DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 178018

GHQ/SCAP Records (RG 331, National Archives and Records Service)

Description of contents

(1) Box no. 3010

(2) Folder title/number: (12) - (15)
Electrical Equipment - Generating

(3) Date: Jan. 1948 - June 1950

(4) Subject:

Classification	Type of record
9617	c, e, r

(5) Item description and comment:
i) Chugoku
ii) Includes Contents Lists

(6) Reproduction: (Yes) No

Sheet no.

(7) Film no.

(Compiled by *National Diet Library*)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

DATE	SUBJECT	ISSUING HEADQUARTERS & INDORSEMENTS
-	Data for Electric Power Plant	-
31 Jan. 1950	Monthly Report on the Progress of the Construction Works of Water Power Plants in Chugoku Region	H'shima International Trade & Industry Bureau
-	Existing Power Plant - Map	Hiroshima Prefecture
8 April 1950	FIELD TRIP REPORT - Conference with Mr. Nagata, Chief of Chugoku Branch of Nippon Hassoden Co.	CCAR
29 Nov. 50	Counterpart Fund Loans for Small Hydro-Power Plants and Land Improvement.	SCAP/ESS
16 Feb. 51	Start Sometime May Chugoku Area 5 Years Power Source Developement Plan	Chugoku Liaison & Coordination Office

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

Mr. Bradley
Economic section

Feb 16 "Chugoku"

Stard Sometime May Chugoku Area 5 Year Power Source Development Plan.

Chugoku area Power Rehabilitation Expediting Conference Steering Committee held its session on Feb 14 at IT and I bureau. Yamaguchi ken Commerce-Industry Chief Hironaga attended.

In view of urgent necessity of Chugoku power development, it was decided to strengthen the conference by adding 5 ken assembly speakers as its members.

As a first step, they will formulate Chugoku Area Power Development 5 Year Plan during April. It will be put into practice sometime during May. Five kens will make concerted efforts in order to borrow funds from Power Development Financing Treasury.

The conference adopted resolution to request ESB chief and Public Utility Commission chief to include Onoda Thurmal plant and 3 hydro plants of Akezuka, Nagato, Kake, into allocation plan of Power Development Counter Aid Fund. Thex allocation will be decided by Feb. 20. The conference's above request was aimed to start Onoda Thurmal and other 3 plants in fiscal 1951.

(Chugoku Liaison & Coordination office)

TRADE AND INDUSTRY FILE 1-16

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

INFORMATION:
O.D. //
DEC 11 1950

CHUGOKU 12

I+D
Info+file
tlk

GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
Economic and Scientific Section
APO 500

123(29 Nov 50)ESS/PF

29 November 1950

SUBJECT: Counterpart Fund Loans for Small Hydro-Power Plants and Land Improvement.

TO: Ministry of Finance, No. 6 Honshio-cho, Yotsuya, Tokyo.

1. Reference is Memorandum for Economic and Scientific Section, GHQ, SCAP, from the Ministry of Finance, FCO 1970/50 (FI/CF-388), dated 9 November 1950, subject: Application for Release of the U.S. Aid Counterpart Fund for Small Scale Hydro-Power Generation and Land Improvement.

2. No objection is offered to granting Counterpart Fund Loans in the amount of ¥ 52,400,000 for small hydro-power plants and ¥ 12,560,000 for land improvement as outlined in reference 1 above.

3. Loans will be subject to the following conditions:

a. Interest rate will be 7½% per annum.

b. Security will be a guarantee by the Central Cooperative Bank for Agriculture and Forestry both as to interest and principal, and any direct liens on the properties involved which the Ministry of Finance may consider it advisable to take.

c. Repayment of loans for the various projects will conform to provision outlined in reference 1 above.

d. Reports will be submitted by the borrowers as required by the Ministry of Finance.

/s/ W. F. MARQUAT
Major General, U. S. ARmy
Chief, Economic and Scientific Section

MANUFACTURING AND INDUSTRY FILE 91-I 16-G

DEC 15 1950

2006

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013

FIELD TRIP REPORT

R.G. STRADLEY

8 April 1950
Hiroshima

1-16-R

1. Purpose:

A conference with Mr. Nagata, Chief of Chugoku Branch of Nippon Hassoden (Japan Electric Power Generation and Transmission) Company and attending a ceremony commemorating the completion of additional work (increasing from one circuit to two circuits) on Okayama - Fukuyama transmission line together with the completion of the Kannose and the Katsuyama No. 2 Power Stations.

2. Background:

Surveillance in accordance with O.D. 51.

3. Discussion:

a. Additional work accomplished on the Okayama - Fukuyama transmission line.

Distance, 52 k.m., from Okayama Substation to Fukuyama Substation.

Authorized voltage, 10,000 V.

Number of Circuit, 2 (one circuit was increased by the recent work)

Number of Steel tower, 110 (Improved to two circuit towers by the recent work)

Overhead transmission line, Open Copper wire, 100 mm^2 (Septuple twisted open wire, dia, of single wire 4.3 mm increased by the recent work).

Ground wire, Twisted zinc with steel plating, 5 mm. (dia of single wire, 3.2 mm) one line increased by the recent work).

Standard span, 250m.

Number of days, From 25 January 1951.
To 31 January 1951.

Total cost ¥75,700,000

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013

b. Kannose Power Station (completed December 1949)

(1) Scale of Dam (Third largest artificial dam in Japan)

Type	Overflow concrete dam.
Height,	69.4 m
Length	195.7 m
Effective capacity,	35,858,000 m^3 (17.930,000KW)
Effective depth,	33.2 m
Tunnel, Distance,	3,475.93 m
Diameter,	3.3 m (Inside) Round type.

Authorized Maximum capacity, 20,000 KW
Authorized Constant capacity, 6,180 KW
Turbine, 2 x 12,500 KW (By Mitsubishi Heavy Industry Company).
Generator, 2 x 12,000 KVA(By Mitsubishi Denki Company).
Transformer, 2 x 12,000 KVA(By Mitsubishi Denki Company.)

c. Katsuyama No. 2 Power Station.

The Katsuyama No. 2 Power Station has increased its generation capacity from the authorized maximum capacity of 7,300 KW to that of 10,600 KW by virtue of the recent additional installation of the following equipment.

Turbine, One 4,000 KW (By Dengyosha)
Generator, One 4,500 KWA (By Meidensha)
Transformer, One 5,500 (By Meidensha)
Capacity increased, By 3,300 KW to 10,600 KW.

d. Mr. Nagata stated that in order to realize the ample supply of power in Chugoku Region there are three most important objectives to be accomplished which are as follows;

(1) Development of the hydroelectric power stations with revervoir in the Region.

(2) Development of the thermo power station that will use the low grade Yamaguchi Prefecture coal.

(3) Strengthening of the inter-region transmission lines which connect the Chugoku Region with the central region of Honshu.

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e. Additional works scheduled for future.

Name	Area	Date of Commencement	Estimated date of completion
Chugoku Trunk transmission line	Okayama - Himeji	8 March 1950	15 May 1950
Nagato Trunk transmission line	Ube - Nagato	14 March 1950	31 May 1950

NOTE: These projects are comparatively easy as no change in the steel towers will be involved.

f. Ceremony.

Opening address — Mr. Nagato, Chief of Chugoku Branch of Nippon Hassoien Co.

Outline of the work, — Mr. Nakamoto, Chief of Nippon Hassoden Construction Office.

Congratulatory address, — Mr. R.G. Stradley. Chugoku Civil Affairs Region.

Mr. Hara, Director. Hiroshima International Trade & Industry.

MMr. Kawamoto, Chairman of Municipal Assembly.

Closing address, — Mr. Nagato.

(Vice-Gor. Wakuda, expressed a few words of appreciation in behalf of the persons present)

4. Conclusion:

The strenghtening of transmission lines and expansion of power stations such as mentioned above will considerably contribute to the development of industry in Chugoku Region.

It is significant to note the completion of the Chugoku and Nagato trunk transmission lines, which is scheculed at the end of May 1950, will enable the Nippon Hassoden Company to increase its transmission volume from Kansai district from the present 60,000 KW to 120,000 KW -- it will eventually play a great part in solving the electric power situations in Chugoku and Kyushu regions.

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5. Recommendations:

Mr. Nagata was advised;

a. To try to reduce the power loss (approximately 32% in March 1950) in generation, transmission and distribution.

b. To disseminate the knowledge among consumers that they will have to pay what it will cost to produce power and let them pay the bill with consent especially in view of the fact that the national subsidy system will be gradually abolished.

RGS

R.G. STRADLEY.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

PROJECTING W.P.P.

M.	Name of Site	Output	
		Max.	Firm
◎	Shinyumura	8,510	2,150
◎	Moribara	6,300	2,700
	Akezuka	20,000	5,100
	Chōmonkyō	8,050	1,600
	Kandogawa	38,700	13,900
	Kuba	10,300	3,500
◎	Gorisan No.1.	2,100	870
	Gorisan No.2.	3,400	1,050
	Yubara No.1.	25,000	7,270
	Yubara No.2.	15,500	13,000
	Takeichi	3,000	1,200
	Matsubara	12,800	2,900
	Otodani	15,000	3,200
	Tarutoko	10,700	5,800
	Shibakigawa No.2.	9,850	2,400
	Shibakigawa No.3.	5,350	1,840
	Hatasato	2,100	1,000
Total		196,660	69,480

◎ Approved Site

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

● EXSTING POWER PLANT

No	Name of Power Plant	Dscharge m³/sec	Effective Head m	Max. & Firm Output kw.
1	Heisakubara	2.640	103.60	2900~1300
2	Kamisaibara	4.950	71.50	2700~1080
3	Okutsu	2.740	116.40	6800~2100
4	Hade	6.790	47.90	2350~1350
5	Kuta	6.870	116.70	9.000~3400
6	Katsuyama No.1	9.180	78.50	5100~2390
(7)	Katsuyama No.2	18,000 5.500	35.80 129.67	4.700~1,820 5.900~1600
8	Tomi	0.840	95.40	570~150
9	Taishakugawa	5.700	95.20	6400~2725
10	Narihagawa	13.900	110.30	12900~6390
11	Uchinashi	24.000	122.40	21.770~9900
12	Doi	7.600	129.60	8,000~5900
13	Yoshigase	20.000	113.80	18900~6.000
14	Ōdomari	14.000	20.00	2200
15	Shimoyama	20.000	85.10	15.000~5.000
16	Kake	8.900	217.60	15.000~12.500
17	Yasuno	13.720	65.10	7,000~3,600
18	Manohira	25.000	47.50	9,000~2,000
19	Kurosaka	10.000	186.40	15,000~3,000
(20)	Kannose	20.000	93.60	29,000~6,080
21	Kimita	14.000	88.00	9.620~6.000
22	Kumami	47.300	29.90	11.200~4.500
23	Kurumino	2.780	131.80	3.000~420
24	Hattō	6.020	55.70	2710~1200
25	Ashizu	1.670	192.90	2610~810
26	Ōro	1.670	230.60	2870~1190

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VER PLANT

ective ead	Max. & Firm Output
m	Kw.
3.60	2,900~1,300
1.50	2,700~1,080
6.40	6,300~2,100
2.90	2,350~1,350
6.70	9,000~3,000
8.50	5,100~2,390
5.80	4,700~1,020
2.67	5,700~1,600
5.90	570~150
5.20	4,400~2,725
0.30	12,900~5,390
7.40	21,770~9,900
9.60	8,000~5,900
3.80	18,900~6,000
0.00	2,200
5.10	15,000~5,000
7.60	15,000~12,500
5.10	7,000~3,600
7.50	9,000~2,000
0.40	15,000~3,000
3.60	20,000~6,080
4.00	9,620~6,000
9.90	11,200~4,500
1.80	3,000~420
5.70	2,710~1,200
2.90	2,610~810
0.40	2,870~1,190

Scale 1/50[illegible]

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

Scale 1/500,000

Sea

Japan

Shimane Prefecture

Shinzi

Imaichi

Hii River

Kisuki

Kando River

Nishisusa

Shinyumura

Akezuka

Hamahama

Kandogawa

Hatsuhara

Gōtsu

Gō River

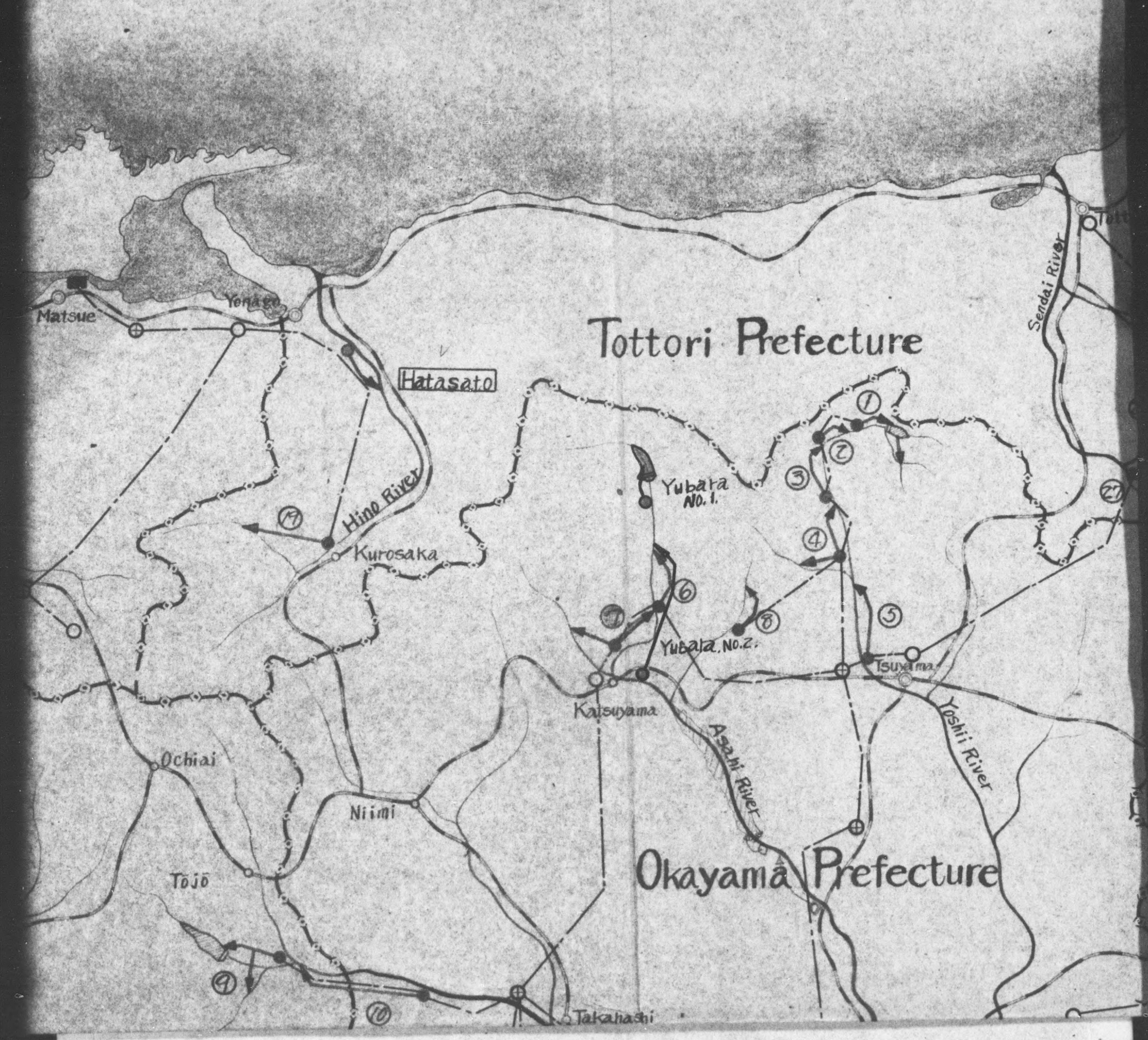
Otodani

Moribara

Bingo tōkaichi

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013



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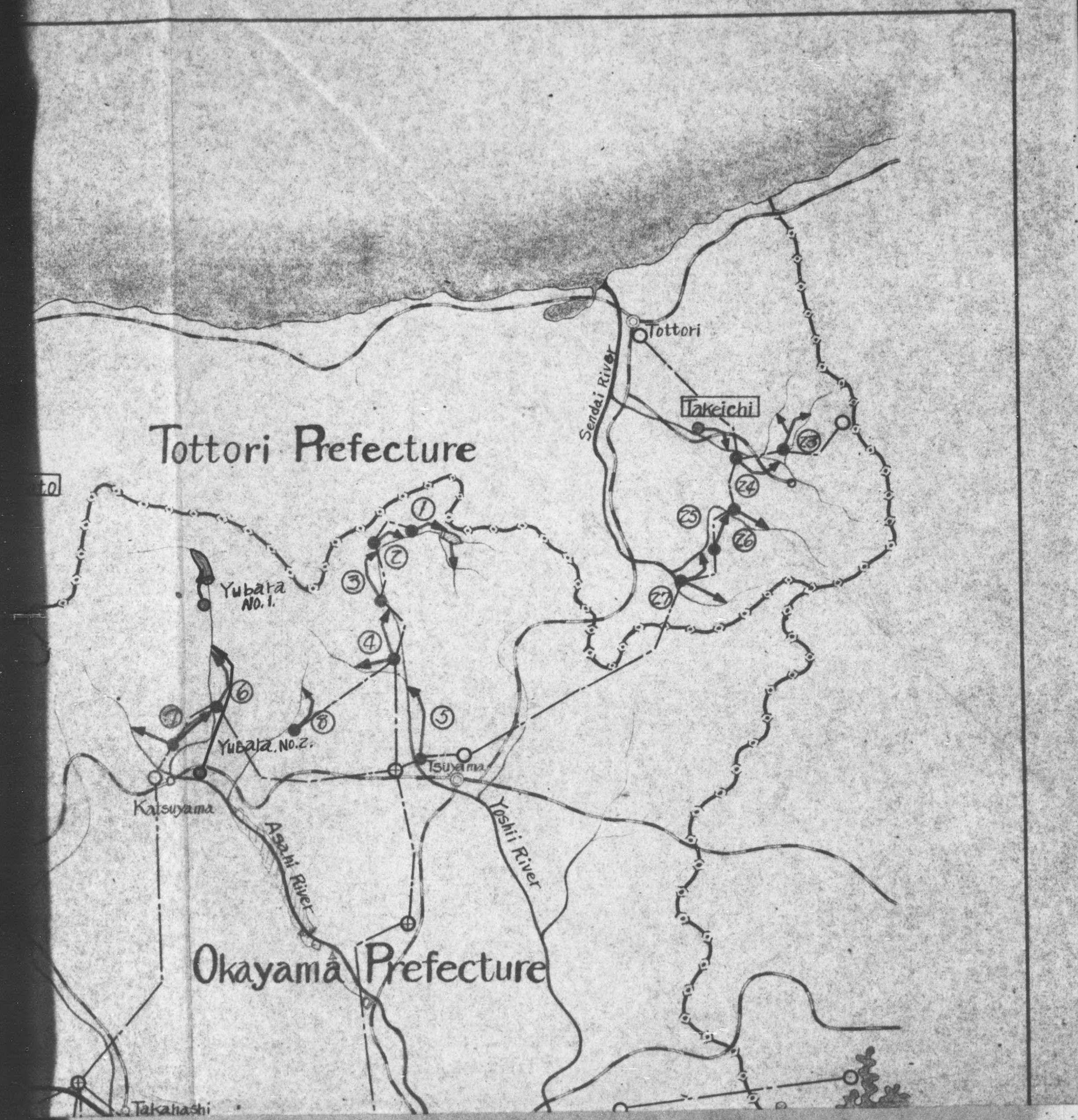
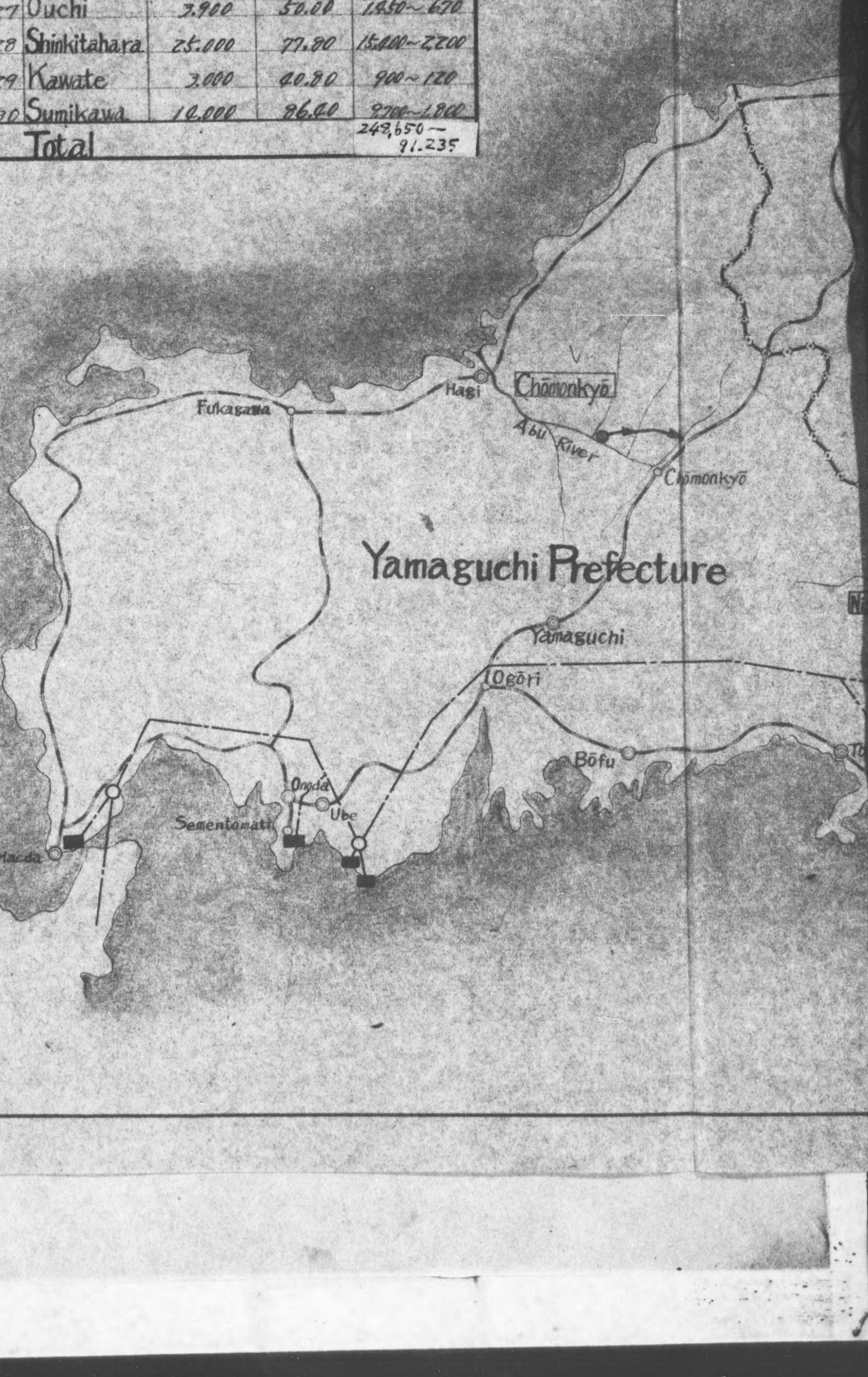


DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78015

20	Kannose	20.000	93.60	20,000~6,080
21	Kimita	14.000	84.00	9.620~6.000
22	Kumami	47,300	29.90	11.200~4.300
23	Kurumino	2.780	131.80	3.000~420
24	Hattō	6.020	55.70	2.710~1.200
25	Ashizu	1.670	192.90	2610~810
26	Ōro	1.670	230.00	2870~1190
27	Ōuchi	3.900	50.00	1.450~670
28	Shinkitahara	25.000	77.00	15.000~2200
29	Kawate	3.000	40.80	900~120
30	Sumikawa	10.000	86.40	9700~1800
	Total			248,650 — 91.235



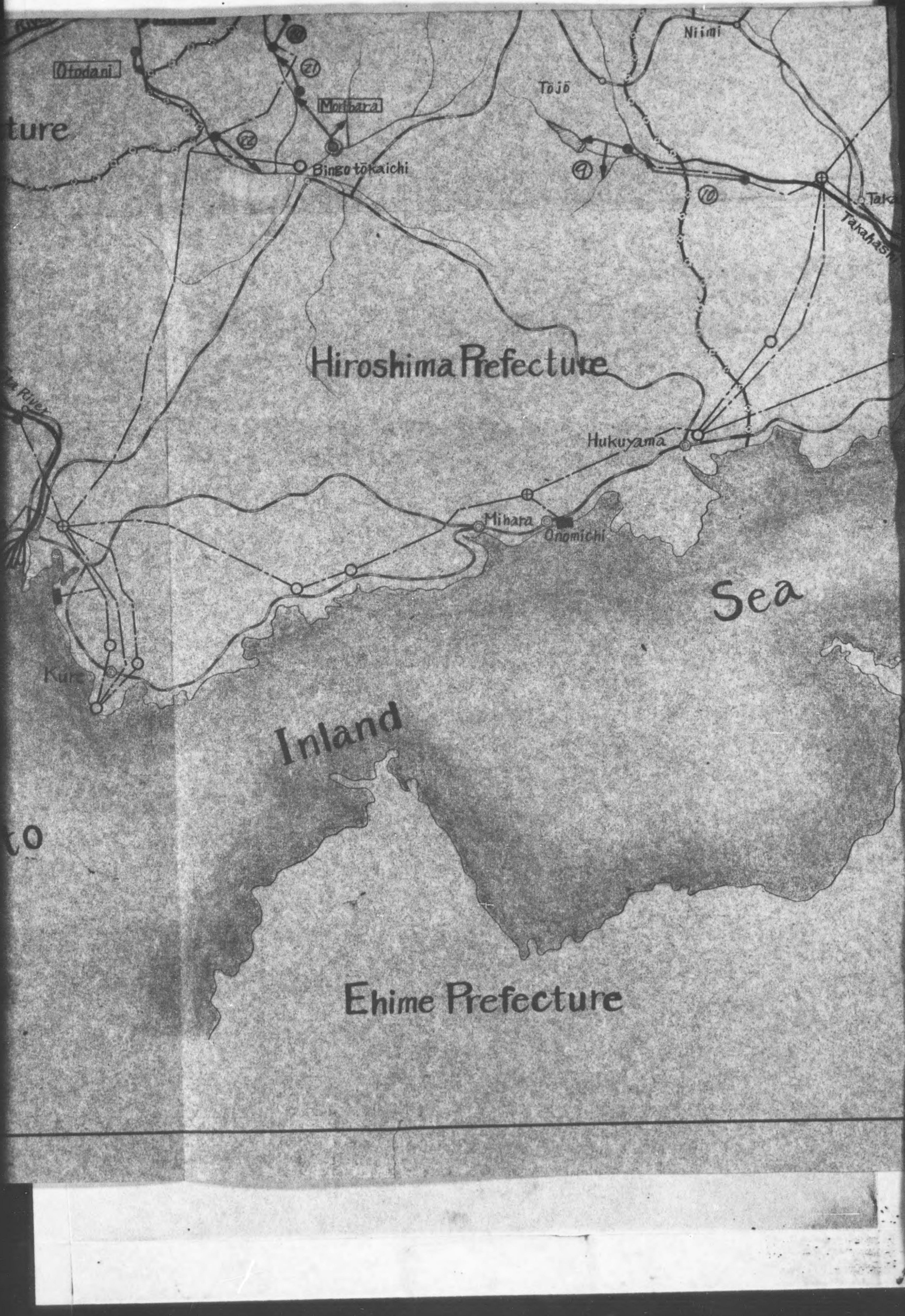
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013

29,000~6,080
9,670~6,000
11,200~4,500
3,000~ 420
2,710~1,200
2,610~ 810
2,870~1,190
1,950~ 670
15,000~2,200
900~ 120
9,700~1,800
248,650 —
91,235

Götsu
Gō
Shimane Prefectu
Masuda
30
Takatsu River
Gorisan No. 1
Shibaki-gawa No. 2
Shibaki-gawa No. 3
Tatsutoka
Ōda Riv
Gorisan No. 2
Hagi
Chōmonkyō
Abu River
Chōmonkyō
Hiroshima
Kuba
Ōze River
Yamaguchi Prefecture
Nishikigawa No. 1
Nishiki River
Nishikigawa No. 2
Iwakuni
Yamaguchi
Ogōri
Bōfu
Tokuyama
Kushigahama
Hikari
Seto

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78018



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78018

Niimi

Tōjō

River

Okayama Prefecture

Takahashi

Takahashi River

Okayama

Kurashiki

Prefecture

Hukuyama

Mihara

Onomichi

Sea

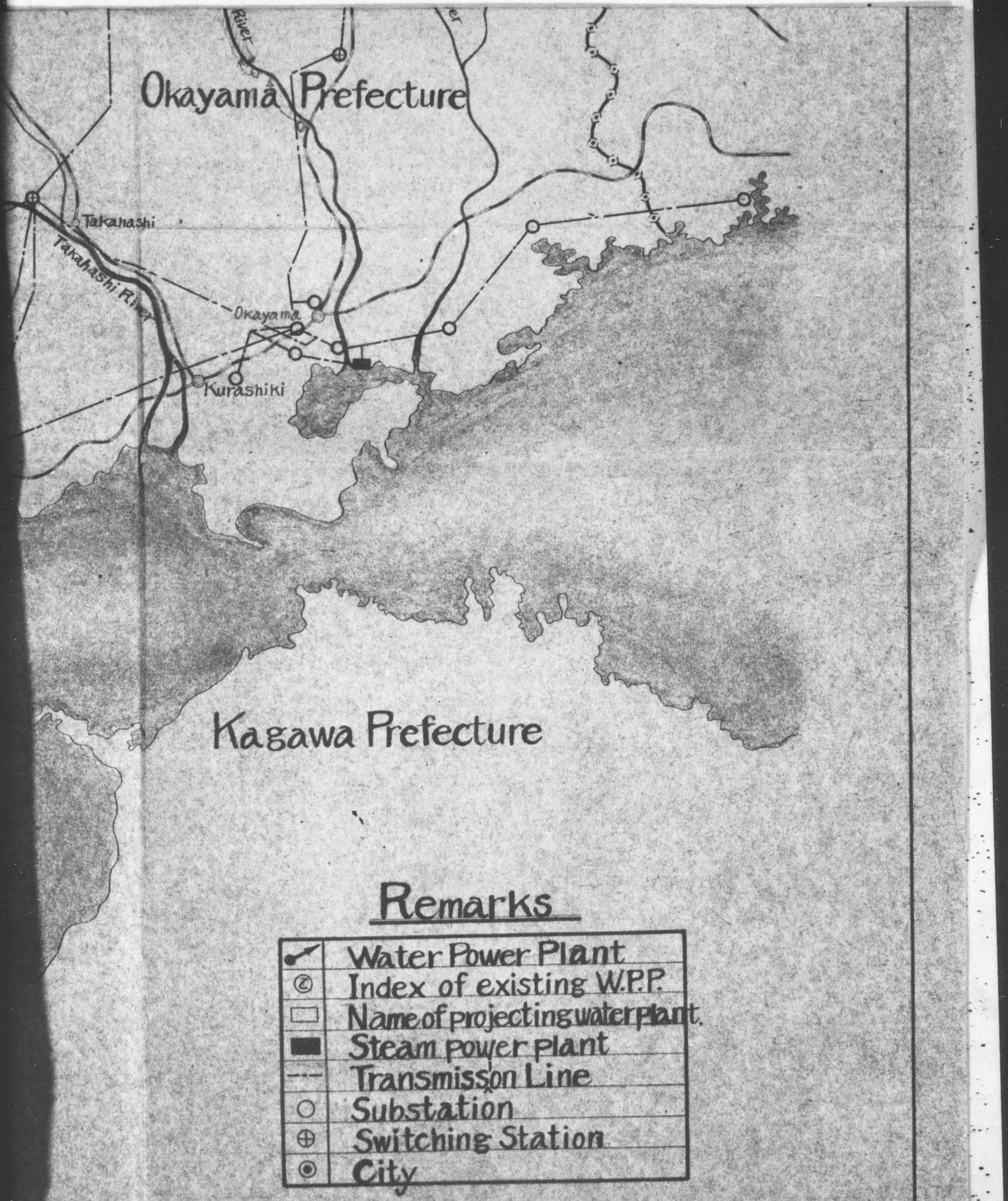
Kagawa Prefecture

efecture

Remarks

	Water Power Plant
ⓒ	Index of existing W.P.
▭	Name of projecting water
■	Steam power plant
---	Transmisson Line
○	Substation
⊕	Switching Station
◉	City

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]



民事部

Hiroshima International Trade & Industry Bureau

Subject : Monthly Report on the Progress of the Construction Works of Water Power Plants in Chugoku Region

To : Chief of Economic Section,
Chugoku Civil Affairs Region

Through : Director, Chugoku Liaison and Coordination Office

Regarding the subject stated above, we have the honour of submitting you as per enclosed sheets.

.....Hara Yutaka.....
~~for~~,
Director, Hiroshima Bureau of International Trade & Industry

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

(A) Public Utility

(1) The Sinyumura Power Plant

(a) Outline of the Project

Location		Shimano Pref.
Enterpriser		Minon Hasegawa K.K.
Type		Waterway
Capacity	Maximum (kw)	8,500
	Firm (kw)	2,150
Annual Generation	(kwh)	53,942,000
Date of Works Started		
Date of Completion		~~1951~~ - 1951
Total Fund	(¥)	

(b) Progress of Works (31, Jan, 1950)

Kinds of works	Amount of works	Works Completed till previous Month	Works done in this Month	Rate of works progress in %	Remarks
Intake (Include Intake-Dam)	1	21 %	0	21	
Tunnel	2,598 m	21	0	21	
Penstock	95.30-2 m	4	0	4	

Firm	(kw)	2,150
Annual Generation	(kwh)	53,942,000
Date of Works Started		
Date of Completion		~~1951~~ 1951
Total Fund	(¥)	

(b) Progress of Works (31, Jan, 1950)

Kinds of works	Amount of works	Works Completed till previous Month	Works done in this Month	Rate of works progress In %	Remarks
Intake (Include Intake-Dam)	1	21 %	0	21	
Tunnel	5,508 m	21	0	21	
Ponstock	95.30-2 m	4	0	4	
Building	394-2	21	0	21	
Water-Turbine	5000kw-2	0	0	0	
Generator	5,000kw-2	0	0	0	
Total				13	

(c) Remarks ; The construction works are being suspended now.
They are getting ready to commence the works again.
The office has been established on Sept. 1. 1949.

DECLASSIFIED E.O. 12065 SECTION 3-402/NND NO.

(B) Private Use

(1) The Kotogawa Power Plant

(a) Outline of the Projects

Location		Yamaguchi Pref.
Enterpriser		Ube Kosan K.K.
Type		Dam
Capacity (Special)	(kw)	4,000
Annual Generation	(kwh)	12,000,000
Effective Capacity of Reservoir	(m³)	17,350,437
Date of the Works started		20 Feb 1949
Date of Completion		31 March 1950
Total Fund	(¥)	91,000,000

(b) Progress of Work (31 Jan 1950)

Kinds of Works	Amount of the works	Works completed till Previous Month	Works done in this month	Rate of works progress in %	Remarks
Power Plant Building	231m2	Works of Floors	Works of Floors & Windows	97	
Penstock	66m	under Laying	under Laying	90	
Water-Turbine	4,200kw-1	under Installation	under Installation	100	
Generator	4,500kw-1	under Installation	under Installation	100	
Transmission Line	14,402 m	1440Z		100	
Total				96	

DECLASSIFIED E.O. 12065 SECTION 3-402/NND NO.

Date of the Works started: 20 Feb 1949

Date of Completion: 31 March 1950

Total Fund (¥): ¥1,000,000

b) Progress of Work (31 Jan 1950)

Kinds of Works	Amount of the works	Works completed till Previous Month	Works done in this month	Rate of works progress in %	Remarks
Power Plant Building	231m2	Works of Floors	Works of Floors & Windows	97	
Penstock	66m	under Laying	under Laying	90	
Water-Turbine	4,200kw-1	under Installation	under Installation	100	
Generator	4,500kw-1	under Installation	under Installation	100	
Transmission Line	14,402 m	14,402		100	
Total				96	

(c) Remarks: The capacity was authorized with 3500 kw and the generation was began from 16 Feb 1950 and therestill remains the works (excavation of tail race) which will be finished about 31 March 1950.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDS NO.

file

DATA FOR ELECTRIC POWER PLANT

(No. 1)

PLANT NO. _____ LOCATION _____

1. NAME OF FIRM _____

   ADDRESS (LOCAL OFFICE) _____

   _____

2. NAME OF PLANT _____

   ADDRESS _____

   _____

3. AUTHORIZED CAPACITY IN KW _____

4. INSTALLED CAPACITY IN KW _____

5. ACTUAL CAPACITY IN KW _____

6. KIND _____

7. PRODUCT _____

8. THERMAL EFFICIENCY _____ CALORIES/KWH _____

9. DATE WHEN LAST OPERATED _____

10. DATE WHEN LAST MAJOR REPAIRS MADE _____

11. FURNISH COMPLETE SET OF BLUEPRINTS: (1) COAL HANDLING SYSTEM. (2) PLAN AT OPERATING FLOOR. (3) TYPICAL CROSS-SECTION OF POWER PLANT. (4) ONE LINE WIRING DIA.GRAM (5) PLAN OF PLANT AREA.

DECLASSIFIED E.O. 12065 SECTION 3-402/NND2 NO. ____

2. NAME OF PLANT

ADDRESS

3. AUTHORIZED CAPACITY IN KW

4. INSTALLED CAPACITY IN KW

5. ACTUAL CAPACITY IN KW

6. KIND

7. PRODUCT

8. THERMAL EFFICIENCY CALORIES/KWH

9. DATE WHEN LAST OPERATED

10. DATE WHEN LAST MAJOR REPAIRS MADE

11. FURNISH COMPLETE SET OF BLUEPRINTS: (1) COAL HANDLING SYSTEM. (2) PLAN AT OPERATING FLOOR. (3) TYPICAL CROSS-SECTION OF POWER PLANT. (4) ONE LINE WIRING DIA.GRAM (5) PLAN OF PLANT AREA.

12. FURNISH COMPLETE SET OF NAME PLATE DRAWINGS OF: (1) MAIN POWER TRANSFORMERS (2) PRIME MOVERS (3) BOILERS (4) GENER ATORS

13. GENERAL

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDC NO.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

1. DIESEL - GASOLINE - SPECIFICATIONS

a. Number diesel-gasoline engine on blueprints for respectively identification.

No.	Engine Cycle	No. of Units	Capacity KW	No. of Cylin.	Bore Mm	Stroke Mm	RPM	Combust System & Head	Date Mfg	Maker
1										
2										
3										
4										
5										
6										

2. REMARKS

3. DIESEL - GASOLINE - HOURS IN SERVICE

Year	Number of Unit					
	1	2	3	4	5	6
Total						

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

4. KWH PER GAL OF FUEL

5. TYPE (VERTICAL, HORIZONTAL, RADIAL, ETC.)

6. STARTING EQUIPMENT

7. TYPE OF FUEL SYSTEM

8. TYPE OF COOLING SYSTEM

9. TYPE OF SCAVENGING

10. TYPE OF GOYERNOR

11. LUBRICATING SYSTEM

12. MISCELLANEOUS

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

(No. 3)

1. RECIPROCATING STEAM ENGINE SPECIFICATIONS

a. Number steam engines respectively on blueprints for identification.

No.	No. of Units	Capacity KW	Press Kg/Cm2	Tomp C	Bore MM	Stroke MM	RPM	Maker	Date Mfg

Remarks

2. STEAM ENGINE HOURS IN SERVICE

Year	No. of Unit		
	1	2	3
Total			

Year	No. of Unit		
	1	2	3
Total			

3. TYPE (Horizontal, Verticol, Etc.)

4. STAGES

5. TYPE OF VAVLA

6. KIND (Uniflow, double-acting, Etc.)

7. TYPE OF GOVERNOR

8. MISCELLANEOUS

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 779013

(No. 4)

1. STEAM TURBINE SPECIFICATIONS

a. Number turbines respectively on blueprints for identification.

Steam Data

No.	Type	No. of Units	Capacity KW	Press Kg/Cm2	Temp C	Back Press Kg/Cm2	RPM	Maker	Year Mfg	Bleed Stages
1										
2										
3										
4										
5										
6										

REMARKS

STEAM TURBINE HOURS IN SERVICE

Year	Number of Unit					
	1	2	3	4	5	6
Total						

(No .5)

1. BOILER SPECIFICATIONS

a. Number boilers respectively on blueprint for identification.

Heating Surface M2

No.	Type	No.of Units	Evap Mt/Rr	Press Kg/Cm2	Temb C	Boiler	Super Heater	Econ	Pre Heater	Com bus	Maker	Year Mfg	Coal Cal Designed	Coal Cal Used
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														

REMARKS

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BOILER HOURS IN SERVICE

Year	Number of Unit									
	1	2	3	4	5	6	7	8	9	10
Total										

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2. COAL HANDLING EQUIPMENT

a. Coal supplied by _____

b. Conveyors and cranes. Number conveyors and cranes respectively on blueprints for identification.

Conveyors

No.	Length M	Capacity MT/Hr	No.	Usage
1				
2				
3				
4				
5				

Cranes

No.	Type	Capacity MT/Hr	No.	Usage
1				
2				
3				
4				
5				

c. List additional important equipment (if any) such as dryers, etc.

d. General condition of coal handling equipment. Estimate time in man hours that it will take to put equipment into first class operating condition.

3. PULVERIZING EQUIPMENT

a. State briefly the number, kind, capacity and conditioen of pulverizing units.

b. How many pulverizers to a boiler? How many exhausters to a boiler? Is the coal mixedoor is it pulverized in separate pulverizers and shot thru different burners.

c. Estimate time in man hours that it will take to put equipment into first class operating condition.

4. ASH DISPOSAL SYSTEM

a. State the means used in disposing of ashes and give size and capacity of equipment used. This includes any steel piping if used.

b. Total capacity of ash disposal system _____ MT/Hr.

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c. General condition of ash disposal system. Estimate time in man hours that it will take to put equipment into first class operating condition.

5. WATER SUPPLY SYSTEM

a. Feed water supply source _____.

(1) Steel reservoirs or tanks. Number and size.

(2) Water treatment plants. Number, type and capacity.

b. Condenser circulating water source _____.

(1) Condenser circulating water cooling surface area.

No. 1 _____M2 No. 2 _____M2 No. 3 _____M2

No. 4 _____M2 No. 5 _____M2 No. 6 _____M2

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1. GENERATOR SPECIFICATIONS

a. Number generators respectively on blueprints for identification.

No.	No. of Units	Capacity KVA	Power Factor	Voltage KV	Freq	RP M	Maker	Year Mfg	EXCITER Volt	EXCITER KW	EXCITER DRIVE
1											
2											
3											
4											
5											
6											

REMARKS

2. SWITCHBOaRD ROOM

a. Panels

No.	Name	Number of Panels	
		Vertical	Bench Bds
1			
2			
3			
4			
5			
6			

No.	Name	Number of Panels	
		Vertical	Bench Bds
7			
8			
9			
10			
11			
12			

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3. SWITCHING EQUIPMENT

a. Transformers

No.	Name	Type	Capacity KVA	High Voltage with Taps	Low Voltage	Connection	Phase & Cycle	Cooling	Maker	Year Mfg
1										
2										
3										
4										
5										
6										
7										

REMARKS

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b. Oil Circuit Breakers

No. of Sets	Voltage	Amp	Type	Operation

c. Air Break Switches

No. of Sets	Voltage	Amp	Operation

d. Disconnecting Switches

No. of Sets	Loe.	Voltage	Amp	Operation

e. Miscellaneous

4. AUXILIARY EQUIPMENT

a. Motors. List motors with same votlage in one group. Then descend by HP rating.

Voltage	HP	No.	Phase	Current	Name	Remarks

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5. MISCELLANEOUS EQUIPMENT

a. Precipitators (No. and Voltage) _____.

b. Battery Charging Equipment (Rectifiers, Motor Generators, etc.)

c. House Generators. If house generator is directly coupled to main turbo-generator unit, or a turbo-generator used cxclusively for auxiliary power, list equipment in Item 18; otherwise list below with complete information as in Item 18. Also state its prime mover.

d. Machine Shop. List main equipment including size and condition of equipment. Is the machine shop used exclusively for power plant maintenance?

e. Blacksmith Shop. Same information as above (d).

f. Laboratory. State briefly what laboratory is equipped for testing.

g. Miscellaneous Shops. List any other shops not under above categories which are connected with plant maintenance.

h. Main Overhead Crane.
Main Hoist._____MT. Aux. Hoist._____MT. Span_____M.
Manual or Motor Operated _____.

i. Transformer Hoist.
Hoist_____MT. Span_____M. Motor or Manual Operated_____

j. List all warehouses in which power plant maintenance supplies are stored.

k. Plant Personnel.
Name _____ Title_____
Name_____ Title_____
Name_____ Title_____
Name_____ Title_____

l. Inspecting Personnel.
Name_____ Title_____
Name_____ Title_____
Name_____ Title_____
Name_____ Title_____
Name_____ Title_____

m. Date Inspected.

_____

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梁高

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DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

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大潮町
原村
出雲
雲根
義能
島
伯耆
日野
西伯
大山
三成町
比和町
高野山
山子幅山
立烏帽子
矢筈ヶ峰
孝霊山
船通山
鍵掛峠
江尾
中原
石見中
内河小下
鳩川
木次
口中
口上
谷ノ西
口田儀
山佐
田反
部布下
宇波
大谷
尾原
内之谷
富繁山頂
谷中下
上中谷
牛頭
上長田
西長田
大河内
竹小下
横久
野賀
長今
金八
中東
名ノ上
杉橋
田池
加間
古城
居城
部三
原宮
口浦
下布施
布施
山城
原石
原内大
原木橋
高麗
奥谷
山王寺
原大
波根
雲山
五反田
横田町
上
川根
仁多
尾高
土野
谷大
川八
川八小
原大
三成
川八大原
木次線
木次
馬木
矢谷
木
原小
谷本
谷尾木
木馬大原
木馬小原
舟通
ヤケ島
峠小
峠大
根坂
山野上
野井三
六ノ
山子幅鳥立
久原
原迫
田尺上
田尺下
野坂
原谷長
内河原
人形峠
木地
木地後
鉢八
根坂
雪仙中
明地
木橋
鍋伊谷
谷井坂
山通船
山際
山国三
山後道
山稲荷
山見
山鹿
山根
原新
山新
細野
原鉢
坂上
原野
原野尾
谷木
原小谷
原野尾
谷白
原小
山見谷
田太
見石上
見石中
見石下
吉三
原小
原大
原谷
原
谷小
谷内
子浪
逼石
千屋
地成
原井
石休
口花
口花下
山見花
(山ケ峰小)
三ノ
口田
厚子
隠馬
原瀬小
水坂
立足
野池
神代
戸本
市
村井
田向
原井
谷川
尾曽
原瀬
原井谷
原小
山王
山丸
上野
日
千畑
吉原
原大
原小
原井
原井谷
原小
原瀬
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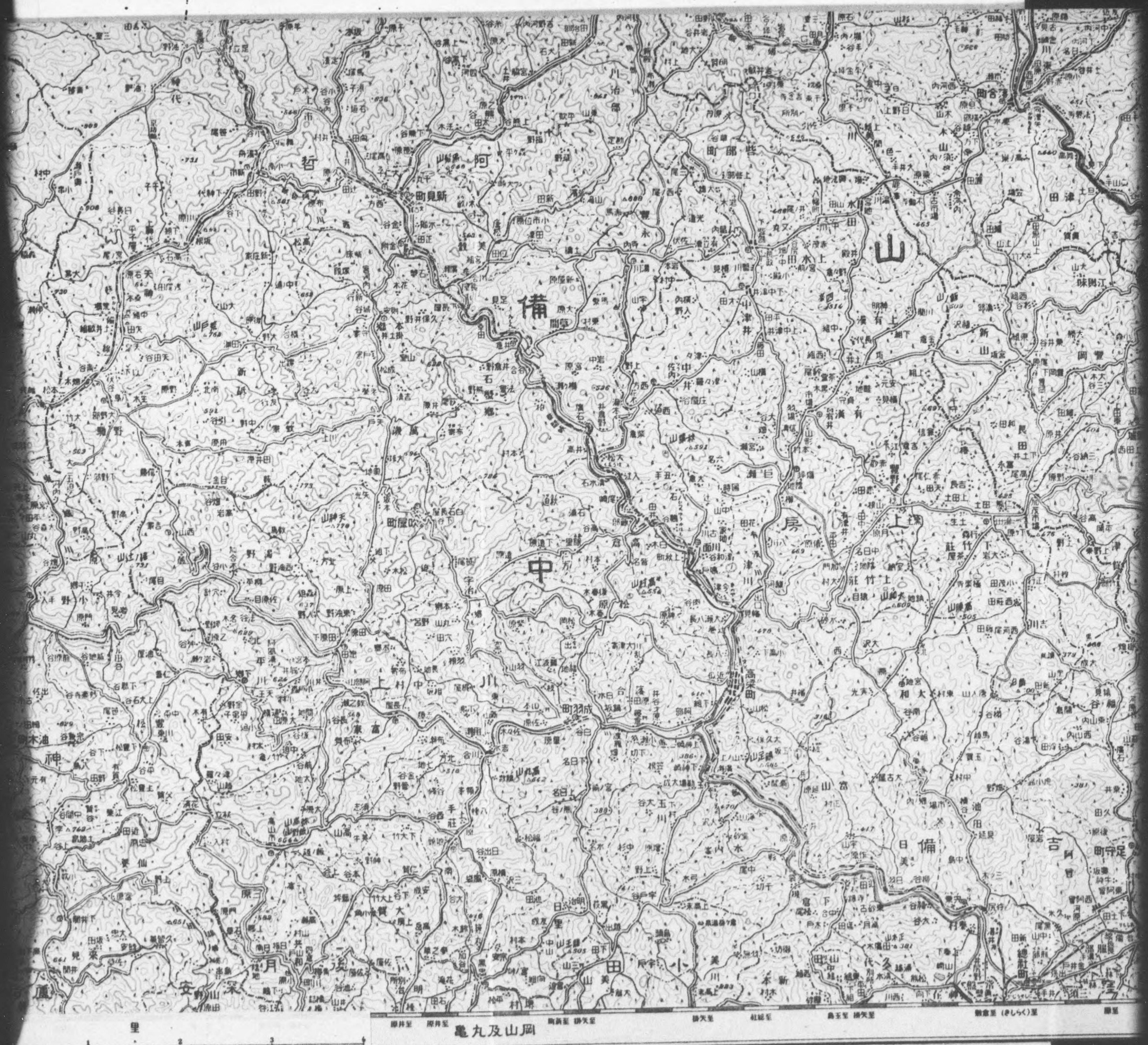

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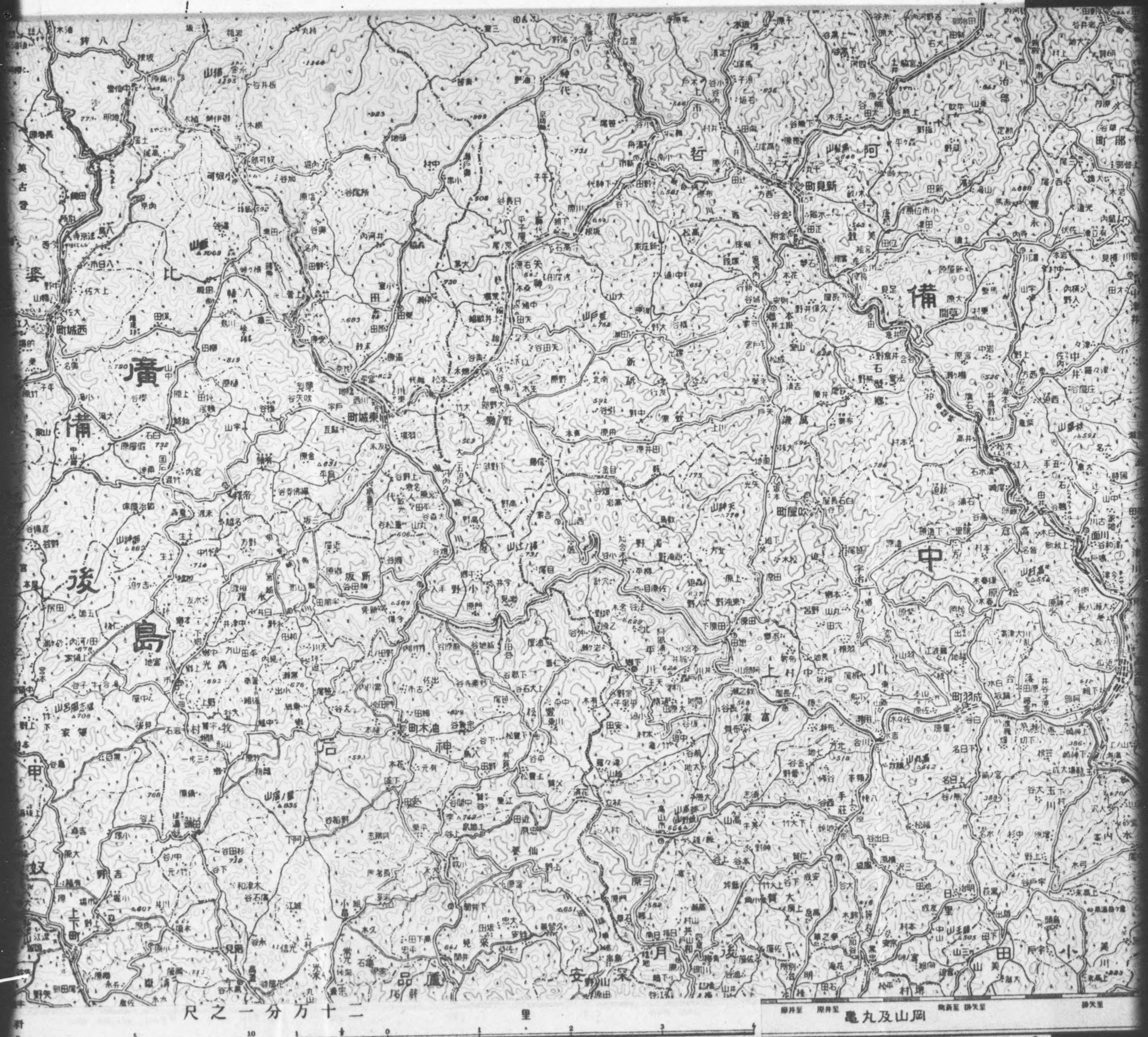

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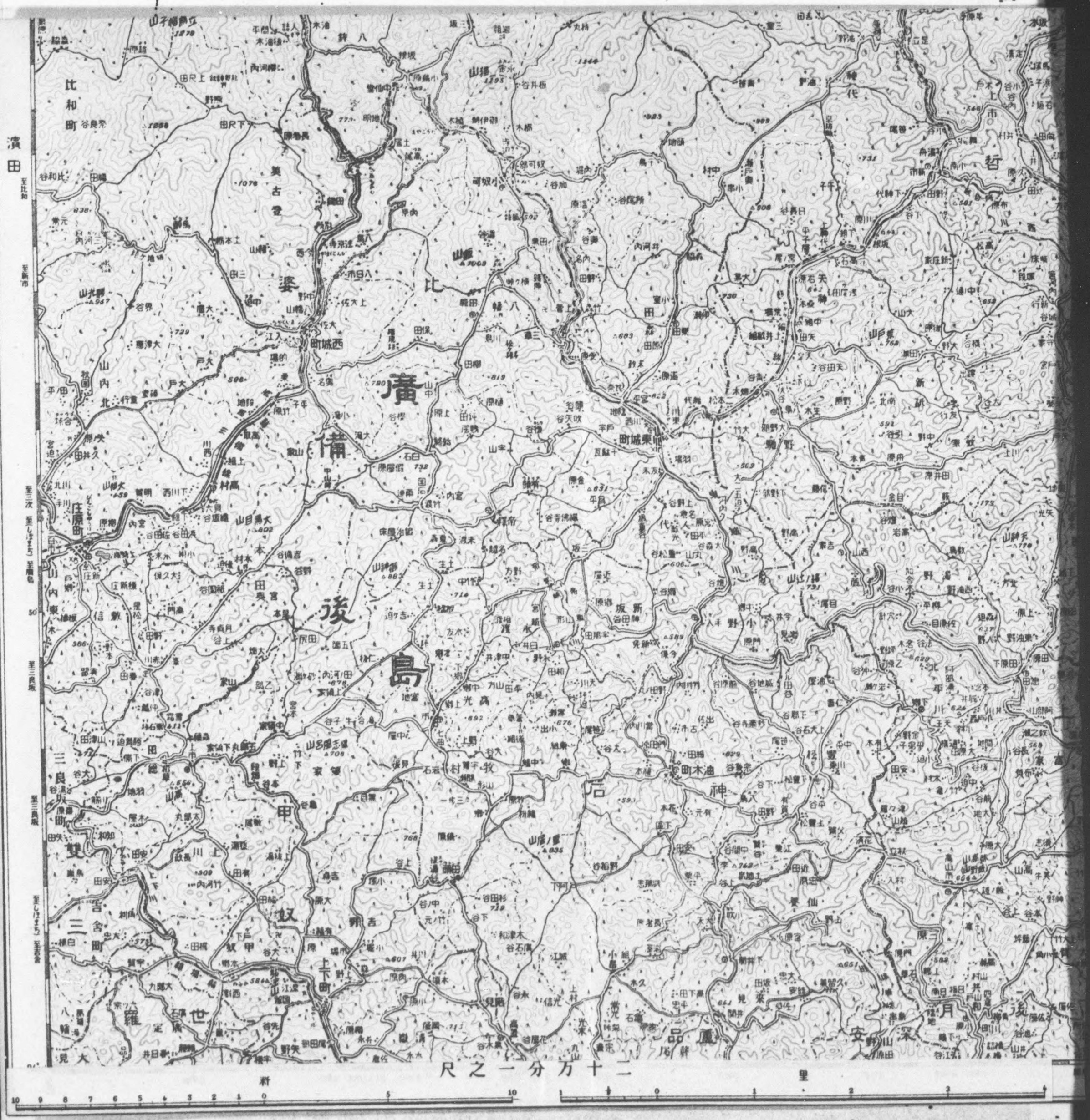
濱田
至比和
至新市
至三次
至しまばら
至三良坂
至吉舎
比和町
美古登
比
婆
西城町
山内北
庄原町
山内東
三良坂
甲
奴可治
上下町
三吉町
雄
世
雄
濱
備
後
島
東城町
神
代
吉
野
安
芸
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原
月
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大
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谷
内
尾
高
新
市
町
木
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川

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DATE	SUBJECT	ISSUING HEADQUARTERS & INDORSEMENTS
-	Process of Synthetic Development of Kando River	The Hiroshima International Trade & Industry Bureau

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

THE HIROSHIMA INTERNATIONAL TRADE & INDUSTRY BUREAU

(Electric Power Division)

Process of Synthetic Development of Kando River

Yukio Hara

~~for~~ Y.HARA,
Director, Hiroshima International
Trade & Industry Bureau.

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I. Geographical aspect of Kando-river

(1) Basin of the river

The basin of Kando-river extends over sourthern part of Iiseki-gun and Hikawa-gun, Shimane Prefecture, forming slender topography north and south covering the area of 480 square kilo meters. Chugoku mountains are running south east with about 1000 meter hight; needle-leaf trees and broad leaved trees flourish all over the basin, and forests and fields are in good shape.

(2) Weather

Average rainfall during past eight years was 1,880 m.m. for down-stream area, 2,110 m.m. for mid-stream area and gradually decreases to 1.950 m.m as it reaches upper course.

(3) Rivers

The main stream of Kando-river unites with Akana-river & Tonhara-river in upper course and flows north east and suddenly changes its course to north at downstream and flows into Japan Sea.

Covering total distance of about 85 Kilo meters, Kando-river flows slowly at upper course among somewhat wide fields; at midstream where the river joins with Tonbara River, the speed of the stream is comparatively rapid and hydraulic power plants be found around here.

II. Necessity of synthetic development

As the birthplace of Izumo civilization, agricultural and minig industry have developed to considerable extent in this area since olden times and traffic facilities by roads and railways between Sanin district & Sanyo district are comparatively good resulting in foundation of Izumo City, one of the largest cities in Sanin District.

Hikawa plain situated around downstream of Hii-river & Kando River covers the area of 30,000 acres and is the largest in the production of grains in Sanin District. Textile & silk industries have also developed to some extent in and around Izumo city.

In order to assure the supply of water during drought Season on one hand, and to meet public demand for flood control on the other, they had formerly established Kando-river-Control-Project in Shimane Prefecture but they hadn't been favoured with any chances to realize it.

Notwithstanding the fact that hydraulic power is roughly estimated to be 25,000 K.W., only 4 power plants (2,190 K.W., in other words about 9%) are developed so far (average ratio developed in Chugoku region is 30%).

Considering from electric power situation in Chugoku Region, synthetic development of Kando River seems particularly essential.

III) Process up to the decision of synthetic development of the River:

Necessity of the synthetic development of the river stated above being recognized by E.S.B., the problem was picked up as a topic for synthetic river development investigation of 1949 fiscal year, and Kando River-synthetic development-investigation-commission consisting of committee stated in attatched sheet was organized. The first meeting was held in Matsue City in August 1949 attended by E.S.B. and committee concerned from central Government, and they formed an arrangement for future activities.

In consequence the plan for investigation of electric generation category is to be established at Hiroshima International Trade & Industry Bureau and at Chugoku-branch office of Nippon Hassoden K.K., inspection on the scene and actual scheme for irrigation are to be planned by Okayama Agricultural Affairs Bureau & Shimane Prefecture respectively.

In order to adjust plans in each division and establish a plan for local itself a commission was held in Matsue City in early part of March 1950 attended by local committee only.

The 2nd conference was held in early part of April 1950 where the problem

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was discussed further by committee together with central government committee concerned and original plan for Synthetic-Kando-river-Development was born as per enclosed sheets.

IIII. Synthetic development plan

Regarding Synthetic development of electric generation plan on Kando-river, we refer you to the statement in enclosed sheet.

V. Effect of synthetic development

a. Effect on electric power generation

(1) Maximum and average out-put of Kando-river Bunsui Power Plant (consists of Sakatani and Ushio power-plants) are 33,600 K.W. and 11,470 K.W. respectively and the plant is capable of maintaining average maximum of 29,400 K.W. during drought season, and the amount actually increasing in annual electric generation quantity is 117,998 M W H.

(2) Annual supplying capacity of hydraulic power in Chugoku Region is 1,594,000 MWH even after completion of Shimyumura, Morihara (both of which are now under construction) and Akazuka where the construction will be commenced during 1950 fiscal year, and the out-put during drought season is 183,000 K.W.; thus this electric generation plan shows about 7.4 % increase in electric Power quantity and about 16% increase in out-put during drought season, and this corresponds to about 8.5 % of 1,405,000 MWH, annual average electric generation quantity (including thermoelectric power) of last five years.

If this quantity were to be produced in place of thermoelectric power, 118,000 tons of Kyushu coal would be saved.

The difficulties in Chugoku Region lies rather in lack of peak out-put than electric power quantity, so peak out-put of 29,400 K W of the power plant means about 42% increase as against maximum out-put of about 70,000 K W (at present) during drought season and is very effective to relieve sudden suspension of electric supply.

b. Effect on agriculture

By means of the dam up-stream, Minimum amount of necessary water for irrigation will be assured even when an extra ordinary drought season should occur, and it will give very good influence upon agriculture.

c. Effect on flood-control

Through the ability of the dam to regulate floods 20% of floods would be reduced at downstream giving very good effect on flood-control.

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Committee Organization

A. officials concerned in central government :

1. experts:
   Mr. Seion Uchiumi
   Mr. Saburo Takahashi
   Mr. Masuji Akiba
   Mr. Masaji Suzuki
   Mr. Yutaka Kubota
   Mr. Toshiichi Hagihara
   Mr. Kanichi Kachi

2. Economic Stabilization Headquarters

   Chief, Development Section, Transportation & Construction Bureau — Mr. Sankichi Okazaki
   staff — Mr. Tadashi Hatakeyama

3. Construction Ministry

   Chief, Water Utilization Section, River Bureau — Mr. Katsumasa Yano
   engineer — Mr, Michio Ito

4. Agriculture & Forestry Ministry

   Chief, Natural Resources Section, Scheme Division, Agricultural Land Bureau — Mr. Shigematsu Ito
   engineer — Mr. Toshimasa Matsuda

5. International Trade & Industry Ministry

   2nd Chief, Development Section, Electric Power Bureau — Mr. [illegible] Yamaoka
   engineer — Mr. Tokiya Watanabe
   engineer — Mr. Masanobu Takahata

6. Nihon Hassoden K. K.

   Chief, Scheme Section, Public Works Division — Mr. Michio Yazaki

B. Local parties concerned

1. Chief, Scheme Division, Chugoku & Shikoku Regional Construction Bureau — Mr. Katsumi Fukaya
2. Chief, Scheme Division, Okayama Agricultural Land Affairs Bureau — Mr. Yoshiyuki Shimokawa
3. Director, Hiroshima International Trade & Industry Bureau — Mr. Yukio Hara
   Chief, Electric Power Division — Mr. Zenji Kojima
   Chief, Facilities Section — Mr.Takaki Nakashima
   Head , Electri Generation Unit — Mr. Takeji Yasuda
4. Nihon Hasso Den K.K.
   Chief, Public Works Division, Chugoku Branch-office — Mr. Masao Kondo
5. Chief, Shimane Branch-office, Chugoku Haiden K.K. — Mr. Mikio Sakurauchi

C. Parties concerned in Shimane Prefecture

1. Governor, Shimane Prefecture — Mr. [illegible]jiro Hara
2. Chief, Shimane Prefectural Council — Mr. Yasuo Kanematsu
3. Chairman, General Affairs Division, Shimane Prefectural Assembly — Mr. Rokujiro Oshima
4. Chairman, Public Works Division — Mr. Kaname Takeuchi
5. Chairman, Agricultural Land Division — Mr. Shoichiro Otani
6. Chairman, Economic Division — Mr. Hideo Nakamura

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7. Chairman , Shimane Prefectural Electric Power Counterplan Committee
Mr. Kyoichi Ihara
8. Chief, General Affairs Division, Shimane Prefecture
Mr. Hideo Kaneko
9. Chief, Economic Division, " Mr. Kiyokazu Okubo
10. Chief, Public Works,Division, " Mr. Hiroo Arima
11. Chief, Agricultural Land Division, " Mr. Shiichi Kodama
12. Chairman, Town & Village Assembly, Higawa-gun, Shimane Prefecture
Mr. Sonosuke Kisa
13. " " , Hanseki-gun, Shimane Prefecture
Mr. Koichi Katsube
14. " " , Yuchi-gun, Shimane Prefecture
Mr. Junnosuke Suhama
15. Chief, Kando-river Industry Development Asaociation
Mr. Shigeki Moriyama

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013

Kando-river Synthetic Development Committee

April 1950

Subject : Kando-river Synthetic Development Electric Generation Project

1. General outline

1. The Kando-river is to be shut off by this plan at Aza Kawahira Shishi-mura Iishikigun, Shimane Prefecture, by an embankment of 70 meters high, constructing Kurushima Reservoir capable of holding 43,300,000 cubic meters of effective water which is afterwards allowed to flow into the basin of Go-river, and Sakatani Power Plant will be constructed by on its course at aza Hoseki Oaza Sakatani Sawatanimura, Yuchigun, Shimane Prefecture, where maximum amount of 13,600 K.W. is to be generated and the water discharged here is led into Ushio Power Plant at Aza Ushio Togayukimura Yuchigun, Shimane Prefecture. After generating 20,000 K.W. (maximum) of electric power here, it is led into the pondage at Akazuka Power-plant.

2. Water for agricultural use around downstream of Kando-river may be badly effected by the plan, but necessary amount of water will be assured by the discharge of water from the reservior.

3. As the result of the plan, four power plants namely Kurushima, Tonbara, Kubota and Otodachi owned by Chuhai Electric K.K. will be either submerged under water or be effected by less water supply resulting some decrease in the generation of electric power. On the contrary, the amount of electric power will increase at Akazuka Power Plant which is to be built somewhere downstream ending in the generation of 117,998,000 K.W.H. in the balance and at the same time water for irrigation will be assured, floods will be controled to the possible extent.

11. General plan of Sakatani plant

1. Rivers to be utilized
Kando-river (water is to be taken from. position : Aza Ushiroyamaruyama, Kurushimamura Iishigun, Shimane Prefecture)
Go-river via Ushio Power Plant (Water is to be discharged into. position :Oaza Sakatani Sakatanimura Yuchigun Shimane Prefecture)

2. Area of the basin : 151 square kilo meters

3. On Kando-river
Kando-river takes its rise in Chugoku Mountains and flows northward into Japan Sea passing through Akana Valley uniting on the way with Oda-river, Tonhara-river, and Hase River, and is one of the largest rivers in Sanin District. Forests flourish around the basin ; cultivated lands are found here and there. About 500 meters up-stream from the dam and 300 meters downstream, the river flows along a gorge with rocks exposed on the river-bed.
Rocky strata are mainly composed of granite everywhere along the rivers.
Average inclination of the river-bed about 7,000 meters' distance upstream from the dam to about 5,000 meters' distance downstream is about 1/110.

4. The reservior

(1). Dam
Type : concrete gravity overflow dam with movable gate,

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Hight: 7,000 meters(on rocky foundation)

crest Length: 22,020 meters

Volume: 222,800 cubic meters

Movable ~~door~~ gate: 5 ~~center~~ tainter-gates(380 meters high, 400 meters wide)

(2) Reservior

total ~~volume of water~~ capacity: 47,000,000 cubic meters
available ~~volum of water~~ capacity: 43,300,000 " "
available depth : 35 meters
area of water on the surface when filled : 2,670,000 square meters

On operation of the reservior:
Natural ~~discharge~~ discharge of river is regulated seasonably at the reservior in accordance with daily ~~changes~~ load.

(3) Materials to be submerged under reservior

forest	about	409 acres
paddy field	"	149 "
farm	"	15 "
houses		78
school		2 buildings
Prefectural road	about	7 kilo meters
Village road	"	3 " "

(4) Amount of water to be used

Maximum	1,500	cubic meters per second
ordinary	540	" " " "

(5) Effective head

Maximum	11,326	meters
ordinary	10,847	"

(6) ~~Outoric~~ putration

Maximum	13,600	Kilo wat.
Ordinary	4,490	"

(7) Construction expenditure

¥ 1,821,000,000 yen

(8) Others

1. elongation of water warye
about 4,133 meters (Pressure tunnel)

2. transportation of materials is not so difficult as a prefectural road is running from Hamahara Station on Sanko line and Susa Station, Izumo Railway Co., to the reservior.

Necessary Materials

Cement	68,000	tons
iron materials	4,040	"
timber	80,000	koku

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III. General plan of Ushio ~~plant~~

(1) Rivers and location

Kando-river via Sakatani Power Plant
(water is to be taken from)
~~Go~~-river (water is to be discharged into.

position : at the outlet of discharging water at Sakatani Power Plant , Oaza Sakatani Sawatani-mura, Yuchi-gun, Shimane Prefecture.

(2) Area of basin
151.0 square kilo meter

(3) On ~~Go~~-river
Explanation on this will be omitted as the water discharged at Sakatani Power Plant is taken directly for use by the plan.

(4) amount of water to be used

maximum	15.00	cubic meter per second
ordinary	5.40	" " " "

(5) Effective ~~head~~

maximum	163.90	meter
ordinary	166.50	"

(6) ~~Quatrie~~ ~~putration~~

maximum	20,000	kilo wat
ordinary	6,980	"

(7) Construction Expenditure
¥ 673,000,000

(8) Others
1. ~~elongation of water sway~~
about 7,438 meters

2. Necessary Materials

Cement	8,800	tons	Koku: ~~a timber having an area of about 30 square centimeters and about 3 meters length.~~ 0.28 cubic meters
iron materials	1,750	"	
timber	40,000	Koku	

IIII. Synthetic effect of electric generation plan and others

(1) Relations between annual generation and construction expenditure

Location	Increase & decrease of electric power(K.W.H.)		Expenditure (¥)	Expenditure per K.W.H.
Sakatani	46,250,000		¥1,821,000,000	
Ushio	71,180,000		¥ 673,000,000	
Akizuka	5,640,000		0	
Kubota	1,488,800	(decrease)	0	
Otsudate	3,583,300	(")	0	
	117,998,000		¥2,494,000,000	¥ 21.12

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In addition to the list there are Kinjaima and Tonbara Power plants the purchasing prices of which is included in construction expenditure.

Remark :

Annual electric generation shown here is annual average of five years covering the term from 1943 to 1947.

From past 30 years' actual result, let's take 1924 (very dry year. 4th of its kind) as a standard. Suppose 4,700,000 cubic meters of water be discharged for irrigation annual electric generation would be 116,162,500 KWH and construction expenditure per unit would be ¥21.42 KWH.

(2) Necessary materials

Power station	cement (ton)	iron material (ton)	timber (koku)
Sakatani	68,000	4,040	80,000
Ushio	8,800	1,750	40,000
total	76,800	5,790	120,000

Power station	employees	wages
Sakatani	1,600,000	¥487,000,000
Ushio	260,000	¥ 77,000,000
total	1,860,000	¥564,000,000

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63p 1-16-G 21 Apr. 1950

Synopsis of Construction of

Hatasato Power Plant.

D

Tottori Prefecture.

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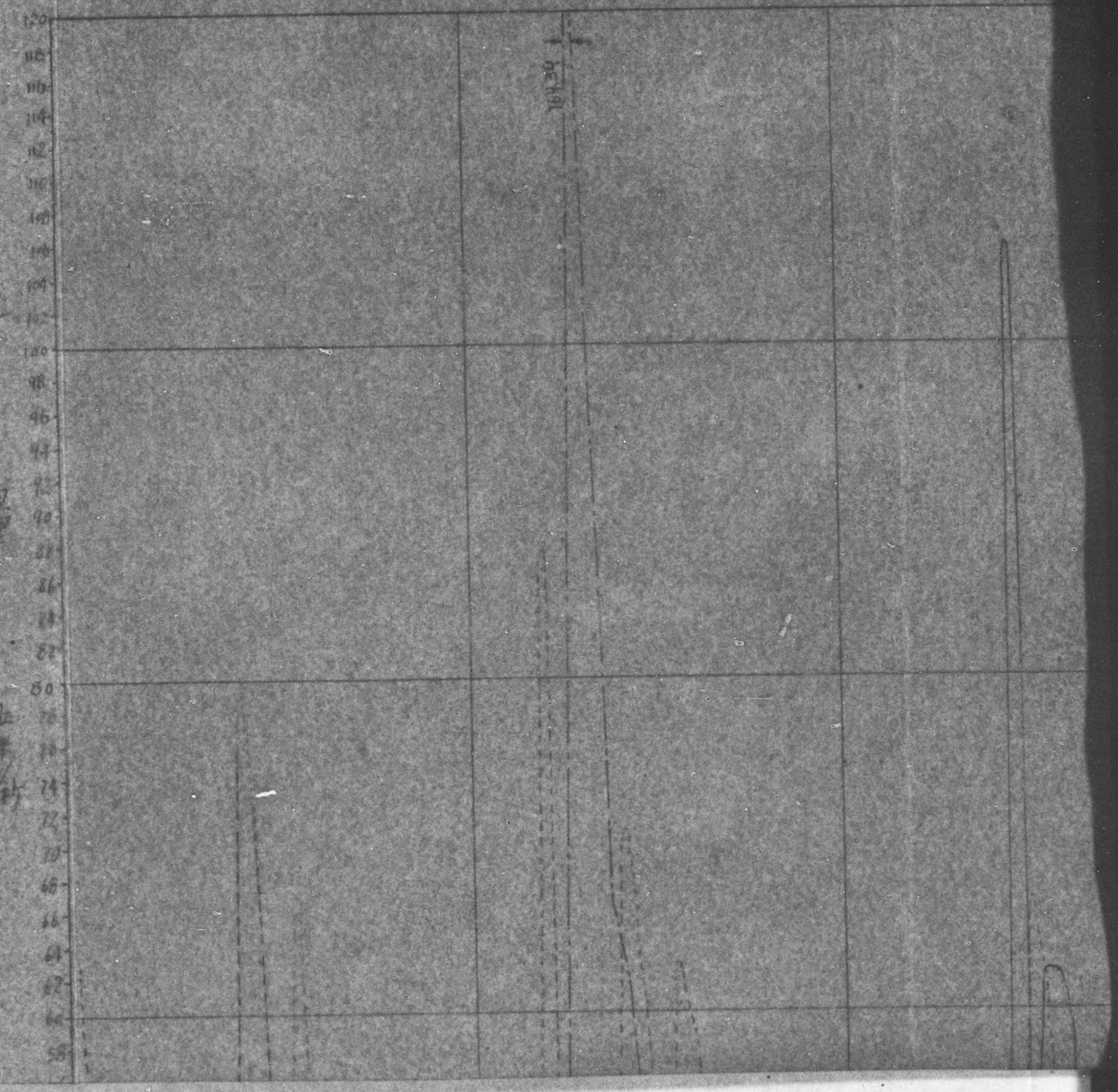
流量圖

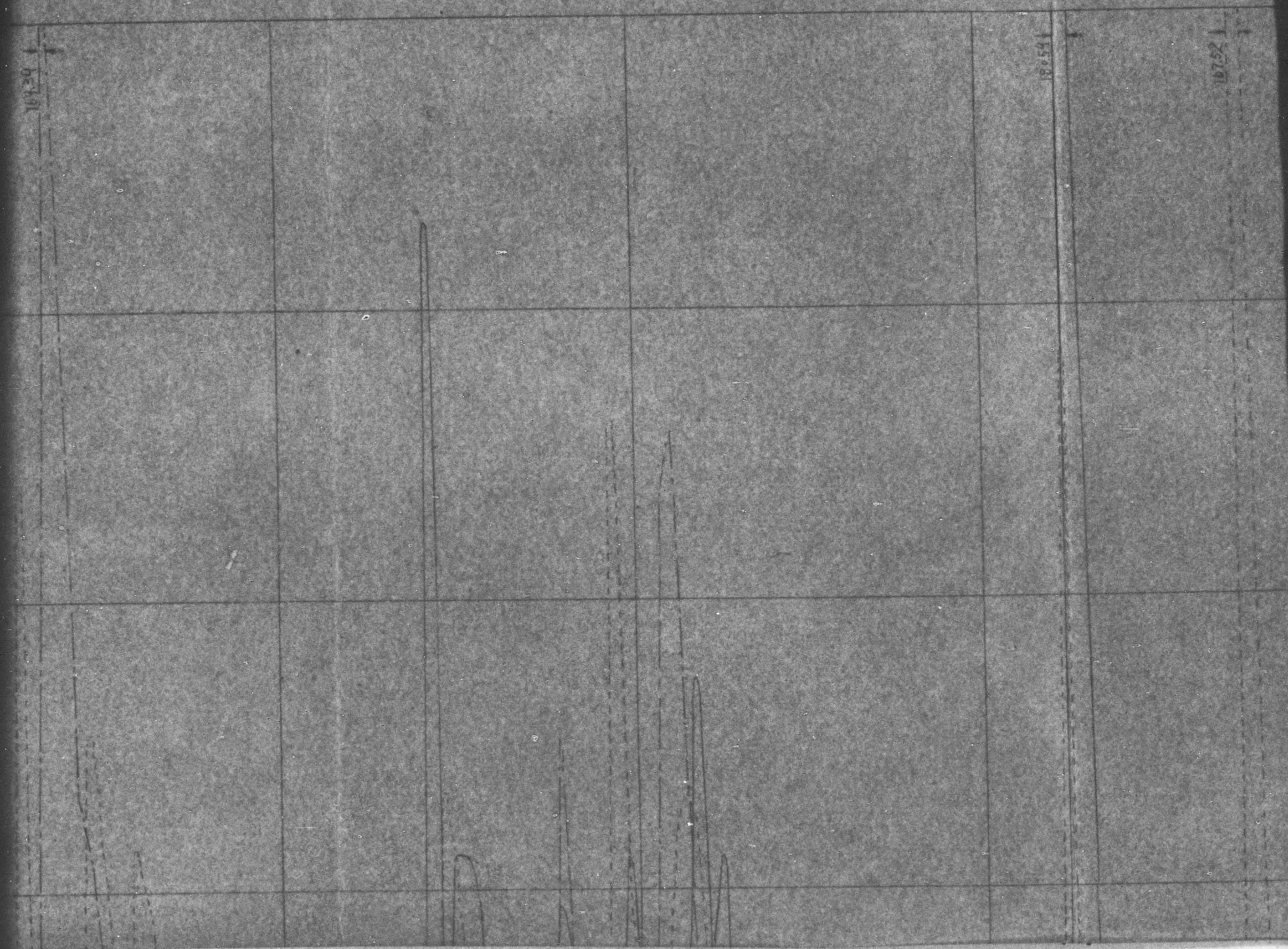
日野川水系日野川

鳥取縣西伯郡

測水期間 自大正十三年



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

Hino River D
by Measurment o
Saïtaku Dist
Measuring Ferry

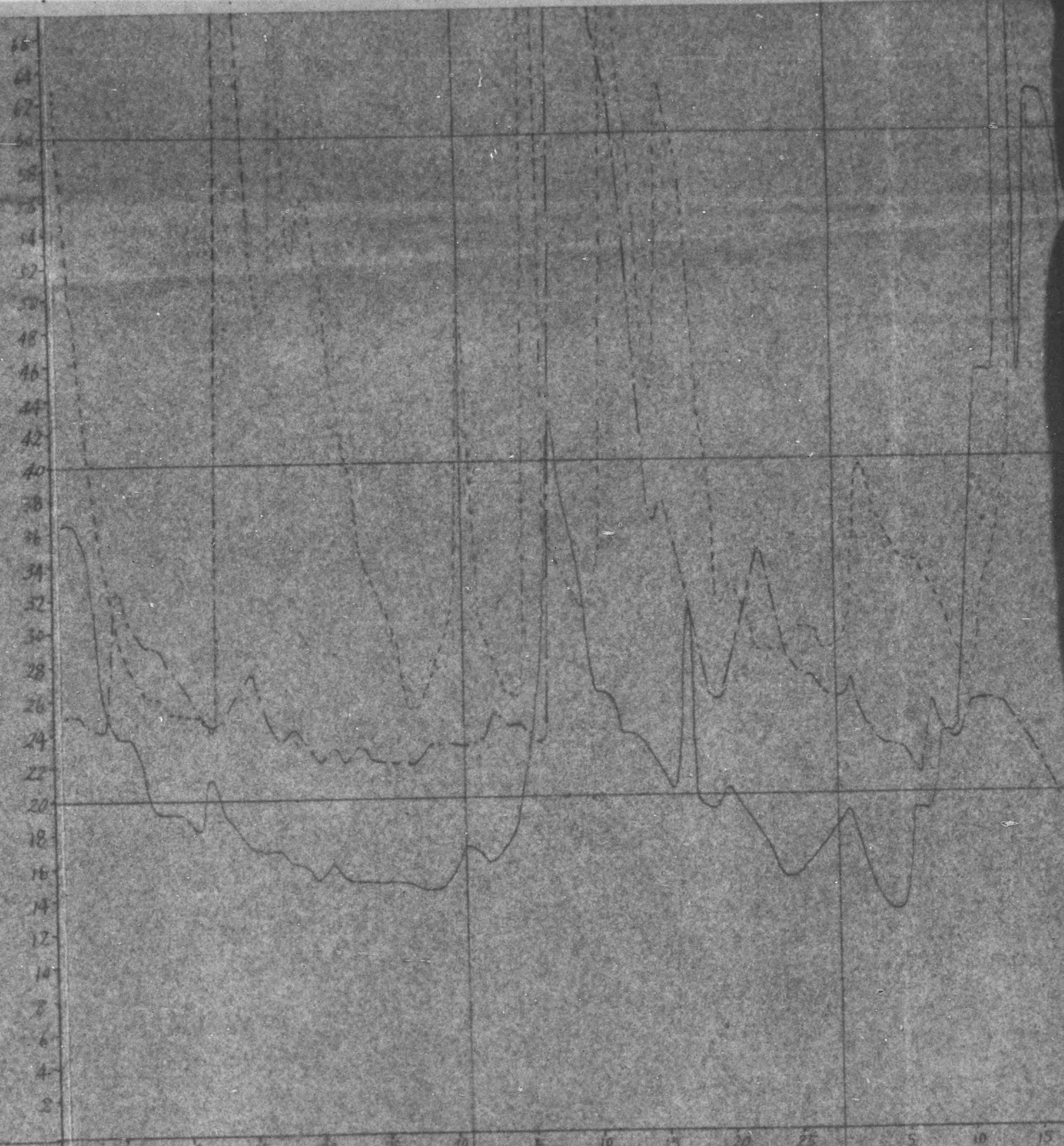
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

Hino River Discharge Diagram
by Measurment of Discharge on the Hatsuto Village
Saïtaku District Prefecture
Measuring Term from 1924 to 1926

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

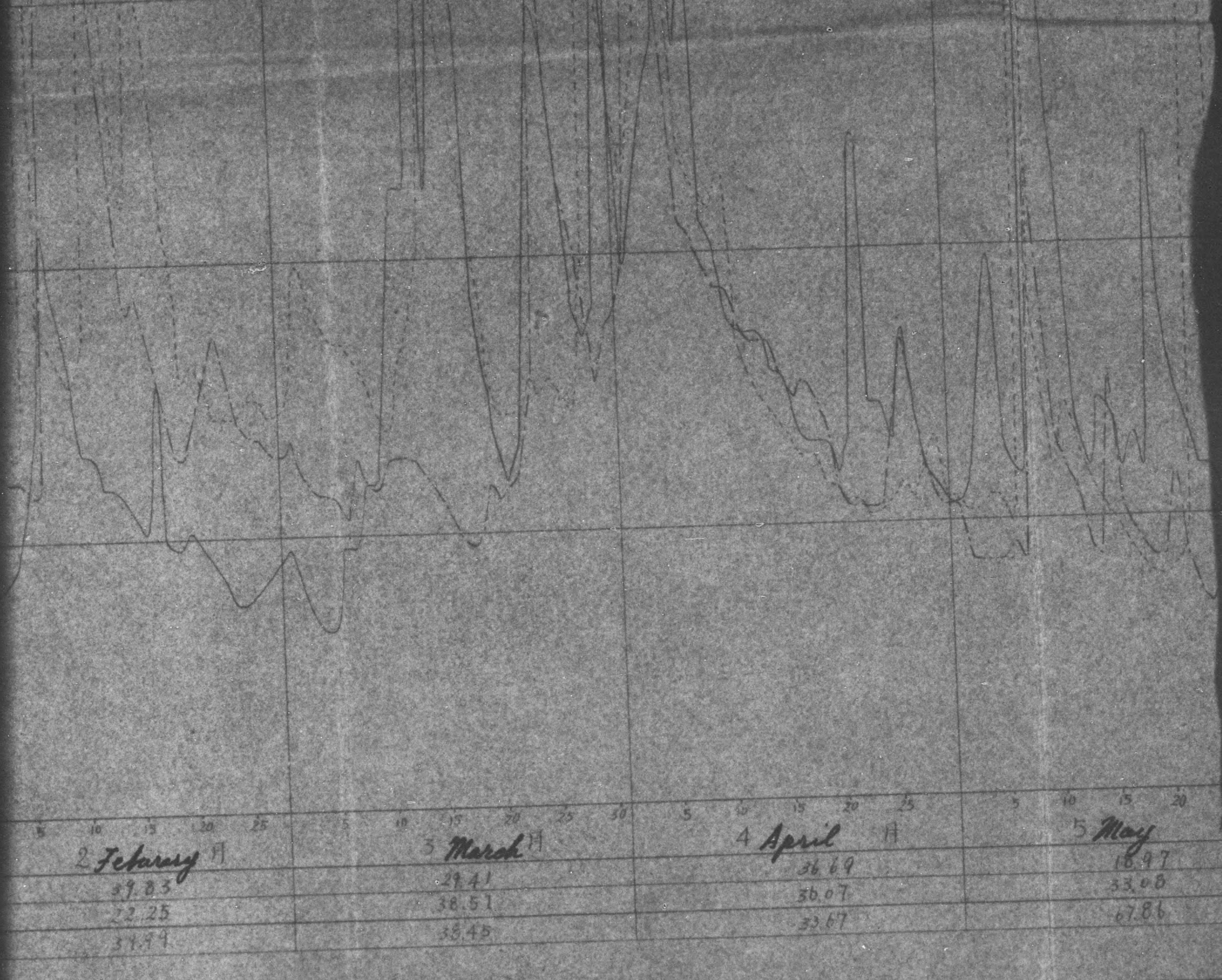
郡幡鄉大字小野 小野測水所

大正十三年壹月壹日 至昭和四年拾貳月參拾壹日



月別	1 January 月	2 Feburary 月	3 Ma
大正13年月平均流量	24.78	39.83	29.4
大正14年月平均流量	19.37	22.25	38.5
大正15年月平均流量	40.07	39.99	38.4

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [redacted]



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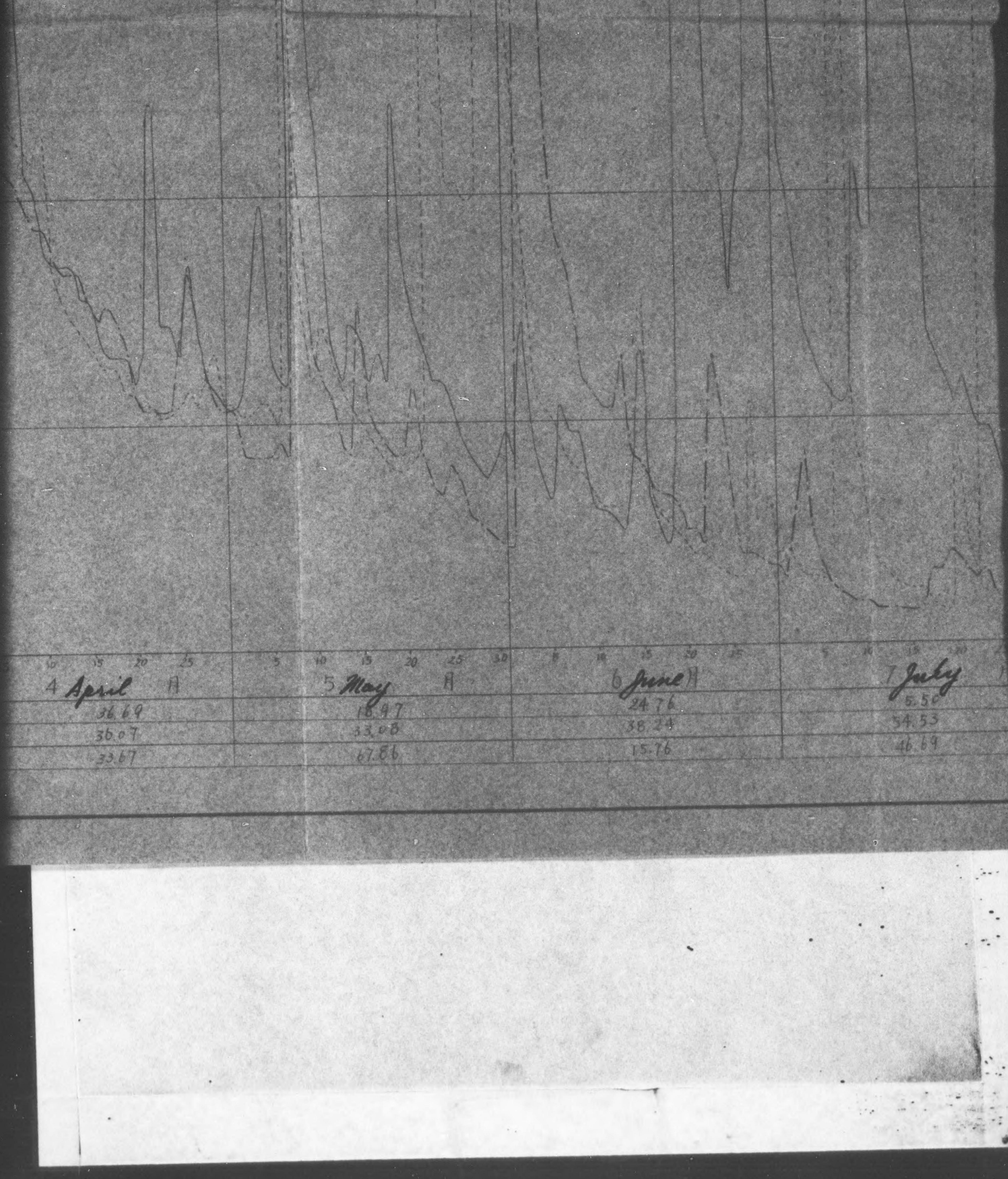

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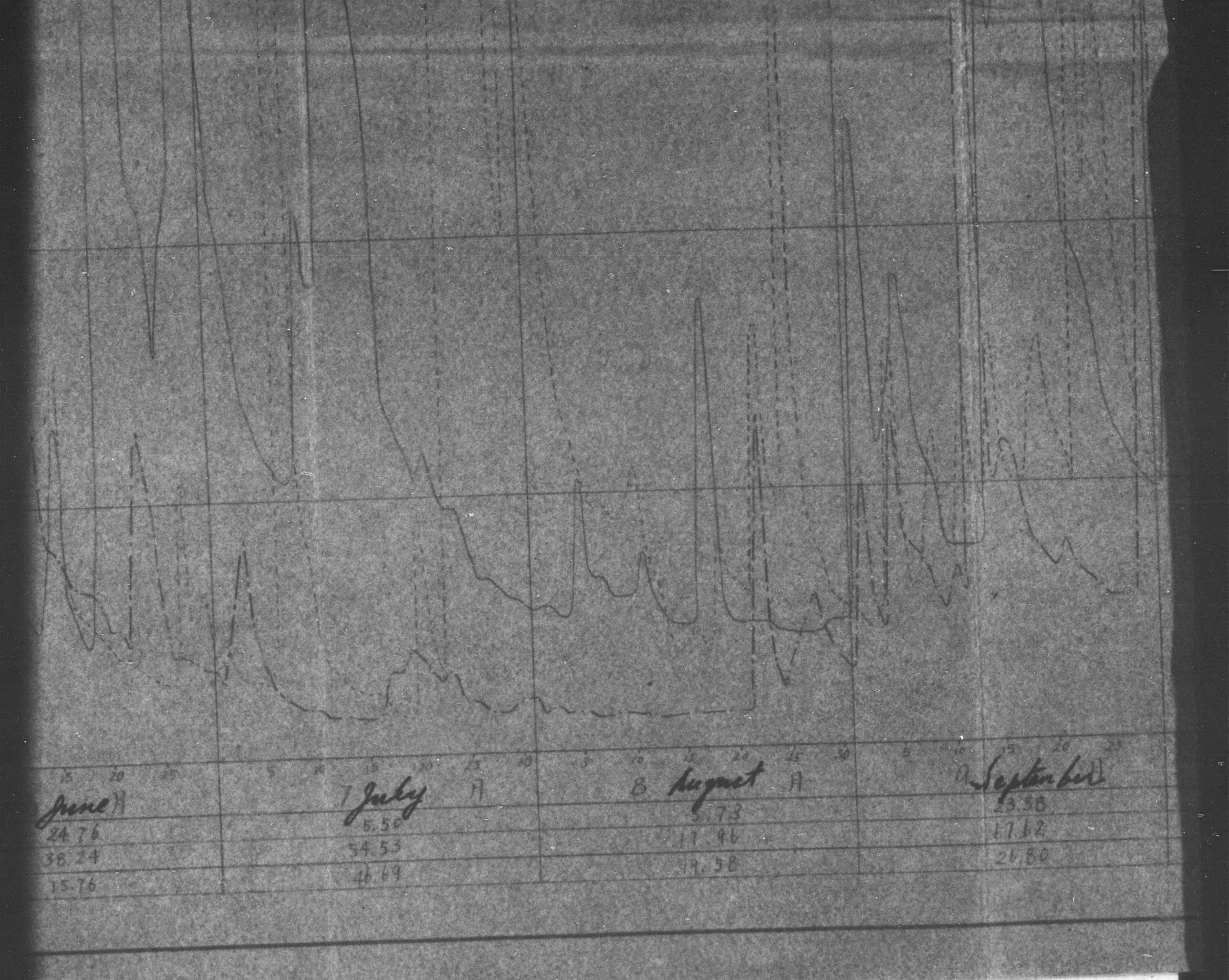
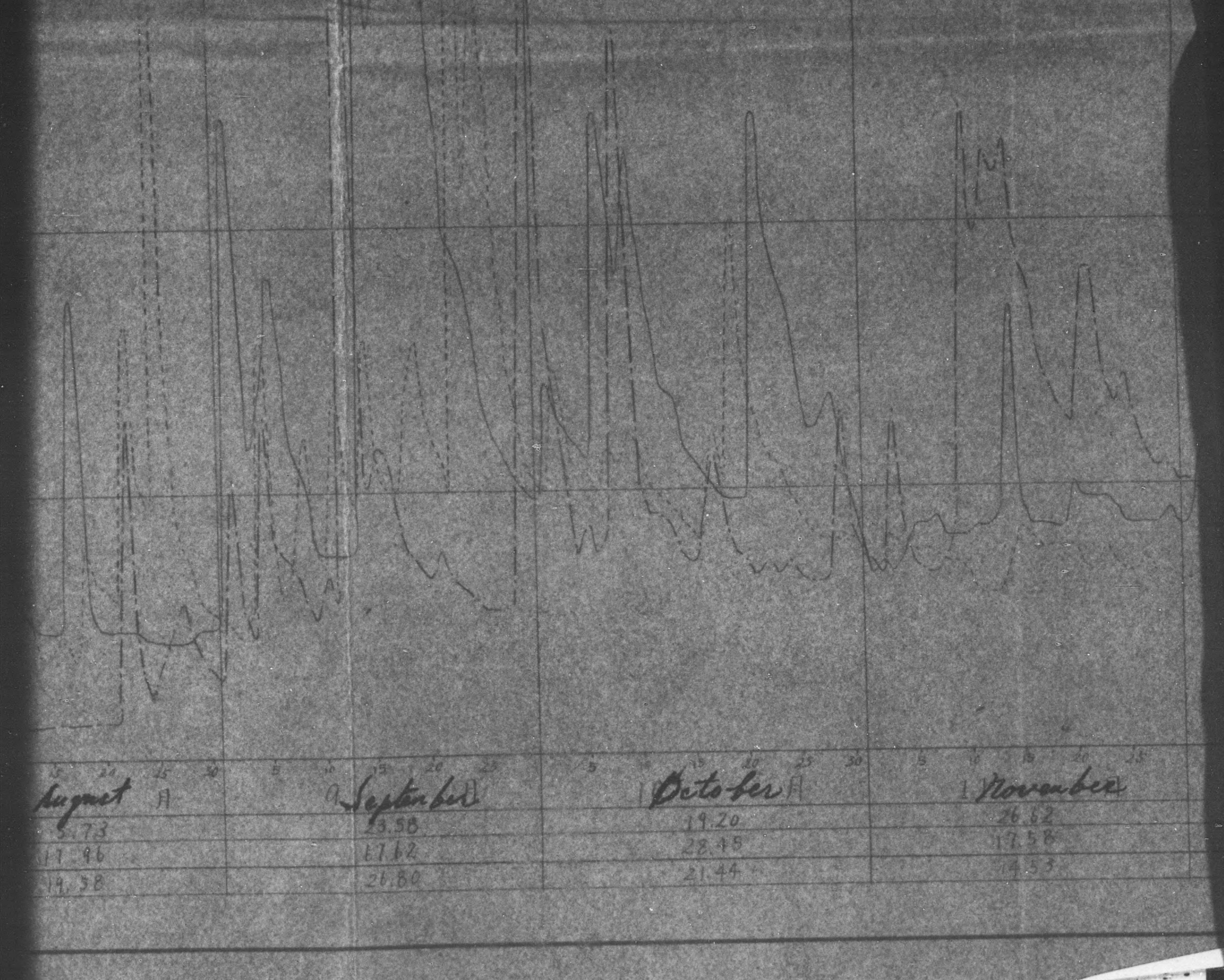
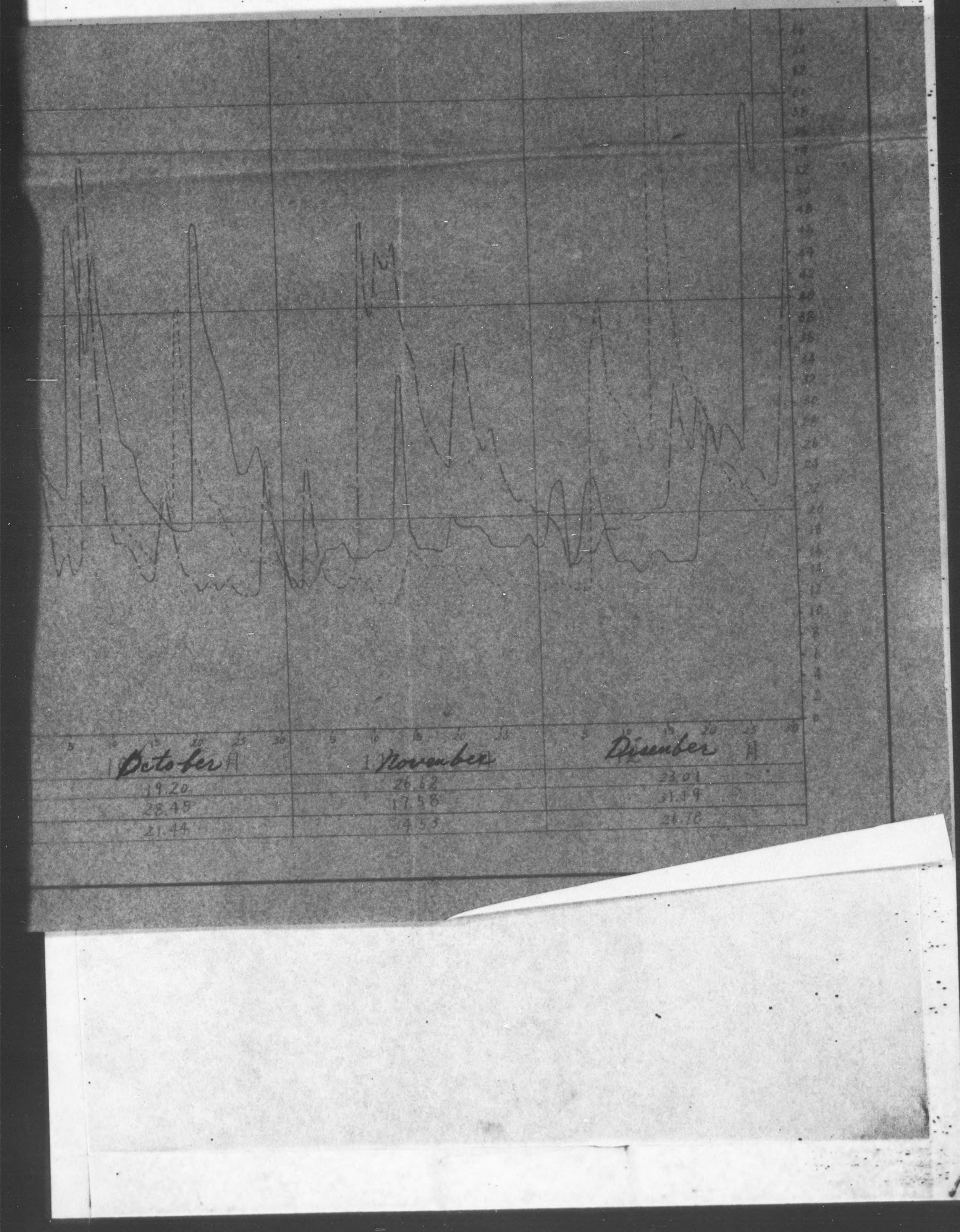


DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]



August	September	October	November
5.73	23.58	19.20	26.62
11.96	17.62	28.45	17.58
19.58	26.80	21.44	14.53

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 780013



October	November	December
19.20	26.62	23.01
28.45	17.58	31.39
21.44	14.53	21.78

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

幡郷発電所北提並水路断面図

縮尺壱百分之壱

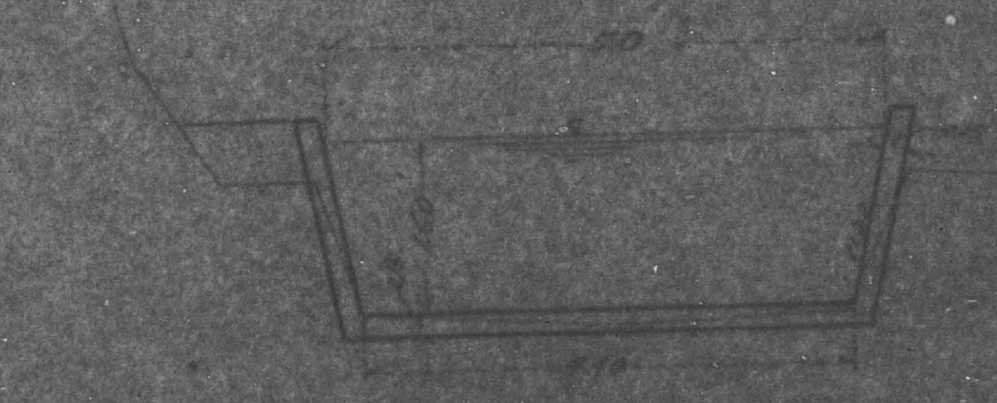
Scale 1/100

北提断面図

Section of Drawn Water Dam

水路定規図

Section of Water Course



計算

$A = (4.4 \times 2 + 1.6 \times 0.4) \times \frac{1}{2} \times 1.6 = 7.552$

$P = 6.4 + 1.0125 \times 1.6 \times 2$

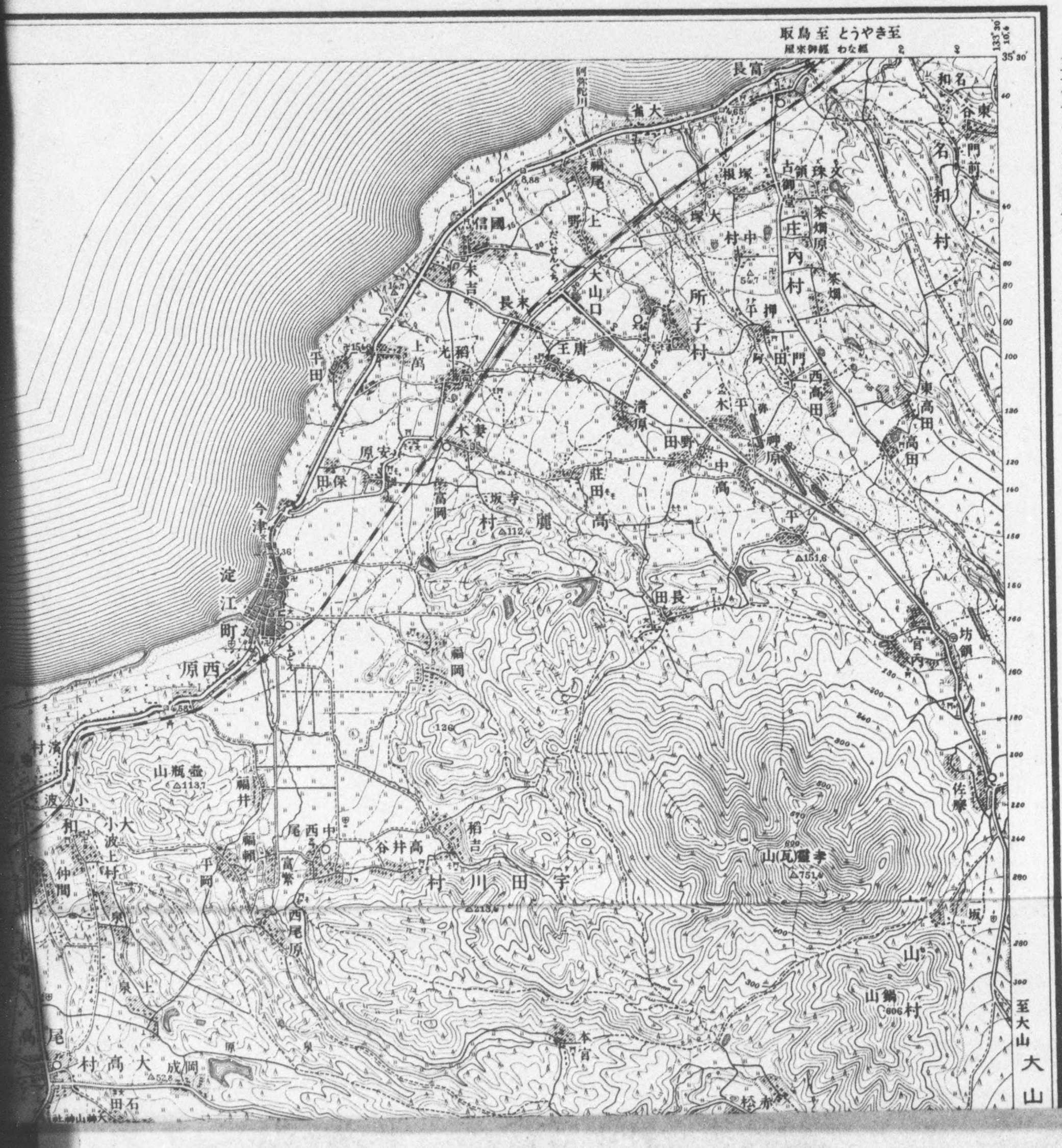
$R = \frac{A}{P} = 0.985$

$V = \frac{1.984 \times 0.985}{\sqrt{0.985} + 0.418} = 1.387$

$Q = 7.55 \times 1.39 = 10.5 \, m^3/s$

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

鳥取縣　伯耆國　米子市
西伯郡
日野郡
島根縣　出雲國　能義郡



五万分一地形圖松江十二號(共八面)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 178013

子米

ゴ　ナヨ

関保美

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

赤崎
大山
湯本

米子

ヨナゴ

美保関

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

境	關保美	碕赤
江松		山大
田横	雨根	本湯

明治三十二年測圖及昭和九年測圖之縮圖昭和九年第二回修正測圖及修正測圖之縮圖同二十三年資料修正(行政區劃)

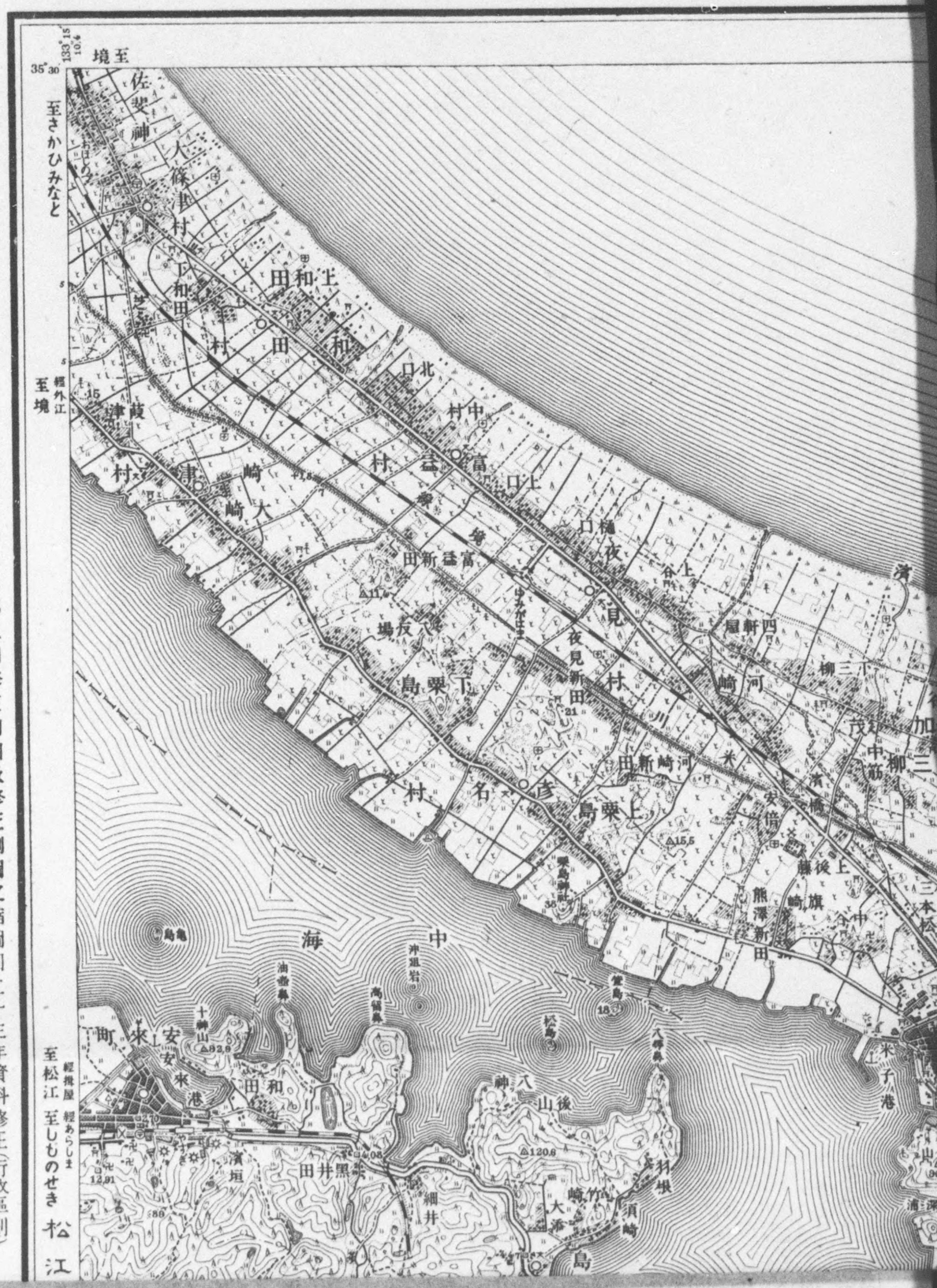
號記

神社 祠
佛寺 宇
西教會堂 十
內國公署 ⑤
外國公署 ⑥
道廳府縣廳 ⓛ
支廳島廳及郡役所 ○
市役所及町村役區役場所 ◎
學校 文
病院 ⊕
避病院及隔離病舍 ⊕
警察署 X
稅務監督局及稅務署 ◇
刑務所 X
控訴院及裁判所 ⚖
林區署 ✳
營林署 ⊗
專賣局及全支局製造所 ◈
稅關 ⊤
郵便局及電信電話局 〒
郵便局 〒
電信局 ⌐
電話局 ⌣
測候所 ⌜
製造所 ⚙
發電所 ⚙
國道 ═══
府縣道 ═══

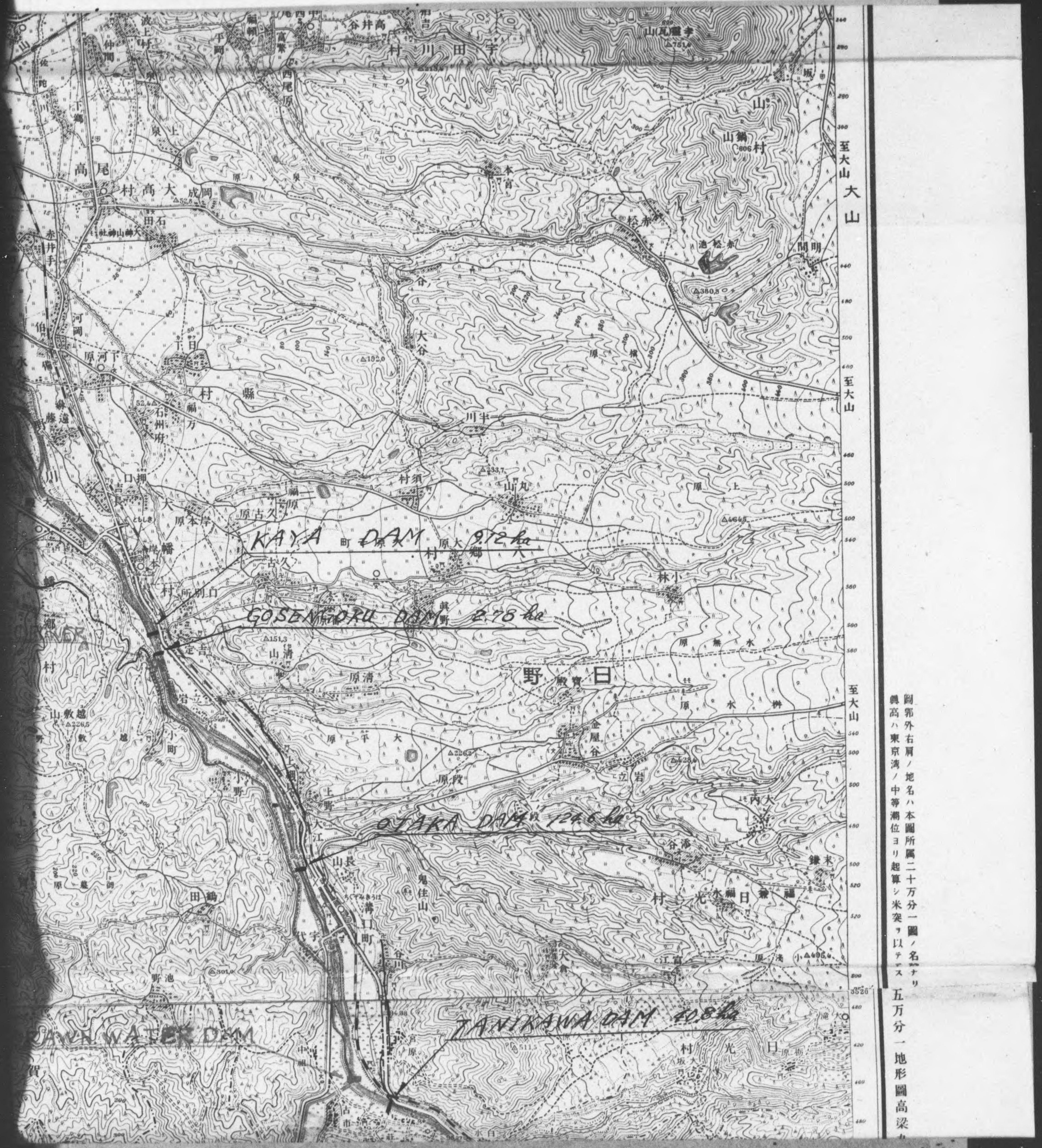
銀行 ⊠
水車房 ⌂
土坑 工場
牆 ┌┐
柵 ┌┐
土圍 ┌┐
水濠 ┌┐
墓地 ┌┐
鳥居 ⌒
燈籠 ◇
記念碑 ▯
立像 ♀
立標 ⊥
石段 ≡
起重機 ⌐
突烟 ▯
獨立樹 ♀ 針葉樹 闊葉樹

海面ヨリノ高サ
三角點 △97.1
水準點 ⊡345.27
獨立標高點 ·32.5

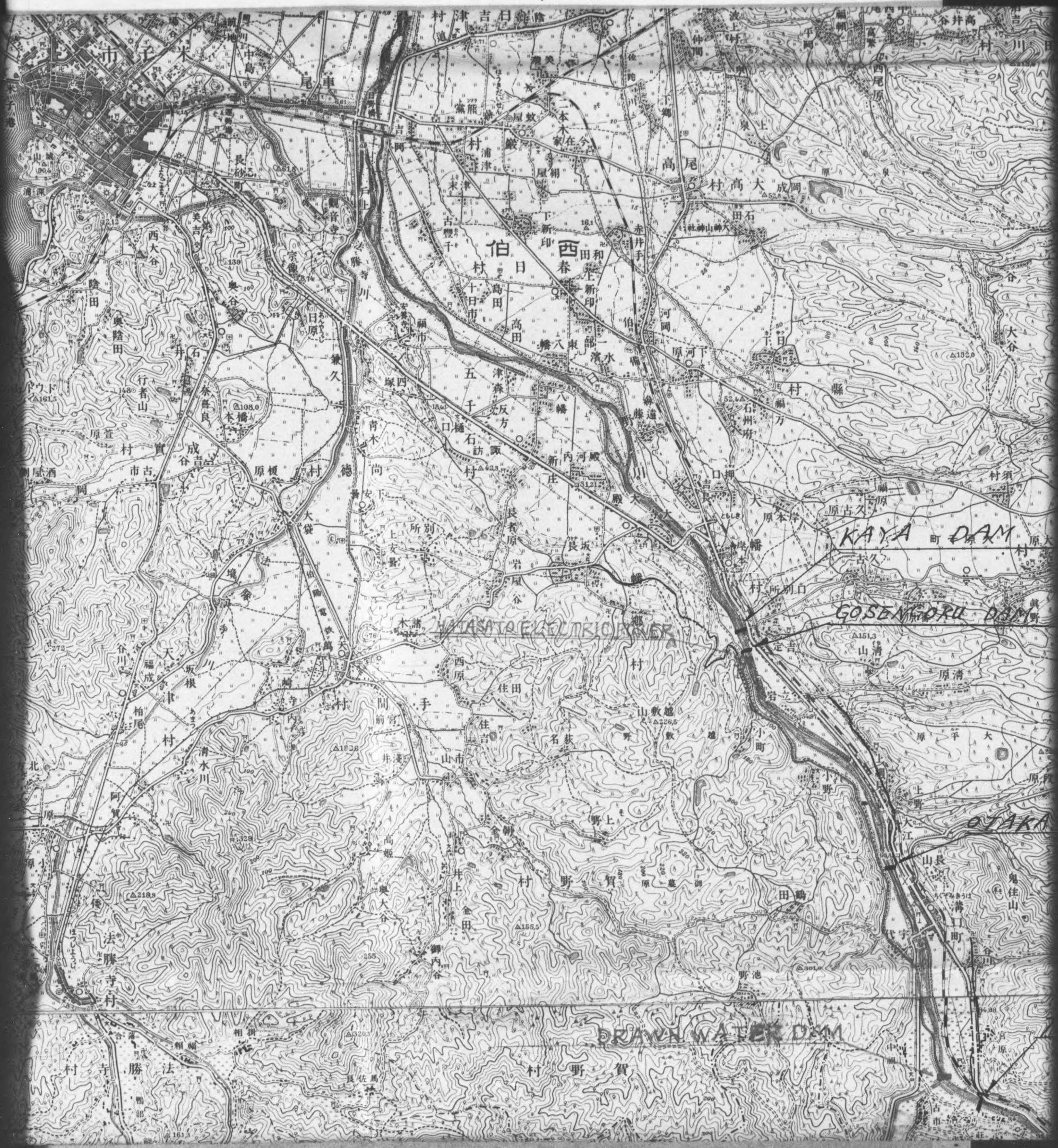
山陵 ⋔
城墟 ⌓
古戰場 ⚔
火山 ◢
礦泉 ♨
湧泉 ⌒
材料貯蓄場 ⌃
採礦地 ⚒



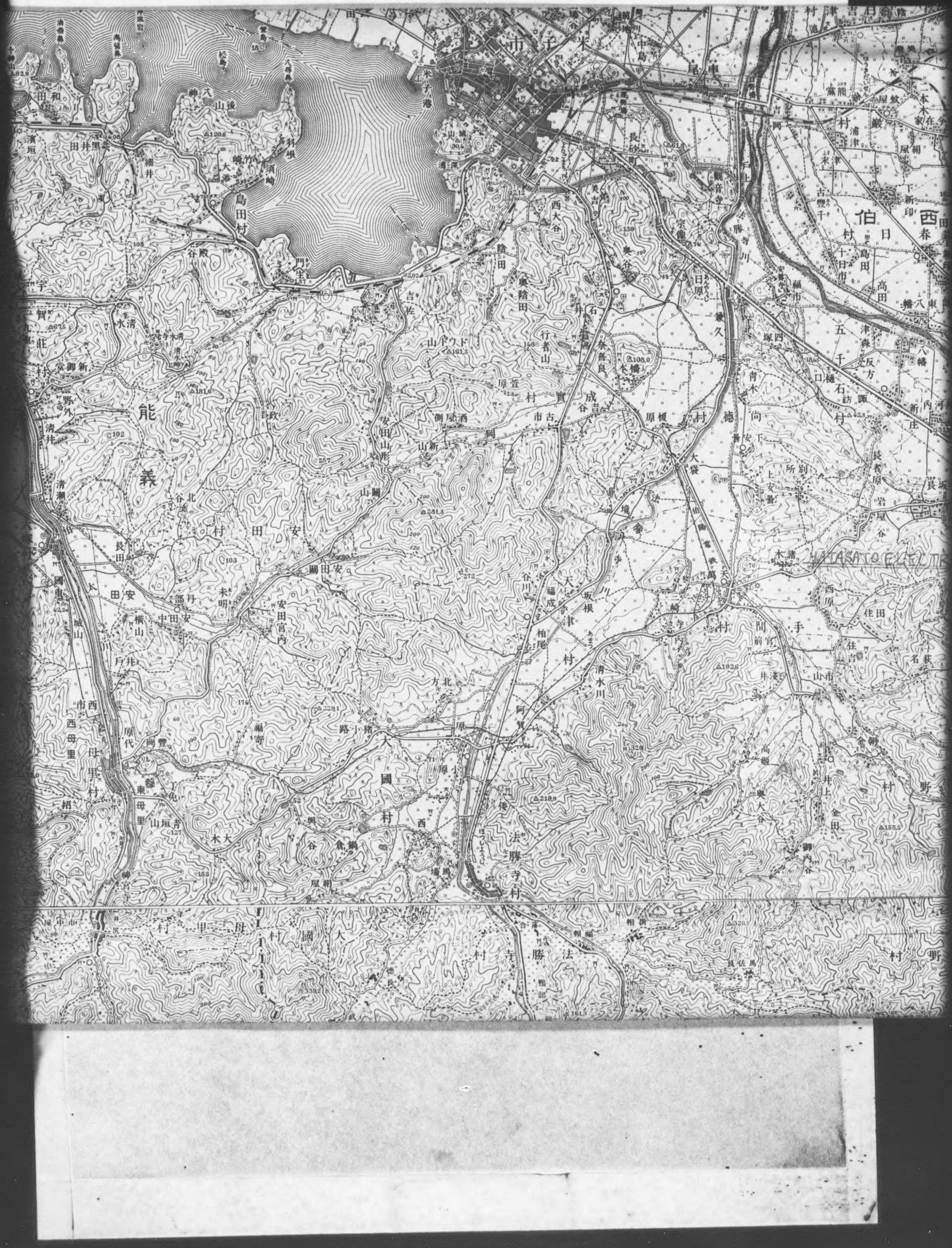
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.


KAYA DAM 9.72 ha
GOSENGOKU DAM 2.78 ha
OTAKA DAM 124.6 ha
TANIKAWA DAM 40.8 ha
DAWN WATER DEM
DEVER
高尾村
高大成岡
大原本岸
古久原
原古久
原大郷六
須川村
山丸
林小
原無水
原水桝
原清
野日殿寶
原竿大
原段
原立岩
原内大
原上
光水編日
村光
江富
末鎌
原浅
原栃木
原坂大
原日
原滝
至大山
大山
山鍋606村
山(瓦)靈李
池松赤
松赤
明開
坂
山
至大山
至大山
至大

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

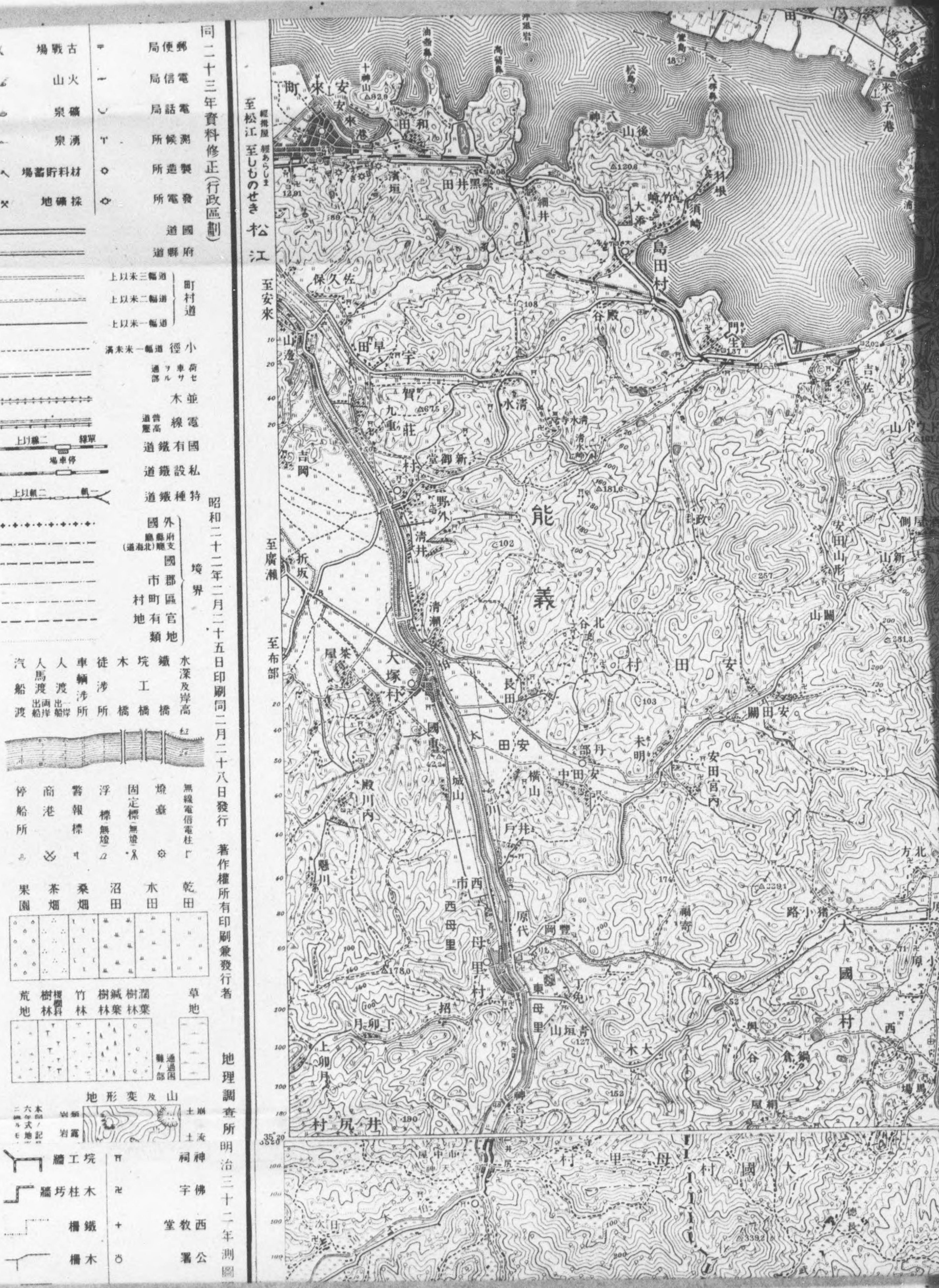

米子市
米子港
中島
尾高
長砂町
観音寺
吉岡
日原
本橋
成合
原頭
大袋
青木
尚安
所別
長者原
伯耆
日吉津村
西伯
日吉津
日吉
十日市
福市
八幡
五千石
口
訪
新庄
内河
住吉
名和
金田
野
村
高姫
奥大谷
井上
御内谷
朝金
住田
西原
手
間前
木請
萬天
坂根
福成
天津
柏尾
清水川
阿賀
原
小猪路
大國村
西
倭
法勝寺村
原
北方
安田宮内
横山
中田
部丹
未明
安田
長田
國重
城山
市
西母里
母里村
原代
岡豊
東母里
丁免
山垣
木大
倉鍋
屋納
場馬
神宮寺
安田村
關田
山隅
山形
新山
側屋酒
岡
政
谷北
清瀬
清井
野外
御堂
新荘
水清
清水上
清水寺
賀
宇
陰田
奥陰田
吉佐
門生
谷殿
田村
濱垣
田井
黒栗
細井
大添
竹崎
須崎
羽根
後山
八神
松島
田和
十神山
油樽鼻
高濱鼻
八幡鼻
米子港
山城
浦深
西大谷
井
石
行者山
原萱
實
古市
側屋酒
岡
安田
山形
新山
山隅
257
272
陰田
奥陰田
吉佐
山ノ下ウド
△161.5
△181.6
△231.3
△1331
△3392
△218.9
△108.0
△1926
△1613
△320.3
△155.5
△61.8
△42.2
△67.5
△127
△123
△42.3
△82.8
△120.6
△90.4
△42.12
△61.8
△108.0
△42.2
△67.5

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

同二十三年資料修正(行政區劃)

昭和二十二年二月二十五日印刷同二月二十八日發行　著作權所有印刷兼發行者

地理調查所　明治三十二年測圖


至松江　至しものせき
至安來
至廣瀨
至布部
安來町
安來港
十神山
油嶋
高嶋
沖ノ瀨岩
松島
雞島
八束島
米子港
田和
濱垣
黒井田
細井
後山
神八
羽根
須崎
竹ノ崎
大添
島田村
保久佐
谷殿
早田
賀
九重
水清
清水寺
清水神
新御堂
吉岡
野外
清井
折坂
清瀨
茶屋
大塚村
國重
城山
殿川内
隱川
西母里
母里村
原代
豐岡
東母里
山垣
丁兎
招
丁卯月
上卯月
井尻村
能義
北谷村
長田
中安部
横山
戸井
西市
安田
安田宮内
安田山形
安田側屋
安田新山
安田關
安田大國村
安田西
安田北方
安田小猪路原
安田大原
安田倉谷
安田鍋屋
安田馬場
安田武徳
安田長
安田丹後
安田未明
安田大木
安田大谷
安田井尻
安田母里
安田中屋
安田次日
安田神宮寺
安田山王寺
安田屋敷
安田中山
安田天神
安田合村
安田井尻
安田母里
安田大國村
安田西
安田東
安田丁卯月
安田上卯月
安田次日
安田大谷

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

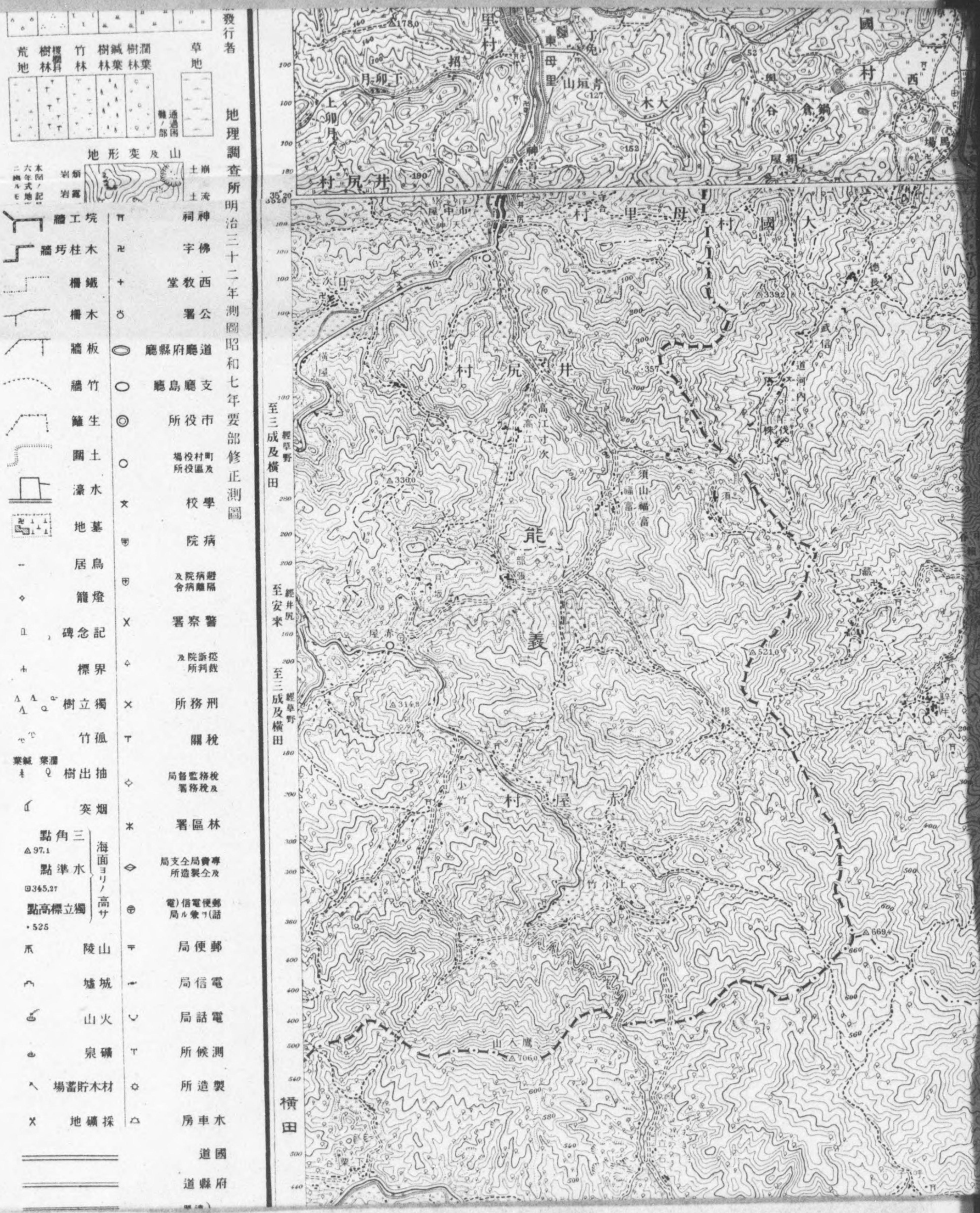
二十万分一圖ノ名號ナリ
起算シ米突ヲ以テ示ス

五万分一地形圖高梁九號(共十六面)

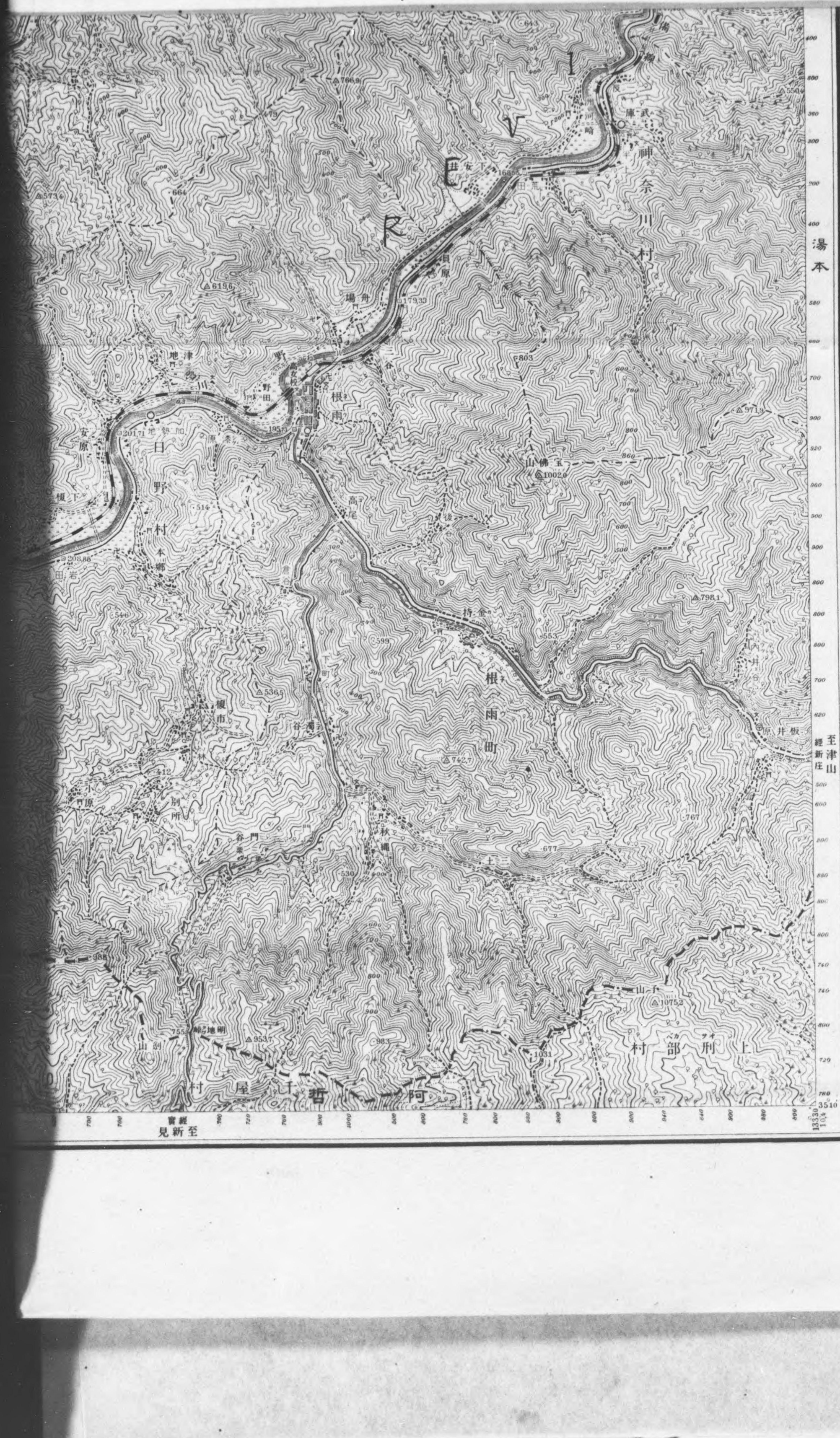
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 776018

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78019

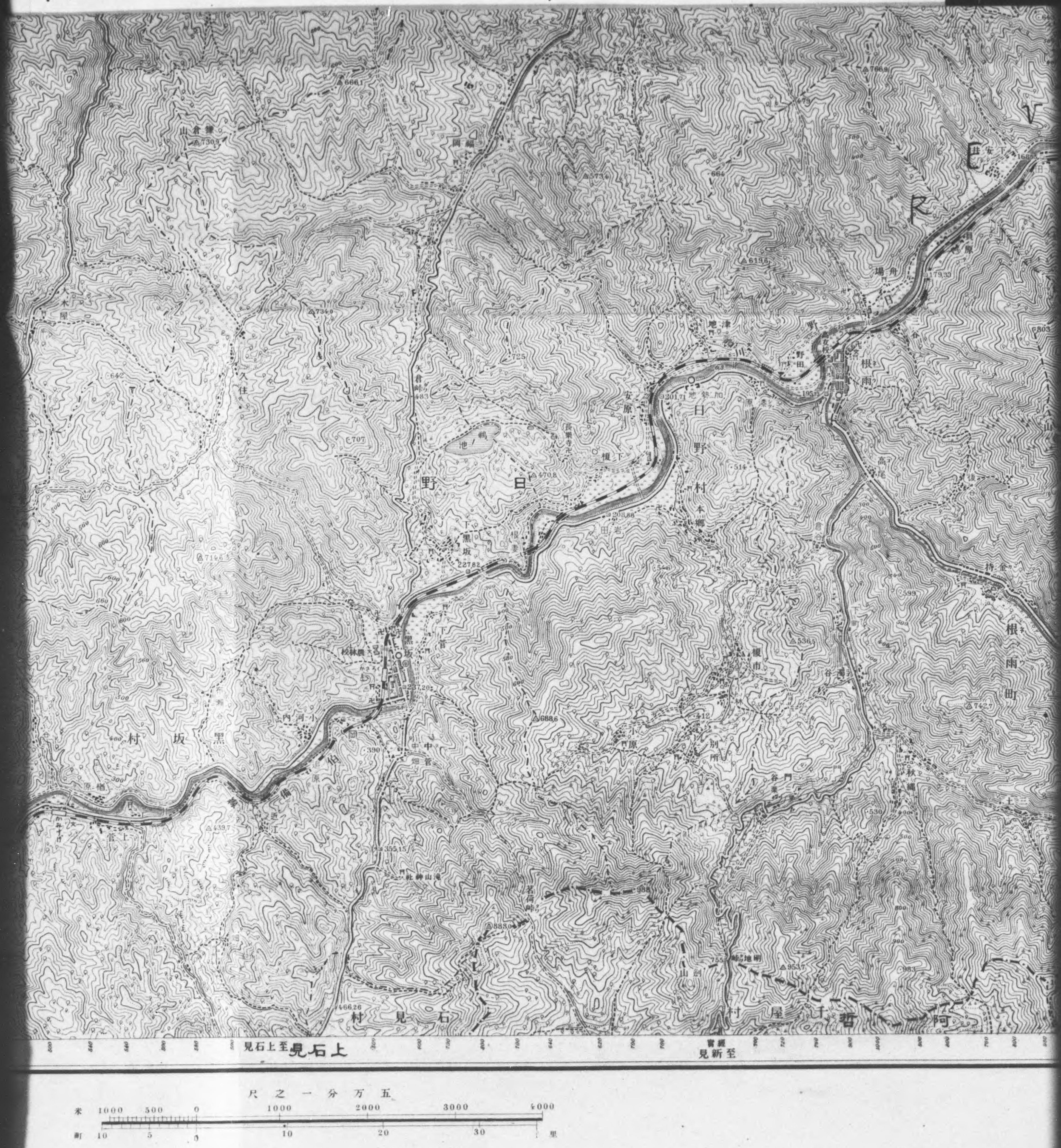


DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78018



圖郭外右肩ノ地名ハ本圖所屬二十万分一圖ノ名號ナリ
眞高ハ東京湾ノ中等潮位ヨリ起算シ米突ヲ以テ示ス

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.



五万分之一尺

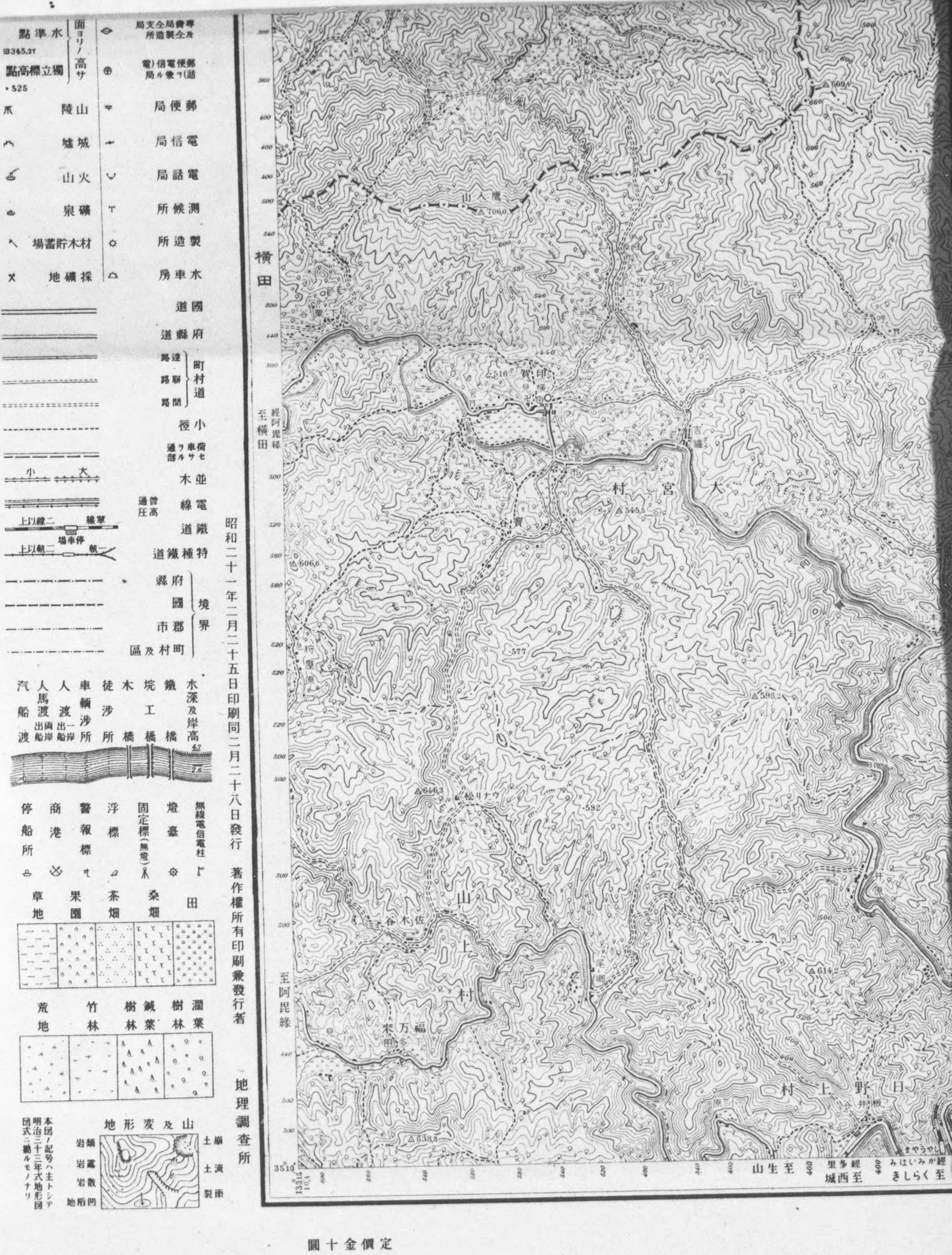
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

尺之一分万五

米	1000	500	0	1000	2000	3000	4000
町	10	5	0	10	20	30	里

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO.

昭和二十一年二月二十五日印刷同二月二十八日發行　著作權所有印刷兼發行者　地理調査所

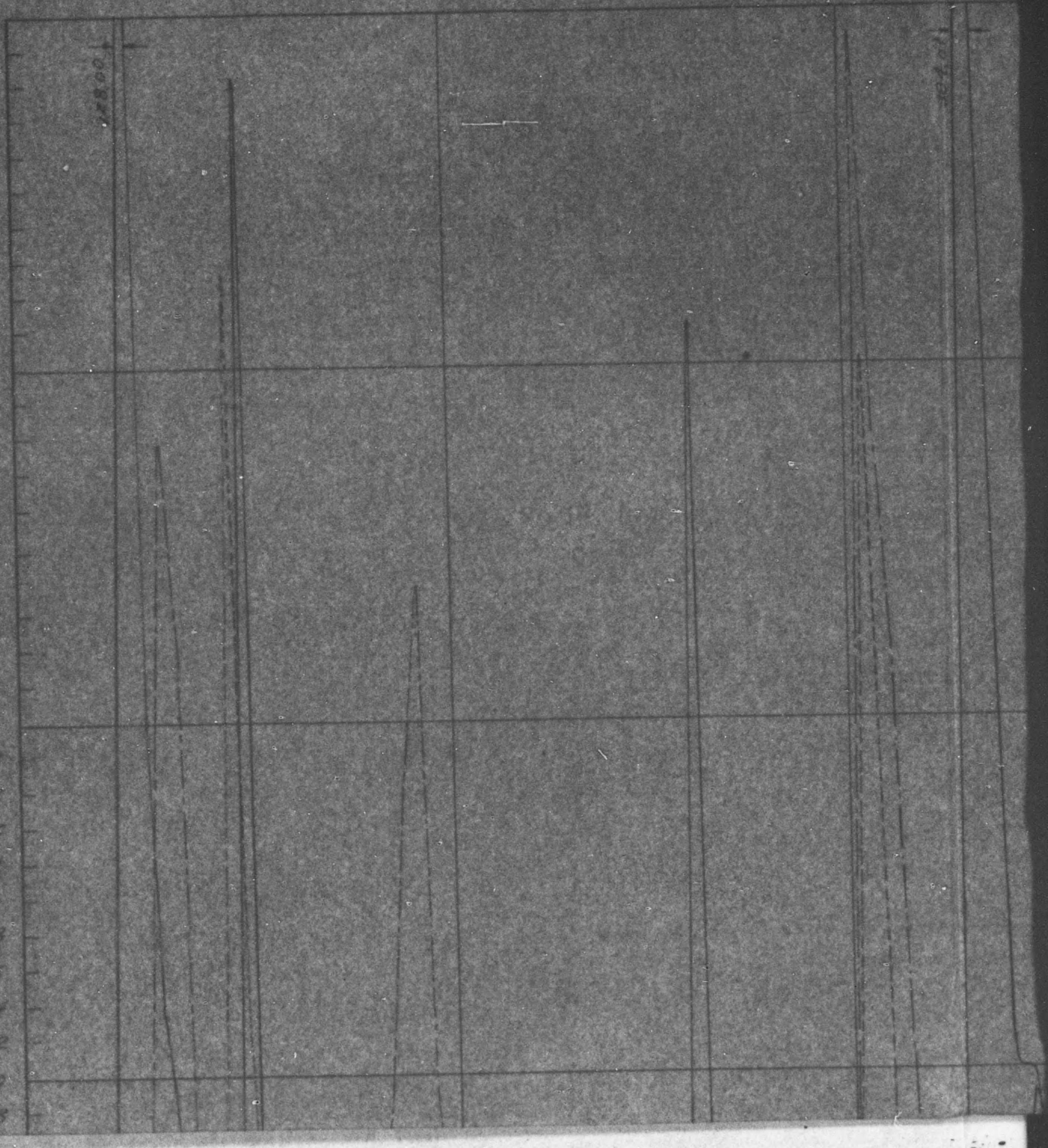


定價金十圓

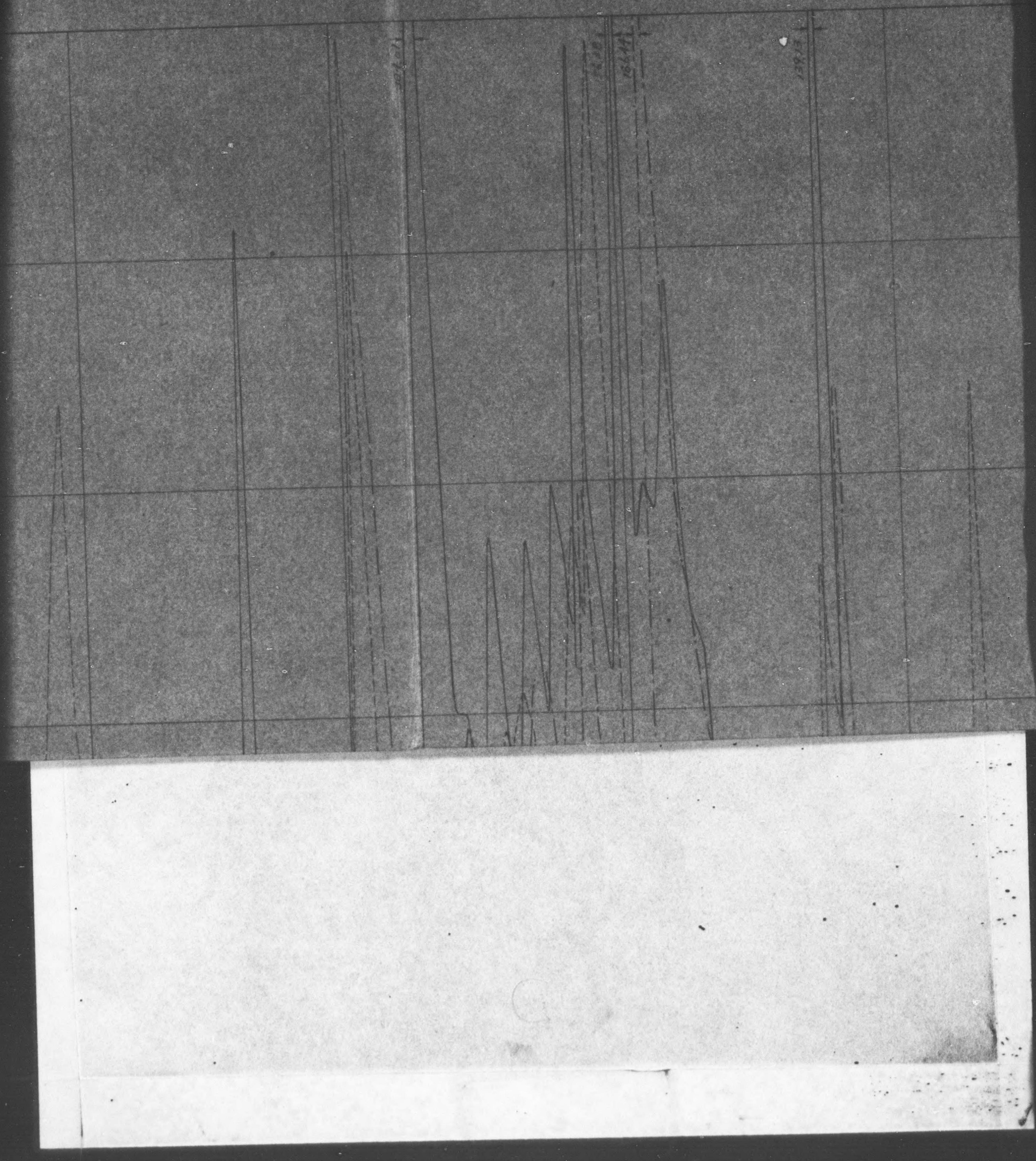
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 178013

流量圖

日野川水系日野川
鳥取縣西伯郡幡郷村大
測水期間昭和貳年



DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]



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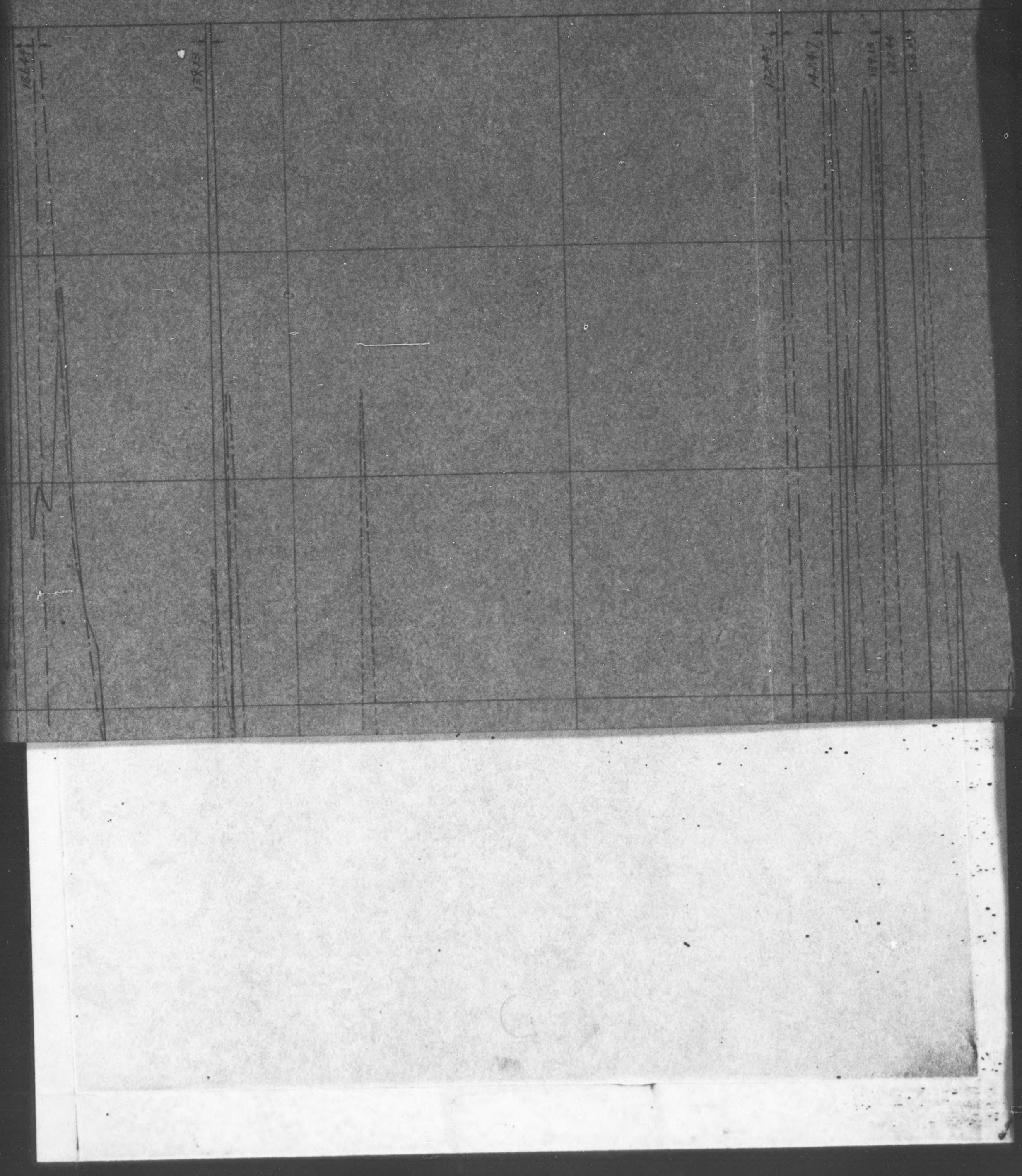

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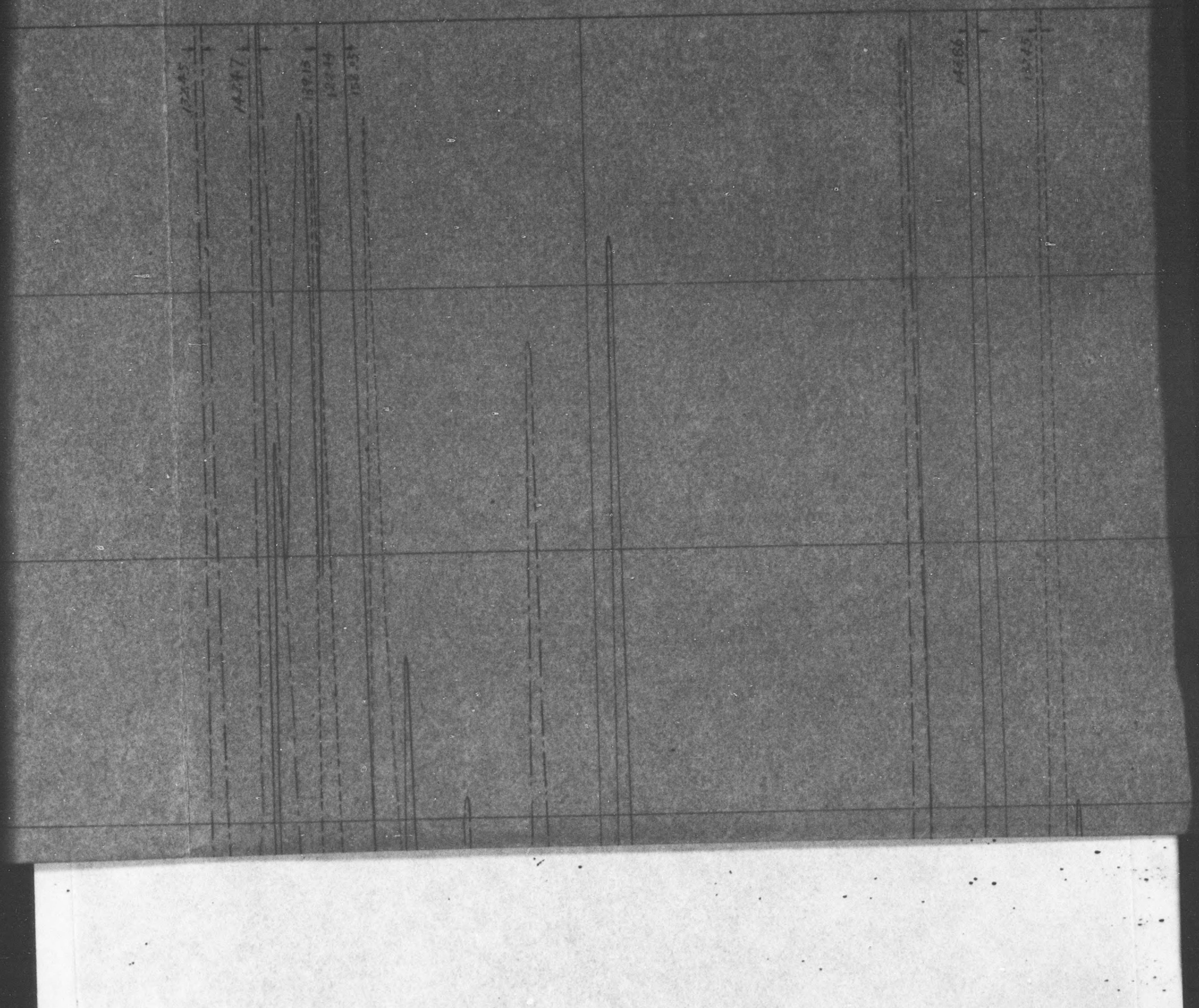

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. [illegible]

Hino River Discharge Diagram
by Measurment of Discharge on the
Saikaku District Tottori Prefec
Measuring Term from 1927 to 19

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013

Hino River Discharge Diagram
by Measurment of Discharge on the Hatasato Village
Saikaku District Tottori Prefecture

Measuring Term from 1927 to 1929.

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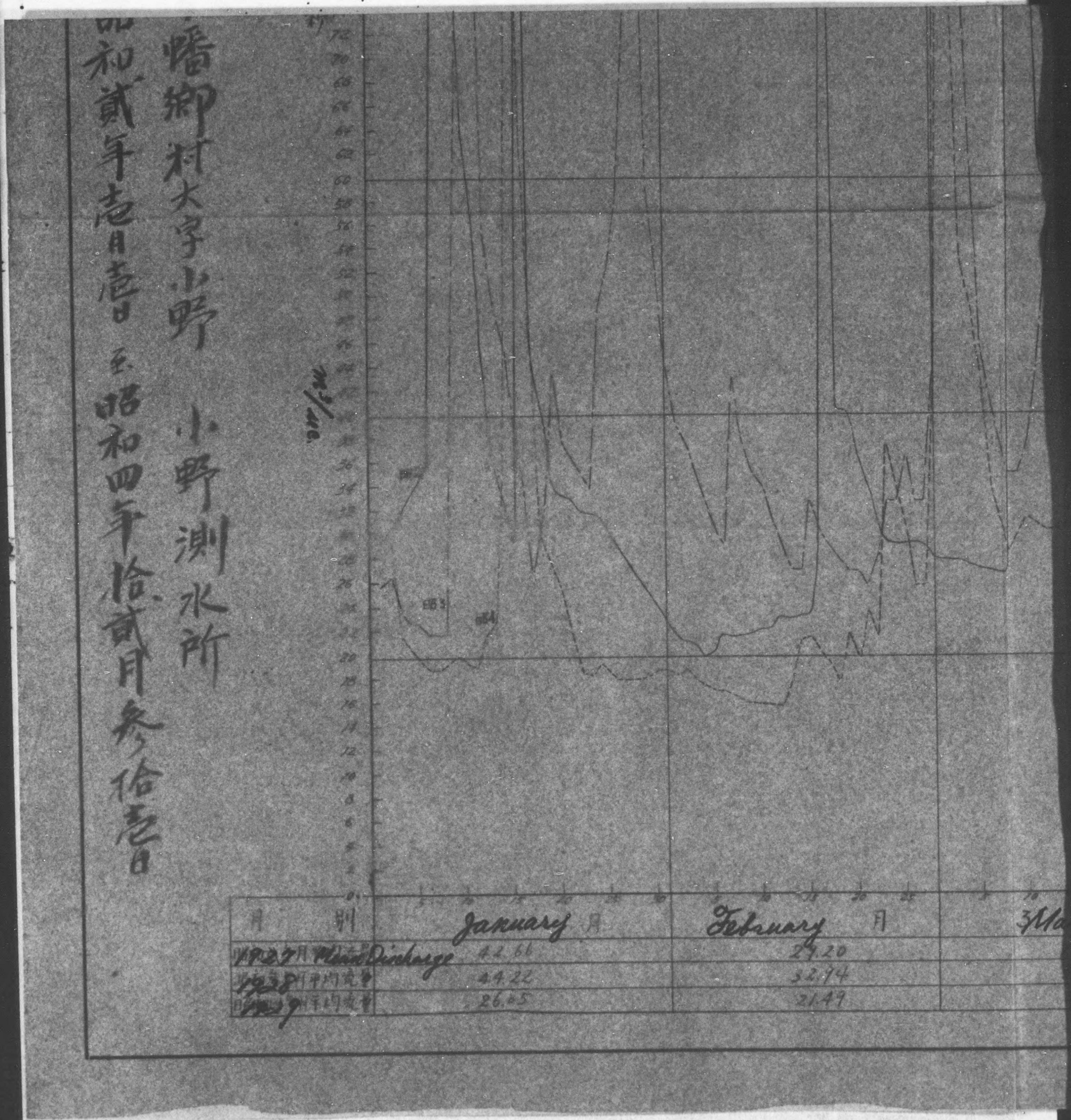
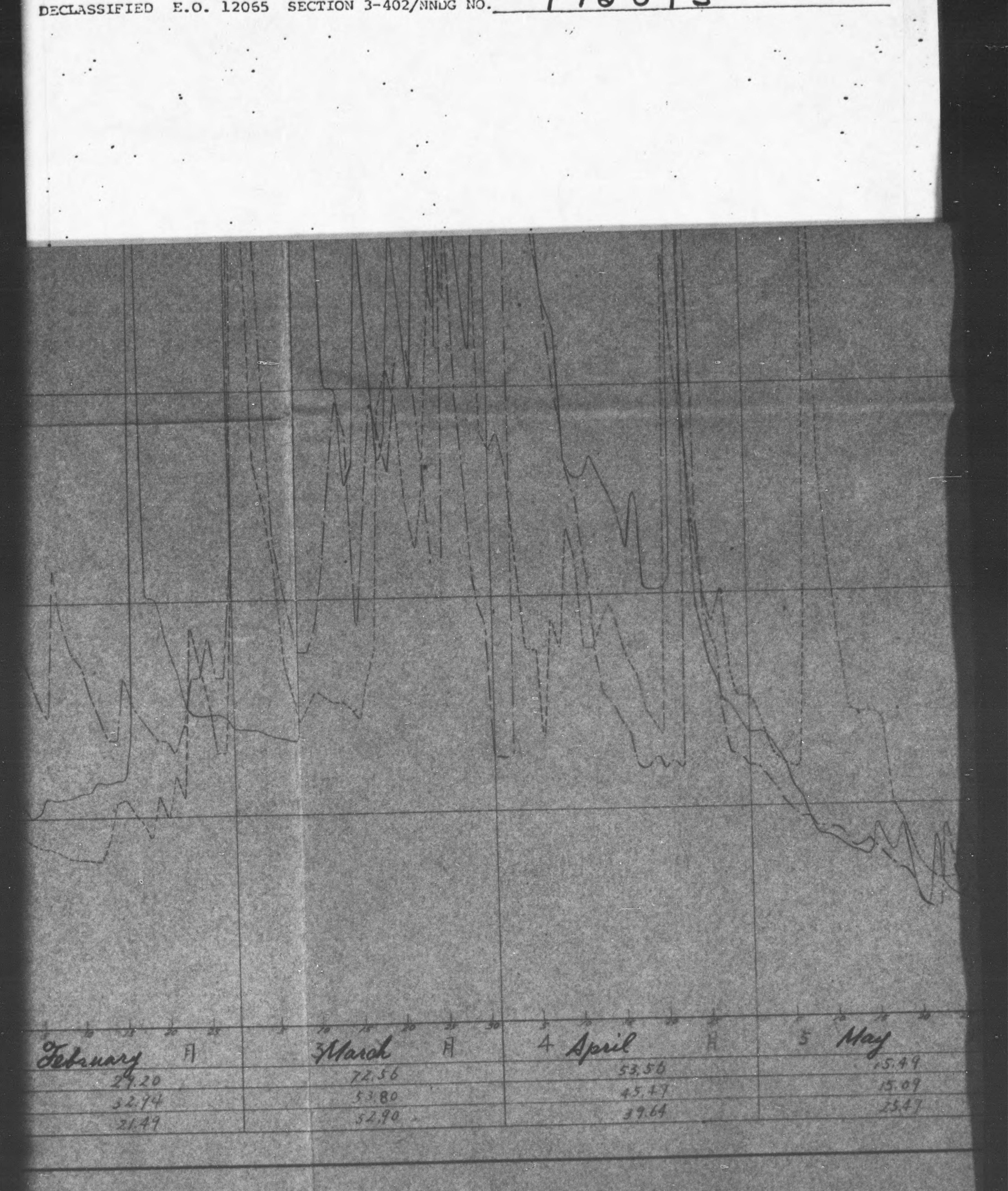


DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 78013



2 February	H	3 March	H	4 April	H	5 May
29.20		72.56		53.56		15.49
32.74		53.80		45.47		15.09
21.49		52.90		39.64		25.47

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5 May		6 June		7 July	
il	H		A		A
53.56		15.49		1.02	44.29
45.47		15.09		24.28	27.21
39.64		25.47		10.84	24.28

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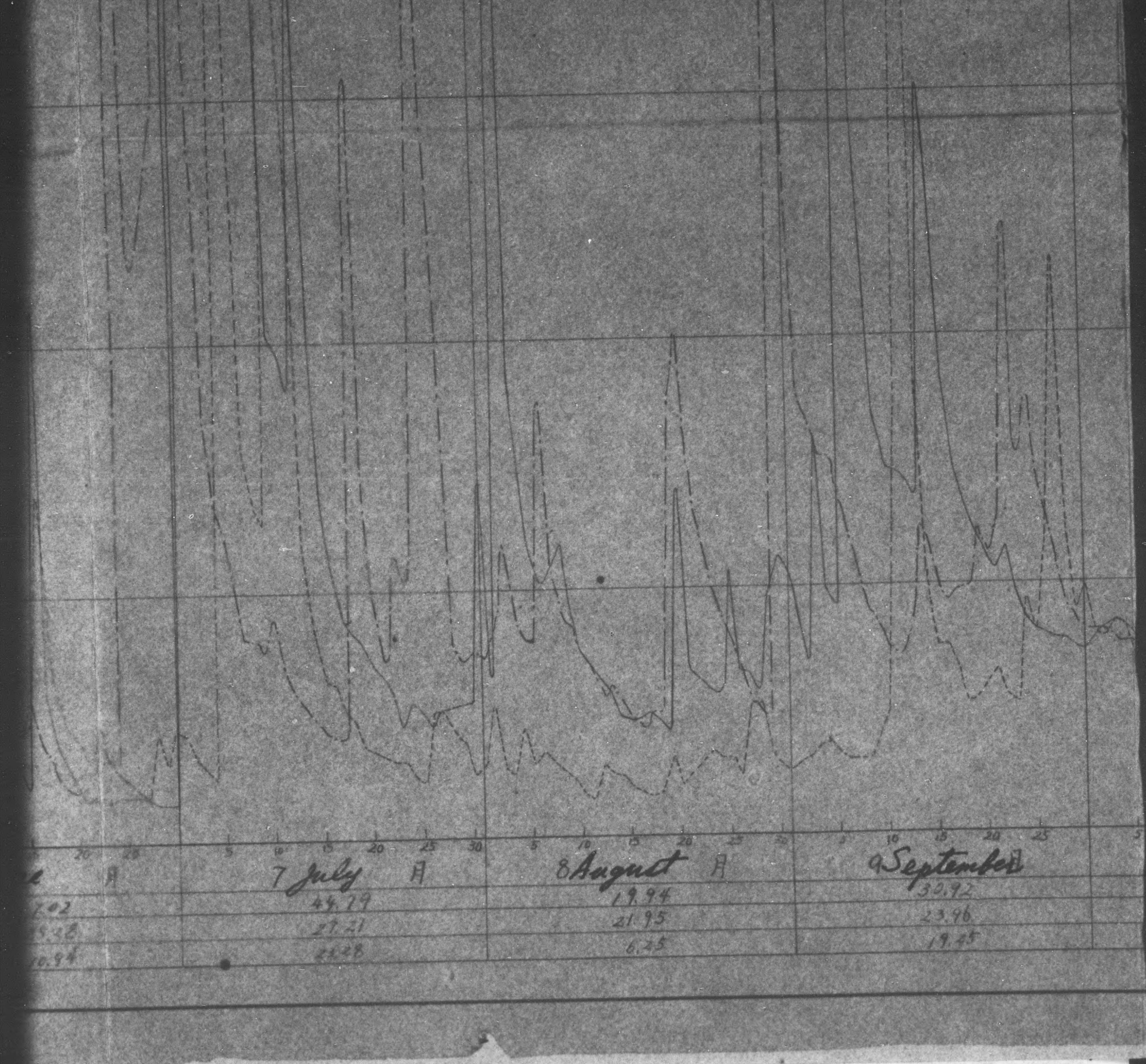

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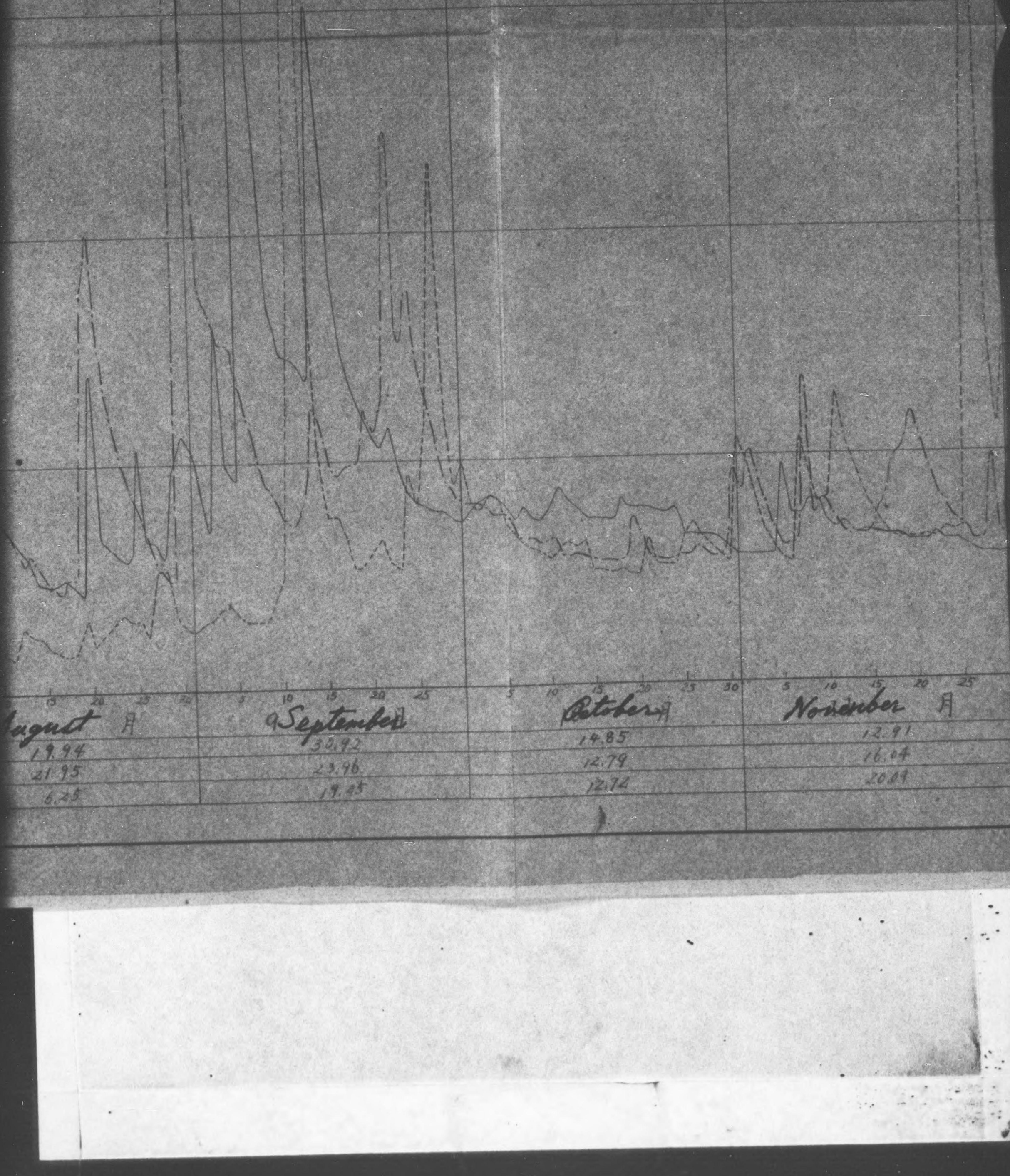

August A	September A	October A	November A
19.94	30.92	14.85	12.91
21.95	23.96	12.79	16.04
6.25	19.65	12.74	20.09