

REPORT OF HOMESTEAD INSPECTOR J. W. THOMPSON.

RIDING MOUNTAIN TIMBER RESERVE,  
MINNEDOSA, September 11, 1901.Mr. E. STEWART,  
Superintendent of Forestry,  
Ottawa.

SIR,—In connection with the work of the forest fire rangers appointed last spring, I beg to report that in this district the result has been very satisfactory. We had one fire which did a little damage on Clearwater creek, but outside of this I do not know of an acre of timber being damaged by fire on the timber reserve in my territory. Before the appointment of rangers a large quantity of timber was destroyed by fire each spring and fall. By keeping warning notices posted along trails and at stopping places and distributing copies of the Fire Act among the settlers, and by making frequent trips along the edge of the timber, the fire rangers are doing a great deal toward educating the people to respect the law. A great many see the necessity for protecting the timber, while others are deterred from setting out fire by the fear of punishment. In a number of cases the fire rangers were instrumental in having fires extinguished that were outside of but threatening the reserve. Owing to the very rank growth we have had this season, I am afraid we will have trouble with fire this fall, and I am urging extra vigilance on the part of our fire rangers, as 'an ounce of prevention is worth a pound of cure.'

Your obedient servant,

JOHN W. THOMPSON,  
*Homestead Inspector.*



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APPENDIX No. 4 TO THE REPORT OF THE SUPERINTENDENT  
OF FORESTRY.

REPORT OF MR. C. A. WALKINSHAW, FOREST RANGER.

TURTLE MOUNTAIN TIMBER RESERVE,  
BOISSEVAIN, October 7, 1901.E. STEWART, Esq.,  
Superintendent of Forestry,  
Ottawa.

SIR,—I take great pleasure in reporting to you the success of our efforts this year in preventing fire from spreading in the Turtle Mountain timber reserve. During the months of April and May we found and extinguished fires on many occasions, and I cannot emphasize too strongly the necessity of keeping a patrol on the international boundary line, as fires are set out there by the settlers, and too frequently are allowed to spread. In this work I found my assistants invaluable. The fire break or guard, 100 feet wide, that runs from the northerly boundary of the reserve in a southerly direction to the international boundary, and which is seven miles in length, including Long lake, which is two miles long, has all been carefully cleared of stumps and underbrushed and ploughed, with the exception of three-quarters of a mile between Long lake and Lake Dromier, so that it is almost impossible for a fire that can run in the bush to cross it. This I think effectually protects the reserve from any fire running from the west. The growth of the young trees this season has been a great surprise to me. Of course this has been a favourable year, owing, no doubt, to the great amount of rain that fell. I confidently believe that with anything like favourable weather in the future, providing the precautions for keeping out the fire are maintained, it will not be many years till we have another forest in the Turtle Mountain.

I find there is a growing interest taken in the protection of the bush by the settlers.

I am, sir, your obedient servant,

C. A. WALKINSHAW,  
*Forest Ranger.*

APPENDIX No. 5 TO THE REPORT OF THE SUPERINTENDENT  
OF FORESTRY.

REPORT OF MR. THOS. YOUNG, HOMESTEAD INSPECTOR AND FOREST RANGER.

RIDING MOUNTAIN TIMBER RESERVE,

DAUPHIN, October 7, 1901.

E. STEWART, Esq.,  
Superintendent of Forestry,  
Ottawa.

SIR,—I have the honour to report that I have had three forest fire rangers under my supervision during the past season. The district over which they ranged extends along the line of the Canadian Northern Railway from McCreary Station to the present terminus, Erwood, and their efforts were chiefly directed to the protection of the timber on and along the Riding, Duck and Porcupine mountains. Those rangers went on duty early in May, and remained at work until the early part of June, at which date there was a sufficient rainfall to prevent the running of forest fires. Their duties during the earlier part of May were confined to the posting of notices, cautioning the settlers of the district against letting fires run, and the distribution of copies of the Fire Act. This work was necessary on account of the district being unorganized, and being, on the whole, a scrub and bush country, which is being settled by a great number of people who have no knowledge of the danger as well as the destructiveness of forest fires.

Towards the latter part of May forest fires broke out along the north slope of the Riding mountains near Makinak, and another north and west of Ethelbert, on the east slope of the Duck Mountains. Ranger Porterfield, with a number of men, did good work in controlling the fire along the Riding Mountain, and in keeping it from spreading into valuable timber, but Ranger McDonald and his helpers found it impossible to accomplish much in the Duck mountains on account of the quantities of timber which had been killed by previous fires and which burned fiercely. In the Swan river district there were numerous local fires in the newly-settled localities, but Ranger Caverly reported no destructive fires. On account of the wooded nature of this district and the difficulty experienced in travelling over such a large area, I found that three rangers were not sufficient to protect properly the timber, especially in unorganized districts like the greater portion of Dauphin. A sufficient number of rangers, with the cooperation of the provincial and municipal authorities, will be necessary to keep under control settlers who are clearing their holdings, while travellers and hunters must be more closely watched.

I am, sir, your obedient servant,

THOMAS YOUNG,  
*Homestead Inspector.*

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## APPENDIX No. 6 TO THE REPORT OF THE SUPERINTENDENT OF FORESTRY.

REPORT OF CROWN TIMBER AGENT AT NEW WESTMINSTER.

CROWN TIMBER OFFICE,

NEW WESTMINSTER, B.C., October 9, 1901.

E. STEWART, Esq.,  
Superintendent of Forestry,  
Ottawa.

SIR,—I beg to submit herewith a short report of what has been done under my supervision respecting the fire protection for this season, and the results of the working of the system of fire wardency.

As you are aware, seven wardens were appointed for the railway belt in the province of British Columbia, and six were actively employed in their various districts in locking after fires. The seventh, Mr. John D. Paris, was not able to give the amount of time required of him during this season, and no other man having been appointed in his place, I took upon myself the duty of looking after Mr. Paris' district, during the time he was off duty.

In Mr. Paris' district two extensive fires occurred on worked-out timber berths, one of which, on Berth T, was easily extinguished by the prompt action of Fire Warden Paris before any serious damage was done, but a considerable quantity of useful timber was destroyed, and the fire is attributable, from all the information I can gather, to sparks from a locomotive of the Great Northern Railroad. However, we have no clear proof of this.

Another fire occurred on the Semiahmoo trail, which passes through timber berths Q and B, but occurred in the worked-out portion of the limit, therefore not destroying any valuable timber. This fire was set out by tramps. I may say in this connection that the fire fought at Semiahmoo trail was not allowed to cross the trail, and, therefore, did not do any damage to merchantable timber or the unworked portion of the timber berth. You having personally visited the scene of both fires can bear out this fact.

The fires in the Chilliwack district, which was under the supervision of Mr. Ball, were mainly caused by settlers in the actual clearing of land, and were very well looked after and did not do any damage, excepting the fire at Slesse Creek, of which I give you an extract from Mr. Ball's report:—

'I beg to report having returned from an extended visit of the districts of Mt. Baker and Cultus valley. I very strictly investigated the burning of Slesse Creek bridge, which crosses the Chilliwack river about 14 miles up from Vedder bridge, and I have no hesitancy in saying it was entirely due to carelessness on the part of the person who set fire to some slashing on the south side of the river and then left it; it has not done very much damage to the big timbers, except causing considerable annoyance by destroying the trail by fallen timbers. I travelled south from the bridge two miles and the fire nearly all burned out, and the rainy day which followed last Thursday happily would quench it all, I think. I tried to find out who fired the slashing, and, from information I could gather, it was a packer who did it in passing to Mt. Baker mines, but the stringers of the bridge were not burnt beyond using again.'

You will see, by this extract from the report, that very little damage was done to the large timber. The fire was caused by prospectors on their way to Mount Baker, and while mentioning this fact, I would respectfully suggest that the government of British Columbia be requested to make the laws regarding the indiscriminate setting out of fires by prospectors more stringent, and that a term of imprisonment be added

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in default of payment of fine, as it is impossible to collect a fine from tramps, who are utterly destitute.

A fire occurred about August 28 on the Similkameen trail near Hope. This fire, while not destroying any large timber, burnt a very considerable quantity of young timber, which was springing up in that district. This country has been burnt over several times, the last big fire occurring there about six years ago, in which a very considerable quantity of timber was destroyed. With regard to this fire, I quote you the following extract from Mr. Eastman's report:—

'August 28-30. Travelled to Hope, crossing the Fraser. Found fire on the Similkameen trail at the "Mule Shoe Bend," left bank of the Coquhalla, this fire was burning among young timber that will be of great value in the future. I got the assistance of E. Purnaby and we succeeded in confining it by back firing and trenching, and cutting down the burning brush and putting out the fires in them. I left Purnaby watching this fire after we got it surrounded, and took two men, Ryder and Beers, up the trail to "7 Mile" on the Nicolum. I found here a very heavy fire burning on the mountain side. This country has been burned over many times. The last fire I should judge would be about six years ago. The large timber on this mountain, besides being mostly fire killed, is of no commercial value. The mountain is about 4,000 feet in height and very precipitous. I did not attempt to stop this fire, it being impossible to get near to it for falling trees and rocks rolling down. In any case the mountain is so precipitous that men could not get about readily or with safety. I succeeded in cutting the fire off to the south by back firing and trenching. The loss in the fire at Mule Shoe Bend is about three acres of fir and cedar, from 1 inch to 12 inches in diameter, burned over but not all destroyed. The larger trees being left will, I have no doubt, re-seed the ground. There is no commercial loss on the Nicolum. The mountain side will re-seed and grow up again. I employed Sam. Ryder and John Beers two days each. You will please to find their accounts with this. Ed. Purnaby is still watching the fire at Mule Shoe Bend until it is completely burned out. I will forward his time in due course. I could not find out what caused the fires, but surmise it to be packers or prospectors. The country is so dry here that a match carelessly thrown down would set the whole country ablaze.'

I may also say that, from Ruby Creek to Lytton, along the line of the Canadian Pacific Railway fires had burnt amongst small brush and timber along the track, which could not have been set out other than by the locomotives, but fortunately did very little damage, as a rain coming on quenched them all, but I would ask that something be done to prevent this state of affairs with respect to sparks from locomotives.

Considerable fires occurred at Notch Hill, Eagle river, and on the Columbia river, north and south of Revelstoke, regarding which I inclose you a report from Mr. D. J. McDonald, the assistant Crown Timber Agent, which fairly describes the amount of work done and the work of the wardens with regard to these fires. I am making a trip over the upper country very shortly, and, if necessary, can furnish, from personal inspection, a supplementary report of the fires in question.

I may say that I consider the work done by the fire rangers during the past season to have been very efficacious, not only in putting out fires, but largely in preventing fires, as they impressed upon the settlers the necessity of being very careful in burning slashings, &c., and had it not been for the fire guardians, who looked after the fires thoroughly, a very large quantity of timber would have been destroyed, but I consider that more wardens should be appointed for another season, and I would respectfully suggest that the number be increased by at least four, as I consider that it will pay to have them on.

In conclusion, I might add that the past season has been very dry, scarcely any rain having fallen from early in June until the end of September.

I am, sir, your obedient servant,

JAMES LEAMY,  
*Crown Timber Agent.*

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## APPENDIX No. 7 TO THE REPORT OF THE SUPERINTENDENT OF FORESTRY.

REPORT OF ASSISTANT CROWN TIMBER AGENT AT KAMLOOPS.

DEPARTMENT OF THE INTERIOR,  
DOMINION LANDS OFFICE,  
KAMLOOPS, B.C., October 5, 1901.JAMES LEAMY, Esq.,  
Crown Timber Agent,  
New Westminster, B.C.

SIR,—I beg to report that fires in the Golden division of the Kamloops district, did not amount to anything on account of several rain storms east of the Selkirk mountains. In the Revelstoke division it was very different regarding rain, and it appeared at one time that the whole country was on fire, however, it did not turn out so bad as at first anticipated. The fires north and south of Revelstoke would have done, no doubt, a great amount of damage, had it not been for the men employed by the fire rangers, who fought the fire by way of cutting ditches through the moss and fire brakes through the timber; one ditch north of Revelstoke had to be cut almost two miles long to prevent the destruction of timber berth 73. The fires south of Revelstoke were kept under submission by much the same means as the fires north of that place.

The Clanwilliam fire was so fierce that nothing much could be done with it; however, it did not do much damage, more than destroy a small growth, which was of no commercial value on account of the location being very rough and precipitous.

The fires at Notch Hill and on the Eagle river were handled in much the same way as the Revelstoke fires, and gave a lot of trouble and work to prevent the merchantable timber from being burnt up.

I am unable to say at present the amount of merchantable timber destroyed, but from what I can gather the amount will be small. Of the origin of the fires that we had to contend with, 90 per cent are attributed to the negligence of the Canadian Pacific Railway Company, in connection with their locomotives, which were not equipped in accordance with section 7 of the Fire Act, province of British Columbia. Of the balance of the fires 30 per cent have been started by prospectors and settlers.

I am, sir, your obedient servant,

D. J. McDONALD,  
*Assistant Crown Timber Agent.*



## LIST OF PLATES ACCOMPANYING REPORT OF THE SUPERINTENDENT OF FORESTRY.

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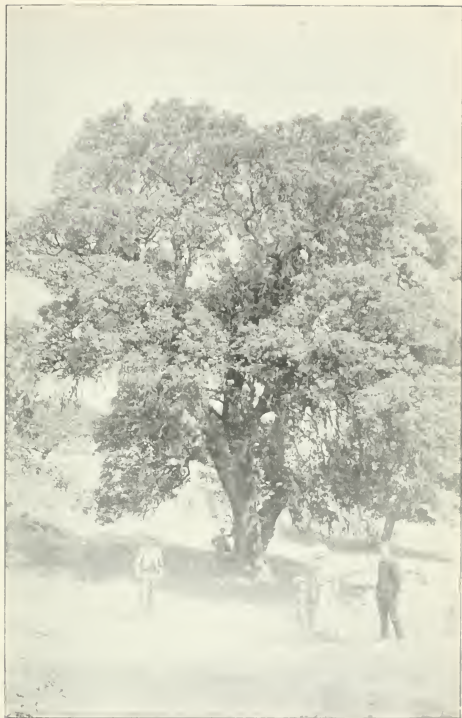
Photograph 400 for canal construction, showing country on river. Y. A. Fisher. Esq. Fairbanks, Alaska.  
Copyright reserved 1913. Contributions to the U. S. Geol. Surv. Water.





IN STANLEY PARK, VANCOUVER, B.C.





ARBUTUS OR MADRONA TREE (ARBUTUS MENZIESII, J. P. R.) (CALIFORNIA, BY ANTHONY SEXTON,  
NEAR VERMONT, 1881)

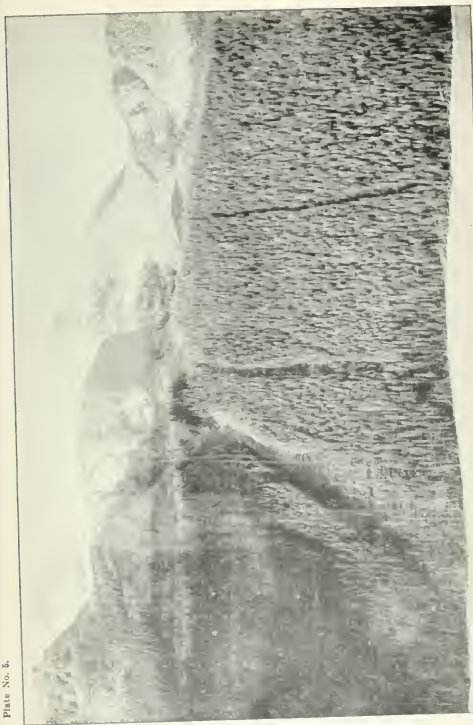




DOMINION FORESTRY EXHIBIT AT THE BOSTON FAIR.

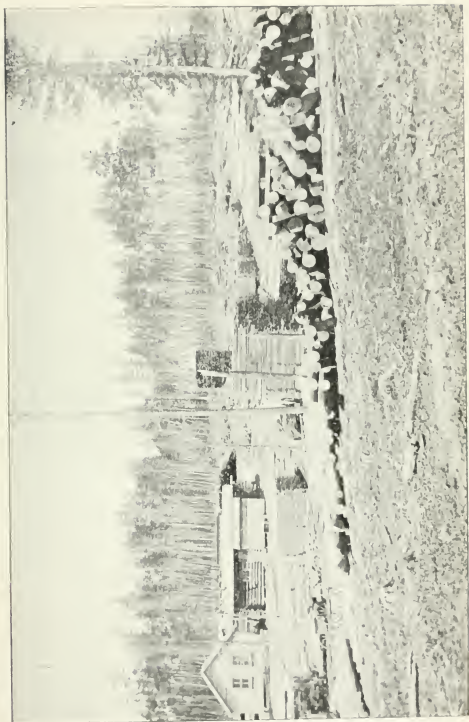






THE ROCKY MOUNTAINS, NEAR LAKE GEORGE, SEPT. 1865. A LARGE POLE PINE ON THE MOUNTAIN SLOPE.  
(By permission of the Surveyor General.)





IN THE CYPRESS HILLS IN WESTERN ASSINIBOIA.





VIEWS OF THE PASSAGE WITH THE ROCKY MOUNTAINS IN THE DISTANCE  
(By permission of the Surveyor General.)



PART IX.

YUKON TERRITORY





# YUKON TERRITORY

## REPORT OF THE COMMISSIONER.

DAWSON, Y.T., October 10, 1901.

Hon. CLIFFORD SIFTON,  
Minister of the Interior.

SIR,—I have the honour to submit the annual report of the Yukon Territory for the year ending June 30, 1901.

It may be said with perfect confidence that the progress of the Yukon Territory during last year has been of a very satisfactory character. The evolution from an uncertain, unstable and excited mining camp to a steady, permanent and prosperous community has proceeded in a rapid and striking manner. Gold is still, as it probably will continue to be, as long as the Yukon lasts, the chief product of the country. Copper has been discovered over a considerable extent of territory, and there is reasonable hope that its mining and smelting will develop into an important industry. Profitable working of copper will depend upon many circumstances, and to some extent, on the continuance of the gold production, since this will insure permanent settlement of the country and aid in cheapening all the essentials required in producing copper. Coal has also been discovered, and is now being regularly supplied in Dawson and other parts of the territory. While the quality as yet is not of the highest, the coal is still a most valuable addition to the resources of the territory. The enormous quantity of wood required for heating purposes during the long winter season, and the still larger amount regularly consumed in thawing ground and furnishing power in connection with mining operations have occasioned alarm lest the somewhat meagre supply would be too rapidly consumed. The present supply of coal seems to remove to a great extent the danger from the failure of wood, and the demand on wood will be still further reduced if the water supply can be applied in such a manner as to make more general the hydraulic method of mining. It is now well established by a number of examples that frozen ground can be disintegrated by water alone. The general application of steam to thawing the ground has also largely reduced the quantity of wood consumed, as compared with that required in the old method of direct application of burning wood to the ground.

With regard to the production of gold, I look with great confidence to its continuance for many years. The great requirement now is cheapening of transportation facilities. Every reduction in freight rates, every reduction in the cost of living in the Yukon Territory makes possible the introduction and operation of a higher class of machinery and cheaper production of gold. At the present time ground that could not be worked at a profit a year or two ago can be successfully mined. Each change that lessens the cost of production increases the area for profitable working. It is confidently anticipated that large areas which have already been mined to the full extent that they profitably could be at the time they were mined under then existing conditions, can soon be wholly reworked at handsome profits. Transportation has been the serious obstacle to cheap mining. The expense, not only of getting things into the country, but of moving them from one place in the country to another has been enormous. Many instances can be furnished where three, four, five and even ten times the

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cost paid for an article at Vancouver or Victoria has been paid for getting that article into position on some mining claim twenty or thirty miles from Dawson. The companies employed in freighting goods to Dawson went to large capital expenditure firmly convinced that they were taking great risks and under the impression that the life of their business would be very short, and that the only chance of getting any profit from their investments was by charging rates that would bring back such capital and profit within a very short period. That period has elapsed and much of the capital has been realized, and, I believe, these companies are now satisfied that their business is assured for many years and will act accordingly, both in their own interest and in the interest of the country. I firmly believe that a reduction of freights to what would be deemed reasonable rates in the other more expensive parts of the continent would result in such a volume of business as would benefit the companies and produce a development in this territory of the most extraordinary character. I have endeavoured to aid in the cheapening of transportation within the territory by providing for the expenditure of every available dollar upon the construction of a system of roads connecting all the important mining creeks with Dawson, which is the centre of supply for the territory. The road construction has been mapped out on a large scale with the view of having each year's operations tend towards completion of a general system calculated to meet to the fullest possible extent the wants of the people.

No one can have spent a season in Dawson without realizing the existence of unmistakable signs of permanency. Not only does a general air of prosperity and confidence pervade the whole business community, but the surest steps are being taken to insure a continuance of good times. When one finds men of as wide business experience as any on the continent, and hundreds of intelligent and competent mining men all over the gold producing districts bringing in boilers and machinery to such an extent that for months the streets are obstructed by them, and hastening to erect plants upon their claims; when steady, calculated business methods supersede the former makeshift way; when mine owner after mine owner declares that already in sight is dust to occupy years in working, and when it is recognized that although Eldorados are not struck every day, or more than once in a life time, yet daily there are being disclosed enormous tracts of good paying ground; and when in addition there is every indication and prospect of early development of quartz mining, it is not difficult to find justification for the faith which is found here wherever one turns in the resources of the country. One stamp-mill has already been erected in Dawson, and another is in course of erection. These facts indicate the hopes created by recent quartz finds.

Under a conservative assessment made this year, land in Dawson was valued at \$1,946,490 as compared with \$1,107,330 last year. Improvements in the shape of buildings on land were valued at \$2,342,850 as compared with \$1,487,580 last year. Personal property was assessed this year at \$8,346,000. It is not possible to compare this item with the former year, because the volume of business and not personal property was then assessed. Income this year was assessed at \$1,467,200 as compared with \$1,448,100 in the former year. It must be remembered that this includes Dawson alone, and does not include a foot of ground that is at present gold producing.

Dawson has this year a total assessment of \$14,102,540. The city has increased surprisingly in private buildings. The government, recognizing the indications of permanency and to assist in it and enable the better discharge of the duties of public offices, has erected a fine post office, a court-house, an administration building, and a school-house. All these buildings are splendid works, and would do credit to any city of a population of fifty thousand. A new residence for the Commissioner of the Territory has also been built. The private enterprise displayed in Dawson has fully justified the government's action.

Dawson has now advanced to such an extent as to make it advisable to grant it a charter of incorporation and the management of its own municipal affairs. The citizens generally, I believe, approve of a scheme of incorporation, to which legislative effect will shortly be given. The city will commence its corporate life well supplied

## SESSIONAL PAPER No. 25

with good school-houses, thoroughly equipped and in excellent running order, with streets, not yet quite perfect, but still vastly improved on what was expected or hoped for a year ago, with a fire department well supplied with engines and the usual paraphernalia, including an alarm system which is now being installed, with a private water company supplying pure water, summer and winter, with a private electric company lighting streets and houses with electric lighting, and in fact with most of the usual possessions of newly incorporated communities.

The Yukon council will be relieved of much purely local business by the erection of the corporation, and being thus required to meet less frequently, will be able to give more time and attention to territorial matters of a more general character. Both White Horse and Grand Forks are seeking to obtain some control of local affairs, which will be granted either by bringing them under the Yukon ordinance relating to unincorporated towns, with a view to early incorporation, or by immediate incorporation. These two towns have shown considerable improvement and exhibit great enterprise. In other places, too, improvements may be noted. On many of the creeks the mine owners are providing for themselves more permanent and comfortable quarters. Hotel accommodation is improving, and at Gold Run, Messrs. Chute & Wills have erected an hotel which would do no discredit to any town of five thousand inhabitants. Stage lines run daily from Dawson to the principal creeks, and bring their inhabitants the advantages of letters, newspapers, &c.

Dawson has no need to be ashamed of its newspapers. There are three issued daily. Each has typesetting machinery; all occasionally print wood cuts, and indulge at times in clever and amusing cartoons. They are well supplied with news, and conducted with enterprise, spirit and general good sense.

The climate of this country has indeed surprised me. I have not yet experienced a winter here, but am quite convinced from the numerous experiences to which I have listened that much of the winter weather is bracing and most agreeable, and that trying, severe, cold weather is only for a brief period. Six months of this year I have experienced, and do not think a more charming climate can be found than has been enjoyed here for most of that time. The flowers of Dawson and the country are simply superb. Many vegetables grow to as great perfection as in any other part of Canada. Potatoes, cabbage, cauliflower, turnips, lettuce, celery, &c., &c., have been produced this year of splendid size and quality. Specimens were sent to the Victoria Exhibition.

I cannot conclude this report without reference to what is justly a source of constant pride and satisfaction to all Canadians. I refer to the freedom of the Yukon Territory from crime, and particularly from crimes of a violent character. It is universally conceded that in this respect it is unique among mining camps. By what causes has it been brought about that, in one of the richest mining camps in the world, with a population drawn from all quarters of the world, and among whom are to be numbered as bold and daring spirits as exist on earth, a camp that at one time and another has been visited by the most desperate criminals of the day, and where the richest prizes tempt to crime, there is yet as perfect confidence in the security of personal property as can be found in the oldest and most staid community of the east? To-day, as for several years past, men travel the loneliest trails, burdened themselves with pokes of gold, or with horses and mules similarly burdened, without guard and without even being armed. This is no fancy picture; this is no story of a single instance; it is the usual daily occurrence during the whole time that gold is being cleaned up. Dawson and the other towns in the territory are not perhaps as strict in observance of religious rites as they should be, but at any hour of the day or night one is perfectly secure in any part of them.

The great cause that has produced this excellent condition is the splendid work of the officers and men who have represented the North-west Mounted Police in this territory from the first. They enforced order with strong and just hands; they became a terror to evil-doers, and a strong defence to the law-abiding and well disposed. At first they were only a handful, but courage and firmness made up for lack of numbers.

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The rough and vicious element that too frequently dominates mining camps, particularly in their early stages, never gained control here. For a time the force supplied not only police protection to the people of the territory, but acted as arbitrators, assessors, judges and administrators, and gave satisfaction in the exercise of every function. Numerous instances can be given where a private member of the force settled disputes involving thousands of dollars, and settled them finally, and with never an imputation on the disinterested impartiality of the decision. It is and will be, I believe, one of the proudest distinctions of the North-west Mounted Police force that it discharged with credit its manifold duties in all the various phases of the life of this community. It adapted itself with vigour and determination to what was practically a condition approaching martial law, and with grace and promptness handed over to the civil power, as soon as the latter was ready to assume its exercise, those functions which, in the earlier days of the territory it had executed with so great virility and justness, and to the continued support of which it is lending its most efficient and satisfactory assistance.

I have the honour to be, sir, your obedient servant,

JAMES H. ROSS,  
*Commissioner, Yukon Territory.*

SESSIONAL PAPER No. 25

## No. 1.

FINANCIAL STATEMENT of the Gold Commissioner's Office from July 1, 1900, to June 30, 1901.

## CREDITS.

*Dawson Returns—*

Free miner's certificates . . . . .	\$ 76,257 00
Placer grants . . . . .	59,170 00
Certificate of work—Placer . . . . .	6,054 00
Certificate of partnership—Placer . . . . .	524 00
Renewals—Placer . . . . .	48,405 00
Assignments—Placer . . . . .	10,301 50
Registered documents—Placer . . . . .	6,194 25
Payment in lieu of assessment—Placer . . . . .	24,069 10
Payment in lieu of assessment with penalty . . . . .	10,560 00
Abstracts . . . . .	2,720 25
Water grant . . . . .	500 00
Relocations . . . . .	44,287 00
Quartz mining grants . . . . .	4,850 00
Quartz registered documents . . . . .	749 00
Quartz certificate of work . . . . .	617 50
Quartz Crown grant . . . . .	1,086 00
Quartz certificate of partnership . . . . .	82 50
Quartz payment in lieu of assessment . . . . .	3,800 00
Hydraulics . . . . .	3,572 31
Forfeited fees . . . . .	12,479 50
Government auction sales . . . . .	86,991 50
Sundries . . . . .	3,685 76
Royalty . . . . .	40,249 79
Infringement government fractions . . . . .	1,049 45
Sale government reserve claims . . . . .	250 00
Amended applications . . . . .	00 00
Court fees . . . . .	686 75
	\$ 449,861 46

*Stewart River—*

Placer certificate of work . . . . .	\$ 32 00
Placer certificate of partnership . . . . .	26 00
Free miner's certificates . . . . .	1,919 00
Relocations . . . . .	390 00
Placer mining grants . . . . .	15,810 00
Quartz mining grants . . . . .	210 00
Assignments . . . . .	242 00
Renewals . . . . .	600 00
Placer registered documents . . . . .	27 50
Quartz certificate of work . . . . .	2 50
Quartz registered documents . . . . .	27 50
	\$ 19,286 50

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*Hunker—*

Royalty . . . . .	\$	41,671 53	
Free miner's certificates . . . . .		5,216 00	
		—————	\$ 46,887 53

*Selkirk—*

Free miner's certificates . . . . .	\$	405 00	
Quartz mining grants . . . . .		375 00	
Registered documents . . . . .		52 50	
Quartz certificate of partnership . . . . .		2 50	
Quartz certificate of work . . . . .		12 50	
		—————	\$ 847 50

*Grand Forks—*

Free miner's certificates . . . . .	\$	20,508 00	
Royalty . . . . .		392,326 86	
Inspection of work performed . . . . .		30 00	
		—————	\$ 412,864 86

*Dominion—*

Royalty . . . . .	\$	57,414 26	
Free miner's certificates . . . . .		7,219 00	
		—————	\$ 64,633 26

*Forty-Mile—*

Free miner's certificates . . . . .	\$	740 00	
Placer mining grants . . . . .		990 00	
Assignments . . . . .		28 00	
Relocations . . . . .		375 00	
Placer registered documents . . . . .		80 00	
Renewals . . . . .		30 00	
Quartz grants . . . . .		10 00	
Placer certificate of work . . . . .		4 00	
		—————	\$ 2,257 00

*Dalton Trail—*

Assignments . . . . .	\$	4 00	
Renewals . . . . .		45 00	
Free miner's certificates . . . . .		30 00	
		—————	\$ 79 00

*White Horse—*

Free miner's certificates . . . . .	\$	2,600 00	
Quartz grants . . . . .		750 00	
Assignments . . . . .		280 40	
Quartz certificate of work . . . . .		732 50	
Registered documents . . . . .		72 75	
Payment in lieu of assessment . . . . .		400 00	
Certificate of partnership . . . . .		10 00	
Placer mining grants . . . . .		60 00	
		—————	\$ 4,905 65

*Gold Run—*

Free miner's certificates . . . . .	\$	4,367 00	
Royalty . . . . .		35,814 22	
		—————	\$ 40,181 22

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*Hootalinqua—*

Placer mining grants . . . . .	\$ 3,285 00	
Assignments . . . . .	132 00	
Free miner's certificates . . . . .	630 00	
Placer certificate of partnership . . . . .	24 00	
Renewals . . . . .	825 00	
Placer registered documents . . . . .	31 00	
Certificate of work . . . . .	196 00	
Quartz grant . . . . .	45 00	
Royalty . . . . .	801 85	
Payment in lieu of assessment . . . . .	400 00	
Water grant . . . . .	50 00	
Relocations . . . . .	15 00	
		\$ 6,509 00

*Sulphur—*

Free miner's certificates . . . . .	\$ 1,981 00	
Royalty . . . . .	24,337 85	
		\$ 26,318 85

*Upper Stewart River—*

Free miner's certificates . . . . .	\$ 150 00	
		\$ 150 00

*Eureka—*

Royalty . . . . .	\$ 44 39	
		\$ 44 39

## DUES.

Receiver General . . . . .	\$1,071,561 00	
Sundries . . . . .	23 27	
Loss by assay . . . . .	402 03	
Loss by fire (Sulphur) . . . . .	60 00	
Loss by burglary (Grand Forks) . . . . .	1,615 00	
Fees paid in Ottawa . . . . .	1,090 00	
Placer certificate of work . . . . .	2 00	
Assignments . . . . .	20 00	
Quartz mining grants . . . . .	5 00	
Placer mining grants . . . . .	15 00	
Relocations . . . . .	45 00	
Payment in lieu of assessment . . . . .	200 00	
		\$1,075,063 30

J. LANGLOIS BELL,

*Assistant Gold Commissioner.*

## REPORT OF THE COMPTROLLER.

## No. 2.

COMPTROLLER'S OFFICE,

DAWSON, Y.T., July 15, 1901.

Hon. J. H. Ross,  
Commissioner,  
Dawson, Y.T.

SIR,—I have the honour to report that the work of my office during the fiscal year ending June 30, 1901, consisted of the following services:—

The disbursements under letter of credit account, Department of the Interior, amounted to \$300,125.28. Monthly returns have been sent to the department with vouchers.

The accounts of all surveyors have been checked over and forwarded to the department.

Payments of royalty collected amounting to \$592,660.98 have been made to me which have been deposited to the credit of the Receiver General, and the gold dust account adjusted with the bank under tender.

The returns from the Gold Commissioner's and the Crown Timber and Land Agent's offices were sent to me as usual, carefully checked over, and forwarded to the department each month.

I have acted for the Department of Public Works, examining all accounts for construction, maintenance, and repairs of public buildings, and countersigned cheques.

The sheriff's monthly returns have been made to me, checked, and the amounts deposited to the credit of the Receiver General, and statements sent to the Department of Justice.

The revenue and expenditure of the local government of the Yukon Territory have been received and disbursed through my office, and proper books and accounts kept, the revenue for the year being \$434,926.59, the expenditure \$412,931.45. Quarterly returns have been sent to the Auditor General with vouchers.

Eight wholesale liquor licenses were granted by the Commissioner of the Territory, in the month of June last, each holder of the same being allowed permits up to twelve thousand gallons. The following are the names of the firms to whom such licenses were issued:—The Northern Commercial Company, MacAulay Brothers, D. A. Ross & Company, Rosenthal & Company, North American Trading and Transportation Company, Lewin Brothers, T. O'Brien, and Lowe & Company.

All these firms imported into the territory the limit of liquor allowed under their respective permits, except Messrs. Lowe & Company, who only took in nine thousand nine hundred gallons.

All licenses under local ordinance, excepting liquor, have been issued from my office.

I have inspected the offices of the Department of the Interior as frequently as time would permit, and have reported to the department.

Your obedient servant,

J. T. LITHGOW,  
*Comptroller.*



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## No. 3.

## REPORT OF THE CROWN TIMBER AND LAND AGENT.

OFFICE OF THE CROWN TIMBER AND LAND AGENT,

DAWSON, Y.T., July 16, 1901.

Hon. J. H. Ross,  
Commissioner,  
Dawson, Y.T.

SIR,—In pursuance of your request, I have the honour to send you herewith a statement in duplicate showing the total amount of money received at this office, and at the various sub-agencies of White Horse, Fort Selkirk, Stewart and Forty-Mile during the twelve months commencing July 1, 1900, and ending June 30, 1901.

These receipts, as you are aware, are divided into two branches: the Crown Timber Branch, which comprises the revenue from bonuses for timber berths, royalty on operations of timber berths, Crown dues on house logs and cordwood, and seizure dues on cordwood and timber cut without authority, Crown dues on hay permits and on hay and grazing lands; and the Dominion Lands Branch, which comprises the revenue derived from sale of Dominion lands, coal lands and town lots, also from leasing of Dominion lands and water front privileges, from survey fees paid with applications to lease or purchase Dominion lands, and revenue from the sale of maps of survey, and from registration fees of assignments of unpatented Dominion lands.

The revenue received at this office and at the several sub-agencies for the year, amounted as follows:—

1. From Crown Timber Branch . . . . .	\$ 78,150 72
2. From Dominion Lands Branch . . . . .	63,430 65
	<hr/>
	\$141,621 37

The figures compared with the revenue received in the corresponding period of the year previous show an increase of \$24,347.37 in the Crown Timber Branch, and a decrease of \$4,214.59 in the Dominion Lands Branch. I must say, however, that there is at present, due, owing and payable, since the 1st February last, the sum of \$10,400 as second and last instalments on the purchase price of 1,040 acres of coal lands, which sum I expect to receive in a short time. I wish to remark that there is also due and owing nearly \$5,000 for rental of water front privileges and water front lots, for the period ending April 30 last, which I expect to receive in a short time also.

I have thought it might interest you to know how much the sub-agencies have contributed to the total receipts, and to that end I furnish the following figures:—

*Tagish or White Horse Agency—*

1. From Crown Timber Branch . . . . .	\$8,082 50
2. From Dominion Lands Branch . . . . .	792 50
	<hr/>
	\$8,875 00

*Fort Selkirk Agency—*

1. From Crown Timber Branch . . . . .	\$7,518 77
2. From Dominion Lands Branch . . . . .	1,170 10
	<hr/>
	\$8,688 87

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*Stewart River Agency—*

1. From Crown Timber Branch . . . . . \$4,510 50
2. From Dominion Lands Branch . . . . .

(The agent has not been supplied with any forms of receipt for Dominion lands, as it is considered advisable that all payments for lease or purchase of Dominion lands within this agency should be made to Dawson office.)

*Forty-Mile Agency—*

This office was established only in February last, and the receipts reported up to June 30 last from

1. Crown Timber Branch are only . . . . . \$245 00

(The agent has not yet been supplied with any form of receipt for Dominion lands, it being desirable that all payments for purchase or lease of Dominion lands in that agency be made to this office.)

The receipts reported by the sub-agents aggregate . . . . . \$ 22,619 33  
 And the total receipts of the Dawson office . . . . . 119,002 04

It will interest you, no doubt, to know the number of timber and hay permits represented by said returns and the quantities covered by same, which are as follows:—

## TIMBER PERMITS.

Issued from.	No.	Cords Wood.	Hous. Lr. gs.
			Lineal feet.
Dawson . . . . .	377	41,507	20,010
White Horse . . . . .	117	10,318	.....
Fort Selkirk . . . . .	111	10,784½	6,726
Stewart . . . . .	78	6,474	.....
Forty Mile . . . . .	9	400	.....
	692	69,483½	26,736

## HAY PERMITS.

Issued from.	No.	Tons.
Dawson . . . . .	110	790
White Horse . . . . .	10	38½
Selkirk . . . . .	13	90
	133	918½

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## TOTAL RECEIPTS from Hay and Timber from June 30, 1900, to July 1, 1901.

Months.	Bonus.	Royalty.	Timber Permits.	Secured.	Surplus.	Hay Permits.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1900.							
July...	250 00	247 29	3,861 00	2,028 88	265 25	1,725 00	8,387 42
August	1,625 00	1,793 41	4,516 50	176 43		945 00	9,308 72
September...	1,900 00	880 38	6,976 28	291 00		260 00	9,271 70
October....	2,500 00	3,338 16	7,608 16	1,116 10		67 00	14,600 00
November....	750 00	1,389 26	3,167 30	83 11		19 00	5,782 14
December..	750 00	2,367 32	2,500 00	2,500 75			7,900 07
1901.							
January....			439 00	53 00			492 00
February..	1,500 00	236 76	2,784 87	386 96			4,914 00
March.....	250 00		2,526 00	69 70			2,845 70
April.....		129 23	1,649 39	1,018 76			2,797 38
May.....	250 00	2,758 40	1,661 00	3,630 00		100 00	8,402 00
June.....	500 00	1,617 79	998 30	117 00		552 00	3,186 00
Totals....	9,375 00	14,127 91	38,792 00	12,952 45	268 25	2,607 42	108,009 77

## TOTAL RECEIPTS from sales of Dominion Lands from June 30, 1900, to July 1, 1901.

1900.	
July	\$1,000 00
August	4,272 44
September	9,754 71
October...	3,165 85
November....	6,879 00
December..	789 50
1901.	
January.....	4,824 25
February....	2,772 45
March.....	8,347 56
April.....	9,839 33
May.....	2,465 65
June.....	6,593 57
Total.....	\$63,430 68

It will interest you also, no doubt, to know that applications for a total area of 375 square miles of timber berths were granted during the said period, and that the returns from the several licenses of said berths during the said period cover a little over 7,000,000 feet B.M. of timber, representing a royalty of \$2 per M., or \$14,127.91

Your obedient servant,

F. X. GOSSELIN,  
Crown Timber and Land Agent.

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## No. 4.

## REPORT OF THE REGISTRAR.

REGISTRAR'S OFFICE,  
DAWSON, Y.T., July 10, 1901.Hon. J. H. Ross,  
Commissioner,  
Dawson, Y.T.

SIR,—In answer to the request contained in your letter dated 9th inst., I have the honour to make the following report on the work of the Registry Land Titles Office in Dawson, for the year ending June 30, 1901, compared with same of previous year:—

Month.	No. of Documents Recorded.	No of Certificates of Title issued.	Fees Received.
1900.			
July. . . . .	187	30	\$ 964 00
August. . . . .	199	47	567 15
September. . . . .	251	61	739 00
October. . . . .	181	38	525 86
November. . . . .	118	36	328 85
December. . . . .	53	7	152 95
1901.			
January. . . . .	67	6	165 80
February. . . . .	82	24	205 70
March . . . . .	103	20	272 85
April. . . . .	136	38	408 65
May. . . . .	220	63	483 05
June. . . . .	364	96	931 95
	1,961	466	\$ 5,745 81
1899-1900.			
July to June . . . . .	1,134	31	2,460 65
Increase . . . . .	827	435	\$ 3,285 16

Your obedient servant,

J. E. GIROUARD,  
*Registrar.*

## No. 5.

## REPORT OF THE DIRECTOR OF SURVEYS.

SURVEY OFFICE,

DAWSON, Y.T., July 10, 1901.

Hon. J. H. Ross,  
Commissioner,  
Dawson, Y.T.

SIR,—I have the honour to submit the annual report of this office for the year ending June 30, 1901, as follows:—

In the spring of last year the only surveyor employed, locally, was Mr. P. T. C. Dumais, Mr. Gibbon being at that time absent on leave; there were only two draughtsmen employed in connection with the survey work of the territory; these officials were all directly under the control of the Commissioner, and no attempt has been made to organize a distinct survey office. In June of last year I arrived in Dawson under instructions from the Surveyor General to deal with the returns of all surveys to be used as a basis for the issue of patents, and to organize a system of record for such surveys. After my arrival here I also undertook, at the request of the Commissioner, the examination of the returns of hydraulic, placer, and other surveys.

During the course of the year the necessity for an increased staff, and for a properly organized survey office for the territory has become apparent. To handle the surveys of the territory effectively and economically directly through the Surveyor General's office at Ottawa has proved to be a practical impossibility, first on account of the distance from Ottawa, and consequent delay in dealing with returns, and secondly on account of the necessity for a constant and close touch between the survey office and the Gold Commissioner's and other offices here.

This office as now established must necessarily be for some time of an experimental nature, and until we are moved into larger and more convenient quarters, it will not be able to fill the scope intended for it, but during the coming winter I think it will be possible to organize a thorough system of handling surveys and survey records in such a manner as to be of permanent value to the department and the general public alike. In this connection I would strongly urge that arrangements be made that, upon our moving into new quarters, all original records of surveys in other offices here, other of course than the lands titles office, should be transferred to the survey office, copies or compilations being made as required for the other offices. It is constantly necessary in an office of this description to refer to the original records of previous surveys, and the searching of records by the public must be considerably facilitated by having them deposited in the office where they are technically dealt with, and consequently best understood.

The staff of surveyors at present employed is as follows:—James Gibbon, D.L.S., who returned from Ottawa shortly before the close of navigation last year, and who during the winter made the survey, under instructions from the Commissioner, of a base line on Henderson creek and its tributaries, and on part of Black Hills creek. C. W. MacPherson, D.L.S., who accompanied me from Ottawa, and was employed last summer on surveys on the Yukon river. During the fall he made a survey of the base line on part of Livingstone creek, and in the winter performed surveys on Gold Run and other creeks. A. J. McPherson, D.L.S., who recently arrived from Ottawa. In addition to the above, two draughtsmen and a clerk are employed in the office.

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The work of the surveyors on the staff must during the present season largely consist of surveys of placer claims sold at the auction sales last year; in addition to these surveys several new creek base lines are urgently required. All roads finally located and built should be surveyed at as early a date as possible, and during next winter it will be advisable to undertake a traverse survey on parts of the Yukon, Klondike, and possibly Stewart rivers. This survey while partly of the nature of an exploratory survey would differ from an ordinary exploration in that permanent signal monuments would be constructed at suitable points, and their relative position accurately determined. The necessity of such a signal system arises from the fact that owing to the nature of the country and to the isolated and scattered positions of the majority of the surveys, any attempt at a block township system is out of the question.

Besides the work of the surveyors on the staff, that of all the surveyors in private practice in the territory, of whom there are at present ten, is handled through this office. At present there is no manual of survey regulations specially issued for this territory. I have prepared a rough draft of such a manual, and intend during the coming winter to submit it for approval. Its publication I consider to be most desirable, on account of the fact that the majority of the surveys to be made here differ entirely in character and in the conditions under which they have to be performed from surveys required of Dominion land surveyors in any other part of Canada, but these same reasons make it equally advisable that no manual should be issued hastily or until the effect of the regulations it enforces has been carefully studied out.

During the last year the returns of survey passing through my hands for examination have included:—Group lots, 118, including 15 mineral claims (quartz). Townsite subdivisions, 4. Hydraulic concessions, 28. Placer claims (for advertisement), 80.

There is every indication that the number of surveys to be dealt with during the coming year will largely exceed these figures.

Your obedient servant,

C. C. CHATAWAY,  
*Director of Surveys, Y.T.*









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