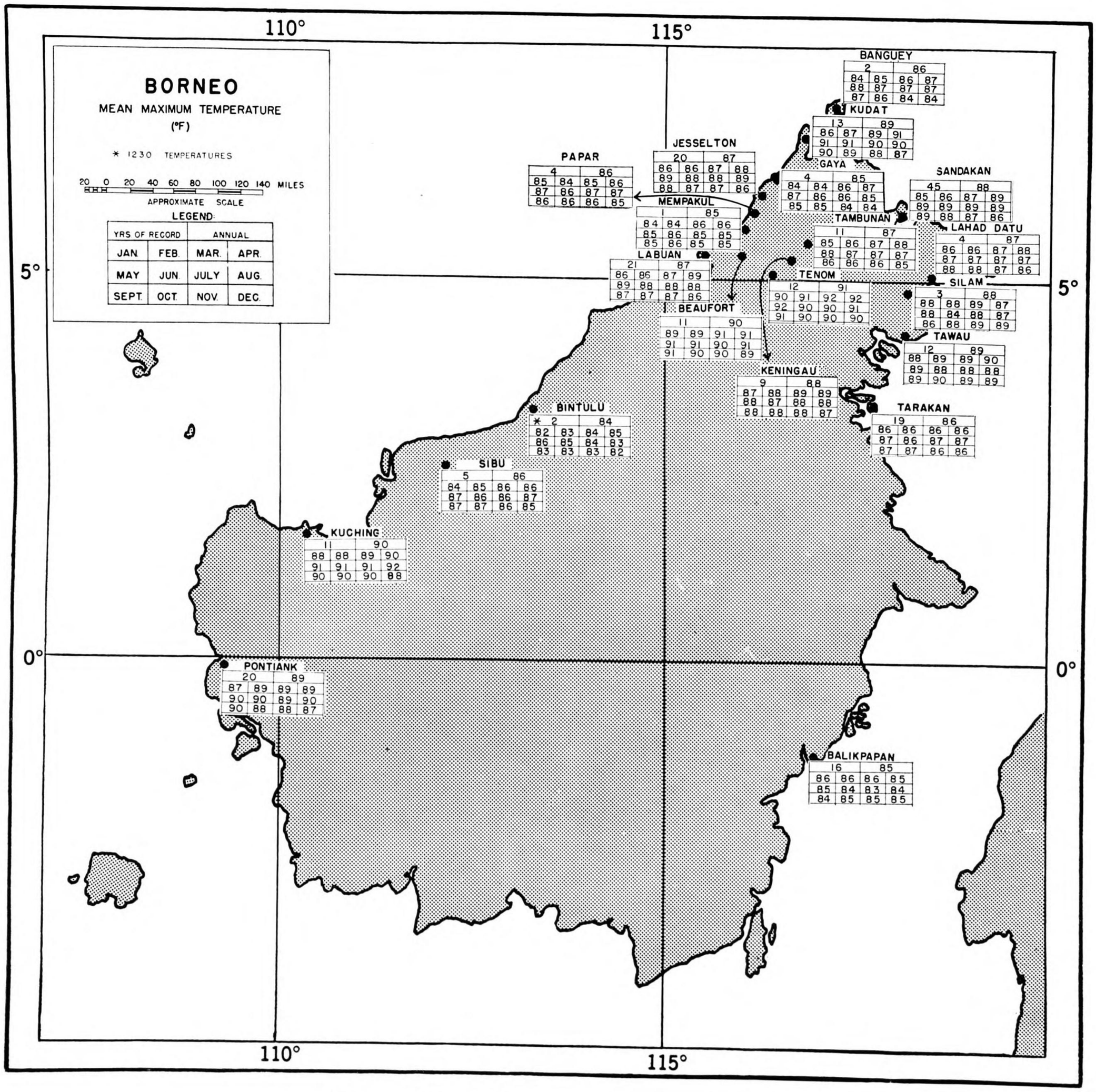

FIGURE V - 14. *Mean Maximum Temperature (° F).*

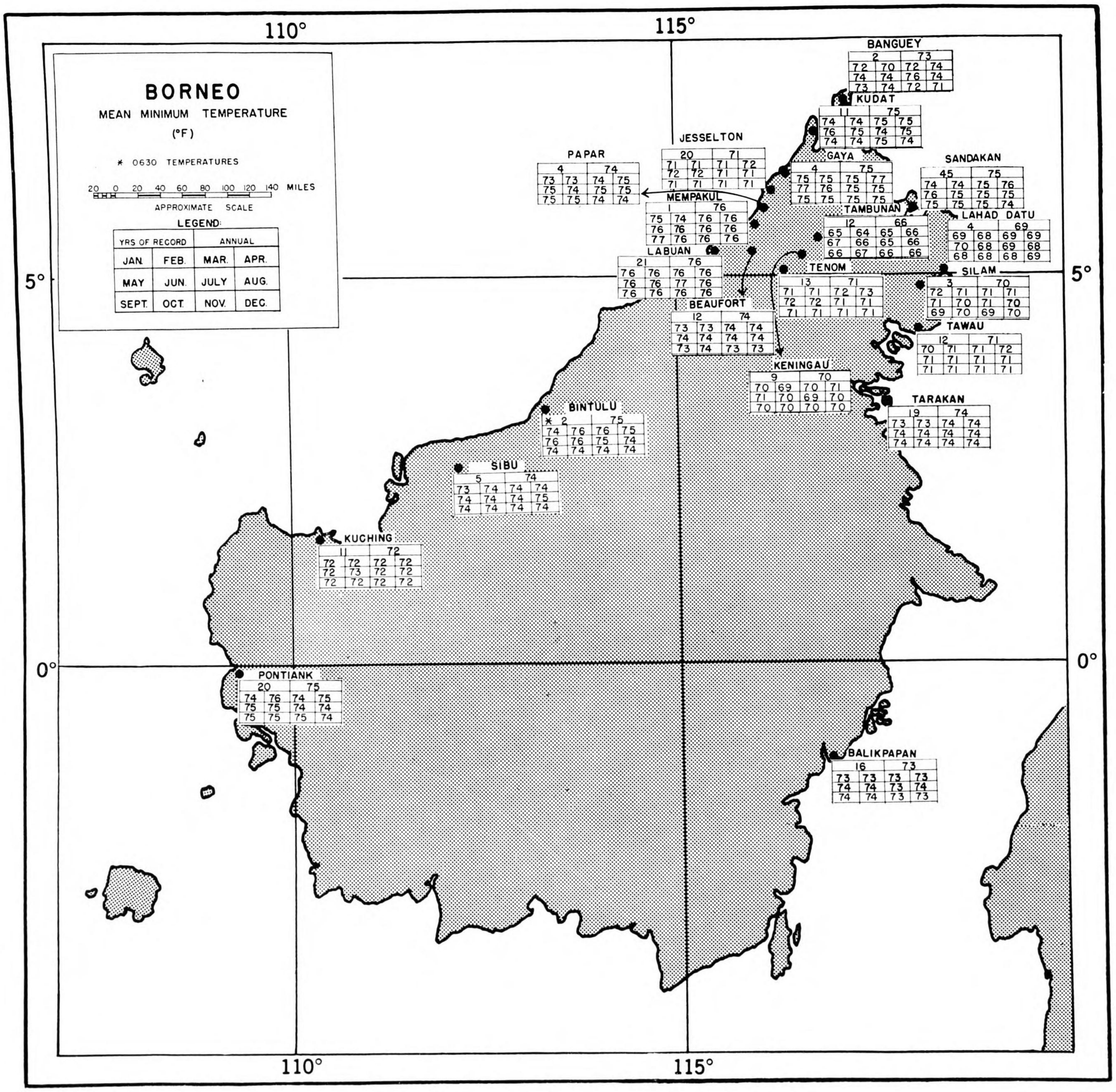

FIGURE V - 15. *Mean Minimum Temperature (° F).*

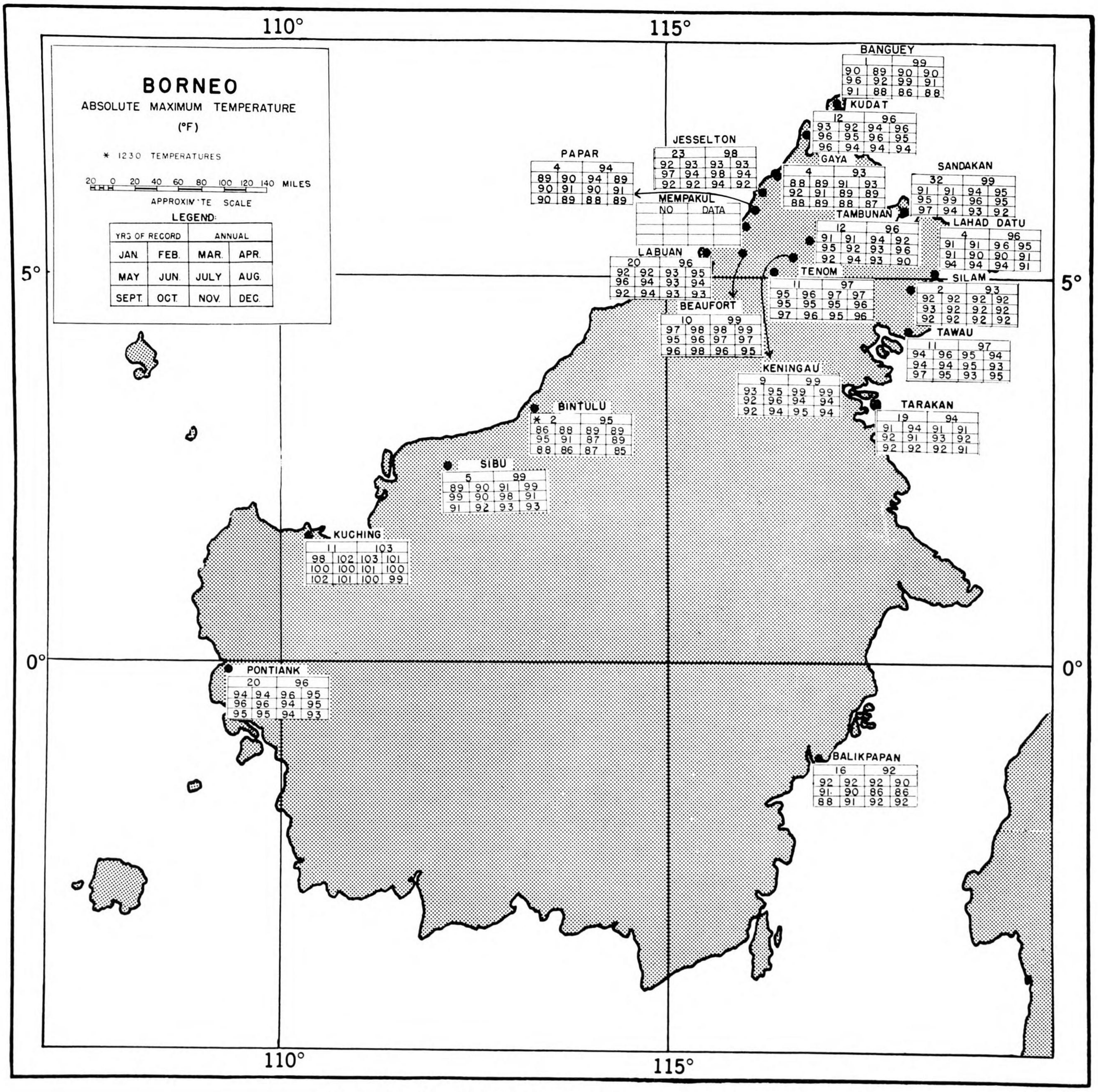

FIGURE V - 16. *Absolute Maximum Temperature (° F).*

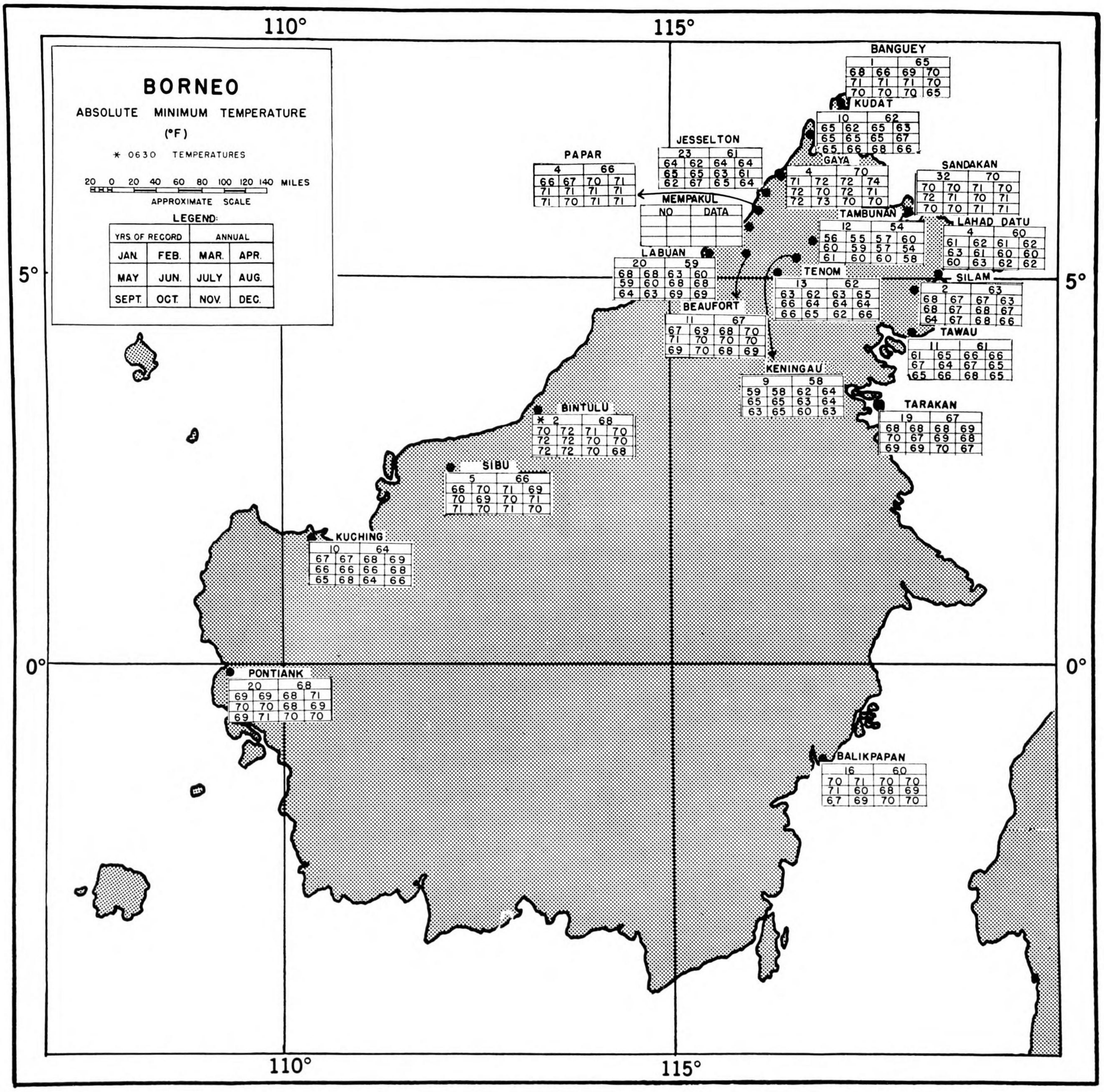

FIGURE V - 17. *Absolute Minimum Temperature (° F).*

B. Precipitation.

FIGURES V-18 through V-21 and TABLES V-8 and V-9 show data on precipitation.

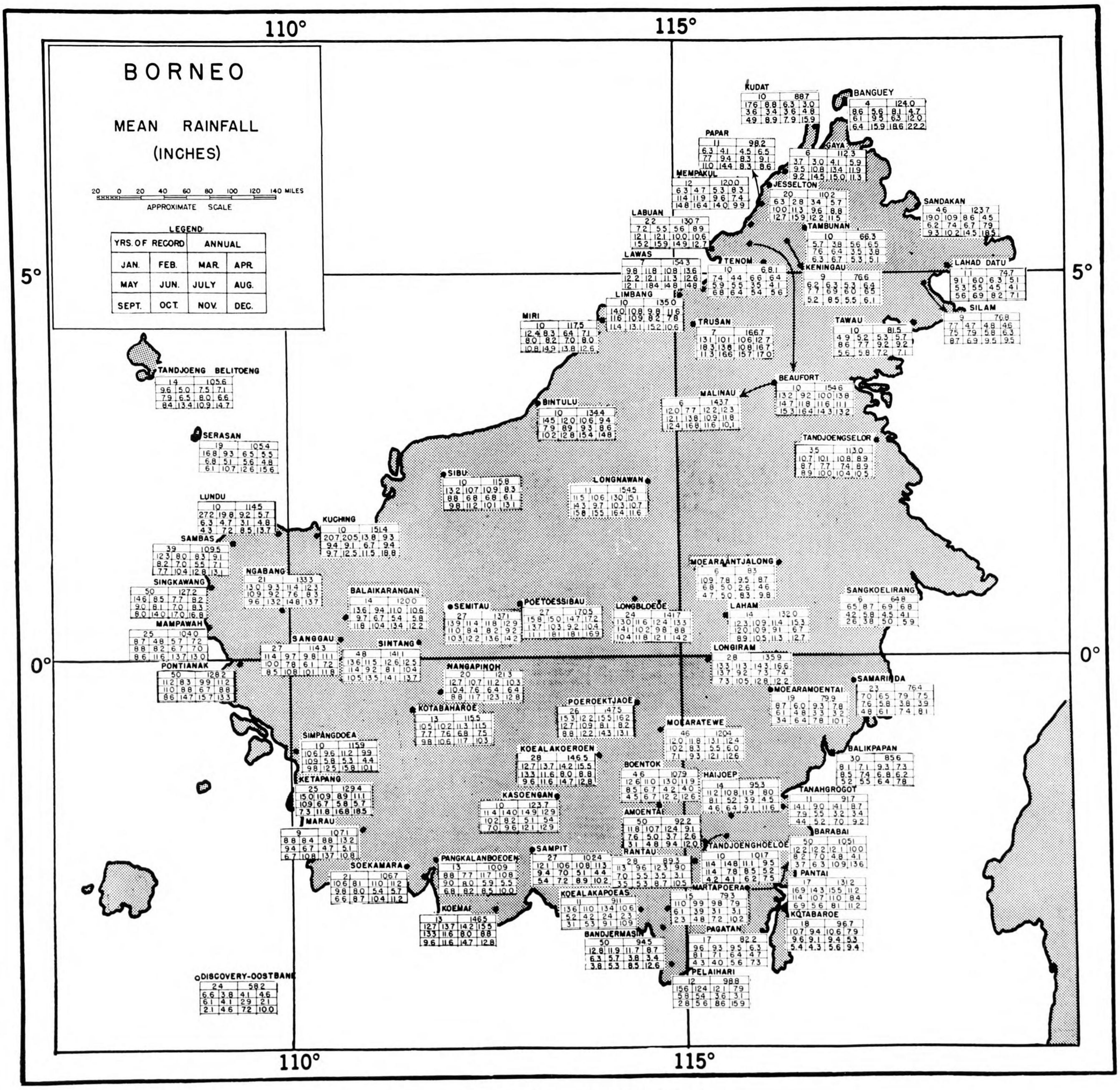

FIGURE V - 18. *Mean Rainfall, (Inches).*

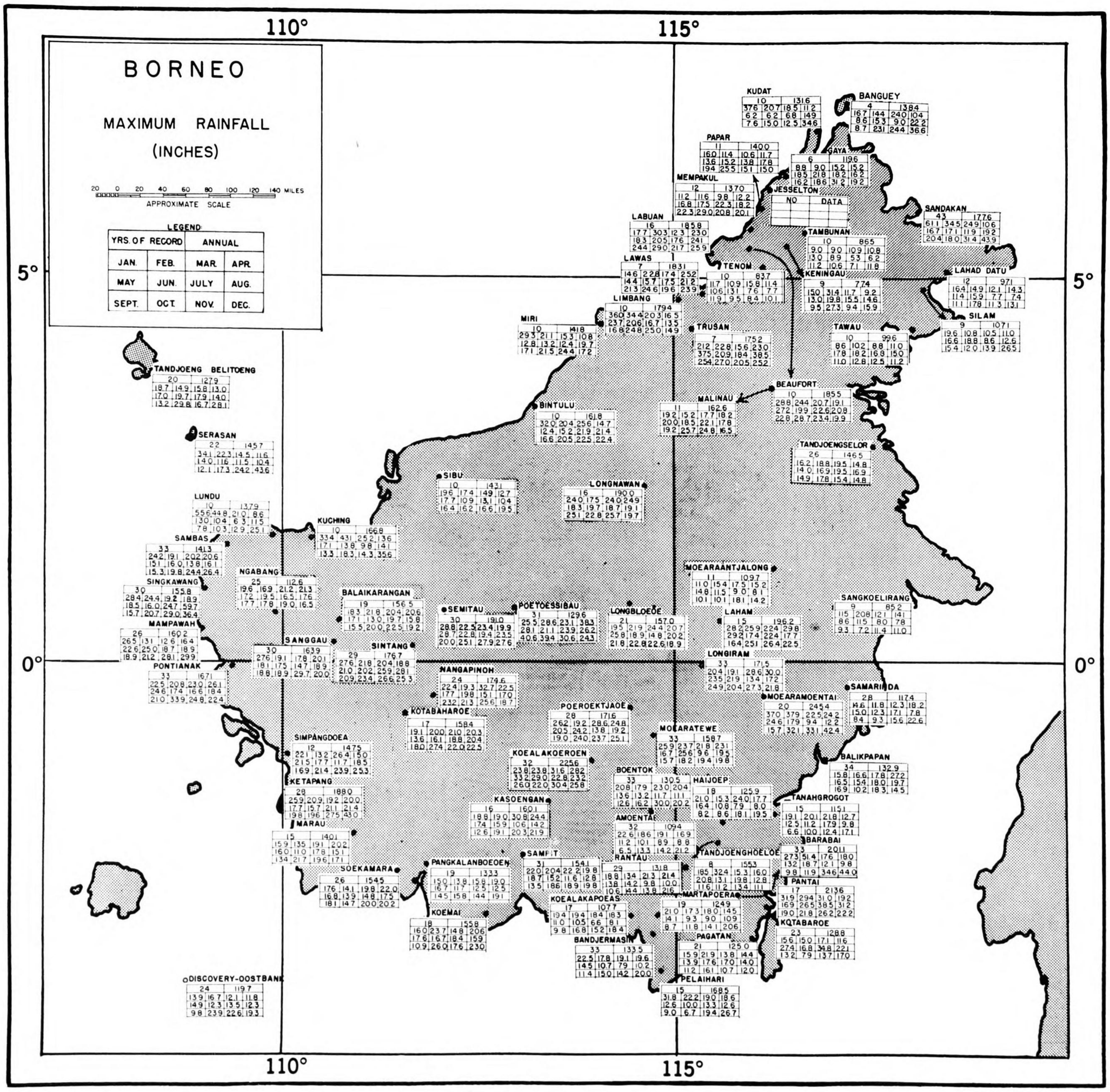

FIGURE V - 19. *Maximum Rainfall, (Inches).*

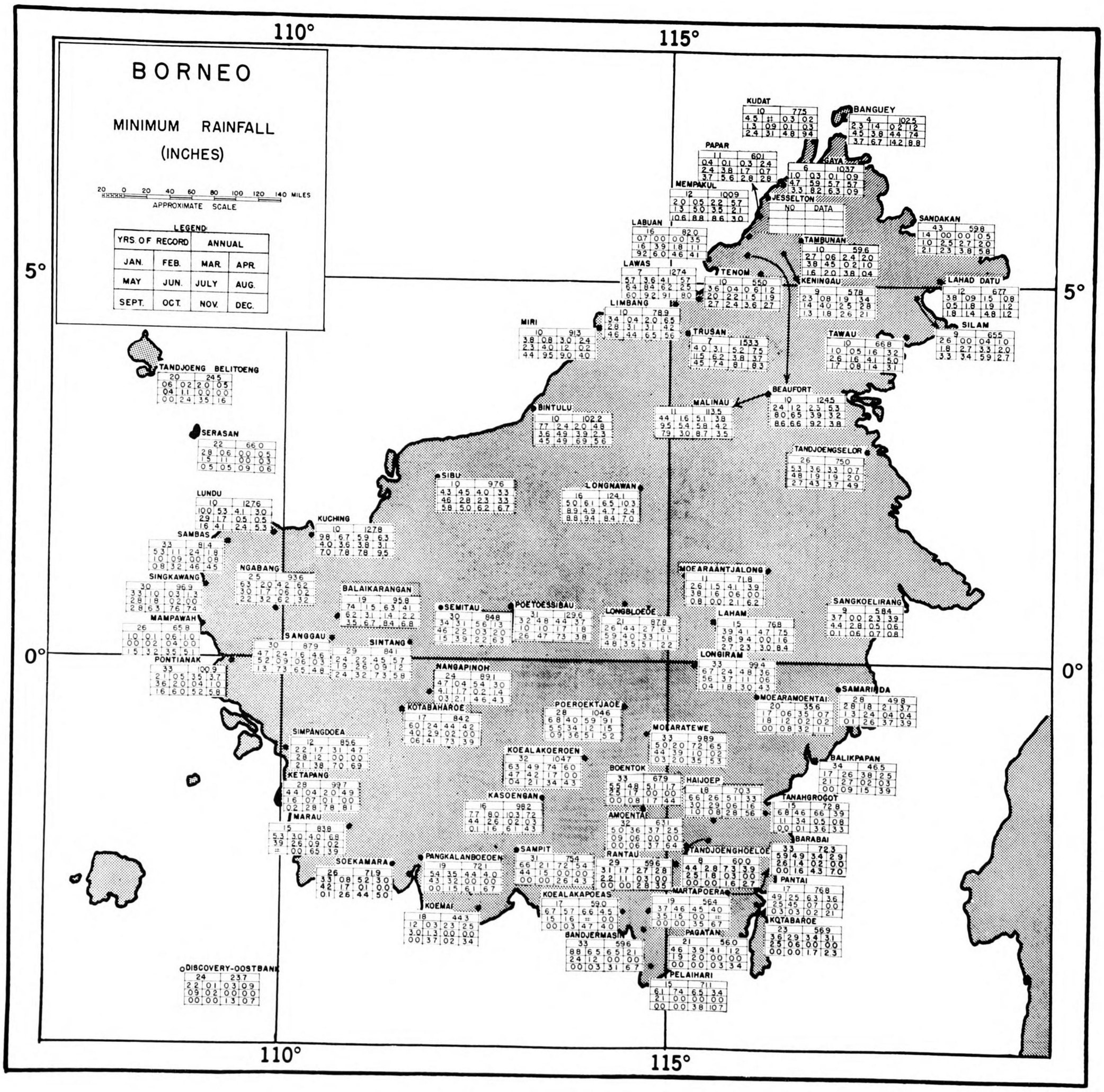

FIGURE V - 20. *Minimum Rainfall, (Inches).*

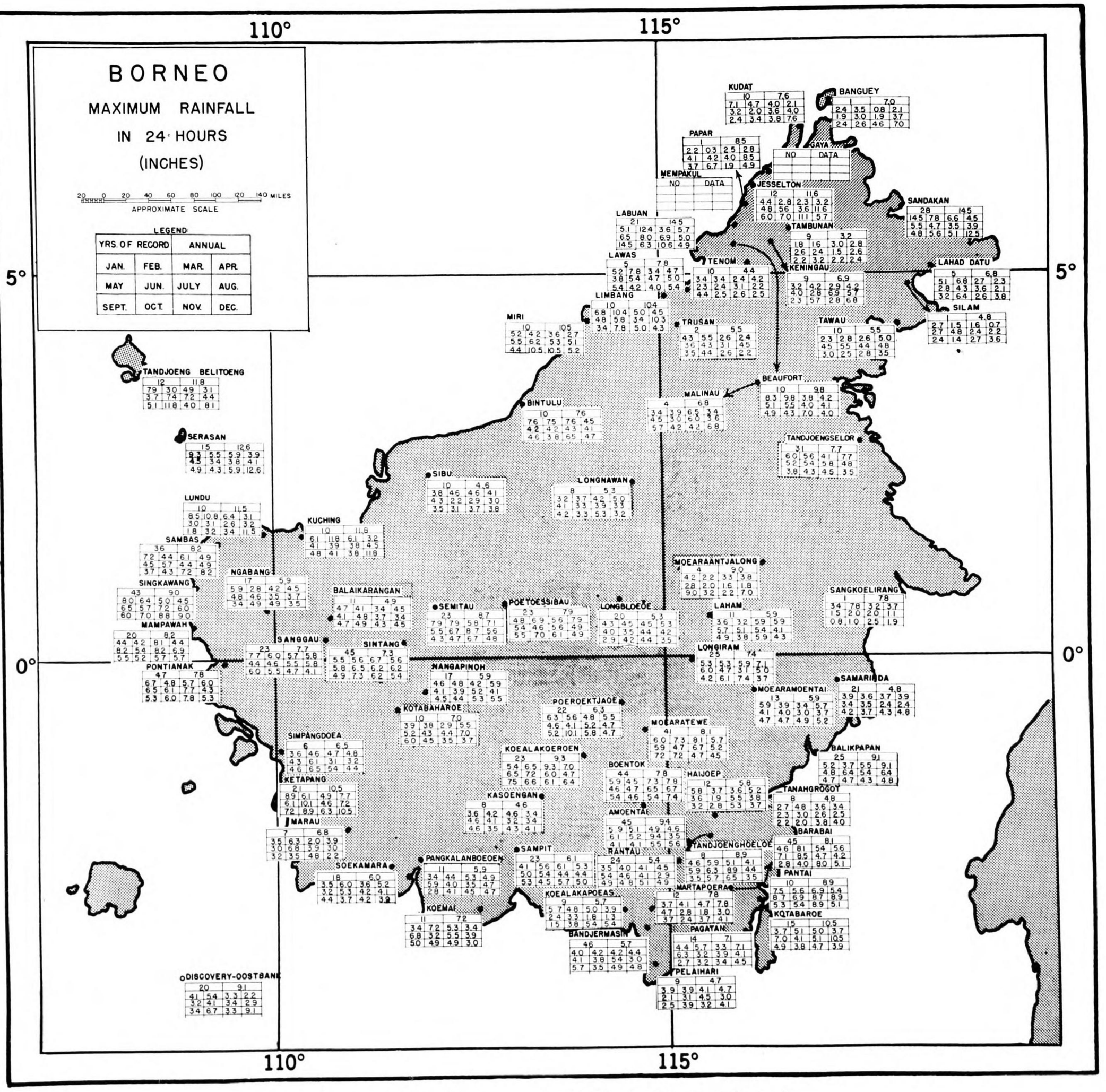

FIGURE V - 21. *Maximum Rainfall in 24 Hours, (Inches).*

TABLE V - 8

MEAN NUMBER OF DAYS WITH PRECIPITATION EQUAL TO OR GREATER THAN GIVEN AMOUNTS

a. Mean Number of Days with Precipitation ≧0.04 Inch

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF RECORD
Pelaihari	16.2	14.5	14.1	10.7	8.8	7.8	5.8	4.3	4.8	6.9	11.5	17.1	122.5	12
Pagatan	16.6	14.0	13.9	12.6	13.2	11.9	9.6	7.9	7.1	9.4	11.8	14.4	142.4	17
Discovery-Oostbank	12.9	7.4	8.3	9.3	10.0	7.2	5.5	3.7	3.8	7.5	11.6	16.4	103.6	24
Bandjermasin	22.1	19.2	19.3	15.2	13.2	11.9	9.4	9.0	8.3	11.5	15.9	21.1	176.1	50
Koemai	14.2	12.8	13.0	12.3	11.3	8.6	8.2	5.6	4.2	10.5	10.9	13.6	125.2	13
Martapoera	16.9	14.1	12.5	10.7	8.9	7.0	6.2	5.1	4.6	7.7	10.9	14.4	119.0	15
Kotabaroe	16.9	15.0	15.5	13.6	13.6	13.1	10.1	5.7	6.9	6.6	9.7	14.6	141.3	18
Pantai	14.0	11.6	13.1	10.4	9.4	10.2	8.6	6.0	6.6	6.0	7.2	10.7	113.8	17
Koealakapoeas	20.3	15.2	15.3	14.1	10.1	7.3	5.1	4.5	6.1	8.4	12.4	17.3	136.1	11
Tjandjoeng-hoeloe	18.9	17.1	17.6	17.6	15.3	13.8	14.5	9.5	8.7	7.8	12.1	14.7	167.6	10
Rantau	17.6	13.3	15.6	12.3	10.1	8.5	6.5	5.6	6.2	8.9	12.6	16.9	134.1	28
Soekamara	20.5	14.6	18.3	17.2	14.7	11.9	9.5	8.1	8.5	12.9	17.1	20.7	174.0	21
Pangkalanboeoen	14.5	11.3	15.4	13.2	11.8	10.7	8.5	7.9	8.2	11.4	13.6	16.6	143.1	13
Barabai	17.1	15.5	17.1	14.4	12.3	11.5	8.8	8.9	7.3	11.0	15.6	19.9	159.4	50
Sampit	15.3	13.2	14.5	14.0	10.8	9.3	7.3	6.6	6.6	9.0	13.0	15.1	134.7	27
Amoentai	16.8	15.3	16.2	13.5	10.8	8.7	6.8	6.4	5.8	8.6	13.5	17.6	140.0	50
Marau	16.3	14.9	16.2	18.7	13.3	11.8	7.8	6.9	8.9	15.6	18.8	18.4	167.6	9
Kasoengan	19.2	17.7	19.6	18.7	15.9	12.1	9.6	8.0	10.2	13.8	19.1	20.6	184.5	10
Haijoep	19.5	16.1	17.8	15.2	13.7	11.3	9.1	8.6	9.0	11.0	14.9	20.7	166.9	14
Ketapang	16.3	13.0	13.0	14.8	13.4	9.8	8.0	7.1	9.1	15.5	19.7	20.6	160.3	25
Tanahgrogot	17.3	13.3	17.5	15.8	14.0	11.4	8.5	6.2	6.9	8.3	10.9	15.1	145.2	11
Boentok	16.2	13.5	15.3	14.0	11.2	9.5	7.2	6.9	7.2	10.0	14.6	16.2	141.8	46
Balikpapan	13.7	12.3	14.5	12.5	12.3	11.7	10.7	10.4	8.7	9.6	11.1	14.6	142.1	30
Koealakoeroen	15.4	14.0	17.0	15.8	15.7	13.0	10.1	10.4	12.2	13.6	16.6	17.0	170.8	28
Simpangdoea	18.0	13.4	16.7	17.0	13.3	8.9	7.7	5.5	10.0	14.9	19.9	18.9	164.2	10
Moearatewe	17.4	15.9	17.3	16.7	15.0	13.0	10.2	10.4	11.2	13.5	17.5	18.8	176.9	46
Kotabaharoe	12.8	13.1	16.4	14.2	11.7	8.9	8.4	7.3	9.6	11.3	14.5	14.1	142.3	13
Poeroektjaoe	20.9	16.7	20.2	20.0	17.8	15.2	12.8	13.0	13.8	16.2	20.1	20.6	207.3	26
Samarinda	15.3	13.3	14.5	16.2	15.9	14.9	11.5	10.1	11.0	13.0	14.8	16.7	167.2	23
Nangapinoh	14.7	11.7	12.8	11.8	11.3	8.6	7.5	7.0	9.7	12.6	15.0	15.9	138.6	20
Moeramoentai	9.4	6.9	10.3	9.2	8.0	6.9	5.5	5.5	5.4	8.4	9.4	10.8	95.7	19
Pontianak	16.3	12.6	14.4	15.8	15.7	12.8	10.4	12.3	13.1	19.1	20.4	18.7	181.6	50
Longiram	15.3	13.2	15.5	15.4	13.9	11.5	10.4	10.0	10.1	12.3	15.5	16.5	159.6	28
Sintang	19.2	16.0	18.5	18.3	16.4	13.5	11.5	13.4	14.3	19.2	20.8	21.7	202.8	48
Sanggau	15.0	13.5	13.9	15.4	13.1	10.5	9.2	10.2	11.7	14.7	16.9	18.1	162.2	27
Mampawah	12.3	8.8	8.2	11.4	12.0	8.6	8.8	9.2	10.9	15.3	16.9	15.6	138.0	25
Ngabang	18.2	13.8	16.5	17.3	15.0	12.0	10.1	10.9	13.5	17.3	19.0	19.4	183.0	21
Laham	17.1	15.0	16.4	18.1	16.6	13.4	11.6	10.4	11.1	14.8	14.6	19.4	178.5	14
Semitau	15.0	12.2	13.4	14.5	13.1	9.7	8.3	9.0	11.7	14.1	15.6	17.1	153.7	27
Longbloeöe	14.5	14.2	16.3	16.3	16.1	13.8	11.8	11.7	13.7	16.3	14.9	15.0	174.6	24
Poetoessibau	19.2	15.8	17.7	17.5	15.7	12.7	11.7	12.9	13.7	17.8	20.4	20.1	195.2	27
Balaikarangan	17.8	13.2	16.1	16.3	14.8	11.4	8.4	10.1	14.2	15.6	18.4	18.3	174.6	14
Singkawang	18.6	12.4	13.1	14.1	13.8	11.7	10.1	11.5	12.5	18.9	21.5	20.1	178.3	50
Sangkoelirang	12.7	11.8	12.3	11.8	10.7	9.7	6.2	8.0	6.7	7.9	11.4	11.6	120.8	6
Sambas	17.7	12.2	12.9	14.6	12.8	11.2	9.6	11.6	12.5	17.1	18.6	18.5	169.3	39
Moearaantjaloeng	12.0	8.5	11.2	8.3	8.3	7.0	5.3	6.5	4.8	5.4	9.7	8.3	95.3	6
Kuching	22.0	17.6	17.6	17.3	17.5	14.0	13.5	14.5	15.8	21.1	20.1	23.7	214.7	10–11
Lundu	18.2	14.0	10.4	8.0	9.5	6.9	5.2	7.1	7.4	9.9	12.5	14.4	123.5	10–11
Longnawan	20.9	18.0	22.5	22.3	23.2	18.3	16.9	16.8	22.2	22.2	23.8	20.7	247.8	11
Sibu	17.8	13.1	16.1	12.9	12.7	11.7	10.7	10.7	12.8	16.4	16.4	19.3	170.6	10–11
Serasan	16.2	9.6	8.9	8.9	9.9	9.3	8.4	7.7	9.4	15.0	16.3	16.8	136.4	19
Tandjoengselor	18.0	14.9	15.7	14.3	14.5	14.7	12.8	13.5	13.8	14.3	15.5	16.9	178.9	35
Bintulu	18.6	12.4	13.8	12.3	13.4	11.4	12.8	12.4	13.8	16.9	18.4	18.6	174.8	10
Malinau	16.0	10.9	12.8	13.5	13.8	14.8	13.2	13.9	15.1	17.2	13.6	14.5	169.3	6
Tandjoeng Belitoeng	14.0	8.9	12.6	12.4	12.8	10.0	10.1	8.9	11.1	17.6	15.5	16.9	150.8	14
Tawau	10.6	8.1	10.9	9.1	11.4	10.6	11.8	11.8	9.9	10.7	10.4	11.2	126.5	10–11
Miri	13.8	9.8	9.0	9.5	9.2	9.7	8.6	9.8	12.2	15.8	15.6	14.6	137.6	10–11
Limbang	13.8	11.2	13.2	14.2	14.8	13.1	11.3	11.4	15.5	17.5	17.5	14.0	167.5	10–13
Lawas	13.8	12.2	12.7	17.2	17.2	16.5	14.6	16.0	14.5	21.2	19.0	17.6	192.5	5–6
Lahad Datu	17.1	11.0	12.4	9.7	13.5	12.8	10.8	10.2	11.8	16.0	15.5	15.7	156.5	5–8
Tenom	14.5	8.4	13.3	13.0	13.6	13.2	10.7	11.0	13.6	15.4	13.9	12.7	153.3	10–11
Labuan	9.3	4.5	6.8	9.8	15.2	15.8	12.7	13.8	15.8	18.7	15.5	16.0	153.9	6
Beaufort	15.8	11.4	12.9	16.2	15.0	12.2	12.6	13.7	17.6	18.7	16.9	17.3	180.3	10–12
Keningau	14.6	10.8	11.9	13.3	15.0	15.2	11.3	13.1	12.9	17.4	13.4	13.7	162.6	9–12
Tambunan	14.1	9.0	11.0	13.0	14.8	14.7	10.4	10.7	14.0	16.7	14.3	12.2	154.9	9–11
Sandakan	16.4	11.1	13.4	8.8	11.0	12.8	12.4	10.4	13.1	16.0	16.6	18.2	160.2	10–11
Jesselton	13.4	7.8	9.0	10.0	12.6	12.4	12.9	12.8	16.7	16.9	15.3	15.0	154.8	10–11
Kudat	18.0	10.9	11.1	8.0	7.7	8.9	8.4	9.7	11.6	15.4	16.0	19.4	145.1	10–11

TABLE V - 8 *Continued*

b. Mean Number of Days with Precipitation ≧0.4 Inch

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF RECORD
Pagatan	9.2	8.8	8.8	3.8	6.5	6.8	4.8	4.5	3.5	2.5	4.5	6.0	69.7	4
Discovery-Oostbank	5.8	2.4	4.4	4.6	5.6	2.3	2.2	2.5	1.8	3.5	7.1	8.1	50.3	9–13
Bandjermasin	10.8	9.8	9.2	7.2	5.1	4.3	2.8	3.0	2.7	4.2	7.6	10.8	77.5	15–16
Kotabaroe	10.0	8.6	7.6	7.2	7.8	8.0	5.8	4.0	3.8	2.8	4.4	6.0	76.0	5
Tandjoeng-hoeloe	11.0	11.4	9.0	9.0	9.2	8.2	8.8	5.4	4.0	3.6	4.4	6.4	90.4	4–5
Rantau	10.0	7.6	9.4	6.9	5.9	4.8	3.1	3.0	2.9	4.6	7.9	9.2	75.3	14–15
Soekamara	9.2	8.5	10.0	9.0	7.4	8.0	6.2	6.8	5.0	7.3	11.2	10.0	98.6	6–9
Barabai	9.4	9.0	9.1	7.2	5.9	5.6	4.5	3.5	2.9	4.8	8.2	10.4	80.5	15–16
Sampit	10.0	9.1	9.4	8.8	6.9	5.5	4.2	4.7	4.3	6.6	7.8	8.8	86.1	13–14
Amoentai	9.5	8.9	9.0	7.8	5.6	3.4	2.5	2.9	2.4	3.9	8.2	9.3	73.4	15–16
Ketapang	8.5	8.5	7.4	9.2	7.6	5.3	4.0	4.8	5.8	9.0	12.3	14.0	96.4	11–12
Boentok	9.2	8.2	9.4	8.5	6.4	5.2	4.0	3.3	3.4	4.8	9.6	9.1	81.1	15–16
Balikpapan	6.4	6.9	7.9	6.1	6.6	6.4	6.4	5.1	4.2	4.4	6.3	7.1	73.8	15–16
Koealakoeroen	8.2	9.7	8.4	10.8	8.5	8.1	6.6	7.1	6.9	7.9	11.2	10.2	103.6	14–15
Moearatewe	8.1	10.1	9.9	10.4	7.9	6.1	4.6	5.2	5.1	6.9	9.2	9.6	93.1	14–16
Poeroektjaoe	10.3	8.8	10.3	12.2	9.2	7.9	7.4	6.3	7.0	8.8	9.6	10.1	107.9	12–13
Samarinda	4.6	4.4	5.3	5.5	6.3	5.0	3.1	3.7	3.4	5.8	6.8	6.6	60.5	10–11
Nangapinoh	9.4	8.7	9.1	9.0	7.4	7.6	4.3	5.1	5.8	8.3	9.0	10.0	93.7	6–7
Moearamoentai	3.8	2.4	5.0	3.0	4.6	3.4	1.8	1.8	1.5	2.7	5.5	4.2	39.7	4–6
Pontianak	7.1	6.1	7.1	9.3	7.8	6.3	4.7	6.4	6.1	8.9	11.3	9.5	90.6	14–15
Longiram	8.5	7.4	9.8	9.3	9.1	6.9	6.5	5.1	5.8	7.3	10.7	9.5	95.9	13–15
Sintang	9.4	7.9	9.0	9.3	7.7	6.6	6.1	6.7	7.9	9.9	10.8	11.1	102.4	14–15
Sanggau	8.7	7.9	7.7	8.6	8.2	7.1	5.8	7.1	5.6	9.3	8.6	10.1	94.7	13–14
Mampawah	6.7	4.6	5.0	7.6	7.9	6.8	5.4	6.2	5.0	8.1	10.7	11.1	85.1	10–12
Ngabang	10.1	7.8	9.4	11.0	8.6	8.7	6.2	6.6	7.1	8.7	9.3	10.6	104.1	6–7
Semitau	10.1	9.4	8.8	10.5	9.7	7.8	6.4	7.5	7.9	10.8	10.8	11.7	111.4	11–13
Longbloeöe	8.3	9.0	9.7	10.7	10.8	7.8	8.7	8.7	9.4	9.5	7.1	7.4	107.1	7–10
Poetoessibau	11.2	10.5	10.8	12.8	9.8	9.1	7.5	9.3	8.8	13.2	13.1	13.5	129.6	11–12
Singkawang	8.7	5.7	5.7	7.0	6.2	5.7	5.0	6.1	5.2	9.9	11.7	11.5	88.4	14–15
Sambas	8.7	6.3	6.9	7.3	7.1	6.5	4.5	5.5	6.5	8.2	9.5	10.0	87.0	14–15
Kuching	11.4	10.9	9.7	8.1	7.3	6.7	5.9	7.6	7.9	10.0	9.7	14.1	109.3	10–11
Lundu	14.3	10.1	7.1	4.4	5.8	3.9	2.6	4.6	4.5	5.8	7.9	10.2	81.2	10–11
Sibu	9.1	7.4	8.1	6.6	6.2	5.7	5.8	4.7	7.3	9.1	8.0	9.4	87.4	10–11
Serasan	10.2	4.5	3.8	4.2	3.7	5.0	4.6	3.1	5.1	10.0	10.9	10.2	75.3	5–7
Tandjoengselor	8.6	7.7	7.4	6.2	7.9	6.5	6.5	7.6	6.9	7.9	8.1	8.9	90.2	15–16
Bintulu	10.5	6.6	6.6	7.1	6.1	6.7	6.5	6.9	7.7	8.9	10.9	10.5	95.0	10
Tandjoeng Belitoeng	5.8	4.0	6.2	6.0	7.8	7.0	7.0	5.0	3.4	6.8	8.5	7.0	74.5	4–5
Tawau	4.4	4.6	4.4	4.0	6.2	5.1	7.3	7.0	4.7	5.5	5.7	4.8	63.7	10–11
Miri	8.1	5.5	4.8	5.4	5.6	5.8	5.2	5.5	7.2	9.4	9.7	9.2	81.4	10–11
Limbang	9.2	6.4	7.7	8.3	9.1	7.9	6.3	6.0	8.5	9.8	11.7	8.6	99.5	10–13
Lawas	7.0	5.7	5.8	9.5	8.0	8.2	7.6	8.2	8.0	12.5	11.8	9.4	101.7	5–6
Lahad Datu	7.8	4.0	4.8	3.8	6.0	5.4	3.8	2.8	4.8	5.1	5.3	5.1	58.7	5–8
Tenom	6.2	3.6	5.7	5.3	5.4	4.4	2.7	3.0	5.4	5.8	4.8	5.3	57.6	10–11
Labuan	3.5	2.3	2.3	3.8	7.5	8.7	7.8	6.5	7.7	10.5	9.5	9.0	79.1	6
Beaufort	9.2	6.2	7.5	9.3	10.7	7.8	8.6	8.4	10.5	11.7	9.7	9.6	109.2	10–12
Keningau	5.4	4.0	4.7	5.6	5.5	6.3	4.2	4.8	4.6	6.4	4.8	3.9	60.2	9–12
Tambunan	5.5	3.6	5.2	5.7	7.4	6.7	3.2	3.3	5.6	5.8	5.0	4.3	61.3	9–11
Sandakan	11.2	6.5	6.3	4.5	5.3	6.6	6.1	6.1	6.5	8.4	10.0	10.4	87.9	10–11
Jesselton	5.4	2.7	2.7	4.0	6.0	7.0	5.8	6.2	8.9	9.4	7.0	7.0	72.1	10–11
Kudat	10.8	6.2	4.5	2.4	3.2	2.6	3.3	4.5	4.4	7.4	6.6	10.8	66.7	10–11

c. Mean Number of Days with Precipitation ≧1.0 Inch

Pagatan	4.2	3.8	2.8	1.2	3.2	1.5	2.0	1.2	1.8	0.2	1.8	1.8	25.5	4
Discovery-Oostbank	1.8	0.7	1.3	1.7	2.8	0.8	0.8	0.9	0.5	1.1	3.5	3.2	19.1	9–13
Bandjermasin	4.2	4.2	3.9	3.2	1.8	1.8	0.9	0.9	1.1	1.2	3.2	5.0	31.4	15–16
Kotabaroe	4.2	3.8	3.8	2.0	3.8	2.6	4.4	2.0	2.2	1.4	1.0	2.6	33.8	5
Tandjoeng-hoeloe	4.8	5.6	3.8	3.0	4.4	2.0	3.4	1.2	1.0	0.8	1.8	2.2	34.0	4–5
Rantau	3.0	3.7	4.5	3.2	2.5	1.5	1.4	0.9	1.0	1.9	2.9	3.5	30.0	14–15
Soekamara	2.4	3.0	4.1	3.6	3.8	3.3	2.0	4.0	3.4	3.4	4.0	3.1	40.1	6–9
Barabai	4.5	4.7	4.1	3.6	2.9	2.4	2.0	0.9	1.4	1.5	4.2	4.7	36.9	15–16
Sampit	4.9	3.8	3.8	3.9	3.6	3.1	1.5	1.9	1.8	3.0	2.8	3.1	37.2	13–14
Amoentai	4.1	4.2	4.1	3.6	2.7	1.2	1.1	0.9	1.1	1.8	3.2	4.3	32.3	15–16
Ketapang	4.6	3.6	3.7	4.4	3.8	2.8	1.6	2.6	2.5	3.8	6.5	7.5	47.4	11–12
Boentok	4.2	3.7	4.2	4.6	2.4	2.0	1.5	1.1	2.1	2.1	4.1	3.9	35.9	15–16
Balikpapan	2.4	2.9	2.6	2.4	2.8	2.3	3.1	1.8	1.8	1.5	2.4	2.5	28.5	15–16
Koealakoeroen	4.1	4.9	4.1	5.3	4.5	4.1	3.1	3.1	3.4	3.9	5.2	4.2	49.9	14–15
Moearatewe	3.8	4.6	4.8	4.9	4.1	2.6	1.1	2.7	2.5	3.0	4.5	3.6	42.2	14–16
Peoroektjaoe	5.0	4.4	5.5	7.2	4.2	3.8	2.9	2.8	3.5	4.4	4.8	3.8	52.3	12–13
Samarinda	1.7	1.9	1.8	2.0	1.9	1.6	1.1	0.6	1.0	2.5	2.2	2.3	20.6	10–11
Nangapinoh	5.3	4.6	5.0	4.8	3.1	4.3	2.2	2.6	3.1	5.0	3.6	3.7	47.3	6–7
Moearamoentai	1.6	1.2	3.0	1.0	1.0	1.2	0.6	1.2	0.2	1.0	2.7	2.2	16.9	4–6
Pontianak	3.9	2.7	3.7	4.3	3.7	2.9	1.9	3.2	2.7	4.7	4.9	4.5	43.1	14–15
Longiram	4.7	4.2	5.2	5.0	4.9	3.4	3.1	2.4	2.8	3.7	5.0	4.0	48.4	13–15

TABLE V - 8 *Continued*

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF RECORD
Sintang	4.3	3.7	3.2	4.9	3.7	3.7	2.5	4.3	4.4	4.6	4.2	4.9	48.4	14–15
Sanggau	3.7	3.6	3.3	4.1	3.8	3.5	2.1	2.8	2.3	3.7	2.9	3.6	39.4	13–14
Mampawah	2.8	1.6	2.4	3.1	3.2	3.8	2.9	2.8	3.0	3.8	5.7	5.6	40.7	10–12
Ngabang	3.7	3.6	3.8	5.6	4.6	4.8	2.3	2.7	3.3	3.7	4.1	4.8	47.0	6–7
Semitau	5.3	5.2	4.4	4.9	4.4	2.5	2.9	3.8	3.8	4.9	4.7	5.3	52.1	11–13
Longbloeöe	3.3	4.8	5.0	5.7	5.8	4.4	4.4	3.1	3.9	3.9	3.3	3.4	51.0	7–10
Poetoessibau	6.2	6.0	5.2	7.5	5.0	4.6	4.0	4.8	4.5	7.4	6.8	6.4	68.4	11–12
Singkawang	4.1	2.7	2.3	2.7	3.0	2.8	3.0	3.4	2.2	4.7	5.8	6.1	42.8	14–15
Sambas	3.4	2.6	2.9	3.5	2.6	2.7	1.7	2.4	2.3	3.3	4.6	4.6	36.6	14–15
Kuching	6.4	6.2	5.2	2.3	3.0	2.8	1.9	3.1	3.2	3.5	3.3	6.5	47.4	10–11
Lundu	9.9	6.4	3.4	2.4	2.4	1.7	0.9	1.7	1.2	3.3	3.4	5.1	41.8	10–11
Sibu	4.4	3.9	4.3	2.8	3.2	2.6	2.3	2.0	4.1	4.3	3.3	3.9	41.1	10–11
Serasan	6.2	2.5	2.0	1.5	1.5	1.7	1.6	1.6	2.1	3.9	5.9	4.6	35.1	5–7
Tandjoengselor	2.8	3.0	2.8	2.4	3.1	1.8	2.9	3.1	3.0	3.4	3.4	4.4	36.1	15–16
Bintulu	5.0	4.2	3.7	4.2	2.5	3.1	3.1	3.0	3.6	4.0	5.4	4.9	46.7	10
Tandjoeng Belitoeng	2.2	1.8	1.8	3.4	3.4	3.0	2.2	2.4	1.8	2.2	2.8	4.0	31.0	4–5
Tawau	1.1	1.7	1.5	1.8	3.5	2.3	3.6	3.3	2.0	1.3	2.4	2.1	26.6	10–11
Miri	5.2	3.3	2.2	2.9	2.5	3.2	2.5	3.0	4.0	5.3	4.5	4.7	43.3	10–11
Limbang	5.4	3.3	4.0	4.8	4.8	4.1	2.7	2.3	4.0	4.3	5.2	3.8	48.7	10–13
Lawas	3.3	2.3	3.2	5.0	4.3	4.0	3.2	3.2	3.5	5.8	6.2	3.6	47.6	5–6
Lahad Datu	2.6	1.0	1.4	0.5	1.2	2.2	1.8	0.2	2.0	1.4	2.0	2.0	18.3	5–8
Tenom	2.4	1.4	2.0	2.0	1.8	1.7	0.4	1.1	1.9	1.5	1.1	1.4	18.7	10–11
Labuan	1.7	1.0	0.5	2.2	4.0	4.7	3.3	4.8	3.7	5.3	5.0	5.0	41.2	6
Beaufort	4.8	2.8	3.9	5.3	5.1	4.6	4.0	4.4	5.8	5.2	4.7	4.1	54.7	10–12
Keningau	1.1	1.8	1.4	1.4	2.3	1.6	1.4	1.7	1.3	2.1	1.2	1.4	18.7	9–12
Tambunan	1.2	0.7	1.6	1.9	1.8	1.5	0.3	0.6	1.0	1.7	0.9	1.4	14.6	9–11
Sandakan	6.0	3.8	3.1	1.7	2.6	2.6	2.8	2.9	2.9	4.0	4.6	6.7	43.7	10–11
Jesselton	2.1	0.7	0.6	2.2	3.2	4.2	2.4	2.4	4.1	4.3	3.2	4.1	33.5	10–11
Kudat	6.3	2.9	1.7	0.9	0.8	0.9	0.9	1.0	1.0	2.5	2.1	4.5	25.5	10–11

d. Mean Number of Days with Precipitation ≧2.0 Inches

Discovery-Oostbank	0.6	0.2	0.3	0.3	0.9	0.2	0.3	0.2	0.1	0.5	0.9	1.2	5.7	12
Kotabaroe	1.4	0.6	1.2	0.8	1.6	0.6	2.2	0.8	0.8	0.0	0.4	0.4	10.8	5
Rantau	0.8	0.8	1.1	1.1	0.7	0.5	0.3	0.3	0.3	0.6	0.5	0.7	7.7	15
Soekamara	0.6	0.8	1.1	1.5	1.3	1.1	0.3	1.1	1.3	0.9	0.8	0.7	11.5	8
Sampit	1.1	1.2	1.0	1.2	0.9	0.7	0.4	0.6	0.5	1.1	0.4	0.6	9.7	13
Ketapang	1.8	1.8	0.8	1.2	1.6	0.7	0.9	1.3	0.8	0.9	2.2	3.1	17.1	11
Nangapinoh	2.1	1.0	1.6	2.4	1.0	1.6	0.6	1.3	0.7	1.3	1.0	1.1	15.7	7
Pontianak	1.4	0.7	0.8	1.5	1.1	1.2	0.9	1.1	0.7	1.4	1.9	1.7	14.4	15
Sintang	1.5	1.1	1.1	1.6	1.1	1.1	2.5	1.2	1.7	1.2	1.6	1.5	17.2	15
Sanggau	1.3	1.0	1.1	1.2	0.9	0.7	0.7	0.6	1.0	1.4	2.9	1.5	14.3	13
Mampawah	1.1	0.4	0.9	0.7	1.1	1.6	1.2	0.7	1.2	1.8	2.0	1.6	14.3	11
Ngabang	1.4	1.3	0.8	1.8	1.6	1.4	1.0	0.6	0.8	0.8	1.3	1.7	14.5	7
Semitau	1.4	2.0	2.0	2.2	1.0	0.8	1.4	2.0	1.0	2.2	1.7	1.8	19.5	12
Poetoessibau	2.1	2.8	2.7	2.2	1.9	1.8	1.4	1.4	1.8	2.6	2.1	1.7	24.5	12
Singkawang	1.7	1.2	1.1	1.1	1.2	1.1	0.9	1.7	0.7	1.5	1.8	2.5	16.5	15
Sambas	0.8	0.9	0.9	1.0	0.7	0.3	0.6	0.8	0.7	0.9	1.1	1.6	10.3	15
Kuching	3.6	3.2	1.6	0.7	0.7	0.9	0.3	1.0	0.6	1.0	0.8	1.5	15.9	10–11
Lundu	4.9	3.7	0.8	0.4	0.3	0.4	0.2	0.1	0.0	0.4	0.2	1.3	12.7	10–11
Sibu	1.7	1.2	1.1	0.8	1.0	0.4	0.6	0.4	0.7	0.8	0.7	1.6	11.0	10–11
Bintulu	1.4	1.8	0.9	0.4	0.6	1.1	1.2	1.0	1.0	1.5	2.0	1.7	14.6	10
Tawau	0.2	0.4	0.4	0.5	0.7	0.8	0.9	0.8	0.4	0.2	0.7	0.7	6.7	10–11
Miri	1.6	1.0	0.7	0.7	0.8	0.8	0.7	1.2	1.3	1.5	1.3	1.2	12.8	10–11
Limbang	2.2	1.4	1.4	1.4	1.5	1.3	1.0	0.7	1.5	1.3	1.8	0.8	16.3	10–13
Lawas	1.2	1.0	1.0	2.2	1.3	1.2	1.4	2.2	1.7	2.7	2.2	1.6	19.7	5–6
Lahad Datu	0.4	0.4	0.1	0.2	0.5	0.6	0.4	0.2	0.6	0.4	0.8	0.6	5.2	5–8
Tenom	0.4	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.4	0.3	0.1	0.3	3.0	10–11
Beaufort	1.5	1.2	1.1	2.2	1.9	1.7	1.5	1.1	2.2	2.4	1.8	1.6	20.2	10–12
Keningau	0.4	0.7	0.2	0.3	0.8	0.2	0.4	0.3	0.2	0.4	0.3	0.4	4.6	9–12
Tambunan	0.0	0.0	0.3	0.4	0.3	0.2	0.0	0.1	0.2	0.3	0.1	0.3	2.2	9–11
Sandakan	3.0	1.9	1.0	0.5	1.0	0.4	0.9	0.6	0.8	1.0	1.8	3.3	16.2	10–11
Jesselton	0.7	0.3	0.2	0.7	0.8	1.8	1.1	0.8	1.3	1.7	1.4	1.6	12.4	10–11
Kudat	2.5	1.3	0.5	0.1	0.1	0.0	0.1	0.2	0.2	0.8	0.4	2.0	8.2	10–11

TABLE V - 8 *Continued*

e. Mean Number of Days with Precipitation ≧3.0 Inches

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF RECORD
Discovery-Oostbank	0.3	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.5	1.6	12
Kotabaroe	0.2	0.2	0.2	0.2	0.6	0.2	0.4	0.2	0.4	0.0	0.0	0.2	2.8	5
Rantau	0.2	0.3	0.3	0.3	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	1.9	15
Soekamara	0.2	0.1	0.2	0.9	0.3	0.3	0.0	0.1	0.7	0.3	0.0	0.0	3.1	8
Sampit	1.5	0.4	0.2	0.5	0.6	0.3	0.2	0.1	0.1	0.4	0.1	0.1	3.5	13
Ketapang	1.2	1.0	0.6	0.6	0.8	0.3	0.5	0.5	0.1	0.3	0.7	1.4	8.0	11
Nangapinoh	0.7	0.0	0.4	1.1	0.1	0.6	0.1	0.4	0.1	0.6	0.4	0.4	4.9	7
Pontianak	0.4	0.1	0.3	0.5	0.6	0.7	0.4	0.5	0.3	0.5	0.6	0.6	5.5	15
Sintang	0.7	0.4	0.5	0.5	0.5	0.4	1.0	0.5	0.2	0.6	0.6	0.5	6.4	15
Sanggau	0.4	0.3	0.2	0.5	0.3	0.1	1.3	0.3	0.4	0.4	0.8	0.7	5.7	13
Mampawah	0.4	0.1	0.3	0.1	0.3	0.4	0.5	0.2	0.5	0.5	0.8	0.5	4.6	11
Ngabang	0.3	0.0	0.0	0.1	0.4	0.7	0.5	0.1	0.1	0.3	0.3	0.1	2.9	7
Semitau	0.1	0.7	0.3	0.8	0.2	0.2	0.2	0.9	0.5	0.4	0.6	0.6	5.5	12
Poetoessibau	0.7	1.2	1.1	0.1	0.5	0.6	0.4	0.6	0.6	1.2	1.0	0.7	8.7	12
Singkawang	0.7	0.2	0.5	0.2	0.5	0.1	0.4	1.1	0.2	0.3	0.7	1.1	6.0	15
Sambas	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.6	2.7	15
Kuching	1.7	1.4	0.4	0.3	0.1	0.4	0.1	0.1	0.2	0.3	0.1	0.7	5.8	10–11
Lundu	2.1	1.9	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.4	5.2	10–11
Sibu	0.4	0.4	0.3	0.3	0.4	0.0	0.0	0.0	0.4	0.1	0.3	0.5	3.1	10–11
Bintulu	0.3	0.6	0.4	0.1	0.2	0.4	0.5	0.1	0.3	0.7	0.6	0.7	4.9	10
Tawau	0.0	0.0	0.0	0.4	0.3	0.4	0.3	0.4	0.1	0.0	0.0	0.4	2.3	10–11
Miri	0.6	0.3	0.3	0.0	0.5	0.4	0.3	0.1	0.7	0.8	0.8	0.5	5.3	10–11
Limbang	2.2	0.7	0.3	0.4	0.4	0.4	0.2	0.3	0.3	0.6	0.8	0.4	7.0	10–13
Lawas	0.2	0.5	0.5	1.0	0.3	0.3	0.4	0.8	0.8	1.0	0.4	0.6	6.8	5–6
Lahad Datu	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.1	0.0	0.3	1.1	5–8
Tenom	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.6	10–11
Beaufort	0.4	0.5	0.5	0.5	0.9	0.4	0.7	0.4	0.6	0.8	0.9	0.6	7.2	10–12
Keningau	0.1	0.3	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.2	0.0	0.2	1.5	9–12
Tambunan	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	9–11
Sandakan	1.4	1.3	0.3	0.2	0.4	0.1	0.4	0.1	0.2	0.0	0.8	1.8	7.0	10–11
Jesselton	0.1	0.0	0.2	0.2	0.4	0.4	0.4	0.3	0.5	0.7	0.8	0.7	4.7	10–11
Kudat	1.4	0.4	0.2	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.9	3.4	10–11

f. Mean Number of Days with Precipitation ≧4.0 Inches

Discovery-Oostbank	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.4	12
Kotabaroe	0.0	0.2	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	5
Rantau	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.8	15
Soekamara	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	8
Sampit	0.1	0.2	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.9	13
Ketapang	0.4	0.4	0.2	0.2	0.4	0.2	0.3	0.2	0.1	0.2	0.1	0.5	3.2	11
Nangapinoh	0.1	0.0	0.1	0.7	0.0	0.1	0.1	0.1	0.1	0.4	0.3	0.1	2.1	7
Pontianak	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	1.4	15
Sintang	0.3	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	1.8	15
Sanggau	0.1	0.2	0.1	0.4	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	1.8	13
Mampawah	0.1	0.0	0.1	0.1	0.2	0.2	0.4	0.2	0.1	0.2	0.1	0.4	2.1	11
Ngabang	0.3	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.9	7
Semitau	0.1	0.3	0.0	0.2	0.0	0.2	0.2	0.5	0.2	0.1	0.4	0.2	2.4	12
Poetoessibau	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.4	0.5	0.2	2.9	12
Singkawang	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.3	0.3	2.0	15
Sambas	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.8	15
Kuching	0.8	0.8	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	2.3	10–11
Lundu	1.3	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.4	10–11
Sibu	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10–11
Bintulu	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.2	2.1	10
Tawau	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.8	10–11
Miri	0.2	0.2	0.0	0.0	0.2	0.2	0.1	0.1	0.3	0.3	0.2	0.3	2.1	10–11
Limbang	4.3	3.7	0.1	0.2	0.1	0.1	0.0	0.2	0.0	0.3	0.2	0.2	9.4	10–13
Lawas	0.2	0.5	0.0	0.7	0.0	0.2	0.2	0.4	0.3	0.2	0.2	0.2	3.1	5–6
Lahad Datu	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.4	5–8
Tenom	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	10–11
Beaufort	0.2	0.3	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.1	1.9	10–12
Keningau	0.0	0.2	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.2	0.9	9–12
Tambunan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9–11
Sandakan	0.7	0.9	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.4	1.0	3.5	10–11
Jesselton	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.4	0.2	0.4	0.2	1.6	10–11
Kudat	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2	10–11

TABLE V - 9

MEAN FREQUENCY OF WET AND DRY PERIODS OF GIVEN LENGTHS

LENGTH OF PERIOD	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
TYPE OF PERIOD* MONTH	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
					a. Pagatan							
January	4.5	5.5	2.8	1.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
February	6.2	5.2	1.0	1.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
March	3.8	3.2	2.	2.52	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
April	6.2	4.2	1.0	2.5	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
May	4.2	4.5	2.0	1.2	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
June	4.2	3.8	1.0	1.5	0.5	0.5	0.0	0.2	0.0	0.2	0.0	0.0
July	2.2	2.0	0.5	0.8	0.2	0.8	0.2	0.8	0.0	0.5	0.0	0.0
August	1.0	1.5	1.0	0.0	0.2	0.5	0.0	0.5	0.0	0.0	0.0	0.2
September	1.8	0.8	0.7	1.5	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.2
October	3.5	3.2	1.2	1.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
November	6.0	4.8	1.2	2.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
December	6.2	5.2	1.2	2.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	49.8	43.9	15.8	18.0	1.3	5.4	0.2	1.7	0.0	0.7	0.0	0.4
								Years of Record: 4				
					b. Discovery-Oostbank							
January	3.8	3.9	1.3	1.7	0.2	1.0	0.0	0.1	0.0	0.1	0.0	0.0
February	3.1	1.4	0.7	1.3	0.0	1.0	0.0	0.4	0.0	0.0	0.0	0.0
March	4.1	2.7	1.3	1.6	0.0	0.9	0.0	0.1	0.0	0.0	0.0	0.0
April	3.4	1.9	0.9	1.7	0.1	0.9	0.0	0.3	0.0	0.1	0.0	0.0
May	3.5	2.5	0.9	1.4	0.2	0.7	0.0	0.3	0.0	0.1	0.0	0.0
June	3.6	1.6	0.1	1.1	0.1	1.3	0.0	0.4	0.0	0.2	0.0	0.0
July	2.1	0.9	0.4	1.0	0.1	0.8	0.0	0.7	0.0	0.2	0.0	0.1
August	2.1	1.3	0.4	0.5	0.0	0.9	0.0	0.4	0.0	0.2	0.0	0.1
September	2.0	0.7	0.5	0.7	0.0	1.2	0.0	0.4	0.0	0.1	0.0	0.2
October	3.1	1.8	0.7	1.4	0.1	0.7	0.0	0.2	0.0	0.0	0.0	0.1
November	4.3	4.1	1.2	1.0	0.4	0.6	0.0	0.1	0.0	0.0	0.0	0.0
December	3.6	4.3	2.5	1.5	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual	38.7	27.1	10.9	14.9	1.4	10.3	0.0	3.4	0.0	1.0	0.0	0.5
								Years of Record: 9 — 13				
					c. Bandjermasin							
January	2.9	5.0	2.1	0.6	0.9	0.1	0.1	0.0	0.0	0.0	0.0	0.0
February	2.6	4.2	1.8	1.1	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0
March	3.4	5.2	2.6	1.4	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
April	5.1	5.2	1.9	1.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	4.2	3.8	1.7	1.5	0.1	0.7	0.0	0.1	0.0	0.0	0.0	0.0
June	4.1	3.4	1.4	1.8	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0
July	3.6	2.4	1.0	1.3	0.1	1.1	0.0	0.3	0.0	0.1	0.0	0.0
August	3.4	2.5	0.7	1.1	0.2	0.9	0.0	0.6	0.0	0.0	0.0	0.1
September	2.9	2.5	1.1	1.1	0.0	0.6	0.0	0.2	0.0	0.1	0.0	0.1
October	4.0	3.1	1.4	1.4	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0
November	3.5	3.5	1.5	1.8	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0
December	3.1	4.3	1.6	0.9	0.6	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Annual	42.8	45.1	18.8	15.7	4.2	5.4	0.4	1.3	0.0	0.2	0.0	0.2
								Years of Record: 15 — 16				
					d. Kotabaroe							
January	2.8	4.6	2.2	0.6	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0
February	3.6	4.2	2.2	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
March	2.4	3.2	2.2	1.4	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0
April	5.0	5.4	1.8	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	3.4	3.4	2.2	1.6	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
June	3.6	4.4	1.4	0.4	0.4	0.6	0.0	0.2	0.0	0.2	0.0	0.0
July	2.2	2.0	0.8	0.8	0.4	1.0	0.0	0.2	0.0	0.0	0.0	0.2
August	2.0	1.2	0.8	0.8	0.0	0.8	0.0	0.4	0.0	0.2	0.0	0.2
September	2.8	1.2	0.2	1.0	0.2	1.0	0.0	0.2	0.0	0.0	0.0	0.2
October	4.2	2.8	0.4	1.4	0.2	0.6	0.0	0.2	0.0	0.0	0.0	0.0
November	5.0	2.8	1.0	2.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
December	6.2	5.8	1.4	1.8	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	43.2	41.0	16.6	16.0	3.2	6.2	0.0	1.2	0.0	0.4	0.0	0.6
								Years of Record: 5				

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
e. Tandjoeng-hoeloe												
January	3.0	4.2	0.8	1.0	1.5	0.2	0.2	0.0	0.0	0.0	0.0	0.0
February	2.6	3.4	1.8	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
March	3.2	4.6	2.8	1.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
April	4.8	5.2	1.8	1.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	4.8	4.0	0.8	2.0	0.8	0.2	0.2	0.0	0.0	0.0	0.0	0.0
June	3.2	3.8	0.8	1.0	1.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
July	2.0	2.0	1.0	0.4	0.2	1.2	0.2	0.4	0.0	0.0	0.0	0.0
August	4.6	4.0	1.0	1.0	0.2	0.6	0.0	0.2	0.0	0.2	0.0	0.0
September	2.0	1.2	0.8	1.2	0.4	1.0	0.0	0.0	0.0	0.0	0.0	0.2
October	4.6	2.6	0.4	1.4	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
November	6.2	4.0	1.0	3.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December	3.8	4.4	1.6	1.4	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	44.8	43.4	14.6	16.6	5.9	5.2	0.8	0.6	0.0	0.2	0.0	0.2
								Years of Record: 4 — 5				
f. Rantau												
January	4.0	4.2	2.1	1.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
February	4.1	3.9	1.6	2.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
March	4.3	4.8	2.0	1.5	0.2	0.3	0.0	0.1	0.0	0.0	0.0	0.0
April	5.2	4.5	1.5	2.0	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
May	6.0	4.0	0.9	2.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
June	4.7	2.8	0.7	2.0	0.1	0.9	0.0	0.1	0.0	0.1	0.0	0.0
July	3.6	2.4	0.7	0.9	0.1	1.1	0.0	0.4	0.0	0.3	0.0	0.0
August	3.6	2.1	0.5	1.0	0.1	1.1	0.0	0.6	0.0	0.0	0.0	0.0
September	3.8	1.5	0.3	1.7	0.0	0.9	0.0	0.2	0.0	0.0	0.0	0.0
October	4.9	3.0	0.9	1.9	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0
November	5.6	5.1	1.3	1.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	4.3	5.5	1.8	1.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual	54.1	43.8	14.3	20.3	2.0	6.5	0.2	1.6	0.0	0.4	0.0	0.0
								Years of Record: 14 — 15				
g. Soekamara												
January	3.9	5.1	2.2	1.0	0.5	0.1	0.0	0.1	0.0	0.0	0.0	0.0
February	3.9	4.6	1.9	1.1	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0
March	4.1	4.5	2.0	1.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
April	4.6	6.0	2.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	5.6	4.4	1.0	1.7	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
June	6.3	5.8	1.6	1.8	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
July	3.7	2.7	0.7	1.3	0.2	1.0	0.2	0.2	0.0	0.0	0.0	0.0
August	4.0	2.8	1.3	1.6	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0
September	2.6	1.0	1.0	1.6	0.1	1.1	0.0	0.6	0.0	0.0	0.0	0.0
October	3.6	3.6	1.3	0.8	0.2	0.7	0.0	0.2	0.0	0.0	0.0	0.0
November	4.6	4.8	1.2	1.6	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	3.1	4.3	2.0	1.3	0.4	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Annual	50.0	49.6	18.7	16.5	2.4	5.0	0.6	1.3	0.0	0.0	0.0	0.0
								Years of Record: 6 — 9				
h. Barabai												
January	5.1	5.6	1.8	1.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
February	3.5	3.7	1.3	1.5	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
March	4.6	5.1	2.0	1.4	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0
April	4.6	4.3	1.4	1.9	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.0
May	5.2	3.3	0.6	1.8	0.1	0.8	0.1	0.1	0.0	0.0	0.0	0.0
June	5.8	4.3	0.8	1.7	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0
July	4.8	3.0	0.8	1.5	0.1	1.1	0.0	0.3	0.0	0.0	0.0	0.0
August	3.7	1.8	0.8	1.7	0.0	1.2	0.0	0.2	0.0	0.1	0.0	0.0
September	3.4	1.4	0.7	1.4	0.0	1.1	0.0	0.3	0.0	0.1	0.0	0.0
October	5.5	3.5	0.8	2.1	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
November	5.1	5.6	2.2	1.6	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	3.4	5.1	1.9	0.8	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Annual	54.7	46.7	15.1	18.9	2.6	6.6	0.3	1.3	0.0	0.2	0.0	0.0
								Years of Record: 15 — 16				

* A wet day is considered as a day with precipitation >0.04 inch.
A dry day is considered as a day without precipitation or with precipitation <0.04 inch.

** If a wet or dry period began in one month and extended into succeeding months, the period was credited to the month in which it began. The column headed "Entire Month" was added to account for an entirely wet or dry month, the occurrence of which is obscured by the practice of attributing extended periods to the month in which they began.

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
i. Sampit												
January	5.0	5.7	2.1	1.5	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
February	4.9	5.7	1.7	1.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
March	6.2	6.6	1.8	1.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
April	5.3	5.2	1.8	2.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	5.1	4.3	1.6	1.7	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0
June	4.6	3.5	1.1	1.8	0.1	0.8	0.0	0.1	0.0	0.1	0.0	0.0
July	3.8	2.1	0.7	1.7	0.1	1.0	0.0	0.2	0 0	0.0	0.0	0.0
August	3.6	2.8	0.9	0.9	0.1	0.6	0.0	0.5	0.0	0.1	0.0	0.0
September	3.6	1.6	0.4	1.5	0.1	1.2	0.0	0.4	0.0	0.1	0.0	0.0
October	4.5	3.8	1.3	1.1	0.1	0.6	0.0	0.1	0.0	0.0	0.0	0.0
November	3.8	4.7	2.1	1.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
December	4.3	5.4	2.0	1.1	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Annual	54.7	51.4	17.5	16.9	2.3	6.2	0.1	1.4	0.0	0.3	0.0	0.0
								Years of Record:		13 — 14		
j. Amoentai												
January	5.2	4.6	1.1	1.7	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0
February	3.8	3.9	1.2	1.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
March	5.2	4.7	1.5	2.2	0.2	0.2	0.0	0.1	0.0	0.1	0.0	0.0
April	5.1	4.5	1.4	1.4	0.1	0.6	0.0	0.1	0.0	0.1	0.0	0.0
May	5.6	4.1	0.8	2.0	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0
June	4.5	2.2	0.7	1.9	0.0	0.9	0.0	0.3	0.0	0.1	0.0	0.0
July	3.7	1.5	0.4	1.4	0.0	1.3	0.0	0.3	0.0	0.1	0.0	0.1
August	3.4	1.7	0.4	1.3	0.0	0.9	0.0	0.6	0.0	0.2	0.0	0.1
September	3.5	1.5	0.3	1.1	0.0	1.1	0.0	0.3	0.0	0.1	0.0	0.1
October	4.0	1.9	0.6	1.7	0.1	0.9	0.0	0.3	0.0	0.0	0.0	0.0
November	6.3	5.4	1.0	1.6	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
December	4.8	5.1	1.2	1.4	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Annual	55.1	41.1	10.6	19.0	1.7	8.0	0.2	2.2	0.0	0.7	0.0	0.3
								Years of Record:		15 — 16		
k. Ketapang												
January	4.4	3.7	1.3	1.9	0.3	0.5	0.0	0.1	0.0	0.0	0.0	0.0
February	3.9	2.9	1.0	1.8	0.3	0.3	0.0	0.1	0.0	0.0	0.0	0.0
March	4.8	3.8	0.7	1.5	0.4	0.5	0.0	0.1	0.0	0.0	0.0	0.0
April	4.6	4.2	1.8	1.9	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
May	2.5	1.7	1.8	2.0	0.2	0.8	0.0	0.2	0.0	0.0	0.0	0.0
June	3.8	2.7	1.1	1.6	0.1	0.8	0.0	0.3	0.0	0.1	0.0	0.0
July	1.9	0.9	0.8	1.4	0.2	0.8	0.1	0.7	0.0	9.1	0.0	0.0
August	2.4	1.3	0.6	1.0	0.2	0.9	0.8	0.5	0.0	0.2	0.0	0.0
September	2.9	2.3	0.8	0.8	0.2	0.8	0.0	0.1	0.0	0.0	0.0	0.0
October	3.6	3.1	1.2	1.2	0.3	0.6	0.1	0.1	0.0	0.0	0.0	0.0
November	2.9	4.1	1.9	1.4	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	2.5	3.7	1.6	1.3	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Annual	40.2	34.4	14.6	17.8	4.0	6.7	1.1	2.2	0.0	0.4	0.0	0.0
								Years of Record:		11 — 12		
l. Boentok												
January	5.4	5.4	1.6	1.4	0.2	0.4	0.0	0.1	0.0	0.0	0.0	0.0
February	5.5	5.8	1.7	1.4	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
March	4.8	5.1	2.0	1.6	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
April	5.6	5.6	1.9	1.7	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	6.2	4.2	0.8	2.3	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0
June	4.7	3.1	0.8	1.8	0.2	1.0	0.0	0.2	0.0	0.1	0.0	0.0
July	4.4	2.7	0.7	1.5	0.0	0.9	0.0	0.3	0.0	0.1	0.0	0.1
August	3.9	2.0	0.8	1.9	0.0	1.0	0.0	0.4	0.0	0.1	0.0	0.1
September	3.6	1.9	0.8	1.6	0.0	0.9	0.0	0.1	0.0	0.0	0.0	0.1
October	5.4	3.8	0.7	1.4	0.2	0.8	0.0	0.1	0.0	0.0	0.0	0.0
November	4.3	4.7	1.3	1.3	0.7	0.1	0.0	0.1	0.0	0.0	0.0	0.0
December	5.5	5.1	1.4	2.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	59.3	49.4	14.5	20.0	1.9	6.8	0.1	1.4	0.0	0.3	0.0	0.3

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
					m. Balikpapan							
January	5.7	4.6	1.2	1.6	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
February	4.4	3.6	1.1	1.6	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
March	6.1	4.8	1.2	2.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
April	5.6	4.4	1.0	2.0	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0
May	5.9	4.3	1.1	2.1	0.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0
June	5.0	3.4	0.9	2.2	0.2	0.5	0.0	0.1	0.0	0.1	0.0	0.0
July	3.3	2.9	1.5	1.1	0.1	1.1	0.0	0.2	0.0	0.0	0.0	0.0
August	4.2	2.7	1.1	1.9	0.2	0.7	0.0	0.2	0.0	0.1	0.0	0.0
September	3.9	2.6	0.8	1.4	0.1	0.8	0.0	0.1	0.0	0.0	0.0	0.1
October	5.4	3.7	1.0	1.8	0.0	0.9	0.0	0.1	0.0	0.0	0.0	0.0
November	5.9	4.6	1.0	2.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
December	6.2	5.4	1.3	1.7	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0
Annual	61.6	47.0	13.2	21.6	1.5	7.1	0.0	0.9	0.0	0.2	0.0	0.1
								Years of Record: 15 — 16				
					n. Kocalakoeroen							
January	4.6	4.3	1.6	2.1	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.0
February	3.6	4.1	1.9	1.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
March	4.4	5.4	1.8	1.1	0.5	0.3	0.0	0.1	0.0	0.0	0.0	0.0
April	4.9	6.3	2.1	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	6.1	5.8	1.4	1.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
June	4.9	5.0	1.8	1.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
July	4.6	3.4	1.2	1.6	0.0	0.8	0.0	0.1	0.0	0.0	0.0	0.0
August	4.4	3.7	1.4	1.5	0.0	0.9	0.0	0.1	0.0	0.0	0.0	0.0
September	4.5	3.6	1.2	1.5	0.2	0.4	0.0	0.1	0.0	0.0	0.0	0.0
October	4.7	4.6	1.7	1.8	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
November	4.3	5.5	2.5	1.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	4.2	5.1	2.1	1.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Annual	55.2	56.8	20.7	18.5	2.7	3.8	0.1	0.6	0.0	0.0	0.0	0.0
								Years of Record: 14 — 15				
					o. Mocaratewe							
January	3.4	4.2	2.2	1.4	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0
February	1.9	3.0	1.7	1.2	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0
March	3.4	4.8	2.2	1.2	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0
April	3.1	4.5	2.3	1.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
May	5.6	6.0	1.9	1.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
June	4.7	5.1	1.8	1.5	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
July	4.6	3.8	1.1	1.7	0.2	0.7	0.1	0.1	0.0	0.0	0.0	0.0
August	4.1	3.3	1.6	2.0	0.1	0.6	0.0	0.1	0.0	0.0	0.0	0.0
September	4.2	4.2	1.4	1.8	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
October	4.3	4.4	1.6	1.4	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0
November	2.8	4.5	2.4	0.9	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	2.5	4.5	1.8	0.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual	44.6	52.3	22.0	16.6	5.3	3.3	0.6	0.2	0.0	0.0	0.0	0.0
								Years of Record: 14 — 16				
					p. Pocroektjaoe							
January	2.8	4.4	2.1	0.7	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
February	3.2	4.5	2.2	1.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
March	2.8	4.1	2.4	1.2	0.8	0.3	0.2	0.0	0.0	0.0	0.0	0.0
April	3.5	5.3	1.9	0.8	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0
May	4.5	5.8	1.8	1.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
June	4.2	4.8	1.9	1.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
July	4.0	4.2	1.6	1.2	0.2	0.7	0.0	0.1	0.0	0.0	0.0	0.0
August	3.5	3.7	2.0	1.6	0.2	0.4	0.0	0.2	0.0	0.0	0.0	0.0
September	4.2	3.8	1.4	1.5	0.3	0.3	0.0	0.1	0.0	0.0	0.0	0.0
October	4.7	4.9	1.7	1.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
November	3.4	5.5	2.2	0.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	3.8	5.5	1.8	0.9	0.7	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Annual	44.6	56.5	23.0	13.8	6.0	3.0	0.6	0.4	0.0	0.0	0.0	0.0
								Years of Record: 12 — 13				

* A wet day is considered as a day with precipitation >0.04 inch.
A dry day is considered as a day without precipitation or with precipitation <0.04 inch.

** If a wet or dry period began in one month and extended into succeeding months, the period was credited to the month in which it began. The column headed "Entire Month" was added to account for an entirely wet or dry month, the occurrence of which is obscured by the practice of attributing extended periods to the month in which they began.

TABLE V - 9 *Continued*

LENGTH OF PERIOD	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
TYPE OF PERIOD* MONTH	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
					q. Samarinda							
January	4.8	4.7	1.7	1.2	0.2	0.6	0.0	0.1	0.0	0.0	0.0	0.0
February	4.3	4.1	1.3	1.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
March	4.5	4.5	2.1	1.8	0.2	0.3	0.0	0.1	0.0	0.0	0.0	0.0
April	4.9	5.3	1.7	1.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	4.5	5.5	2.1	1.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	3.8	3.9	1.7	2.0	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0
July	4.9	4.2	1.4	1.5	0.1	0.6	0.0	0.1	0.0	0.0	0.0	0.0
August	3.0	2.8	1.3	1.5	0.4	0.8	0.0	0.1	0.0	0.1	0.0	0.0
September	3.3	2.7	1.2	1.2	0.2	0.7	0.0	0.2	0.0	0.0	0.0	0.0
October	5.4	4.7	1.5	1.4	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0
November	5.0	6.3	2.3	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	4.0	4.6	1.8	1.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Annual	52.4	53.3	20.1	17.6	3.4	4.5	0.1	0.8	0.0	0.1	0.0	0.0
								Years of Record: 10 — 11				
					r. Nangapinoh							
January	5.3	5.4	1.6	1.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
February	4.6	4.4	1.7	1.8	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
March	6.4	6.0	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
April	6.7	6.7	1.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	5.7	3.7	1.1	2.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
June	5.8	4.1	1.0	2.1	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0
July	3.5	3.2	1.2	0.5	0.0	1.2	0.0	0.5	0.0	0.0	0.0	0.0
August	3.8	2.1	0.8	1.3	0.0	1.4	0.0	0.3	0.0	0.1	0.0	0.0
September	3.4	2.6	1.1	1.3	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0
October	5.7	4.8	1.0	1.8	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
November	3.8	5.1	1.8	1.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	5.0	5.6	1.3	0.8	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual	59.7	53.7	15.6	17.7	2.1	6.0	0.0	0.9	0.0	0.1	0.0	0.0
								Years of Record: 6— 7				
					s. Moearamoentai							
January	4.6	2.2	0.2	0.8	0.0	1.4	0.0	0.4	0.0	0.0	0.0	0.0
February	4.4	2.2	0.2	1.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
March	6.4	3.2	0.2	1.8	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
April	5.8	4.2	0.4	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
May	5.6	2.8	0.2	2.2	0.0	1.0	0.0	0.2	0.0	0.0	0.0	0.0
June	5.0	3.4	0.6	1.4	0.0	1.0	0.0	0.2	0.0	0.2	0.0	0.0
July	4.2	2.2	0.4	2.2	0.2	0.6	0.0	0.2	0.0	0.0	0.0	0.0
August	4.4	2.6	0.2	0.6	0.0	1.0	0.0	0.8	0.0	0.2	0.0	0.0
September	4.0	1.0	0.0	1.8	0.0	0.8	0.0	0.4	0.0	0.2	0.0	0.0
October	4.8	2.3	0.7	2.3	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.2
November	4.7	3.2	1.0	1.3	0.0	1.2	0.0	0.2	0.0	0.0	0.0	0.0
December	4.6	2.8	0.8	1.4	0.2	1.2	0.0	0.2	0.0	0.0	0.0	0.0
Annual	58.5	32.1	4.9	17.8	0.4	12.6	0.0	2.8	0.0	0.6	0.0	0.2
								Years of Record: 4 — 6				
					t. Pontianak							
January	4.1	3.5	1.5	1.9	0.5	0.5	0.0	0.1	0.0	0.0	0.0	0.0
February	2.6	3.2	1.5	1.1	0.3	0.5	0.0	0.3	0.0	0.0	0.0	0.0
March	3.9	3.5	1.7	1.5	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0
April	4.5	5.7	1.7	0.9	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
May	5.1	5.5	1.8	1.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	4.5	4.6	1.8	1.3	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
July	3.9	2.9	1.3	1.7	0.1	0.7	0.0	0.2	0.0	0.1	0.0	0.0
August	4.2	3.5	1.2	1.3	0.3	0.9	0.0	0.1	0.0	0.0	0.0	0.0
September	3.6	3.3	1.7	1.4	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0
October	4.3	4.8	1.9	1.5	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0
November	3.1	4.9	2.3	1.3	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	3.7	4.1	1.5	1.8	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Annual	47.5	49.5	19.9	17.1	4.5	5.2	0.3	0.7	0.0	0.1	0.0	0.0
								Years of Record: 14 — 15				

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
u. Longiram												
January	5.9	5.2	1.4	1.6	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
February	4.5	3.7	1.3	1.8	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
March	4.9	4.8	1.8	1.2	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0
April	4.8	4.3	1.3	1.3	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0
May	5.9	4.5	0.9	1.9	0.1	0.7	0.0	0.1	0.0	0.0	0.0	0.0
June	5.5	4.1	1.1	1.7	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0
July	5.2	3.9	1.2	1.6	0.0	0.7	0.0	0.2	0.0	0.0	0.0	0.0
August	4.4	3.0	1.2	2.3	0.1	0.7	0.0	0.2	0.0	0.0	0.0	0.0
September	4.0	2.6	0.9	1.8	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0
October	6.2	4.7	1.1	2.1	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0
November	4.3	4.6	1.5	1.6	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	4.6	4.2	2.1	2.3	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
Annual	60.2	49.6	15.8	21.2	1.5	6.6	0.1	0.9	0.0	0.0	0.0	0.0
										Years of Record:	13 — 15	
v. Sintang												
January	3.7	4.7	1.7	0.9	0.6	0.4	0.0	0.1	0.0	0.0	0.0	0.0
February	2.9	3.9	1.6	1.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
March	4.7	5.4	1.5	1.1	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0
April	4.7	5.9	1.8	0.9	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0
May	5.1	5.8	1.7	1.1	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
June	4.7	4.9	1.4	1.1	0.3	0.5	0.0	0.1	0.0	0.0	0.0	0.0
July	3.6	3.1	1.6	1.4	0.1	0.8	0.0	0.2	0.0	0.0	0.0	0.0
August	3.7	2.6	1.5	2.0	0.3	0.6	0.0	0.1	0.0	0.0	0.0	0.0
September	3.9	3.9	1.1	1.6	0.5	0.3	0.0	0.1	0.0	0.0	0.0	0.0
October	4.7	5.6	1.5	1.1	0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0
November	3.4	5.0	1.4	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December	2.7	5.0	1.9	0.6	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Annual	47.8	55.8	18.7	13.4	6.5	3.7	0.4	0.6	0.0	0.0	0.0	0.0
										Years of Record:	14 — 15	
w. Sanggau												
January	5.4	4.6	1.3	1.5	0.2	0.6	0.0	0.1	0.0	0.0	0.0	0.0
February	4.6	4.2	1.2	1.6	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
March	5.8	5.3	1.1	1.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
April	6.0	5.6	1.6	1.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
May	5.5	4.4	1.5	2.7	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
June	5.5	4.3	1.3	1.9	0.0	0.6	0.0	0.1	0.0	0.1	0.0	0.0
July	4.5	3.5	1.1	1.2	0.0	1.0	0.0	0.3	0.0	0.0	0.0	0.0
August	3.9	2.8	1.3	1.8	0.2	0.7	0.0	0.1	0.0	0.0	0.0	0.0
September	4.8	3.7	1.1	1.8	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0
October	5.4	5.0	2.0	2.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
November	4.8	5.6	1.9	1.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	5.0	6.2	1.7	1.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	61.2	55.2	17.1	20.9	1.9	4.6	0.1	0.7	0.0	0.1	0.0	0.0
										Years of Record:	13 — 14	
x. Mampawah												
January	3.1	2.8	1.1	1.4	0.4	0.7	0.0	0.2	0.0	0.0	0.0	0.0
February	3.1	2.4	1.1	1.4	0.2	0.8	0.0	0.4	0.0	0.0	0.0	0.0
March	3.6	2.4	1.2	1.6	0.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0
April	4.6	4.1	1.5	2.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	5.0	3.7	1.2	2.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
June	4.4	3.0	0.9	2.2	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0
July	4.6	3.9	0.9	0.9	0.2	1.0	0.0	0.1	0.0	0.0	0.0	0.0
August	4.4	3.4	1.1	1.3	0.2	0.9	0.0	0.3	0.0	0.0	0.0	0.0
September	4.3	3.4	1.3	1.4	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0
October	4.2	5.1	2.3	1.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0
November	3.6	3.9	0.9	1.6	1.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
December	3.4	4.4	1.8	1.0	0.6	0.4	0.1	0.1	0.0	0.0	0.0	0.0
Annual	48.3	42.5	15.3	18.1	3.9	6.8	0.4	1.2	0.0	0.0	0.0	0.0
										Years of Record:	10 — 12	

* A wet day is considered as a day with precipitation >0.04 inch.
A dry day is considered as a day without precipitation or with precipitation <0.04 inch.

** If a wet or dry period began in one month and extended into succeeding months, the period was credited to the month in which it began. The column headed "Entire Month" was added to account for an entirely wet or dry month, the occurrence of which is obscured by the practice of attributing extended periods to the month in which they began.

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
y. Ngabang												
January	3.3	4.3	1.7	1.0	0.4	0.6	0.0	0.1	0.0	0.0	0.0	0.0
February	3.6	4.8	2.4	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
March	3.6	4.0	1.8	1.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
April	4.3	5.6	2.3	1.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
May	5.4	5.0	1.8	2.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
June	5.4	5.6	2.1	1.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
July	3.6	3.0	0.8	0.7	0.0	1.0	0.0	0.3	0.0	0.0	0.0	0.0
August	5.1	3.3	1.0	2.0	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0
September	4.8	3.0	1.0	2.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
October	4.7	5.4	2.1	1.6	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
November	3.6	5.3	2.8	1.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	2.6	4.3	2.1	0.8	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Annual	50.0	53.6	21.9	16.9	2.5	4.2	0.2	0.4	0.0	0.0	0.0	0.0
								Years of Record: 7				
z. Semitau												
January	5.1	4.7	1.6	1.8	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
February	3.8	3.6	1.6	1.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
March	5.5	4.8	1.3	1.8	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
April	5.9	5.8	1.3	1.6	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0
May	5.1	4.7	1.0	0.9	0.2	0.4	0.0	0.1	0.0	0.0	0.0	0.0
June	4.6	3.1	0.8	2.2	0.2	0.6	0.0	0.1	0.0	0.1	0.0	0.0
July	3.5	2.2	1.1	1.5	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0
August	4.4	2.8	0.6	1.6	0.2	0.7	0.0	0.2	0.0	0.1	0.0	0.0
September	4.5	3.6	1.0	1.5	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0
October	5.5	4.5	0.6	1.8	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0
November	4.2	5.0	1.8	1.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	4.0	5.4	1.8	1.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Annual	56.1	50.2	14.5	18.7	2.7	4.5	0.2	0.7	0.1	0.2	0.0	0.0
								Years of Record: 12 — 14				
aa. Longbloeöe												
January	3.1	3.6	1.7	1.1	0.4	0.6	0.0	0.1	0.0	0.0	0.0	0.0
February	5.1	5.2	1.6	1.6	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
March	3.9	3.7	1.0	1.6	0.9	0.2	0.0	0.1	0.0	0.0	0.0	0.0
April	4.0	4.0	1.4	1.6	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0
May	4.8	4.2	1.5	2.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
June	4.3	3.6	1.3	1.7	0.3	0.3	0.0	0.3	0.0	0.0	0.0	0.0
July	6.0	5.0	0.8	1.6	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
August	4.8	5.0	2.0	1.8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
September	5.4	5.0	1.5	1.6	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
October	5.8	5.3	1.1	2.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
November	4.9	3.1	0.9	1.9	0.1	0.6	0.1	0.0	0.0	0.0	0.0	0.0
December	5.1	3.8	1.2	2.2	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Annual	57.2	51.5	16.0	20.8	3.0	4.3	0.2	0.7	0.0	0.0	0.0	0.0
								Years of Record: 7 — 10				
bb. Poetoessibau												
January	3.6	4.3	1.6	1.4	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0
February	3.4	4.8	2.0	0.9	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.0
March	4.3	5.6	2.0	0.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
April	3.8	6.0	2.5	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	4.5	4.9	2.0	1.5	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	4.5	4.8	1.3	1.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
July	3.3	3.2	1.7	1.3	0.3	0.9	0.0	0.1	0.0	0.0	0.0	0.0
August	2.9	3.6	1.9	0.9	0.5	0.8	0.1	0.1	0.0	0.0	0.0	0.0
September	3.6	3.8	1.5	1.1	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0
October	3.0	4.1	1.8	0.9	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0
November	2.9	5.2	2.1	0.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December	2.9	5.2	2.2	0.8	0.8	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Annual	42.7	55.5	22.6	12.2	6.4	4.0	0.4	0.3	0.0	0.0	0.0	0.0
								Years of Record: 12 — 13				

* A wet day is considered as a day with precipitation >0.04 inch.
A dry day is considered as a day without precipitation or with precipitation <0.04 inch.

** If a wet or dry period began in one month and extended into succeeding months, the period was credited to the month in which it began. The column headed "Entire Month" was added to account for an entirely wet or dry month, the occurrence of which is obscured by the practice of attributing extended periods to the month in which they began.

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
cc. Singkawang												
January	2.6	3.6	1.7	0.9	0.8	0.5	0.0	0.1	0.0	0.0	0.0	0.0
February	3.4	2.9	1.3	1.0	0.1	0.9	0.0	0.1	0.0	0.0	0.0	0.0
March	3.0	2.5	1.4	1.6	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0
April	3.5	3.5	1.6	1.7	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
May	4.1	3.1	1.3	2.4	0.3	0.4	0.0	0.1	0.0	0.0	0.0	0.0
June	4.5	3.5	1.0	1.4	0.2	0.7	0.0	0.1	0.0	0.0	0.0	0.0
July	3.7	2.9	1.3	1.2	0.1	1.0	0.0	0.2	0.0	0.0	0.0	0.0
August	3.6	3.1	1.3	1.1	0.2	1.0	0.0	0.3	0.0	0.0	0.0	0.0
September	3.8	3.1	1.0	1.2	0.3	0.6	0.0	0.1	0.0	0.0	0.0	0.0
October	4.3	5.1	1.9	1.1	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	2.4	4.3	1.5	1.0	1.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
December	2.9	3.7	1.4	1.5	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Annual	41.8	41.3	16.7	16.1	5.6	6.6	0.2	1.0	0.0	0.0	0.0	0.0
								Years of Record: 14 — 15				
dd. Sambas												
January	3.3	3.7	1.1	1.3	0.8	0.3	0.1	0.1	0.0	0.1	0.0	0.0
February	2.7	2.1	1.1	1.7	0.3	0.6	0.0	0.2	0.0	0.0	0.0	0.0
March	5.1	4.2	1.0	1.8	0.5	0.3	0.0	0.1	0.0	0.0	0.0	0.0
April	4.7	5.2	1.7	1.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	4.6	4.3	1.5	1.7	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0
June	5.1	3.6	0.9	2.1	0.1	0.5	0.0	0.1	0.0	0.1	0.0	0.0
July	4.1	2.6	0.8	1.7	0.1	0.8	0.0	0.1	0.0	0.0	0.0	0.0
August	4.5	3.9	1.3	1.1	0.2	0.6	0.0	0.2	0.0	0.0	0.0	0.0
September	3.9	4.1	1.9	1.5	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
October	4.3	5.5	1.9	1.3	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	3.5	4.5	1.8	1.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	2.5	3.8	1.4	0.8	1.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0
Annual	48.3	47.5	16.4	17.8	5.0	4.7	0.4	1.0	0.0	0.2	0.0	0.0
								Years of Record: 14 — 15				
ee. Kuching												
January	2.1	4.2	1.8	1.0	1.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
February	2.3	3.1	1.4	0.8	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0
March	4.0	4.2	2.0	1.9	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0
April	4.2	4.9	2.2	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	4.4	5.3	2.3	1.6	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
June	5.9	5.3	1.3	2.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
July	4.4	4.6	1.9	1.2	0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0
August	4.2	4.4	2.1	1.1	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
September	4.6	6.0	2.3	1.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
October	4.0	6.5	3.1	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
November	3.5	5.3	2.1	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December	1.5	4.3	2.1	0.5	0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Annual	45.1	58.1	24.6	13.8	5.8	2.3	0.5	0.0	0.0	0.0	0.0	0.0
								Years of Record: 10 — 11				
ff. Lundu												
January	2.5	3.2	1.0	1.2	1.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0
February	3.2	3.2	1.6	1.5	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
March	4.4	3.0	1.2	1.6	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0
April	5.4	2.6	0.4	1.9	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0
May	4.9	2.8	1.0	2.3	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
June	4.5	2.1	0.4	1.5	0.0	1.3	0.0	0.4	0.0	0.0	0.0	0.0
July	4.2	1.6	0.1	1.4	0.0	1.3	0.0	0.4	0.0	0.1	0.0	0.0
August	5.2	2.8	0.2	1.6	0.0	0.8	0.0	0.3	0.0	0.0	0.0	0.0
September	4.4	2.3	0.4	1.3	0.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0
October	4.9	2.7	0.7	2.2	0.1	0.7	0.0	0.1	0.0	0.0	0.0	0.0
November	5.3	4.2	1.3	1.7	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
December	3.8	3.4	1.4	1.6	0.6	0.5	0.0	0.1	0.0	0.0	0.0	0.0
Annual	52.7	33.9	9.7	19.8	2.2	10.4	0.2	1.5	0.0	0.1	0.0	0.0
								Years of Record: 10 — 11				

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS WET	1 OR 2 DAYS DRY	3 TO 6 DAYS WET	3 TO 6 DAYS DRY	OVER 6 DAYS WET	OVER 6 DAYS DRY	OVER 15 DAYS WET	OVER 15 DAYS DRY	OVER 30 DAYS WET	OVER 30 DAYS DRY	ENTIRE MONTH** WET	ENTIRE MONTH** DRY
					gg. Sibu							
January	3.5	4.6	2.5	1.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
February	4.2	3.9	1.4	1.4	0.2	0.7	0.0	0.1	0.0	0.0	0.0	0.0
March	4.5	4.7	1.8	1.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
April	5.6	5.0	1.3	1.7	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
May	5.4	4.1	0.9	1.9	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
June	6.3	4.4	0.7	2.4	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
July	4.6	3.7	1.0	1.1	0.2	1.2	0.0	0.2	0.0	0.0	0.0	0.0
August	4.6	3.3	0.9	1.5	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0
September	4.6	3.8	1.3	2.0	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0
October	6.5	6.3	1.4	1.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	4.8	6.1	2.8	1.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	4.9	6.5	2.2	1.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Annual	59.5	56.4	18.2	18.9	2.4	4.7	0.0	0.6	0.0	0.0	0.0	0.0
								Years of Record: 10 — 11				
					hh. Serasan							
January	0.8	2.3	1.8	0.8	0.8	0.7	0.0	0.2	0.0	0.2	0.0	0.0
February	1.8	1.0	0.8	1.0	0.0	1.2	0.0	0.7	0.0	0.2	0.0	0.0
March	4.0	2.2	0.5	1.5	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0
April	4.8	3.2	1.2	1.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
May	4.3	3.3	1.5	2.0	0.0	0.8	0.0	0.3	0.0	0.0	0.0	0.0
June	5.0	5.0	1.7	1.5	0.2	0.3	0.0	0.2	0.0	0.2	0.0	0.0
July	2.2	2.0	1.2	1.0	0.4	0.6	0.0	0.4	0.0	0.2	0.0	0.0
August	4.1	3.0	1.0	1.3	0.0	1.3	0.0	0.1	0.0	0.0	0.0	0.0
September	4.0	3.4	1.4	1.1	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
October	3.8	4.4	1.7	1.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	3.1	3.6	0.8	1.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December	3.0	3.4	1.3	2.0	1.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Annual	40.9	36.8	14.9	16.6	4.3	7.2	0.1	1.9	0.0	0.8	0.0	0.0
								Years of Record: 5 — 7				
					ii. Tandjoengselor							
January	4.5	4.9	1.6	1.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
February	3.6	3.9	1.6	1.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
March	4.9	4.2	1.1	1.6	0.4	0.4	0.0	0.1	0.0	0.0	0.0	0.0
April	4.0	3.6	1.2	1.8	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.0
May	5.3	4.8	1.6	1.9	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	5.2	5.3	1.9	1.7	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
July	5.4	4.1	1.3	2.3	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
August	5.8	5.3	1.4	1.2	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0
September	5.0	4.1	1.6	1.9	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0
October	5.2	5.0	1.6	1.8	0.0	0.2	0.0	0.0	00.	0.0	0.0	0.0
November	4.2	4.4	2.2	2.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	5.2	5.2	1.8	1.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Annual	58.3	54.8	18.9	21.1	2.8	3.4	0.2	0.5	0.0	0.0	0.0	0.0
								Years of Record: 15 — 16				
					jj. Bintulu							
January	4.3	5.3	2.2	1.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
February	3.7	3.2	1.5	1.9	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
March	4.9	4.9	1.8	1.3	0.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0
April	5.0	3.9	1.6	2.3	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0
May	6.2	5.0	1.2	2.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	5.3	3.4	0.8	2.9	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
July	4.3	3.5	1.5	1.6	0.1	0.9	0.0	0.2	0.0	0.0	0.0	0.0
August	6.2	4.5	0.9	2.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
September	5.2	4.7	1.0	2.1	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
October	4.3	5.1	1.8	1.4	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	4.0	5.4	2.2	1.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	4.4	6.2	2.8	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Annual	57.8	55.1	19.3	21.1	2.9	3.7	0.0	0.3	0.0	0.0	0.0	0.0
								Years of Record: 10				

* A wet day is considered as a day with precipitation >0.04 inch.
A dry day is considered as a day without precipitation or with precipitation <0.04 inch.

** If a wet or dry period began in one month and extended into succeeding months, the period was credited to the month in which it began. The column headed "Entire Month" was added to account for an entirely wet or dry month, the occurrence of which is obscured by the practice of attributing extended periods to the month in which they began.

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
kk. Tandjoeng Belitoeng												
January	4.0	3.0	1.3	1.0	0.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
February	3.0	1.8	0.2	1.2	0.5	1.0	0.0	0.8	0.0	0.0	0.0	0.0
March	3.8	3.0	1.0	1.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
April	2.8	2.0	1.2	1.0	0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
May	4.8	5.0	1.2	1.2	0.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
June	4.7	3.3	0.7	2.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
July	4.7	3.0	0.0	2.0	0.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0
August	4.0	1.7	0.7	1.0	0.0	1.7	0.0	0.3	0.0	0.3	0.0	0.0
September	3.0	1.0	0.5	1.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.3
October	5.3	5.7	0.7	1.0	0.7	0.3	0.0	0.3	0.0	0.0	0.0	0.0
November	1.7	3.5	2.5	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
December	5.5	4.0	0.5	2.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual	47.3	37.0	10.5	16.4	5.8	8.4	0.0	1.4	0.0	0.3	0.0	0.3
								Years of Record: 2 — 4				
ll. Tawau												
January	4.7	2.8	1.3	2.1	0.1	0.9	0.0	0.2	0.0	0.0	0.0	0.0
February	3.8	2.3	0.7	1.6	0.2	0.7	0.0	0.2	0.0	0.0	0.0	0.0
March	4.4	2.8	0.9	1.6	0.2	1.1	0.0	0.4	0.0	0.0	0.0	0.0
April	3.2	2.2	1.2	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
May	5.5	3.9	1.0	1.6	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0
June	6.1	4.2	0.6	2.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
July	5.2	4.0	1.5	2.1	0.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0
August	6.1	4.3	1.0	2.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
September	5.0	3.4	1.1	2.1	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0
October	4.8	3.3	1.3	1.7	0.0	0.9	0.0	0.1	0.0	0.0	0.0	0.0
November	4.6	3.8	1.3	1.5	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0
December	4.7	3.4	1.0	1.9	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Annual	58.1	40.4	12.9	22.7	1.0	8.8	0.0	1.1	0.0	0.0	0.0	0.0
								Years of Record: 10 — 11				
mm. Miri												
January	4.3	4.0	1.2	1.3	0.3	0.6	0.0	0.1	0.0	0.0	0.0	0.0
February	4.2	3.3	1.0	1.3	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
March	4.5	3.2	0.9	1.1	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
April	4.2	2.5	1.1	1.4	0.0	1.3	0.0	0.2	0.0	0.0	0.0	0.0
May	5.0	3.3	0.7	2.4	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0
June	3.9	2.6	1.3	1.4	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0
July	3.5	1.9	0.7	1.2	0.1	1.5	0.0	0.2	0.0	0.0	0.0	0.0
August	5.0	3.3	0.8	1.7	0.1	0.8	0.0	0.1	0.0	0.0	0.0	0.0
September	5.1	3.7	1.7	2.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
October	4.2	4.9	2.1	1.4	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
November	4.4	4.5	2.1	1.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
December	5.2	4.9	1.9	2.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Annual	53.5	42.1	15.5	19.6	1.0	8.6	0.0	0.8	0.0	0.0	0.0	0.0
								Years of Record: 10 — 11				
nn. Limbang												
January	4.7	4.6	1.3	1.2	0.2	0.5	0.1	0.2	0.0	0.0	0.0	0.0
February	3.4	2.7	1.4	1.6	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
March	4.4	3.4	1.4	2.2	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0
April	4.5	4.5	2.0	1.6	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
May	5.0	4.7	1.6	1.8	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
June	4.8	4.0	1.1	2.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
July	4.7	3.2	0.9	1.7	0.1	0.8	0.0	0.1	0.0	0.0	0.0	0.0
August	4.9	3.5	1.2	2.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
September	4.4	3.8	1.2	1.8	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
October	3.4	4.7	2.3	1.1	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0
November	4.1	4.7	2.2	1.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
December	5.4	4.9	1.5	2.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Annual	53.7	48.7	18.1	21.0	2.9	5.1	0.2	0.3	0.0	0.0	0.0	0.0
								Years of Record: 10 — 13				

TABLE V - 9 *Continued*

LENGTH OF PERIOD TYPE OF PERIOD* MONTH	1 OR 2 DAYS WET	1 OR 2 DAYS DRY	3 TO 6 DAYS WET	3 TO 6 DAYS DRY	OVER 6 DAYS WET	OVER 6 DAYS DRY	OVER 15 DAYS WET	OVER 15 DAYS DRY	OVER 30 DAYS WET	OVER 30 DAYS DRY	ENTIRE MONTH** WET	ENTIRE MONTH** DRY
					oo. Lawas							
January	3.5	4.0	2.5	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
February	4.3	4.0	0.7	1.0	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0
March	5.2	3.8	1.5	1.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
April	4.0	5.2	2.5	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	5.3	5.2	1.3	1.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
June	3.8	4.5	1.8	1.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
July	6.4	6.2	1.0	1.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
August	4.4	4.0	2.2	2.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
September	4.8	4.8	1.5	1.7	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
October	3.0	5.0	2.7	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
November	5.0	6.4	2.2	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December	5.2	5.6	1.6	1.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual	54.9	58.7	21.5	17.3	3.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0
								Years of Record: 5 — 6				
					pp. Lahad Datu							
January	2.6	3.1	1.8	1.4	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
February	4.0	2.6	0.6	2.0	0.3	0.4	0.0	0.3	0.0	0.0	0.0	0.0
March	3.7	3.4	1.4	1.4	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0
April	4.3	3.0	1.0	2.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
May	7.0	5.2	0.8	2.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
June	5.4	4.4	1.2	2.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
July	5.0	3.0	1.2	2.8	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
August	4.8	3.2	1.2	2.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
September	4.7	4.6	1.4	1.1	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0
October	5.0	4.7	1.1	1.4	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
November	3.8	4.2	2.5	1.7	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
December	3.8	4.1	1.4	1.7	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Annual	54.1	45.5	15.6	22.7	3.0	5.3	0.0	0.5	0.0	0.0	0.0	0.0
								Years of Record: 4 — 7				
					qq. Tenom							
January	3.9	3.6	1.8	1.4	0.2	0.8	0.0	0.1	0.0	0.0	0.0	0.0
February	2.9	2.0	1.0	0.9	0.1	1.1	0.0	0.2	0.0	0.0	0.0	0.0
March	2.2	2.3	2.0	1.6	0.2	0.6	0.1	0.2	0.0	0.0	0.0	0.0
April	3.7	3.3	1.9	1.7	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0
May	4.4	4.1	1.4	1.7	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
June	4.8	4.6	1.5	1.0	0.2	0.7	0.0	0.1	0.0	0.1	0.0	0.0
July	5.0	3.1	0.8	2.1	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
August	5.1	4.1	1.4	1.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
September	3.8	3.3	1.3	1.8	0.4	0.5	0.0	0.1	0.0	0.0	0.0	0.0
October	4.2	4.5	2.4	1.4	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0
November	4.4	3.6	1.6	2.6	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
December	4.4	4.3	1.9	2.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	48.8	42.8	19.0	20.0	1.9	6.7	0.2	0.9	0.0	0.1	0.0	0.0
								Years of Record: 10 -- 11				
					rr. Labuan							
January	3.7	2.5	1.0	1.7	0.2	1.0	0.0	0.5	0.0	0.3	0.0	0.0
February	3.0	1.2	0.8	0.5	0.0	1.3	0.0	0.3	0.0	0.2	0.0	0.0
March	5.0	2.8	0.3	1.3	0.0	1.2	0.0	0.3	0.0	0.0	0.0	0.0
April	4.7	2.8	1.5	2.5	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
May	3.8	4.5	2.7	1.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	3.5	4.8	1.7	1.2	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0
July	2.5	2.0	0.8	1.0	0.7	0.8	0.0	0.2	0.0	0.0	0.0	0.0
August	2.8	2.2	2.2	3.2	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
September	3.7	4.0	2.3	2.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
October	2.8	4.3	1.3	1.3	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
November	3.0	3.7	1.8	2.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
December	3.8	4.0	1.2	1.5	0.7	0.7	0.2	0.0	0.0	0.0	0.0	0.0
Annual	42.3	38.8	17.6	20.0	4.9	7.1	0.2	1.3	0.0	0.5	0.0	0.0
								Years of Record: 6				

* A wet day is considered as a day with precipitation >0.04 inch.
A dry day is considered as a day without precipitation or with precipitation <0.04 inch.
** If a wet or dry period began in one month and extended into succeeding months, the period was credited to the month in which it began. The column headed "Entire Month" was added to account for an entirely wet or dry month, the occurrence of which is obscured by the practice of attributing extended periods to the month in which they began.

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD* / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
ss. Beaufort												
January	4.4	4.8	1.4	1.0	0.5	0.4	0.0	0.1	0.0	0.0	0.0	0.0
February	4.6	3.8	0.7	1.4	0.2	0.4	0.0	0.2	0.0	0.0	0.0	0.0
March	5.2	4.1	1.1	1.8	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
April	3.5	4.1	2.2	1.6	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
May	4.5	4.3	1.4	2.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	4.8	3.9	1.6	1.6	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
July	3.8	3.5	1.5	1.2	0.3	0.8	0.0	0.2	0.0	0.0	0.0	0.0
August	4.8	4.1	1.0	1.4	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0
September	3.6	4.4	2.2	1.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
October	3.6	4.7	2.2	1.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	3.8	4.2	1.8	1.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
December	3.7	4.9	2.3	1.6	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Annual	50.3	50.8	19.4	18.0	3.9	4.6	0.1	0.5	0.0	0.0	0.0	0.0

Years of Record: 10 — 12

tt. Keningau												
January	5.1	4.7	1.8	1.7	0.2	0.6	0.0	0.1	0.0	0.0	0.0	0.0
February	3.2	2.7	0.6	0.8	0.4	0.9	0.0	0.1	0.0	0.0	0.0	0.0
March	3.9	3.1	1.6	1.9	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
April	4.4	3.2	1.3	1.6	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0
May	3.3	3.2	1.5	1.9	0.5	0.4	0.0	0.1	0.0	0.0	0.0	0.0
June	3.8	3.9	1.3	1.6	0.5	0.2	0.0	0.1	0.0	0.0	0.0	0.0
July	3.7	2.7	1.6	1.7	0.2	0.9	0.0	0.2	0.0	0.0	0.0	0.0
August	4.4	3.6	1.3	2.3	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
September	4.2	3.4	1.5	1.6	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0
October	3.6	4.6	2.0	0.9	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
November	4.1	3.7	1.2	1.4	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0
December	5.1	4.5	1.7	2.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual	48.8	43.3	17.4	19.4	3.6	6.3	0.0	0.7	0.0	0.0	0.0	0.0

Years of Record: 10 — 12

uu. Tambunan												
January	4.1	3.4	1.2	1.5	0.4	0.6	0.0	0.2	0.0	0.0	0.0	0.0
February	3.8	1.9	1.1	1.7	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
March	4.4	2.8	1.3	2.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
April	4.1	3.4	1.5	1.8	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0
May	3.9	3.5	1.4	2.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
June	3.6	3.0	0.9	1.2	0.8	0.7	0.0	0.1	0.0	0.0	0.0	0.0
July	4.1	2.8	0.7	1.2	0.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0
August	4.3	3.3	1.3	1.9	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
September	4.2	4.1	1.9	1.8	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0
October	4.0	4.4	2.4	1.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
November	3.5	3.2	1.7	1.9	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0
December	4.7	4.1	1.2	2.1	0.3	0.2	0.0	0.1	0.0	0.0	0.0	0.0
Annual	48.7	39.9	16.6	21.2	3.4	7.0	0.0	0.5	0.0	0.0	0.0	0.0

Years of Record: 9 — 11

vv. Sandakan												
January	3.2	3.7	1.7	0.8	0.5	0.8	0.0	0.1	0.0	0.1	0.0	0.0
February	2.6	2.5	1.1	1.0	0.4	0.6	0.0	0.1	0.0	0.0	0.0	0.0
March	4.1	4.1	1.6	0.9	0.1	0.8	0.0	0.1	0.0	0.0	0.0	0.0
April	3.8	2.0	0.7	2.0	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0
May	4.9	3.5	1.4	2.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
June	5.9	4.1	1.0	2.8	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
July	4.7	4.1	1.4	1.6	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
August	5.5	3.6	1.0	2.0	0.0	0.8	0.0	0.1	0.0	0.0	0.0	0.0
September	5.4	4.3	1.5	2.5	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
October	5.3	4.3	1.9	2.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
November	4.8	5.3	1.4	1.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
December	2.4	3.6	2.3	1.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Annual	52.6	45.1	17.0	20.4	2.8	6.3	0.0	0.4	0.0	0.1	0.0	0.0

Years of Record: 10 —11

TABLE V - 9 *Continued*

LENGTH OF PERIOD / TYPE OF PERIOD / MONTH	1 OR 2 DAYS		3 TO 6 DAYS		OVER 6 DAYS		OVER 15 DAYS		OVER 30 DAYS		ENTIRE MONTH**	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
					ww. Jesselton							
January	4.1	3.2	0.6	1.4	0.6	0.8	0.1	0.3	0.0	0.2	0.0	0.0
February	2.2	2.2	0.8	0.6	0.2	0.6	0.0	0.3	0.0	0.1	0.0	0.2
March	3.2	1.9	1.0	1.4	0.0	0.7	0.0	0.2	0.0	0.1	0.0	0.1
April	4.2	2.7	1.1	1.6	0.1	0.8	0.0	0.2	0.0	0.0	0.0	0.0
May	5.0	4.3	1.0	1.8	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
June	3.6	3.0	1.4	1.8	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
July	3.9	2.9	1.2	1.7	0.2	0.7	0.0	0.2	0.0	0.0	0.0	0.0
August	3.6	2.8	1.7	1.7	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0
September	3.2	3.4	1.5	1.5	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0
October	2.9	3.5	2.4	1.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
November	4.6	5.0	1.9	1.5	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
December	4.3	4.4	1.9	1.9	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual	44.8	39.3	16.5	18.8	3.4	6.4	0.1	1.2	0.0	0.4	0.0	0.3
										Years of Record:	10 —	11
					xx. Kudat							
January	2.6	3.0	1.2	0.9	0.7	0.6	0.1	0.2	0.0	0.0	0.0	0.0
February	2.2	2.0	1.0	1.1	0.4	0.6	0.1	0.2	0.0	0.0	0.0	0.0
March	3.4	2.3	1.0	1.1	0.1	1.4	0.0	0.2	0.0	0.1	0.0	0.0
April	4.0	2.3	0.5	1.1	0.1	1.3	0.0	0.4	0.0	0.0	0.0	0.0
May	5.0	2.5	0.4	1.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
June	4.6	2.7	0.9	2.1	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0
July	4.6	2.4	0.7	1.7	0.0	0.9	0.0	0.2	0.0	0.0	0.0	0.0
August	3.6	2.2	1.0	1.7	0.2	0.9	0.0	0.1	0.0	0.1	0.0	0.0
September	4.1	2.6	1.2	2.3	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0
October	4.0	4.1	1.7	1.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
November	4.2	4.6	1.9	1.8	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
December	2.4	4.1	1.9	0.9	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Annual	44.7	34.8	13.4	17.5	3.5	8.9	0.3	1.5	0.0	0.2	0.0	0.0
										Years of Record:	10 —	11

C. Humidity.

TABLE V-10 shows data on relative humidity.

TABLE V - 10

MEAN RELATIVE HUMIDITY (PERCENT)

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF RECORD
0600*														
Balikpapan	96	96	94	96	96	95	94	94	91	91	94	94	94	17
Pontianak	93	93	93	93	94	93	93	93	93	93	93	93	93	19
Tarakan	94	94	95	94	94	94	93	93	94	94	94	94	94	19
0900*														
Labuan	81	83	82	83	83	83	84	83	84	83	82	83	83	9
Sandakan	84	80	79	77	80	79	78	80	78	78	80	82	80	5–6
1200*														
Balikpapan	73	71	71	74	76	78	78	75	72	72	73	69	74	17
Pontianak	67	65	64	66	66	66	63	62	63	65	68	69	65	19
Tarakan	72	71	73	73	72	72	69	68	69	70	73	73	71	19
1500*														
Labuan	77	77	76	75	76	76	76	76	77	78	78	79	77	9
Sandakan	76	73	70	68	72	74	67	68	66	71	73	76	71	5–6
1800*														
Balikpapan	88	85	86	89	88	86	83	80	81	84	88	86	85	17
Pontianak	83	82	82	82	82	80	76	75	79	84	86	84	81	19
Tarakan	85	82	83	84	85	85	84	83	84	85	87	86	84	19
2100*														
Labuan	86	87	87	86	87	87	88	87	88	88	88	88	87	9
Sandakan	88	84	84	83	87	87	84	88	85	88	88	88	86	5–6
Mean (0600, 1200, 1800)*														
Balikpapan	86	84	84	86	87	86	85	83	81	82	85	83	84	17
Pontianak	81	80	80	80	81	80	77	77	78	81	82	82	80	19
Tarakan	84	82	84	84	84	84	82	81	82	83	85	84	83	19
Mean (0900, 1500, 2100)*														
Labuan	81	82	82	81	82	82	83	82	83	83	83	83	82	9
Sandakan	83	79	78	76	80	80	76	79	76	79	80	82	79	5–6

* Local Time (105 East Meridian Time).

D. Surface wind.

FIGURES V-22 and V-23 and TABLE V-11 show data on surface winds.

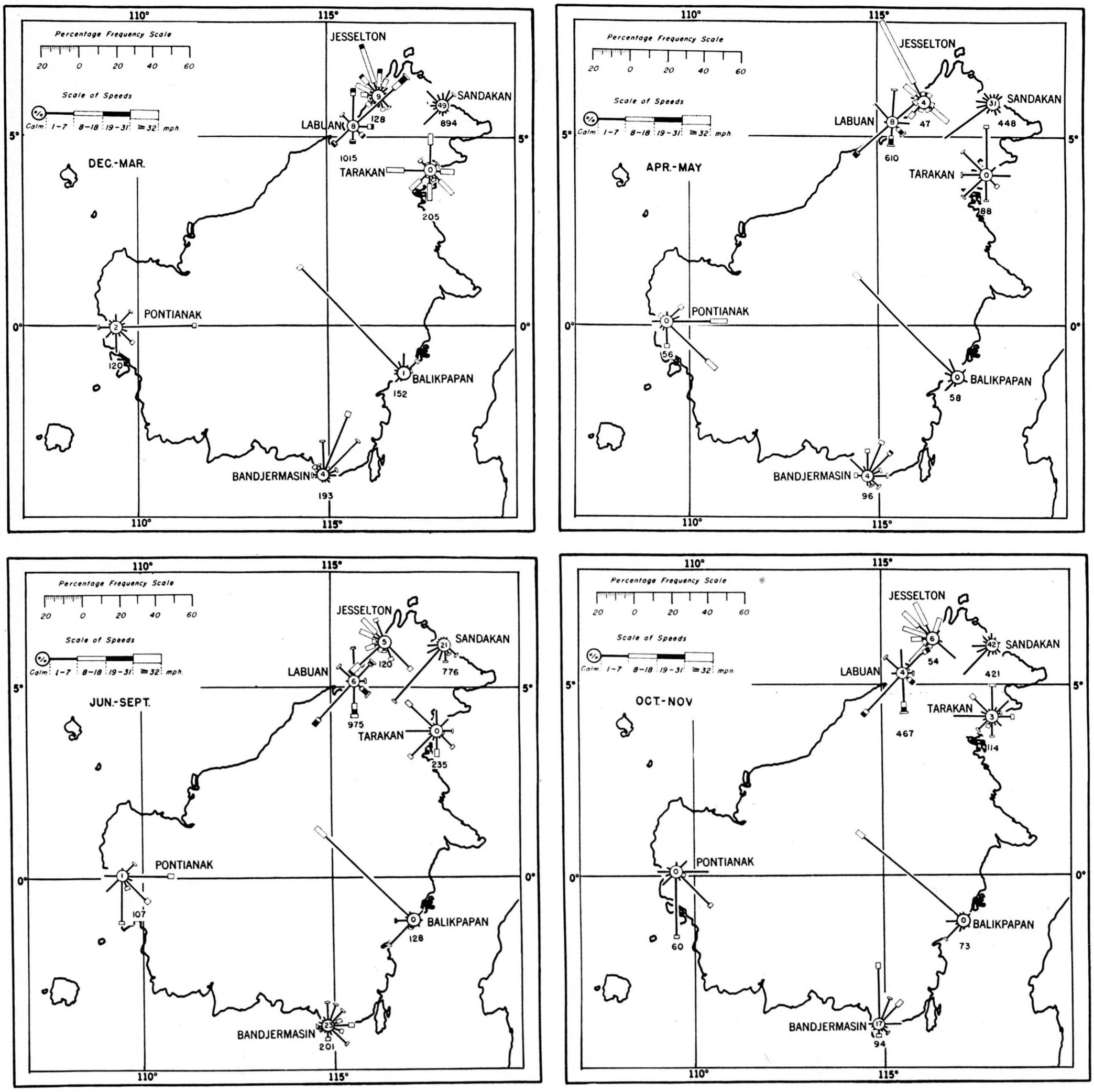

FIGURE V - 22. *Surface Wind Roses for 0500 (Local Time).*

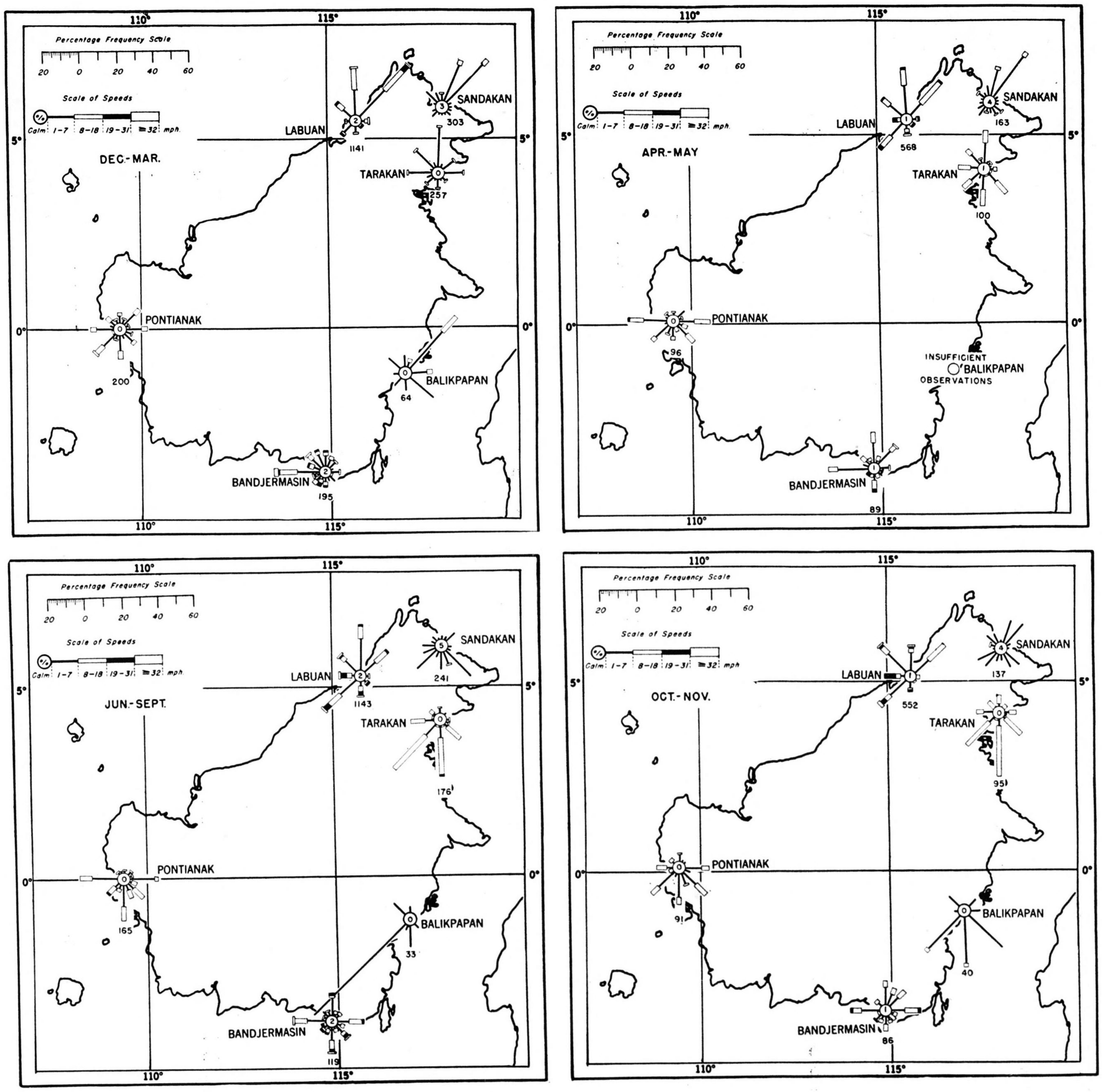

FIGURE V - 23. *Surface Wind Roses for 1300 (Local Time).*

TABLE V - 11

PERCENTAGE FREQUENCY OF SURFACE WINDS BY DIRECTION AND BEAUFORT VELOCITY GROUPS
At Specified Local Time (105° E Meridian)

a. Bandjermasin at 0500. Years of record: 4

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
January							Calm 2.4%							No. Obs.: 42		
1 – 2	14.3	30.8	28.5	2.4	2.4	0.0	2.4	0.0	2.4	0.0	0.0	0.0	2.4	2.4	2.4	2.4
3	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	16.7	33.2	28.5	2.4	2.4	0.0	2.4	0.0	2.4	0.0	0.0	0.0	2.4	2.4	2.4	2.4
February							Calm 0.0%							No. Obs.: 46		
1 – 2	17.3	34.8	19.6	2.2	4.3	0.0	2.2	2.0	2.2	0.0	0.0	0.0	6.5	4.3	4.4	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.3	34.8	19.6	2.2	4.3	0.0	2.2	0.0	2.2	0.0	0.0	0.0	8.7	4.3	4.4	0.0
March							Calm 5.0%							No. Obs.: 60		
1 – 2	10.0	26.6	23.3	5.0	3.3	0.0	0.0	3.4	0.0	0.0	0.0	1.7	0.0	0.0	1.7	0.0
3	0.0	8.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	5.0	1.7
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	10.0	34.9	23.3	8.3	3.3	0.0	0.0	3.4	0.0	0.0	0.0	1.7	1.7	0.0	6.7	1.7
April							Calm 1.9%							No. Obs.: 54		
1 – 2	13.0	13.0	12.4	3.7	5.6	1.9	7.5	0.0	0.0	0.0	0.0	0.0	3.8	0.0	14.9	0.0
3	0.0	1.8	11.0	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0
5	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.0	14.8	25.3	5.6	7.5	1.9	7.5	0.0	0.0	0.0	0.0	0.0	7.6	0.0	14.9	0.0
May							Calm 4.9%							No. Obs.: 41		
1 – 2	2.4	22.0	12.2	4.8	9.9	0.0	2.4	5.0	4.8	0.0	0.0	0.0	0.0	0.0	4.8	4.8
3	4.9	2.4	7.5	2.4	0.0	0.0	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.3	24.4	19.7	7.2	9.9	0.0	4.8	7.4	4.8	0.0	0.0	0.0	0.0	0.0	4.8	4.8
June							Calm 26.5%							No. Obs.: 49		
1 – 2	8.1	10.2	10.4	6.2	6.1	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	2.0	0.0
3	0.0	2.0	0.0	8.3	6.1	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.1	12.2	10.4	14.5	12.2	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	6.1	2.0	0.0
July							Calm 18.7%							No. Obs.: 48		
1 – 2	8.3	14.7	4.2	0.0	10.4	4.2	12.3	4.2	6.3	0.0	0.0	0.0	2.1	4.2	0.0	0.0
3	0.0	0.0	0.0	0.0	4.1	0.0	2.1	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.3	14.7	4.2	0.0	14.5	4.2	14.4	4.2	10.5	0.0	0.0	0.0	2.1	4.2	0.0	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
August							Calm 28.3%							No. Obs.: 53		
1 – 2	13.2	3.8	9.4	0.0	3.8	1.9	20.7	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	3.8
3	0.0	0.0	1.9	0.0	1.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.2	3.8	11.3	0.0	5.7	5.6	20.7	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	3.8
September							Calm 19.6%							No. Obs.: 51		
1 – 2	9.8	7.8	7.8	2.0	11.5	3.9	7.9	2.0	5.9	2.0	2.0	2.0	2.0	0.0	2.0	2.0
3	2.0	0.0	0.0	3.8	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	11.8	7.8	7.8	5.8	11.5	5.9	7.9	2.0	7.9	2.0	2.0	2.0	2.0	0.0	2.0	2.0
October							Calm 18.2%							No. Obs.: 55		
1 – 2	21.9	5.5	12.8	0.0	12.7	0.0	5.4	1.8	3.6	0.0	1.8	1.8	3.6	0.0	0.0	0.0
3	1.8	0.0	3.7	0.0	0.0	0.0	1.8	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	23.7	5.5	16.5	0.0	12.7	0.0	7.2	1.8	7.3	0.0	1.8	1.8	3.6	0.0	0.0	0.0
November							Calm 15.4%							No. Obs.: 39		
1 – 2	35.8	20.5	7.7	0.0	5.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	5.1	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	40.9	23.1	12.9	0.0	5.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December							Calm 7.0%							No. Obs.: 43		
1 – 2	16.3	34.8	21.0	2.3	4.7	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	16.3	34.8	23.3	2.3	4.7	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0

b. Bandjermasin at 1300. Years of record: 3 to 4.

January							Calm 2.4%							No. Obs.: 42		
1 – 2	7.2	0.0	4.8	2.4	2.4	0.0	4.8	0.0	2.4	2.4	4.8	2.4	0.0	4.8	2.4	14.0
3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	7.1	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.4	2.4	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.4
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.4	0.0	2.4	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	9.6	0.0	4.8	2.4	2.4	0.0	4.8	0.0	2.4	2.4	4.8	7.1	19.0	14.3	7.2	16.4
February							Calm 0.0%							No. Obs.: 51		
1 – 2	11.7	7.8	0.0	2.0	0.0	0.0	0.0	4.0	3.9	0.0	2.0	0.0	15.6	4.0	2.0	3.9
3	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	2.0	0.0	9.7	0.0	2.0	0.0
4	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.8	0.0	0.0	0.0
5	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	1.9
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.5	7.8	2.0	2.0	0.0	0.0	0.0	4.0	7.8	0.0	4.0	4.0	35.1	6.0	4.0	5.8

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
March							Calm 3.6%							No. Obs.: 56		
1 – 2	3.6	3.6	8.9	0.0	5.4	0.0	3.6	1.8	1.8	1.8	1.8	0.0	12.4	3.6	8.8	5.4
3	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8	0.0	1.8	8.8
4	0.0	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.7	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.2	9.0	10.7	0.0	5.4	0.0	3.6	1.8	1.8	9.0	1.8	0.0	16.0	5.3	10.6	14.2
April							Calm 2.1%							No. Obs.: 47		
1 – 2	12.8	2.1	6.4	0.0	4.2	2.1	2.1	0.0	2.1	0.0	0.0	0.0	19.2	4.3	6.4	0.0
3	2.1	4.3	2.1	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	2.1	0.0	4.4	2.1
4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	0.0	0.0	4.4	2.1
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.0	6.4	8.5	0.0	4.2	2.1	2.1	0.0	6.3	4.2	2.1	0.0	21.3	4.3	15.2	4.2
May							Calm 0.0%							No. Obs.: 42		
1 – 2	9.5	0.0	14.2	0.0	4.8	0.0	2.4	0.0	4.8	0.0	0.0	0.0	16.6	0.0	0.0	2.4
3	7.1	2.4	2.4	0.0	2.4	0.0	0.0	4.8	2.4	0.0	0.0	0.0	7.1	0.0	0.0	0.0
4	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.3	0.0	2.4	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	16.6	2.4	21.4	0.0	7.2	2.4	2.4	4.8	14.3	0.0	2.4	0.0	23.7	0.0	0.0	2.4
June							Calm 3.3%							No. Obs.: 30		
1 – 2	6.7	3.3	6.7	0.0	6.7	0.0	3.3	0.0	10.1	3.3	0.0	0.0	10.0	0.0	9.9	0.0
3	0.0	6.8	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.3
4	3.4	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.4	3.3	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	10.1	10.1	10.0	0.0	6.7	3.3	6.6	0.0	13.4	6.6	0.0	0.0	13.4	3.3	9.9	3.3
July							Calm 0.0%							No. Obs.: 30		
1 – 2	3.3	3.3	0.0	0.0	6.7	0.0	6.7	3.3	10.0	0.0	6.7	0.0	16.8	3.3	3.3	3.3
3	0.0	0.0	3.3	0.0	10.1	0.0	0.0	3.3	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0
4	0.0	3.3	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.3	6.6	3.3	0.0	16.8	6.7	6.7	6.6	13.3	0.0	6.7	0.0	20.1	3.3	3.3	3.3
August							Calm 3.6%							No. Obs.: 28		
1 – 2	7.0	0.0	3.6	0.0	3.6	3.6	7.0	0.0	3.6	0.0	0.0	0.0	7.2	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	3.6	3.6	0.0	0.0	10.6	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	10.7	0.0	0.0	0.0	3.6	0.0	0.0	0.0
5	3.6	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	10.6	0.0	3.6	0.0	10.8	3.6	17.7	0.0	17.9	7.2	3.6	0.0	21.4	0.0	0.0	0.0
September							Calm 0.0%							No. Obs.: 31		
1 – 2	19.3	0.0	0.0	0.0	6.5	3.2	3.3	0.0	3.2	0.0	0.0	0.0	3.2	0.0	3.2	6.5
3	0.0	0.0	0.0	0.0	6.5	0.0	3.2	3.2	3.2	0.0	3.2	3.2	6.5	0.0	0.0	0.0
4	0.0	0.0	3.2	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	19.3	0.0	3.2	0.0	22.8	3.2	6.5	3.2	9.6	0.0	3.2	6.4	12.9	0.0	3.2	6.5

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
October							Calm 0.0%							No. Obs.: 44		
1 – 2	6.8	2.3	4.5	0.0	4.5	2.3	0.0	4.5	2.2	4.6	4.5	0.0	13.8	0.0	0.0	0.0
3	6.8	0.0	4.5	0.0	2.3	4.5	4.5	2.3	2.3	0.0	0.0	0.0	2.3	0.0	2.3	0.0
4	0.0	4.5	0.0	0.0	2.3	0.0	0.0	0.0	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.6	6.8	9.0	0.0	13.6	6.8	4.5	6.8	6.8	6.9	6.8	0.0	16.1	0.0	2.3	0.0
November							Calm 2.4%							No. Obs.: 41		
1 – 2	12.2	9.7	4.9	0.0	9.8	0.0	0.0	0.0	4.9	0.0	2.4	0.0	7.3	0.0	4.9	0.0
3	0.0	2.5	2.4	0.0	2.5	0.0	0.0	2.4	0.0	2.4	0.0	0.0	7.4	0.0	2.4	0.0
4	0.0	0.0	2.4	0.0	7.5	0.0	2.4	0.0	2.4	0.0	0.0	2.4	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	12.2	12.2	9.7	0.0	19.8	0.0	2.4	2.4	7.3	2.4	2.4	2.4	17.1	0.0	7.3	0.0
December							Calm 0.0%							No. Obs.: 42		
1 – 2	0.0	4.8	0.0	0.0	7.2	0.0	7.1	0.0	0.0	0.0	2.4	0.0	16.5	0.0	9.5	4.8
3	0.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	2.4	2.4	7.1	0.0	2.3	0.0	4.8	0.0
4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.3	2.4	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.8	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	7.2	0.0	0.0	9.6	2.4	7.1	0.0	4.8	7.2	11.9	2.4	25.9	2.4	14.3	4.8

c. Balikpapan at 0500. Years of record: 3 to 5.

January							Calm 0.0%							No. Obs.: 40		
1 – 2	2.5	0.0	2.5	2.5	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	57.5	5.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.5	0.0	2.5	2.5	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	85.0	5.0
February							Calm 0.0%							No. Obs.: 28		
1 – 2	14.2	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	67.9	3.6
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	14.2	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	67.9	3.6
March							Calm 0.0%							No. Obs.: 43		
1 – 2	11.7	2.3	4.6	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	0.0	0.0	0.0	67.6	2.3
3	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0
Total	11.7	2.3	6.9	2.3	0.0	0.0	0.0	0.0	0.0	2.3	2.3	0.0	0.0	0.0	69.9	2.3
April							Calm 0.0%							No. Obs.: 29		
1 – 2	0.0	0.0	3.4	0.0	0.0	3.4	0.0	0.0	0.0	0.0	13.8	3.4	0.0	0.0	69.2	6.8
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	3.4	0.0	0.0	3.4	0.0	0.0	0.0	0.0	13.8	3.4	0.0	0.0	69.2	6.8

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
May							Calm 0.0%							No. Obs.: 29		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	79.4	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	6.9
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	89.7	6.9
June							Calm 0.0%							No. Obs.: 34		
1 – 2	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	2.9	0.0	5.8	0.0	5.9	0.0	64.9	2.9
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	2.9	0.0	5.8	0.0	8.8	0.0	73.7	2.9
July							Calm 0.0%							No. Obs.: 31		
1 – 2	0.0	0.0	3.2	0.0	3.2	0.0	0.0	0.0	0.0	0.0	16.2	0.0	3.2	3.2	67.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	3.2	0.0	3.2	0.0	0.0	0.0	0.0	3.2	16.2	0.0	3.2	3.2	67.8	0.0
August							Calm 0.0%							No. Obs.: 29		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	10.3	0.0	10.3	0.0	55.4	3.4
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	10.3	0.0	10.3	0.0	72.6	3.4
September							Calm 0.0%							No. Obs.: 35		
1 – 2	0.0	0.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0	2.9	25.7	0.0	2.9	0.0	57.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.8	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0	2.9	28.6	0.0	2.9	0.0	59.8	0.0
October							Calm 0.0%							No. Obs.: 35		
1 – 2	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	5.8	5.7	0.0	11.5	0.0	65.4	2.9
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	5.8	5.7	0.0	11.5	0.0	68.3	2.9
November							Calm 0.0%							No. Obs.: 35		
1 – 2	0.0	0.0	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0	14.3	2.9	0.0	0.0	65.6	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	8.5	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0	17.2	2.9	0.0	0.0	74.1	0.0
December							Calm 0.0%							No. Obs.: 42		
1 – 2	2.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	2.4	0.0	80.9	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	2.4	0.0	88.0	0.0

TABLE V - 11 *Continued*

d. Pontianak at 0500. Years of record: 3 to 4.

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
January							Calm 6.5%							No. Obs.: 31		
1 – 2	6.4	0.0	6.5	0.0	58.1	0.0	3.2	0.0	9.7	0.0	0.0	0.0	3.2	0.0	0.0	3.2
3	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	6.4	0.0	6.5	0.0	61.3	0.0	3.2	0.0	9.7	0.0	0.0	0.0	3.2	0.0	0.0	3.2
February							Calm 0.0%							No. Obs.: 25		
1 – 2	0.0	0.0	8.0	4.0	20.0	0.0	4.0	0.0	12.0	0.0	16.0	0.0	16.0	4.0	4.0	0.0
3	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	8.0	4.0	28.0	0.0	4.0	0.0	12.0	0.0	16.0	0.0	20.0	4.0	4.0	0.0
March							Calm 0.0%							No. Obs.: 37		
1 – 2	2.7	0.0	2.7	0.0	43.3	10.8	10.8	5.4	8.1	0.0	2.7	0.0	5.4	0.0	0.0	0.0
3	0.0	0.0	2.7	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.7	0.0	5.4	0.0	43.3	10.8	16.2	5.4	8.1	0.0	2.7	0.0	5.4	0.0	0.0	0.0
April							Calm 0.0%							No. Obs.: 27		
1 – 2	3.7	0.0	11.1	3.7	18.5	0.0	29.7	0.0	3.7	0.0	3.7	0.0	3.7	0.0	0.0	0.0
3	0.0	0.0	3.7	0.0	7.4	0.0	7.4	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.7	0.0	14.8	3.7	25.9	0.0	37.1	0.0	7.4	0.0	3.7	0.0	3.7	0.0	0.0	0.0
May							Calm 0.0%							No. Obs.: 28		
1 – 2	0.0	0.0	3.6	0.0	25.0	0.0	25.0	0.0	14.3	3.6	0.0	0.0	7.1	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	10.7	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	3.6	0.0	35.7	0.0	32.1	0.0	14.3	3.6	0.0	0.0	7.1	0.0	3.6	0.0
June							Calm 0.0%							No. Obs.: 38		
1 – 2	2.6	0.0	7.9	0.0	29.0	2.6	18.4	5.3	18.5	0.0	2.6	0.0	2.6	0.0	0.0	0.0
3	0.0	0.0	0.0	2.6	2.6	0.0	2.6	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.6	0.0	7.9	2.6	31.6	2.6	21.0	5.3	21.2	0.0	2.6	0.0	2.6	0.0	0.0	0.0
July							Calm 0.0%							No. Obs.: 17		
1 – 2	0.0	0.0	11.8	0.0	35.2	5.9	0.0	0.0	17.7	0.0	5.9	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	5.9	0.0	5.9	5.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	11.8	0.0	41.1	5.9	5.9	5.9	23.5	0.0	5.9	0.0	0.0	0.0	0.0	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
August							Calm 0.0%								No. Obs.: 27	
1 – 2	0.0	0.0	3.7	0.0	18.5	3.7	7.4	0.0	29.7	0.0	14.8	0.0	11.1	0.0	0.0	0.0
3	0.0	0.0	3.7	0.0	0.0	0.0	3.7	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	7.4	0.0	18.5	3.7	11.1	3.7	29.7	0.0	14.8	0.0	11.1	0.0	0.0	0.0
September							Calm 3.8%								No. Obs.: 26	
1 – 2	0.0	0.0	3.8	0.0	7.7	0.0	27.1	3.8	19.3	0.0	15.4	0.0	11.5	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	3.8	0.0	15.3	0.0	27.1	3.8	19.3	0.0	15.4	0.0	11.5	0.0	0.0	0.0
October							Calm 0.0%								No. Obs.: 37	
1 – 2	0.0	0.0	5.4	0.0	16.2	0.0	16.2	2.7	35.2	0.0	5.4	2.7	10.8	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	5.4	0.0	16.2	2.7	18.9	2.7	35.2	0.0	5.4	2.7	10.8	0.0	0.0	0.0
November							Calm 0.0%								No. Obs.: 23	
1 – 2	4.3	0.0	4.3	0.0	13.0	0.0	30.6	0.0	26.2	0.0	8.7	4.3	0.0	0.0	4.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.3	0.0	4.3	0.0	13.0	0.0	30.6	0.0	30.5	0.0	8.7	4.3	0.0	0.0	4.3	0.0
December							Calm 0.0%								No. Obs.: 26	
1 – 2	7.6	0.0	15.4	3.8	31.0	0.0	15.4	0.0	15.4	3.8	3.8	0.0	0.0	0.0	3.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.6	0.0	15.4	3.8	31.0	0.0	15.4	0.0	15.4	3.8	3.8	0.0	0.0	0.0	3.8	0.0

e. Pontianak at 1300. Years of record: 3 to 4.

January							Calm 0.0%								No. Obs.: 43	
1 – 2	4.6	2.3	11.7	2.3	4.7	4.6	2.3	0.0	7.0	2.3	16.4	0.0	9.3	0.0	4.6	0.0
3	0.0	0.0	4.7	0.0	2.3	0.0	0.0	0.0	0.0	2.3	7.0	0.0	2.3	0.0	4.7	2.3
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.6	2.3	16.4	2.3	7.0	4.6	2.3	0.0	7.0	4.6	25.7	0.0	11.6	0.0	9.3	2.3
February							Calm 0.0%								No. Obs.: 56	
1 –2	0.0	1.8	7.1	0.0	5.4	1.8	1.8	0.0	10.6	3.6	8.9	0.0	5.4	1.8	3.6	3.6
3	0.0	1.8	3.6	0.0	7.1	0.0	3.6	0.0	8.9	0.0	10.6	1.8	3.6	0.0	1.8	0.0
4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.8	3.6	10.7	0.0	12.5	1.8	5.4	0.0	19.5	3.6	19.5	1.8	9.0	1.8	5.4	3.6

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
March							Calm 0.0%							No. Obs.: 56		
1 – 2	3.6	0.0	7.1	0.0	14.2	5.4	8.8	5.4	7.1	0.0	3.6	0.0	5.4	3.6	1.8	1.8
3	1.8	0.0	3.6	1.8	5.3	0.0	1.8	0.0	1.8	0.0	0.0	1.8	5.3	0.0	3.6	1.8
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.4	0.0	10.7	1.8	19.5	5.4	10.6	5.4	8.9	0.0	5.4	1.8	10.7	3.6	7.2	3.6
April							Calm 0.0%							No. Obs.: 49		
1 – 2	2.0	0.0	8.1	2.0	8.1	2.0	6.1	0.0	4.2	4.0	16.5	2.0	12.4	2.0	2.0	0.0
3	0.0	4.1	0.0	0.0	8.2	0.0	4.1	0.0	0.0	0.0	2.0	0.0	4.1	0.0	2.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.0	4.1	8.1	2.0	16.3	2.0	10.2	0.0	6.3	4.0	18.5	2.0	16.5	2.0	4.0	0.0
May							Calm 0.0%							No. Obs.: 47		
1 – 2	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	2.1	0.0	4.3	2.1	8.5	0.0	2.1	6.4	6.4	0.0	12.8	0.0	0.0	0.0
4	0.0	0.0	0.0	2.1	8.5	6.4	8.5	6.4	2.1	0.0	2.1	0.0	8.5	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	2.1	2.1	17.1	8.5	17.0	6.4	4.2	8.5	10.7	0.0	23.4	0.0	0.0	0.0
June							Calm 0.0%							No. Obs.: 41		
1 – 2	2.4	0.0	0.0	0.0	24.6	2.4	2.4	0.0	9.7	0.0	2.4	0.0	14.6	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	2.4	4.9	9.8	0.0	9.8	0.0	0.0	0.0	4.9	0.0	2.4	2.4
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.5	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.4	0.0	0.0	0.0	27.0	7.3	12.2	0.0	21.9	0.0	2.4	0.0	22.0	0.0	2.4	2.4
July							Calm 0.0%							No. Obs.: 46		
1 – 2	2.2	0.0	2.2	0.0	10.9	0.0	0.0	0.0	8.7	2.2	4.3	0.0	8.7	0.0	0.0	2.1
3	2.2	0.0	2.2	0.0	2.2	6.5	10.9	4.3	13.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	4.3	0.0	0.0	6.5	0.0	2.2	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.4	0.0	4.4	0.0	13.1	6.5	13.1	8.6	21.7	2.2	13.0	0.0	10.9	0.0	0.0	2.1
August							Calm 0.0%							No. Obs.: 38		
1 – 2	0.0	0.0	5.3	0.0	5.2	0.0	5.2	2.6	15.9	0.0	2.6	0.0	18.5	0.0	2.6	0.0
3	0.0	0.0	2.6	0.0	2.6	0.0	2.6	7.9	5.3	2.6	5.3	0.0	10.6	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	7.9	0.0	7.8	0.0	7.8	10.5	21.2	2.6	10.5	0.0	29.1	0.0	2.6	0.0
September							Calm 0.0%							No. Obs.: 39		
1 – 2	0.0	0.0	0.0	0.0	15.3	0.0	7.7	10.3	12.8	5.2	2.6	0.0	15.3	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	5.1	5.1	0.0	7.8	5.1	0.0	7.7	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	15.3	0.0	12.8	15.4	12.8	13.0	7.7	0.0	23.0	0.0	0.0	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
October							Calm 0.0%							No. Obs.: 50		
1 – 2	6.0	0.0	2.0	0.0	6.0	2.0	8.0	8.0	14.0	2.0	10.0	0.0	4.0	0.0	2.0	0.0
3	0.0	0.0	0.0	0.0	6.0	0.0	8.0	0.0	6.0	0.0	2.0	4.0	8.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	6.0	0.0	2.0	0.0	12.0	2.0	16.0	8.0	20.0	2.0	14.0	4.0	12.0	0.0	2.0	0.0
November							Calm 0.0%							No. Obs.: 40		
1 – 2	2.5	2.5	0.0	0.0	10.0	5.0	12.5	2.5	12.5	2.5	15.0	0.0	2.5	0.0	0.0	0.0
3	5.0	0.0	0.0	0.0	0.0	0.0	7.5	2.5	2.5	0.0	5.0	0.0	2.5	0.0	2.5	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.5	2.5	0.0	0.0	10.0	5.0	20.0	5.0	15.0	2.5	22.5	0.0	5.0	0.0	5.0	0.0
December							Calm 0.0%							No. Obs.: 45		
1 – 2	6.6	4.4	4.4	0.0	6.7	0.0	8.9	0.0	8.9	0.0	8.9	0.0	17.9	0.0	2.2	0.0
3	2.2	0.0	2.2	0.0	2.2	2.2	2.2	0.0	6.9	0.0	4.4	0.0	4.4	0.0	2.2	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.8	4.4	6.6	0.0	8.9	2.2	13.3	0.0	15.8	0.0	13.3	0.0	22.3	0.0	4.4	0.0

f. Tarakan at 0500. Years of record: 3 to 4.

January							Calm 0.0%							No. Obs.: 59		
1 – 2	21.9	5.1	5.1	3.4	8.5	0.0	5.1	1.7	3.4	1.7	6.8	0.0	11.9	0.0	11.8	8.5
3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.7	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	23.6	5.1	5.1	3.4	8.5	0.0	5.1	1.7	5.1	1.7	6.8	0.0	11.9	0.0	13.5	8.5
February							Calm 0.0%							No. Obs.: 66		
1 – 2	28.8	3.0	9.1	0.0	9.1	0.0	0.0	0.0	1.5	1.5	6.0	4.5	10.6	0.0	18.3	1.5
3	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.5	0.0	1.6	0.0	1.5	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	28.8	3.0	9.1	0.0	9.1	0.0	1.5	0.0	3.0	1.5	7.6	4.5	12.1	0.0	18.3	1.5
March							Calm 0.0%							No. Obs.: 71		
1 – 2	31.3	0.0	9.8	1.4	12.6	0.0	2.8	2.8	5.6	0.0	1.4	0.0	8.4	1.4	12.6	0.0
3	1.4	0.0	1.4	0.0	4.3	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	32.7	0.0	11.2	1.4	16.9	1.4	4.2	2.8	5.6	0.0	1.4	0.0	8.4	1.4	12.6	0.0
April							Calm 0.0%							No. Obs.: 46		
1 – 2	23.8	0.0	2.2	0.0	10.9	0.0	2.2	0.0	4.4	0.0	23.8	2.2	8.7	0.0	13.1	0.0
3	4.3	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	28.1	0.0	2.2	0.0	10.9	0.0	4.4	0.0	4.4	0.0	26.0	2.2	8.7	0.0	13.1	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
May							Calm 0.0%								No. Obs.: 42	
1 – 2	21.4	0.0	4.8	0.0	9.5	0.0	7.1	0.0	19.1	0.0	2.4	0.0	11.9	0.0	14.2	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	2.4	0.0	0.0	0.0	2.4	0.0	2.4	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	21.4	0.0	4.8	0.0	9.5	0.0	9.5	0.0	21.5	0.0	2.4	0.0	14.3	0.0	16.6	0.0
June							Calm 0.0%								No. Obs.: 47	
1 – 2	10.7	0.0	8.5	0.0	10.7	0.0	6.4	2.1	4.3	4.2	10.6	2.1	4.2	0.0	25.6	2.1
3	2.1	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.2	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	12.8	0.0	8.5	0.0	10.7	0.0	8.5	2.1	4.3	4.2	12.7	2.1	4.2	0.0	27.8	2.1
July							Calm 0.0%								No. Obs.: 52	
1 – 2	7.7	0.0	5.7	0.0	0.0	0.0	5.7	0.0	7.6	0.0	21.3	0.0	15.5	0.0	11.5	0.0
3	0.0	0.0	0.0	0.0	1.9	0.0	3.8	0.0	7.9	1.9	3.8	0.0	0.0	0.0	3.8	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.7	0.0	5.7	0.0	1.9	1.9	9.5	0.0	15.5	1.9	25.1	0.0	15.5	0.0	15.3	0.0
August							Calm 0.0%								No. Obs.: 73	
1 – 2	4.1	1.4	1.4	0.0	5.5	1.4	8.2	1.4	6.9	4.1	20.4	1.4	10.8	1.4	12.3	1.4
3	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	5.5	0.0	2.7	1.4	0.0	0.0	2.7	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.1	2.8	1.4	0.0	6.9	1.4	8.2	1.4	12.4	4.1	23.1	4.2	12.2	1.4	15.0	1.4
September							Calm 0.0%								No. Obs.: 61	
1 – 2	9.8	0.0	8.2	0.0	3.3	0.0	8.2	0.0	8.2	1.6	8.2	0.0	23.0	3.3	14.8	1.6
3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	0.0	0.0	0.0	0.0	0.0	6.6	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	9.8	0.0	8.2	0.0	3.3	0.0	9.8	0.0	9.8	1.6	8.2	0.0	23.0	3.3	21.4	1.6
October							Calm 3.3%								No. Obs.: 61	
1 – 2	13.1	1.6	9.9	0.0	3.2	0.0	6.5	0.0	8.3	0.0	11.5	1.6	16.6	1.6	9.8	1.6
3	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.6	0.0	0.0	0.0	1.6	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
Total	16.4	1.6	9.9	0.0	3.2	0.0	6.5	0.0	8.3	3.3	13.1	1.6	18.2	1.6	11.4	1.6
November							Calm 1.9%								No. Obs.: 52	
1 – 2	13.6	3.8	7.6	1.9	11.6	0.0	1.9	3.8	5.7	1.9	1.9	0.0	17.4	3.8	9.7	0.0
3	0.0	0.0	0.0	1.9	3.8	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	5.9	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
⩾8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.6	3.8	7.6	3.8	15.4	0.0	1.9	3.8	7.6	1.9	1.9	0.0	17.4	3.8	15.6	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
December							Calm 0.0%							No. Obs.: 59		
1 – 2	6.8	1.7	5.1	0.0	11.8	1.7	1.7	0.0	8.5	0.0	6.8	5.1	21.9	3.4	10.2	1.7
3	1.7	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	1.7	0.0	3.4	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.5	1.7	8.5	0.0	11.8	1.7	1.7	0.0	8.5	0.0	10.2	5.1	23.6	3.4	13.6	1.7

g. Tarakan at 1300. Years of record: 3 to 4.

January							Calm 0.0%							No. Obs.: 46		
1 – 2	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	17.3	0.0	2.2	0.0
3	8.7	2.2	0.0	0.0	10.9	0.0	4.3	0.0	10.9	0.0	6.5	0.0	10.9	0.0	0.0	4.3
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	21.8	2.2	0.0	0.0	10.9	0.0	4.3	0.0	19.6	0.0	6.5	0.0	28.2	0.0	2.2	4.3
Feb: uary							Calm 0.0%							No. Obs.: 47		
1 – 2	12.8	0.0	2.1	0.0	4.3	0.0	6.4	0.0	4.3	0.0	4.3	0.0	12.6	0.0	4.2	0.0
3	8.5	0.0	0.0	0.0	8.5	0.0	8.5	0.0	6.4	0.0	8.5	0.0	8.6	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.13	0.0	2.1	0.0	12.8	0.0	14.9	0.0	10.7	0.0	12.8	0.0	21.2	0.0	4.2	0.0
March							Calm 0.0%							No. Obs.: 59		
1 – 2	13.5	0.0	0.0	0.0	0.0	0.0	8.5	1.7	1.7	0.0	6.8	0.0	6.8	0.0	6.8	0.0
3	3.4	0.0	1.7	0.0	10.2	0.0	2.2	1.7	10.2	0.0	3.4	0.0	3.4	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	16.9	0.0	1.7	0.0	10.2	0.0	10.7	3.4	11.9	0.0	10.2	0.0	10.2	0.0	6.8	0.0
April							Calm 0.0%							No. Obs.: 56		
1 – 2	10.6	1.8	1.8	0.0	3.6	0.0	7.1	0.0	5.3	1.8	7.2	0.0	1.8	0.0	3.6	1.8
3	7.1	0.0	0.0	0.0	1.8	1.8	10.7	0.0	14.3	0.0	7.1	0.0	5.4	0.0	3.6	1.8
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.7	1.8	1.8	0.0	5.4	1.8	17.8	0.0	19.6	1.8	14.3	0.0	7.2	0.0	7.2	3.6
May							Calm 0.0%							No. Obs.: 44		
1 – 2	11.4	0.0	2.3	2.3	0.0	0.0	4.5	0.0	13.7	0.0	4.6	0.0	6.8	0.0	11.2	2.3
3	6.8	0.0	2.3	0.0	2.3	0.0	6.8	0.0	4.5	0.0	4.5	0.0	9.2	0.0	4.5	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	18.2	0.0	4.6	2.3	2.3	0.0	11.3	0.0	18.2	0.0	9.1	0.0	16.0	0.0	15.7	2.3
June							Calm 0.0%							No. Obs.: 44		
1 – 2	11.3	0.0	2.3	0.0	0.0	0.0	4.5	0.0	11.3	0.0	18.3	0.0	4.6	0.0	4.5	0.0
3	0.0	0.0	0.0	0.0	0.0	2.3	4.5	2.3	13.6	2.3	18.2	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	11.3	0.0	2.3	0.0	0.0	2.3	9.0	2.3	24.9	2.3	36.5	0.0	4.6	0.0	4.5	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
July							Calm 0.0%							No. Obs.: 49		
1 – 2	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	6.1	0.0	10.3	0.0	0.0	0.0
3	2.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	22.5	0.0	22.5	0.0	14.3	0.0	4.1	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.0	0.0	0.0	0.0	0.0	2.0	12.2	0.0	26.5	0.0	28.6	0.0	24.6	0.0	4.1	0.0
August							Calm 0.0%							No. Obs.: 44		
1 – 2	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	9.1	0.0	4.5	0.0	2.3	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	6.8	2.3	31.8	0.0	31.8	0.0	6.8	2.3	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	2.3	0.0	6.8	2.3	40.9	0.0	36.3	0.0	9.1	2.3	0.0	0.0
September							Calm 0.0%							No. Obs.: 41		
1 – 2	2.4	0.0	0.0	0.0	2.4	0.0	0.0	0.0	7.4	0.0	4.9	0.0	2.4	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	2.4	0.0	19.5	0.0	12.2	0.0	29.3	0.0	9.8	0.0	7.3	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.4	0.0	0.0	0.0	4.8	0.0	19.5	0.0	19.6	0.0	34.2	0.0	12.2	0.0	7.3	0.0
October							Calm 0.0%							No. Obs.: 54		
1 – 2	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	7.4	0.0	7.4	0.0	1.9	0.0	0.0	0.0
3	5.6	0.0	3.7	0.0	1.9	0.0	11.1	0.0	25.8	0.0	16.6	0.0	0.0	0.0	3.7	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	5.6	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.6	0.0	3.7	0.0	5.6	1.9	11.1	0.0	33.2	0.0	25.8	0.0	9.4	0.0	3.7	0.0
November							Calm 0.0%							No. Obs.: 41		
1 – 2	2.4	2.4	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0
3	4.9	0.0	0.0	0.0	7.3	0.0	14.6	0.0	31.8	2.4	17.1	0.0	0.0	0.0	7.3	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.3	2.4	0.0	0.0	7.3	0.0	17.0	0.0	31.8	2.4	17.1	0.0	7.4	0.0	7.3	0.0
December							Calm 0.0%							No. Obs.: 53		
1 – 2	5.7	0.0	0.0	0.0	3.8	0.0	0.0	0.0	3.8	0.0	3.8	0.0	5.6	0.0	0.0	0.0
3	3.8	0.0	1.9	1.9	3.8	1.9	7.5	3.8	11.3	3.8	13.2	0.0	16.9	0.0	7.5	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	9.5	0.0	1.9	1.9	7.6	1.9	7.5	3.8	15.1	3.8	17.0	0.0	22.5	0.0	7.5	0.0

h. Labuan at 0500. Years of record: 10.

January							Calm 8.6%							No. Obs.: 268		
1 – 2	13.0	0.0	29.4	0.0	6.4	0.0	0.4	0.0	7.8	0.0	9.0	0.0	0.0	0.0	2.6	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1.1	0.0	5.7	0.0	2.6	0.0	1.1	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	2.2	0.0	4.6	0.0	1.1	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4	0.0
≥8	0.4	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	16.7	0.0	40.8	0.0	10.1	0.0	1.9	0.0	7.8	0.0	10.4	0.0	0.0	0.0	3.7	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
February							Calm 7.2%							No. Obs.: 237		
1 – 2	16.9	0.0	29.1	0.0	8.9	0.0	1.7	0.0	0.8	0.0	6.7	0.0	0.0	0.0	4.2	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	3.8	0.0	5.5	0.0	2.1	0.0	0.8	0.0	1.3	0.0	1.3	0.0	0.4	0.0	1.7	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	3.0	0.0	3.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
≧8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	24.1	0.0	37.6	0.0	11.4	0.0	2.9	0.0	2.1	0.0	8.4	0.0	0.4	0.0	5.9	0.0
March							Calm 8.0%							No. Obs.: 262		
1 – 2	16.8	0.0	22.2	0.0	3.5	0.0	2.7	0.0	1.2	0.0	6.7	0.0	0.8	0.0	11.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	3.1	0.0	3.4	0.0	1.1	0.0	1.9	0.0	1.5	0.0	0.4	0.0	0.8	0.0	1.9	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	3.1	0.0	3.8	0.0	0.8	0.0	1.5	0.0	0.4	0.0	1.8	0.0	0.0	0.0	0.4	0.0
≧8	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	23.0	0.0	29.4	0.0	5.8	0.0	6.1	0.0	3.8	0.0	8.9	0.0	1.6	0.0	13.4	0.0
April							Calm 8.6%							No. Obs.: 245		
1 – 2	15.9	0.0	12.6	0.0	3.2	0.0	0.4	0.0	2.8	0.0	20.9	0.0	0.8	0.0	14.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
4	1.2	0.0	1.6	0.0	0.4	0.0	2.6	0.0	2.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.8	0.0	0.4	0.0	0.4	0.0	2.0	0.0	4.2	0.0	1.6	0.0	1.2	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total	17.9	0.0	14.6	0.0	4.0	0.0	5.0	0.0	9.4	0.0	24.1	0.0	2.0	0.0	14.4	0.0
May							Calm 6.4%							No. Obs.: 234		
1 – 2	14.1	0.0	14.1	0.0	8.9	0.0	0.9	0.0	5.6	0.0	23.4	0.0	1.3	0.0	7.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1.3	0.0	2.5	0.0	0.0	0.0	1.7	0.0	2.6	0.0	1.3	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.4	0.0	0.4	0.0	1.3	0.0	3.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	15.4	0.0	17.0	0.0	9.3	0.0	4.8	0.0	12.5	0.0	26.0	0.0	1.3	0.0	7.3	0.0
June							Calm 4.6%							No. Obs.: 238		
1 – 2	19.3	0.0	13.9	0.0	3.0	0.0	2.5	0.0	6.7	0.0	19.3	0.0	0.8	0.0	4.6	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	2.1	0.0	2.5	0.0	1.3	0.0	1.3	0.0	5.4	0.0	1.7	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.4	0.0	0.4	0.0	0.0	0.0	2.6	0.0	2.9	0.0	2.1	0.0	0.5	0.0	0.4	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	21.8	0.0	16.8	0.0	4.3	0.0	7.2	0.0	15.9	0.0	23.1	0.0	1.3	0.0	5.0	0.0
July							Calm 4.0%							No. Obs.: 248		
1 – 2	14.5	0.0	8.1	0.0	2.0	0.0	0.8	0.0	11.7	0.0	31.5	0.0	1.2	0.0	4.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.8	0.0	0.8	0.0	0.4	0.0	0.4	0.0	4.1	0.0	3.2	0.0	0.4	0.0	0.8	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.8	0.0	0.0	0.0	4.5	0.0	2.0	0.0	1.2	0.0	0.4	0.0	0.0	0.0
≧8	0.0	0.0	0.4	0.0	0.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	15.3	0.0	10.1	0.0	2.8	0.0	6.5	0.0	17.8	0.0	35.9	0.0	2.0	0.0	5.6	0.0
August							Calm 3.9%							No. Obs.: 256		
1 – 2	14.8	0.0	6.7	0.0	1.6	0.0	2.4	0.0	7.9	0.0	19.4	0.0	0.8	0.0	12.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1.2	0.0	0.4	0.0	0.8	0.0	5.0	0.0	3.9	0.0	2.3	0.0	0.0	0.0	1.2	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	1.2	0.0	0.8	0.0	1.6	0.0	2.3	0.0	5.0	0.0	0.8	0.0	0.4	0.0
≧8	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total	16.0	0.0	8.7	0.0	3.2	0.0	9.0	0.0	16.8	0.0	27.1	0.0	1.6	0.0	13.7	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
September							Calm 9.9%							No. Obs.: 233		
1 – 2	11.2	0.0	9.0	0.0	0.4	0.0	0.8	0.0	11.6	0.0	27.0	0.0	0.4	0.0	10.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.9	0.0	0.4	0.0	0.4	0.0	0.4	0.0	3.0	0.0	0.9	0.0	0.0	0.0	0.4	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.9	0.0	0.4	0.0	3.0	0.0	3.0	0.0	2.1	0.0	0.4	0.0	0.9	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.3	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Total	12.1	0.0	10.3	0.0	1.2	0.0	4.6	0.0	18.9	0.0	30.9	0.0	0.8	0.0	11.3	0.0
October							Calm 4.5%							No. Obs.: 244		
1 – 2	10.7	0.0	10.7	0.0	0.8	0.0	2.0	0.0	11.5	0.0	25.0	0.0	2.8	0.0	11.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.8	0.0	1.6	0.0	1.6	0.0	1.2	0.0	3.9	0.0	2.0	0.0	0.0	0.0	0.4	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	1.2	0.0	0.8	0.0	0.8	0.0	3.8	0.0	1.2	0.0	0.4	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Total	11.5	0.0	13.5	0.0	3.2	0.0	4.0	0.0	20.0	0.0	28.2	0.0	3.6	0.0	11.5	0.0
November							Calm 3.6%							No. Obs.: 223		
1 – 2	8.5	0.0	15.2	0.0	2.6	0.0	0.8	0.0	14.8	0.0	24.6	0.0	0.4	0.0	6.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	3.2	0.0	0.4	0.0	2.2	0.0	1.8	0.0	0.9	0.0	0.0	0.0	0.9	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.4	0.0	3.3	0.0	0.4	0.0	2.7	0.0	0.9	0.0	2.6	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0	1.9	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total	8.9	0.0	22.1	0.0	3.4	0.0	6.1	0.0	19.4	0.0	28.9	0.0	0.4	0.0	7.2	0.0
December							Calm 6.0%							No. Obs.: 248		
1 – 2	11.0	0.0	28.7	0.0	2.0	0.0	2.0	0.0	7.2	0.0	15.3	0.0	0.0	0.0	3.6	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.8	0.0	5.3	0.0	0.8	0.0	2.4	0.0	2.8	0.0	0.4	0.0	0.0	0.0	0.8	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.8	0.0	6.1	0.0	0.0	0.0	0.8	0.0	2.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	12.6	0.0	40.1	0.0	2.8	0.0	5.2	0.0	12.4	0.0	16.1	0.0	0.0	0.0	4.8	0.0

i. Labuan at 1300. Years of record: 9 to 10.

January							Calm 1.4%							No. Obs.: 292		
1 – 2	11.0	0.0	21.7	0.0	3.4	0.0	0.7	0.0	4.1	0.0	5.1	0.0	1.0	0.0	6.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.8	0.0	18.2	0.0	2.4	0.0	1.4	0.0	0.7	0.0	0.7	0.0	0.3	0.0	3.4	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	3.8	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
≥8	1.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	22.7	0.0	45.7	0.5	5.8	0.0	2.1	0.0	5.1	0.0	5.8	0.0	1.6	0.0	9.7	0.0
February							Calm 1.8%							No. Obs.: 273		
1 – 2	20.5	0.0	23.3	0.0	1.5	0.0	0.4	0.0	1.9	0.0	5.5	0.0	0.0	0.0	4.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	9.2	0.0	13.5	0.0	3.7	0.0	1.1	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.8	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.9	0.0	3.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.0	0.0
≥8	0.7	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	32.3	0.0	41.3	0.0	5.2	0.0	2.2	0.0	1.9	0.0	7.7	0.0	0.0	0.0	7.6	0.0
March							Calm 1.7%							No. Obs.: 287		
1 – 2	16.1	0.0	18.3	0.0	1.4	0.0	0.3	0.0	0.3	0.0	3.1	0.0	0.3	0.0	8.7	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	11.5	0.0	15.4	0.0	0.7	0.0	1.7	0.0	1.4	0.0	0.7	0.0	0.7	0.0	8.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	4.2	0.0	1.7	0.0	0.7	0.0	0.7	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.7	0.0
≥8	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	31.8	0.0	35.4	0.0	3.1	0.0	2.7	0.0	2.1	0.0	4.8	0.0	1.0	0.0	17.4	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
April							Calm 1.0%							No. Obs.: 294		
1 – 2	15.8	0.0	6.8	0.0	1.4	0.0	0.0	0.0	1.0	0.0	7.1	0.0	0.3	0.0	7.4	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	10.5	0.0	17.8	0.0	1.0	0.0	1.7	0.0	2.0	0.0	6.1	0.0	2.4	0.0	6.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.4	0.0	0.7	0.0	0.3	0.0	0.3	0.0	1.4	0.0	2.4	0.0	2.7	0.0	1.7	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total	27.7	0.0	25.3	0.0	2.7	0.0	2.0	0.0	4.4	0.0	15.6	0.0	5.7	0.0	15.6	0.0
May							Calm 0.7%							No. Obs.: 274		
1 – 2	16.4	0.0	9.8	0.0	2.6	0.0	0.4	0.0	3.3	0.0	10.2	0.0	0.4	0.0	8.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.9	0.0	13.8	0.0	1.5	0.0	0.4	0.0	1.1	0.0	9.1	0.0	2.6	0.0	4.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.1	0.0	1.5	0.0	0.7	0.0	1.1	0.0	1.5	0.0	1.7	0.0	0.4	0.0	0.4	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Total	24.4	0.0	25.1	0.0	4.8	0.0	1.9	0.0	5.9	0.0	21.0	0.0	3.8	0.0	12.4	0.0
June							Calm 3.5%							No. Obs.: 285		
1 – 2	16.7	0.0	14.3	0.0	0.0	0.0	2.1	0.0	2.2	0.0	10.9	0.0	0.4	0.0	2.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	9.0	0.0	6.7	0.0	1.1	0.0	1.1	0.0	3.2	0.0	7.0	0.0	2.8	0.0	1.4	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.4	0.0	1.1	0.0	0.0	0.0	0.4	0.0	1.8	0.0	4.8	0.0	2.4	0.0	0.4	0.0
≥8	0.4	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.4	0.0	1.3	0.0
Total	27.5	0.0	22.5	0.0	1.1	0.0	4.0	0.0	7.2	0.0	23.0	0.0	6.0	0.0	5.2	0.0
July							Calm 0.4%							No. Obs.: 285		
1 – 2	19.2	0.0	7.0	0.0	0.7	0.0	0.0	0.0	2.8	0.0	15.8	0.0	1.8	0.0	8.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	4.6	0.0	8.0	0.0	2.1	0.0	0.7	0.0	3.5	0.0	6.6	0.0	2.1	0.0	2.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.1	0.0	0.4	0.0	0.7	0.0	2.5	0.0	2.5	0.0	2.4	0.0	2.4	0.0	0.7	0.0
≥8	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Total	24.9	0.0	15.8	0.0	3.5	0.0	3.6	0.0	8.8	0.0	25.1	0.0	6.6	0.0	11.3	0.0
August							Calm 0.7%							No. Obs.: 289		
1 – 2	17.1	0.0	5.2	0.0	0.7	0.0	0.0	0.0	1.0	0.0	10.0	0.0	0.3	0.0	9.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	7.3	0.0	6.9	0.0	1.4	0.0	0.7	0.0	3.1	0.0	12.0	0.0	2.8	0.0	3.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	3.1	0.0	6.3	0.0	5.0	0.0	0.3	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.0	0.7	0.0	0.3	0.0	0.0	0.0
Total	25.4	0.0	12.4	0.0	2.1	0.0	1.0	0.0	7.9	0.0	29.0	0.0	8.4	0.0	13.1	0.0
September							Calm 3.2%							No. Obs.: 284		
1 – 2	14.9	0.0	6.4	0.0	0.8	0.0	0.7	0.0	2.8	0.0	10.8	0.0	1.5	0.0	11.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.0	0.0	9.1	0.0	0.7	0.0	1.1	0.0	1.8	0.0	6.7	0.0	2.8	0.0	4.2	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.5	0.0	1.5	0.0	0.0	0.0	1.1	0.0	1.1	0.0	3.4	0.0	2.7	0.0	1.1	0.0
≥8	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	0.4	0.0	0.4	0.0	0.6	0.0
Total	22.8	0.0	17.0	0.0	1.5	0.0	3.3	0.0	6.3	0.0	21.3	0.0	7.4	0.0	17.2	0.0
October							Calm 1.4%							No. Obs.: 280		
1 – 2	11.4	0.0	6.7	0.0	0.0	0.0	0.8	0.0	3.6	0.0	11.8	0.0	1.8	0.0	16.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	2.1	0.0	11.1	0.0	0.7	0.0	0.4	0.0	0.7	0.0	5.0	0.0	3.2	0.0	5.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.4	0.0	0.8	0.0	0.4	0.0	2.1	0.0	4.6	0.0	5.6	0.0	0.4	0.0
≥8	1.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Total	14.6	0.0	18.6	0.0	1.5	0.0	1.6	0.0	6.8	0.0	22.7	0.0	10.6	0.0	22.2	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
November							Calm 1.1%							No. Obs.: 272		
1 – 2	8.8	0.0	12.5	0.0	0.0	0.0	0.0	0.0	2.6	0.0	13.2	0.0	2.6	0.0	11.4	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	2.6	0.0	11.8	0.0	2.9	0.0	0.7	0.0	1.1	0.0	2.9	0.0	2.6	0.0	5.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.1	0.0	0.8	0.0	0.7	0.0	0.4	0.0	0.4	0.0	2.1	0.0	5.9	0.0	1.5	0.0
≥8	0.7	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.4	0.0	1.1	0.0	0.7	0.0	1.1	0.0
Total	13.2	0.0	25.1	0.0	4.0	0.0	1.5	0.0	4.5	0.0	19.3	0.0	11.8	0.0	19.5	0.0
December							Calm 1.4%							No. Obs.: 289		
1 – 2	10.1	0.0	18.5	0.0	0.3	0.0	0.0	0.0	5.5	0.0	8.3	0.0	1.0	0.0	5.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	5.9	0.0	12.1	0.0	2.1	0.0	1.4	0.0	3.1	0.0	2.4	0.0	3.1	0.0	3.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	5.2	0.0	4.8	0.0	0.0	0.0	1.4	0.0	1.0	0.0	1.4	0.0	0.7	0.0	0.7	0.0
≥8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	21.5	0.0	35.4	0.0	2.4	0.0	2.8	0.0	9.6	0.0	12.1	0.0	4.8	0.0	10.0	0.0

j. Sandakan at 0500. Years of record: 7 to 9.

January							Calm 49.3%							No. Obs.: 225		
1 – 2	4.9	9.0	5.9	0.4	0.0	0.0	0.4	0.4	1.7	0.4	8.1	0.9	1.3	2.6	8.5	4.0
3	0.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.3	9.5	6.4	0.4	0.0	0.0	0.4	0.4	1.7	0.4	8.1	0.9	1.3	2.6	8.5	4.8
February							Calm 55.1%							No. Obs.: 207		
1 – 2	3.4	5.8	7.1	0.0	0.5	0.0	2.4	1.0	0.5	1.0	3.9	1.0	2.9	2.4	8.6	2.9
3	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.4	5.8	8.1	0.0	1.0	0.0	2.4	1.0	0.5	1.0	3.9	1.0	2.9	2.4	8.6	2.9
March							Calm 52.4%							No. Obs.: 206		
1 – 2	5.8	5.8	2.4	0.0	0.0	0.0	0.0	1.5	4.4	1.9	12.1	2.0	2.4	1.5	5.8	1.0
3	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.8	5.8	2.9	0.0	0.0	0.0	0.0	1.5	4.4	1.9	12.1	2.0	2.4	2.0	5.8	1.0
April							Calm 37.3%							No. Obs.: 220		
1 – 2	2.3	3.7	3.6	0.5	0.0	1.4	2.3	1.4	0.5	2.3	23.0	5.4	5.8	3.2	5.0	1.4
3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.3	4.2	3.6	0.5	0.0	1.4	2.3	1.4	0.5	2.7	23.0	5.4	5.8	3.2	5.0	1.4
May							Calm 24.6%							No. Obs.: 228		
1 – 2	1.3	2.2	1.8	0.0	0.4	0.0	3.5	4.0	1.8	4.4	36.2	5.7	6.1	2.7	2.2	2.2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.3	2.2	1.8	0.0	0.4	0.0	3.5	4.0	1.8	4.4	36.7	6.1	6.1	2.7	2.2	2.2

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
April						Calm 1.0%								No. Obs.: 294		
1 – 2	15.8	0.0	6.8	0.0	1.4	0.0	0.0	0.0	1.0	0.0	7.1	0.0	0.3	0.0	7.4	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	10.5	0.0	17.8	0.0	1.0	0.0	1.7	0.0	2.0	0.0	6.1	0.0	2.4	0.0	6.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.4	0.0	0.7	0.0	0.3	0.0	0.3	0.0	1.4	0.0	2.4	0.0	2.7	0.0	1.7	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total	27.7	0.0	25.3	0.0	2.7	0.0	2.0	0.0	4.4	0.0	15.6	0.0	5.7	0.0	15.6	0.0
May						Calm 0.7%								No. Obs.: 274		
1 – 2	16.4	0.0	9.8	0.0	2.6	0.0	0.4	0.0	3.3	0.0	10.2	0.0	0.4	0.0	8.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.9	0.0	13.8	0.0	1.5	0.0	0.4	0.0	1.1	0.0	9.1	0.0	2.6	0.0	4.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.1	0.0	1.5	0.0	0.7	0.0	1.1	0.0	1.5	0.0	1.7	0.0	0.4	0.0	0.4	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Total	24.4	0.0	25.1	0.0	4.8	0.0	1.9	0.0	5.9	0.0	21.0	0.0	3.8	0.0	12.4	0.0
June						Calm 3.5%								No. Obs.: 285		
1 – 2	16.7	0.0	14.3	0.0	0.0	0.0	2.1	0.0	2.2	0.0	10.9	0.0	0.4	0.0	2.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	9.0	0.0	6.7	0.0	1.1	0.0	1.1	0.0	3.2	0.0	7.0	0.0	2.8	0.0	1.4	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.4	0.0	1.1	0.0	0.0	0.0	0.4	0.0	1.8	0.0	4.8	0.0	2.4	0.0	0.4	0.0
≧8	0.4	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.4	0.0	1.3	0.0
Total	27.5	0.0	22.5	0.0	1.1	0.0	4.0	0.0	7.2	0.0	23.0	0.0	6.0	0.0	5.2	0.0
July						Calm 0.4%								No. Obs.: 285		
1 – 2	19.2	0.0	7.0	0.0	0.7	0.0	0.0	0.0	2.8	0.0	15.8	0.0	1.8	0.0	8.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	4.6	0.0	8.0	0.0	2.1	0.0	0.7	0.0	3.5	0.0	6.6	0.0	2.1	0.0	2.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.1	0.0	0.4	0.0	0.7	0.0	2.5	0.0	2.5	0.0	2.4	0.0	2.4	0.0	0.7	0.0
≧8	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Total	24.9	0.0	15.8	0.0	3.5	0.0	3.6	0.0	8.8	0.0	25.1	0.0	6.6	0.0	11.3	0.0
August						Calm 0.7%								No. Obs.: 289		
1 – 2	17.1	0.0	5.2	0.0	0.7	0.0	0.0	0.0	1.0	0.0	10.0	0.0	0.3	0.0	9.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	7.3	0.0	6.9	0.0	1.4	0.0	0.7	0.0	3.1	0.0	12.0	0.0	2.8	0.0	3.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	3.1	0.0	6.3	0.0	5.0	0.0	0.3	0.0
≧8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.0	0.7	0.0	0.3	0.0	0.0	0.0
Total	25.4	0.0	12.4	0.0	2.1	0.0	1.0	0.0	7.9	0.0	29.0	0.0	8.4	0.0	13.1	0.0
September						Calm 3.2%								No. Obs.: 284		
1 – 2	14.9	0.0	6.4	0.0	0.8	0.0	0.7	0.0	2.8	0.0	10.8	0.0	1.5	0.0	11.3	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.0	0.0	9.1	0.0	0.7	0.0	1.1	0.0	1.8	0.0	6.7	0.0	2.8	0.0	4.2	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	1.5	0.0	1.5	0.0	0.0	0.0	1.1	0.0	1.1	0.0	3.4	0.0	2.7	0.0	1.1	0.0
≧8	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	0.4	0.0	0.4	0.0	0.6	0.0
Total	22.8	0.0	17.0	0.0	1.5	0.0	3.3	0.0	6.3	0.0	21.3	0.0	7.4	0.0	17.2	0.0
October						Calm 1.4%								No. Obs.: 280		
1 – 2	11.4	0.0	6.7	0.0	0.0	0.0	0.8	0.0	3.6	0.0	11.8	0.0	1.8	0.0	16.8	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	2.1	0.0	11.1	0.0	0.7	0.0	0.4	0.0	0.7	0.0	5.0	0.0	3.2	0.0	5.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.4	0.0	0.8	0.0	0.4	0.0	2.1	0.0	4.6	0.0	5.6	0.0	0.4	0.0
≧8	1.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Total	14.6	0.0	18.6	0.0	1.5	0.0	1.6	0.0	6.8	0.0	22.7	0.0	10.6	0.0	22.2	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
June							Calm 5.0%							No. Obs.: 221		
1 – 2	1.4	0.9	0.9	0.5	0.0	0.9	4.5	3.6	2.8	9.0	36.9	5.4	4.1	0.5	1.8	1.4
3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	1.2	0.0	0.5	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.4	0.9	0.9	0.5	0.0	0.9	5.0	3.6	3.3	9.5	38.1	5.4	4.6	0.5	1.8	1.4
July							Calm 15.1%							No. Obs.: 186		
1 – 2	1.1	0.5	0.0	0.0	0.0	0.0	4.8	1.1	6.5	9.1	42.5	7.0	4.3	1.0	0.0	0.5
3	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.7	1.1	0.5	0.5	0.5	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.1	0.5	0.0	0.0	0.0	0.0	7.0	2.8	7.6	9.6	43.0	7.5	4.3	1.0	0.0	0.5
August							Calm 22.2%							No. Obs.: 180		
1 – 2	0.6	0.0	0.0	0.0	0.0	0.0	6.1	2.8	7.3	4.5	32.4	6.7	11.1	0.6	0.6	0.6
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.6	0.6	0.6	0.6	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.6	0.0	0.0	0.0	0.0	0.0	6.7	3.4	8.2	5.1	33.0	7.3	11.7	0.6	0.6	0.6
September							Calm 22.2%							No. Obs.: 189		
1 – 2	1.6	0.5	0.0	0.0	0.0	0.0	4.2	2.6	6.3	2.6	41.5	8.0	5.8	1.1	0.5	0.5
3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.6	0.5	0.5	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.6	0.5	0.0	0.0	0.0	0.0	4.7	3.1	6.3	2.6	42.1	8.5	6.3	1.1	0.5	0.5
October							Calm 39.2%							No. Obs.: 217		
1 – 2	4.1	0.5	0.0	0.0	0.0	0.0	2.3	2.8	1.9	4.1	22.4	7.0	7.4	3.2	2.8	1.4
3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.6	0.5	0.0	0.0	0.0	0.0	2.3	2.8	1.9	4.1	22.4	7.0	7.4	3.2	3.2	1.4
November							Calm 44.1%							No. Obs.: 204		
1 – 2	1.0	2.0	1.0	1.0	0.0	0.0	2.5	1.0	1.0	3.0	17.8	5.9	8.3	1.5	6.4	2.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.0	2.0	1.0	1.0	0.0	0.0	3.0	1.0	1.5	3.0	18.3	5.9	8.3	1.5	6.4	2.0
December							Calm 40.2%							No. Obs.: 256		
1 – 2	3.5	3.1	3.1	0.0	0.0	0.4	1.6	0.4	0.8	2.0	20.5	4.3	6.3	0.0	7.5	4.3
3	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.9	3.5	3.1	0.0	0.0	0.4	1.6	0.4	0.8	2.0	20.9	4.3	6.7	0.0	7.9	4.3

TABLE V - 11 *Continued*

k. Sandakan at 1300. Years of record: 3 to 5.

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
January							Calm 1.6%							No. Obs.: 61		
1 – 2	6.5	29.7	24.6	0.0	0.0	0.0	3.2	0.0	0.0	0.0	6.6	0.0	0.0	4.9	6.5	3.2
3	0.0	3.3	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	5.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	6.5	38.0	29.5	0.0	0.0	0.0	3.2	0.0	0.0	0.0	6.6	0.0	0.0	4.9	6.5	3.2
February							Calm 4.9%							No. Obs.: 82		
1 – 2	6.1	13.4	28.2	4.9	1.2	1.2	1.2	0.0	1.2	2.4	2.4	0.0	0.0	0.0	13.4	6.1
3	0.0	3.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	6.1	17.1	36.7	4.9	1.2	1.2	1.2	0.0	1.2	2.4	2.4	0.0	0.0	0.0	14.6	6.1
March							Calm 1.1%							No. Obs.: 93		
1 – 2	2.2	19.3	38.6	0.0	2.2	3.2	3.2	2.2	1.1	1.1	4.3	2.2	0.0	1.1	6.4	7.5
3	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
4	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.2	19.3	41.8	0.0	2.2	3.2	3.2	2.2	1.1	1.1	4.3	2.2	0.0	1.1	6.4	8.6
April							Calm 2.3%							No. Obs.: 88		
1 – 2	5.7	19.3	33.1	3.4	0.0	1.1	2.3	3.4	2.3	1.1	5.6	4.5	0.0	1.1	2.3	3.4
3	0.0	2.3	3.5	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.7	21.6	36.6	3.4	0.0	1.1	3.4	4.5	2.3	1.1	5.6	4.5	0.0	1.1	3.4	3.4
May							Calm 2.8%							No. Obs.: 72		
1 – 2	5.6	11.0	22.0	1.4	4.2	4.2	8.3	5.6	4.2	4.2	5.6	2.7	4.2	0.0	5.6	0.0
3	0.0	1.4	2.8	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.6	13.8	24.8	1.4	4.2	4.2	9.7	5.6	4.2	5.6	5.6	2.7	4.2	0.0	5.6	0.0
June							Calm 4.2%							No. Obs.: 72		
1 – 2	2.8	0.0	16.5	0.0	2.8	2.8	17.9	9.7	5.6	4.2	13.9	4.2	4.2	2.8	4.2	2.8
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.8	0.0	16.5	0.0	2.8	2.8	17.9	11.1	5.6	4.2	13.9	4.2	4.2	2.8	4.2	2.8
July							Calm 0.0%							No. Obs.: 50		
1 – 2	0.0	6.0	4.0	0.0	0.0	2.0	14.0	8.0	10.0	4.0	18.0	10.0	16.0	4.0	2.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	6.0	4.0	0.0	0.0	2.0	14.0	8.0	10.0	4.0	18.0	12.0	16.0	4.0	2.0	0.0

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
August							Calm 6.1%							No. Obs.: 66		
1 – 2	1.5	3.0	3.0	0.0	3.0	1.5	28.8	3.0	12.1	7.6	13.8	7.6	4.5	0.0	1.5	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.5	3.0	3.0	0.0	3.0	1.5	28.8	3.0	12.1	7.6	15.3	7.6	6.0	0.0	1.5	0.0
September							Calm 7.7%							No. Obs.: 52		
– 2	3.8	1.9	1.9	0.0	3.8	1.9	15.5	7.7	13.6	1.9	17.3	5.7	5.7	0.0	3.9	1.9
3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.8	1.9	1.9	0.0	3.8	1.9	17.5	9.6	13.6	1.9	17.3	5.7	5.7	0.0	5.8	1.9
October							Calm 4.3%							No. Obs.: 70		
1 – 2	1.4	11.5	7.2	1.4	0.0	0.0	14.3	11.3	4.3	4.3	15.7	8.6	1.4	4.3	4.3	5.7
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.4	11.5	7.2	1.4	0.0	0.0	14.3	11.3	4.3	4.3	15.7	8.6	1.4	4.3	4.3	5.7
November							Calm 4.5%							No. Obs.: 66		
1 – 2	1.5	15.1	21.6	3.0	1.5	0.0	6.0	4.5	1.5	4.5	4.5	13.6	0.0	0.0	10.6	6.1
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.5	15.1	21.6	3.0	1.5	0.0	6.0	4.5	1.5	4.5	4.5	13.6	0.0	1.5	10.6	6.1
December							Calm 3.0%							No. Obs.: 67		
1 – 2	1.5	29.7	19.3	3.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	6.0	0.0	0.0	7.5	3.0
3	3.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.5	31.2	20.8	3.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	7.5	0.0	0.0	7.5	3.0

l. Jesselton at 0500. Years of record: 1 to 2.

January							Calm 6.9%							No. Obs.: 29		
1 – 2	3.5	6.9	3.4	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.4	0.0	3.5	0.0	3.4	3.5
3	3.5	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.4	0.0	31.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	13.8
5	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	10.4	6.9	3.4	0.0	0.0	0.0	0.0	6.9	0.0	0.0	3.4	0.0	3.5	3.4	6.8	48.4
February							Calm 5.7%							No. Obs.: 35		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	2.9	0.0	0.0	2.9	2.9	2.9	5.5
3	11.3	5.7	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	2.9	5.7	8.6
4	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	11.4	0.0	2.9
5	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.8
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.1	5.7	0.0	0.0	0.0	0.0	8.6	2.9	0.0	2.9	0.0	0.0	8.6	17.2	11.5	19.8

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
March							Calm 6.1%							No. Obs.: 33		
1 – 2	0.0	0.0	0.0	3.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	6.1	3.0
3	12.1	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	12.1	3.0	21.3
4	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	6.2	0.0	3.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	12.1	6.0	0.0	3.0	0.0	0.0	3.0	9.1	0.0	3.0	9.2	0.0	3.0	12.1	9.1	24.3
April							Calm 0.0%							No. Obs.: 22		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	13.7
3	0.0	0.0	0.0	0.0	0.0	0.0	13.6	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5	27.4
4	0.0	0.0	4.5	0.0	0.0	4.5	9.3	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	4.5	0.0	0.0	4.5	27.4	4.5	0.0	0.0	4.5	0.0	0.0	0.0	9.0	45.6
May							Calm 8.0%							No. Obs.: 25		
1 – 2	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	8.0	0.0	4.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	0.0	0.0	8.0	32.0
4	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	12.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	12.0	0.0	0.0	8.0	12.0	48.0
June							Calm 0.0%							No. Obs.: 20		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	35.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	15.0	15.0	5.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	5.0	15.0	20.0	40.0
July							Calm 5.9%							No. Obs.: 34		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	2.9	0.0	26.5	5.9	0.0	5.9	3.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	6.0	2.9	5.9	5.9	2.9
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	2.9	0.0	2.9	2.9	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	2.9	0.0	41.2	14.8	2.9	14.7	11.8	2.9
August							Calm 8.3%							No. Obs.: 36		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	25.0	2.8	0.0	0.0	22.2	0.0	2.8	0.0	0.0	5.6
3	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5	0.0	0.0	2.8	2.8	0.0	0.0	5.6	2.8
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.8	2.7	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	30.5	8.3	2.8	2.8	27.7	2.8	2.8	0.0	5.6	8.4
September							Calm 3.3%							No. Obs.: 30		
1 – 2	0.0	0.0	0.0	0.0	0.0	0.0	27.0	10.0	0.0	0.0	3.3	3.3	0.0	6.6	6.6	3.3
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.3	0.0	3.3	0.0	6.7	6.7	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.3	6.7	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	30.3	13.3	0.0	3.3	3.3	6.6	0.0	16.6	20.0	3.3

TABLE V - 11 *Continued*

VELOCITY GROUP	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
October							Calm 6.9%								No. Obs.: 29	
1 – 2	0.0	0.0	3.4	0.0	0.0	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.5
3	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	10.3	10.4	10.4
4	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.5	3.5
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	10.3	3.4	0.0	0.0	0.0	24.1	0.0	0.0	0.0	6.9	3.4	0.0	10.3	17.3	17.4
November							Calm 4.0%								No. Obs.: 25	
1 – 2	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0	0.0	8.0	4.0
3	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	8.0	0.0	8.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	8.0	8.0	8.0	4.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	4.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0	20.0	0.0	16.0	16.0	16.0	16.0
December							Calm 16.1%								No. Obs.: 31	
1 – 2	0.0	0.0	9.7	0.0	0.0	0.0	6.4	3.3	0.0	0.0	6.5	3.2	0.0	0.0	6.5	3.2
3	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	6.5	0.0	3.2	3.2
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.2	0.0	3.2	6.5	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	3.2
6 – 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	6.5	9.7	0.0	0.0	0.0	6.4	3.3	6.4	0.0	9.7	6.4	6.5	3.2	16.2	9.6

TABLE V - 12

PREVAILING WIND DIRECTION AT SPECIFIED LOCAL TIME (105° E MERIDIAN)

0100	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANN.	YEARS OF REC.
Discovery—Oostbank	NW	NW	NW	SE	SE	SE	SE	SE	SE	SE	W	W	SE	11-12
0500														
Bandjermasin	NNE	NNE	NNE	NE	NNE	ENE	NNE	SE	N	N	N	NNE	NNE	3-4
Balikpapan	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	1-5
Pontianak	E	E	E	SE	E	E	E	S	SE	S	SE	E	E	2-4
Tarakan	N	N	N	N	S	NW	SW	SW	W	W	W	W	--	3-4
Labuan	NE	NE	NE	SW	SW	SW	SW	SW	SW	SW	SW	NE	SW	10
Sandakan	NNE	NW	SW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	SW	3-5
Jesselton	NNW	NNW	NNW	NNW	NNW	NNW	SW	SE	SE	SE	SW	NW	NNW	1-2
1300														
Discovery—Oostbank	NW	NW	NW	SE	SE	SE	SE	SE	SE	SE	W	W	SE	11-12
Bandjermasin	W	W	W	W	W	S	W	W	E	W	E	W	W	3-4
Balikpapan	NE	NE	NE	--	--	--	--	SW	SW	SW	SE	SE	--	1-5
Pontianak	SW	SW	E	SW	W	E	S	W	W	S	SW	W	--	2-4
Tarakan	W	N	SE	S	S	SW	SW	S	SW	S	S	W	S	3-4
Labuan	NE	NE	NE	N	NE	N	SW	SW	N	SW	NE	NE	NE	10
Sandakan	NNE	NE	NE	NE	NE	SE	SW	SE	SE	SW	NE	NNE	NE	3-5
1900														
Discovery—Oostbank	NW	NW	NW	SE	SE	SE	SE	SE	SE	SE	W	W	SE	11-12

TABLE V - 13

MEAN WIND VELOCITY* (MILES PER HOUR)

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF REC.
0500**														
Bandjermasin	4.7	4.0	5.1	5.5	5.1	3.3	3.3	2.6	2.9	3.6	4.7	4.7	4.1	3–4
Balikpapan	2.9	2.9	4.0	3.6	4.0	4.7	4.0	4.4	3.6	3.3	3.6	3.3	3.7	1–5
Pontianak	3.3	4.4	4.7	4.7	5.5	4.7	5.1	4.7	4.0	4.0	3.6	3.6	4.4	2–4
Tarakan	3.6	3.3	4.0	3.3	4.7	4.4	5.5	5.5	4.4	5.1	4.4	4.4	4.4	3–4
Labuan	7.2	7.2	8.1	6.8	6.4	7.7	7.7	8.6	6.8	6.8	8.1	7.2	7.4	10
Sandakan	2.0	2.9	1.7	2.6	3.6	3.6	4.7	3.6	3.6	2.3	2.3	2.3	2.9	3–5
Jesselton	8.1	9.6	8.6	10.1	8.6	7.2	7.7	6.4	6.8	6.8	10.1	12.1	8.5	1–2
1300**														
Bandjermasin	9.6	9.1	7.2	7.2	8.6	7.2	7.7	11.1	9.6	9.1	7.7	9.6	8.6	3–4
Balikpapan	4.7	6.8	5.5	—	—	—	—	5.1	5.1	5.1	4.4	4.0	—	1–5
Pontianak	6.0	6.8	7.2	6.0	8.1	7.2	8.6	7.2	6.0	6.4	6.4	6.4	6.9	2–4
Tarakan	7.7	6.8	7.2	7.2	6.4	6.4	9.6	9.1	9.1	9.1	9.1	8.6	8.0	3–4
Labuan	10.6	10.1	10.6	11.6	10.6	11.1	10.6	12.1	11.1	11.1	11.6	11.1	11.0	10
Sandakan	5.1	5.5	4.7	5.1	5.5	5.1	5.1	4.7	4.0	4.0	4.4	5.1	4.8	3–5

* Computed from Mean Beaufort Force.
** Local Time (105° E Meridian).

E. Upper air wind.

FIGURES V-24a through V-27c show data on upper air wind.

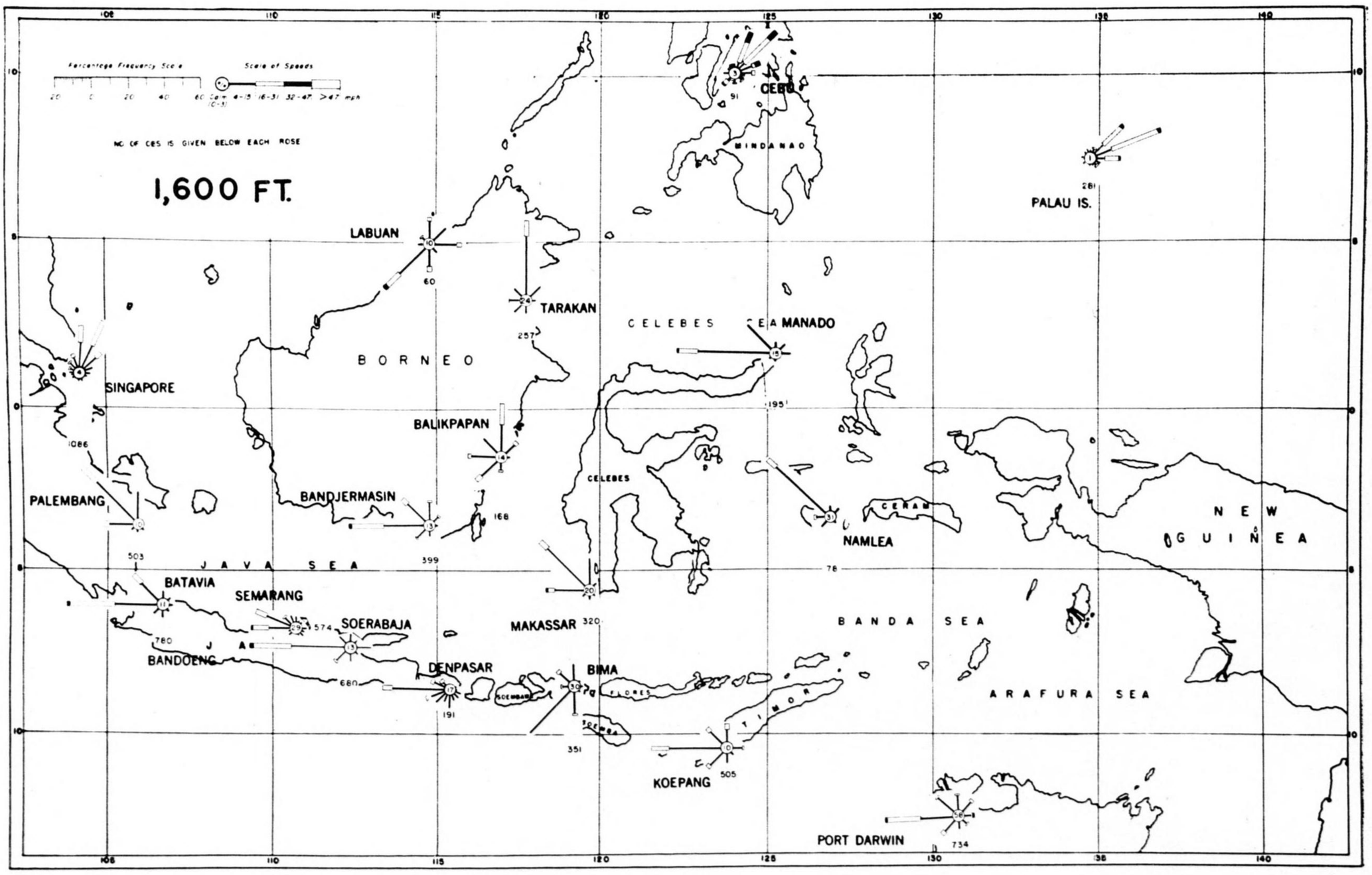

FIGURE V - 24a. *Upper Air Wind Roses (December-February).*
1,600 feet.

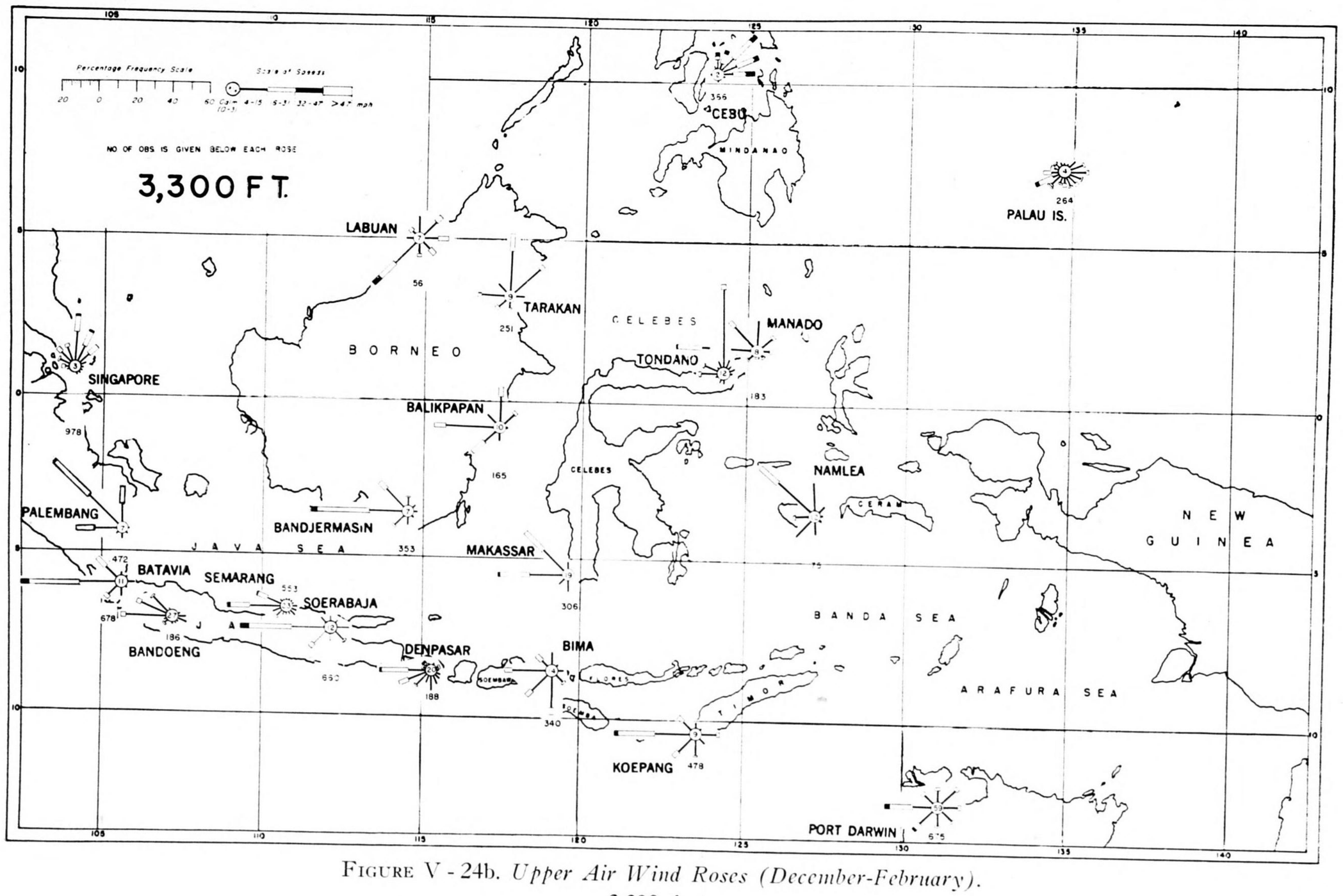

FIGURE V - 24b. *Upper Air Wind Roses (December-February).*
3,300 feet.

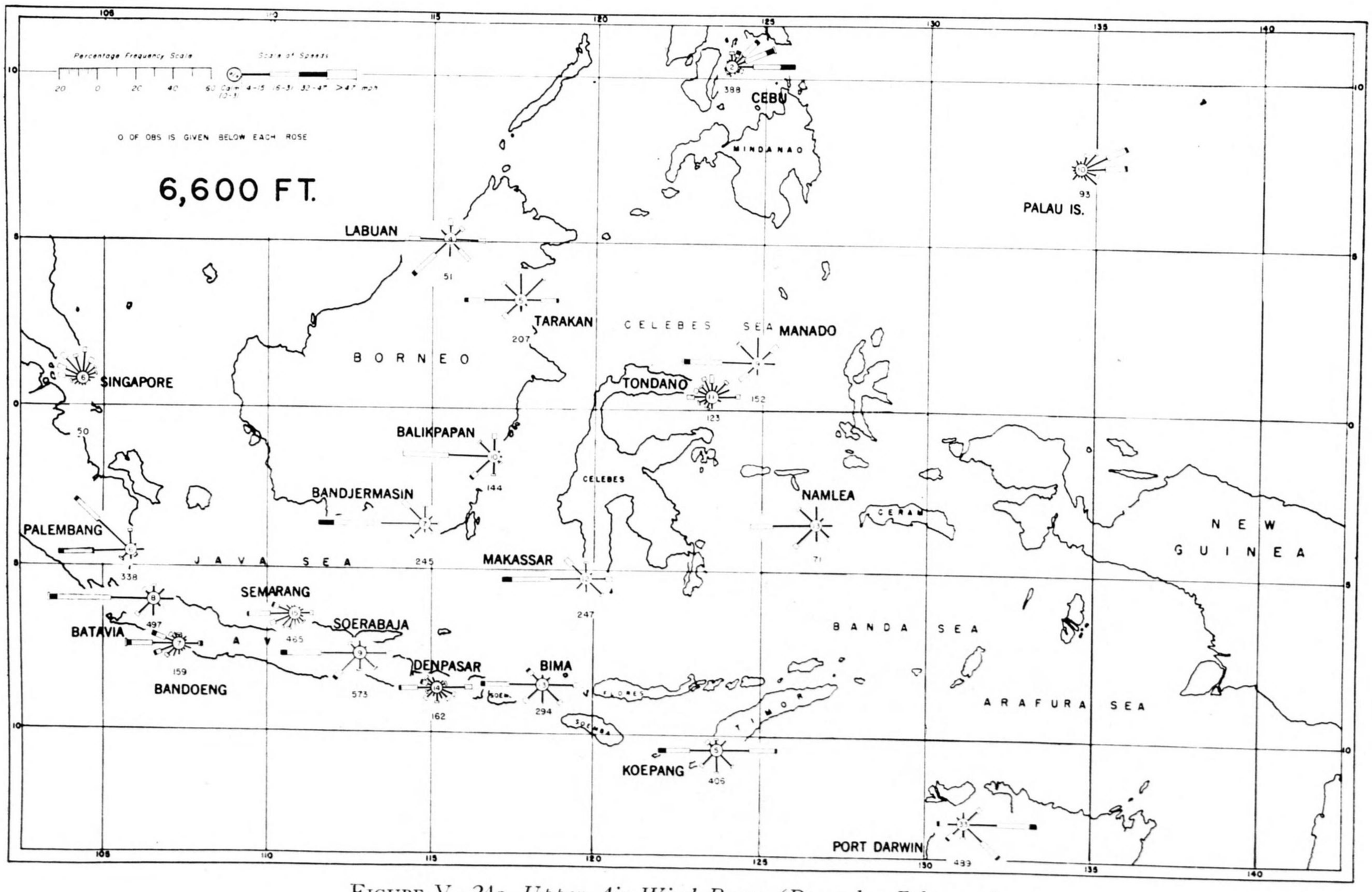

FIGURE V - 24c. *Upper Air Wind Roses (December-February).*
6,600 feet.

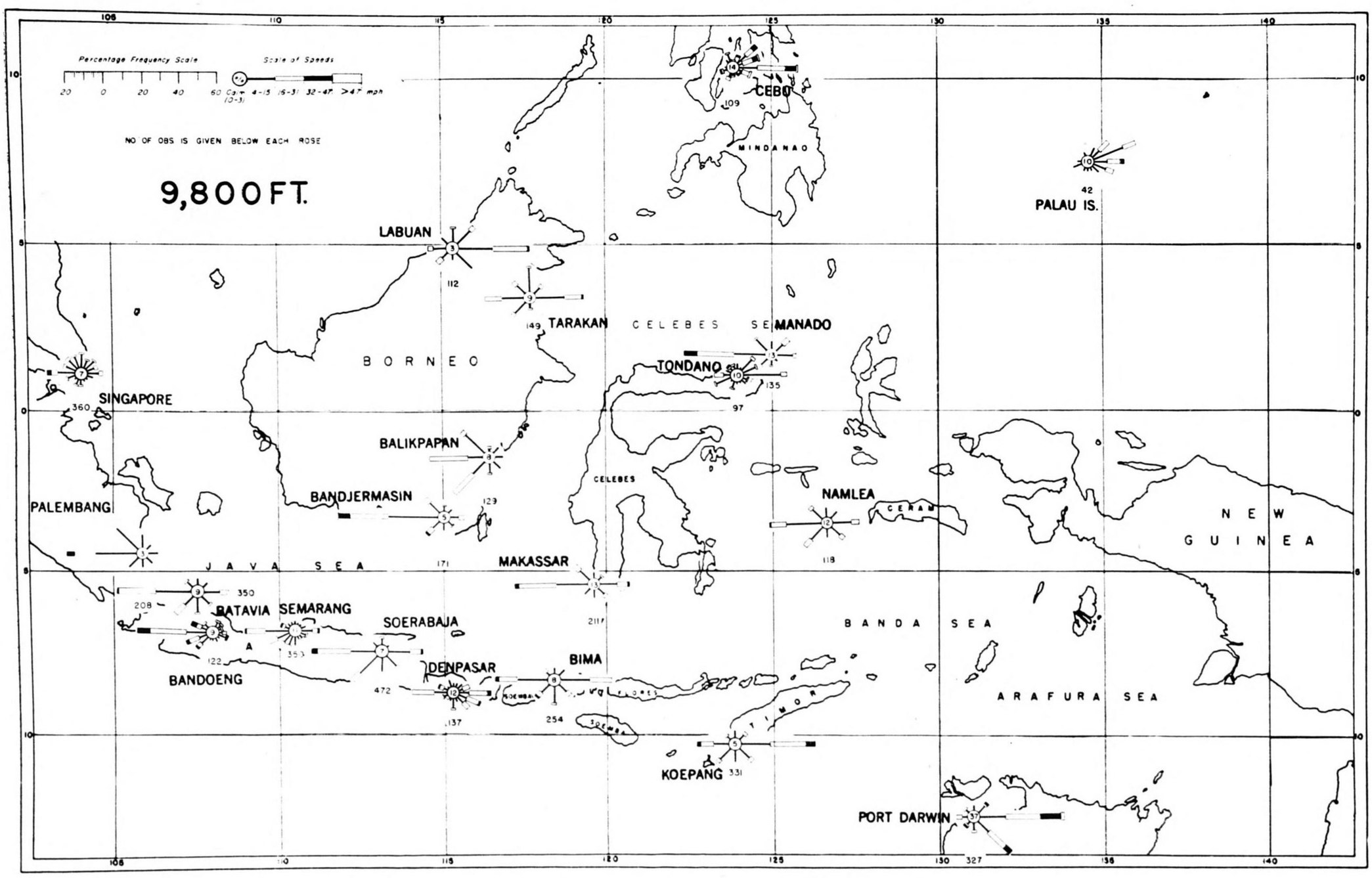

FIGURE V - 24d. *Upper Air Wind Roses (December-February).*
9,800 feet.

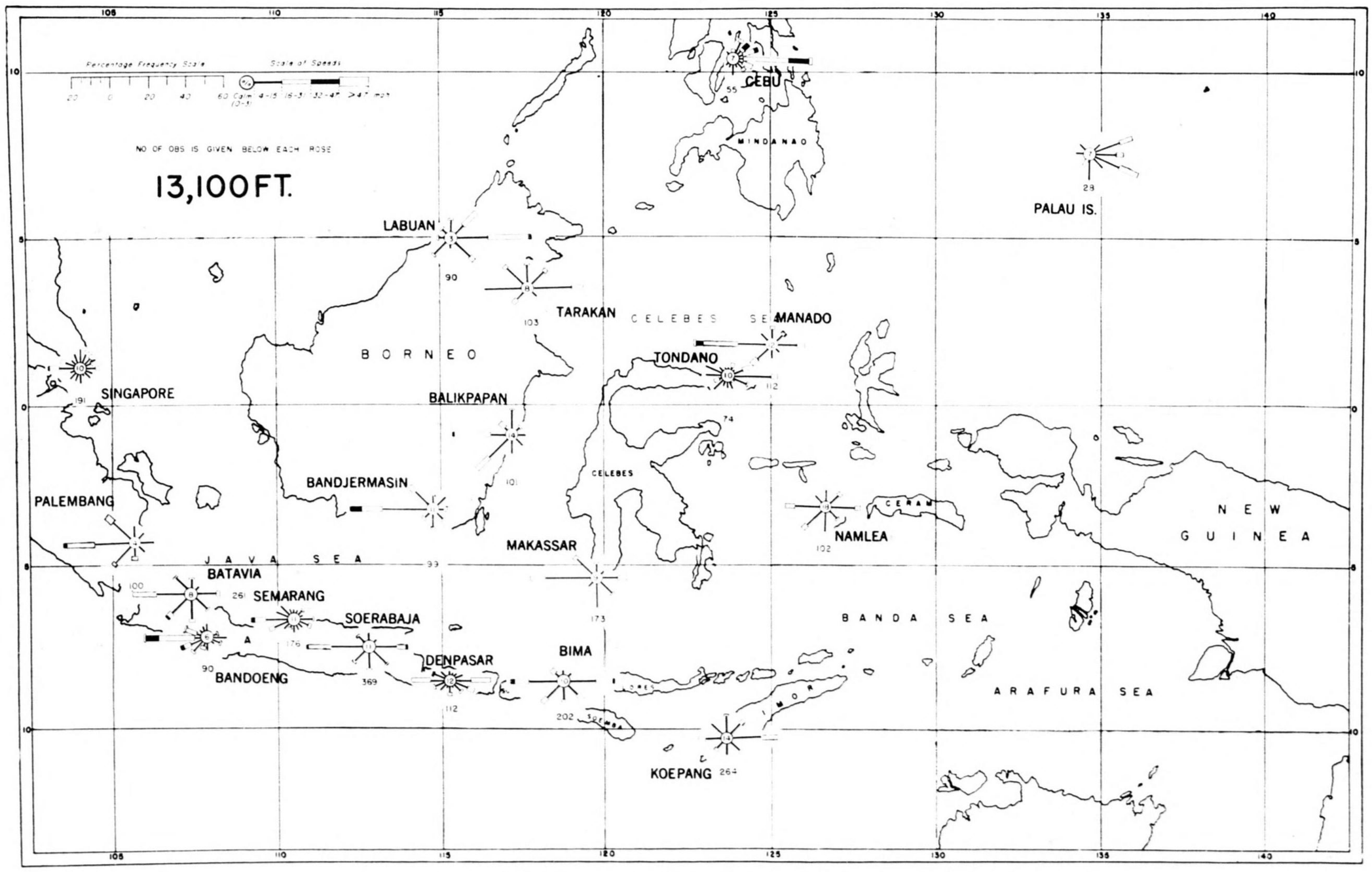

FIGURE V - 24e. *Upper Air Wind Roses (December-February).*
13,100 feet.

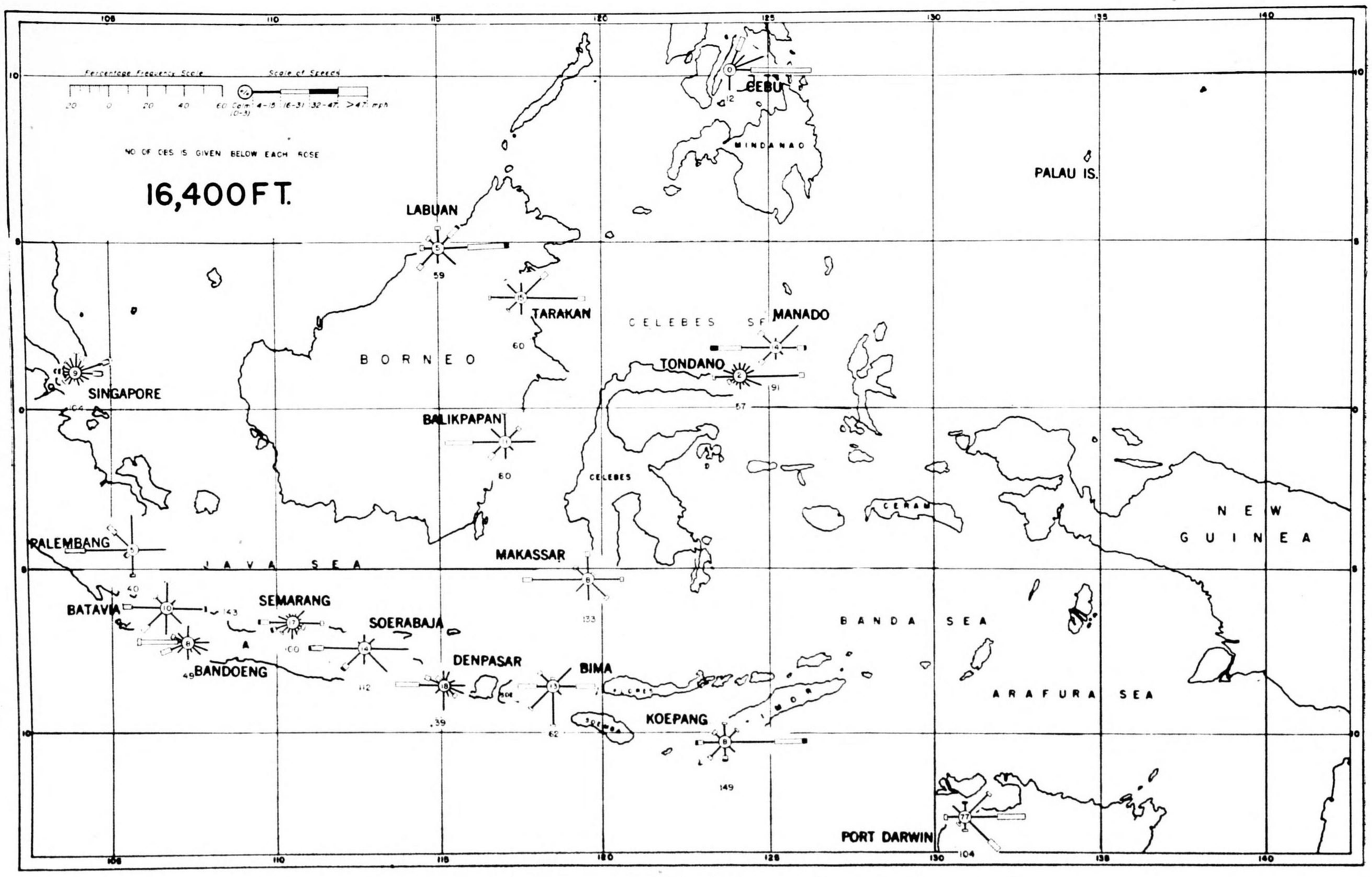

FIGURE V - 24f *Upper Air Wind Roses (December-February).*
16,400 feet.

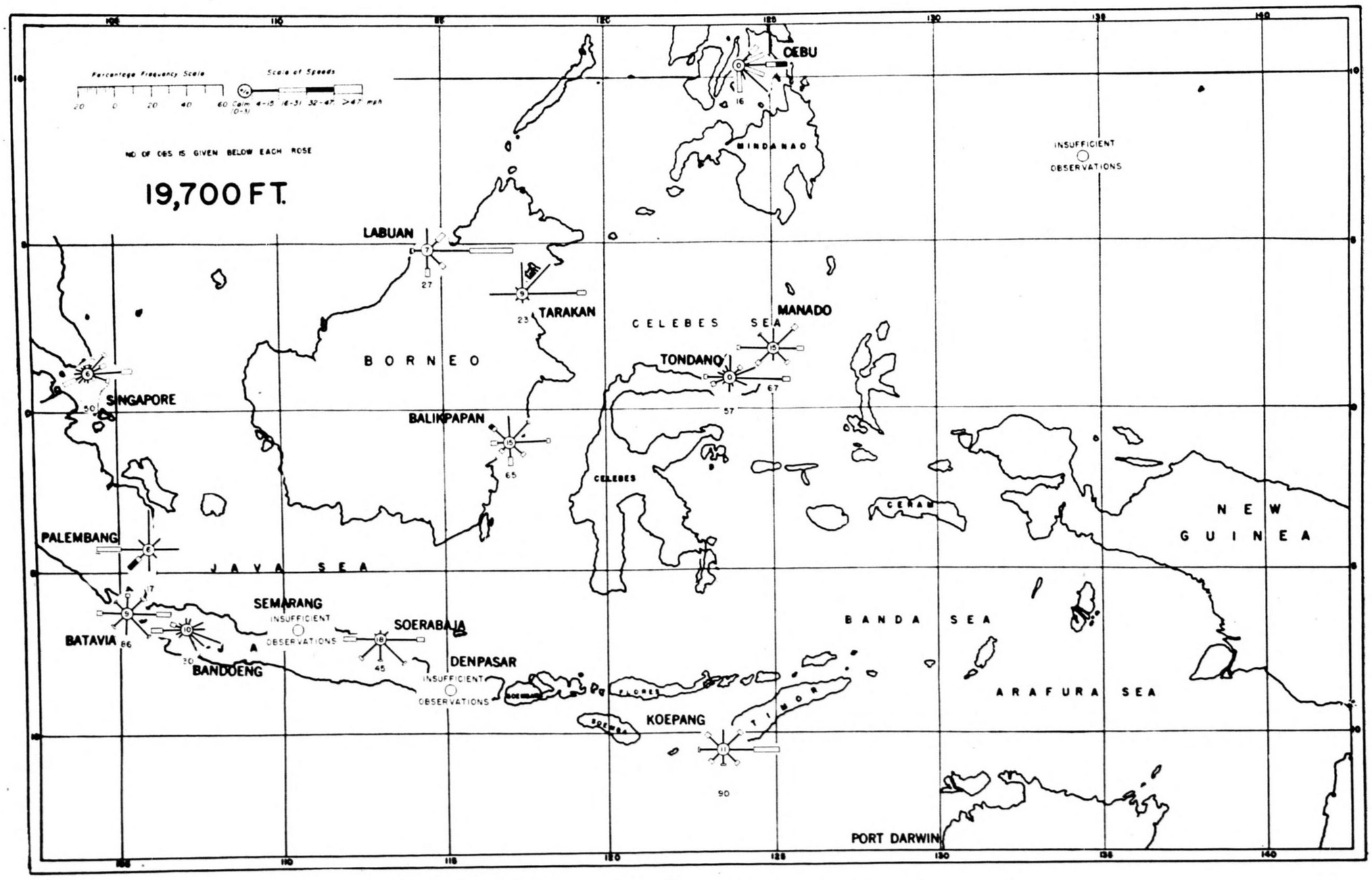

FIGURE V - 24g. *Upper Air Wind Roses (December-February).*
19,700 feet.

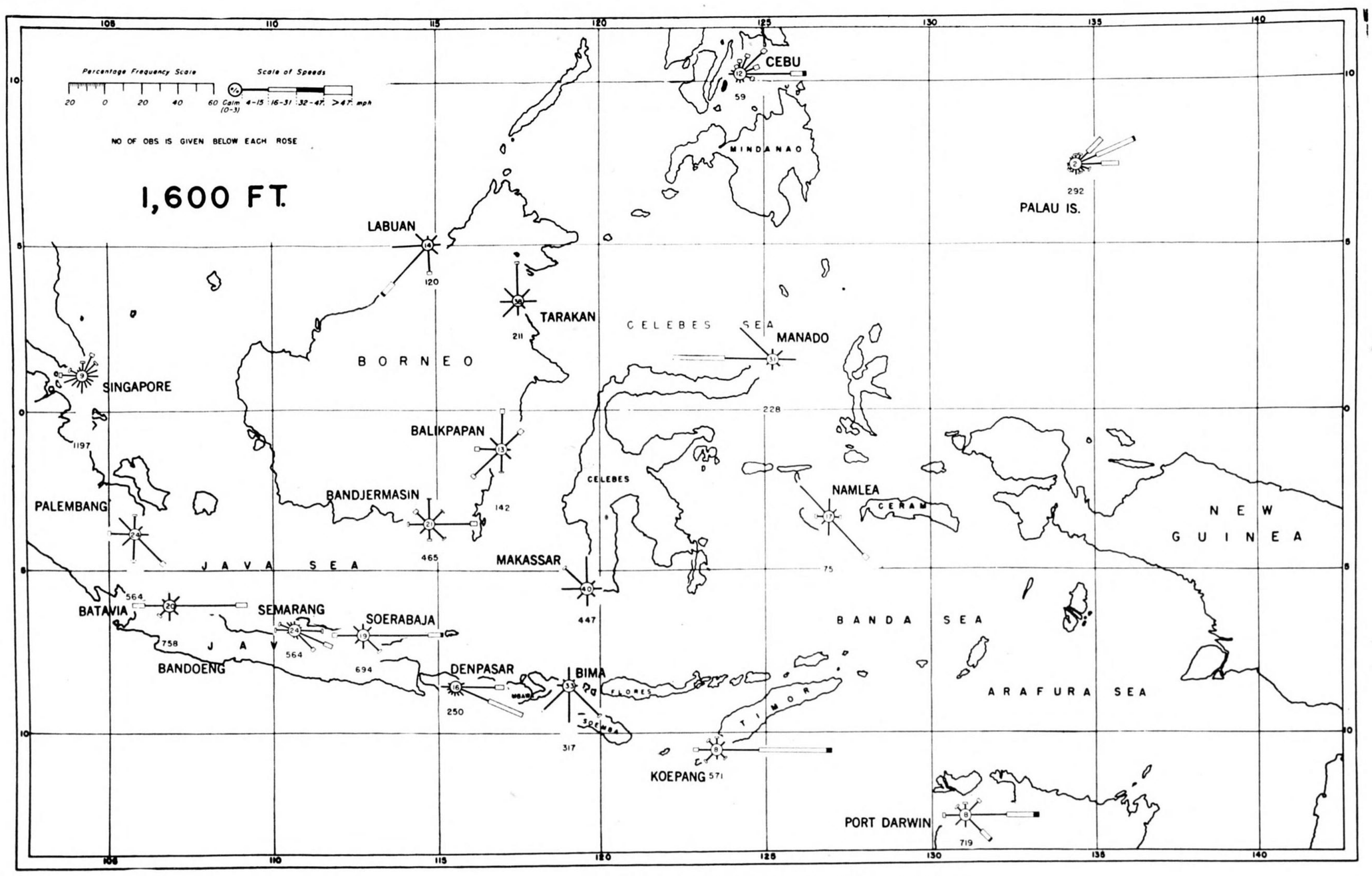

FIGURE V - 25a. *Upper Air Wind Roses (March-May).*
1,600 feet.

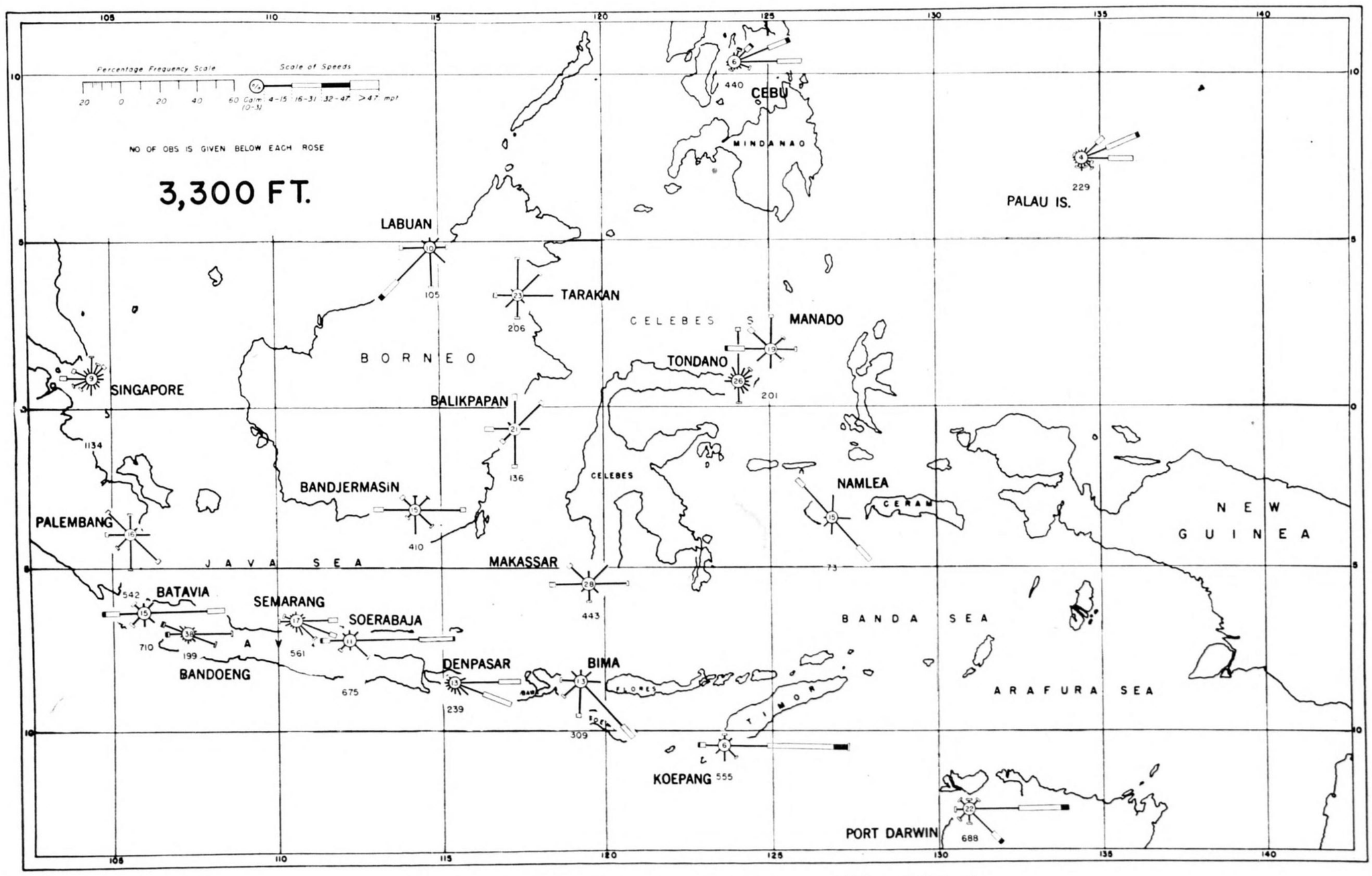

FIGURE V - 25b. *Upper Air Wind Roses (March-May).*
3,300 feet.

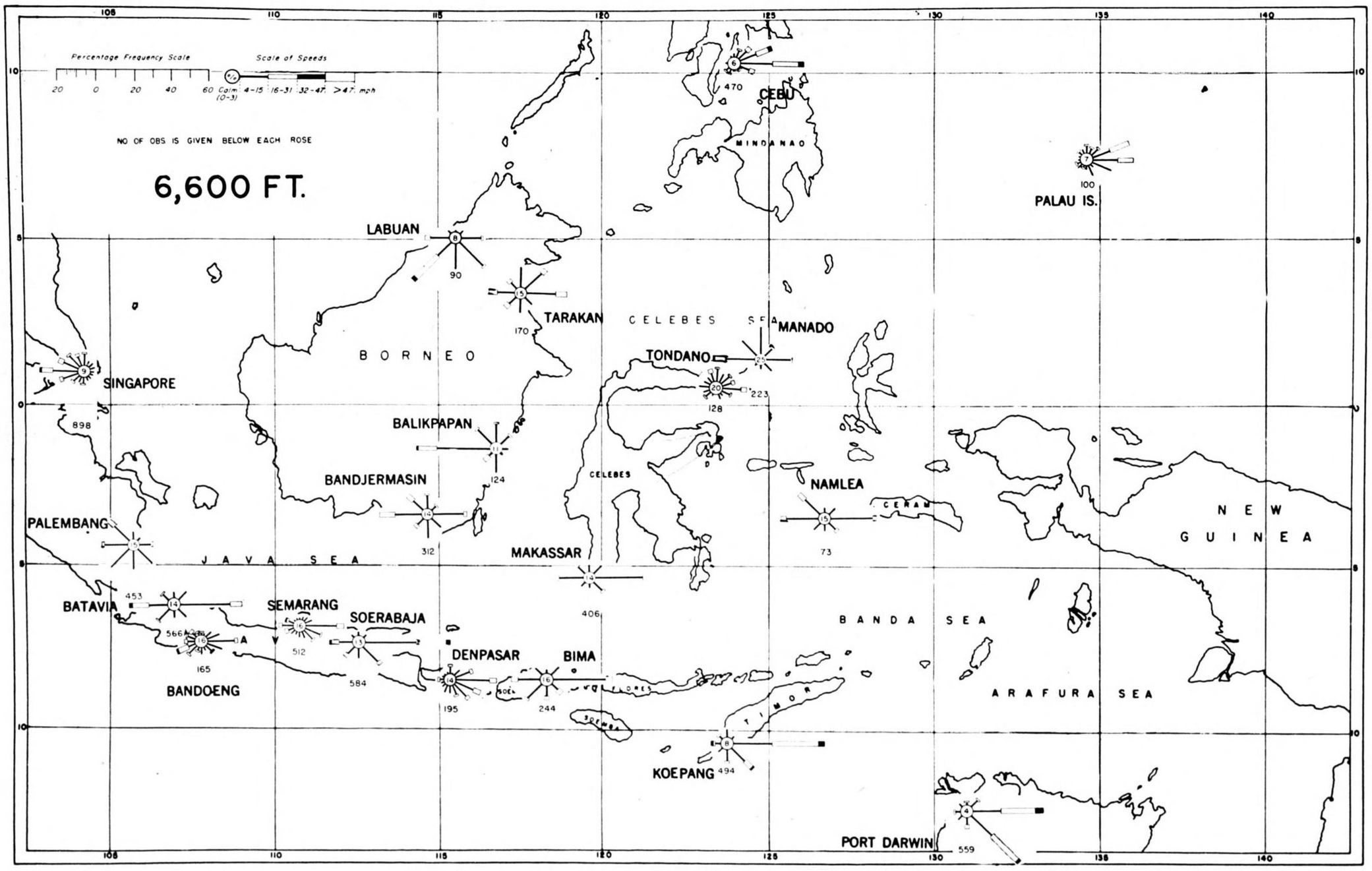

FIGURE V - 25c. *Upper Air Wind Roses (March-May).*
6,600 feet.

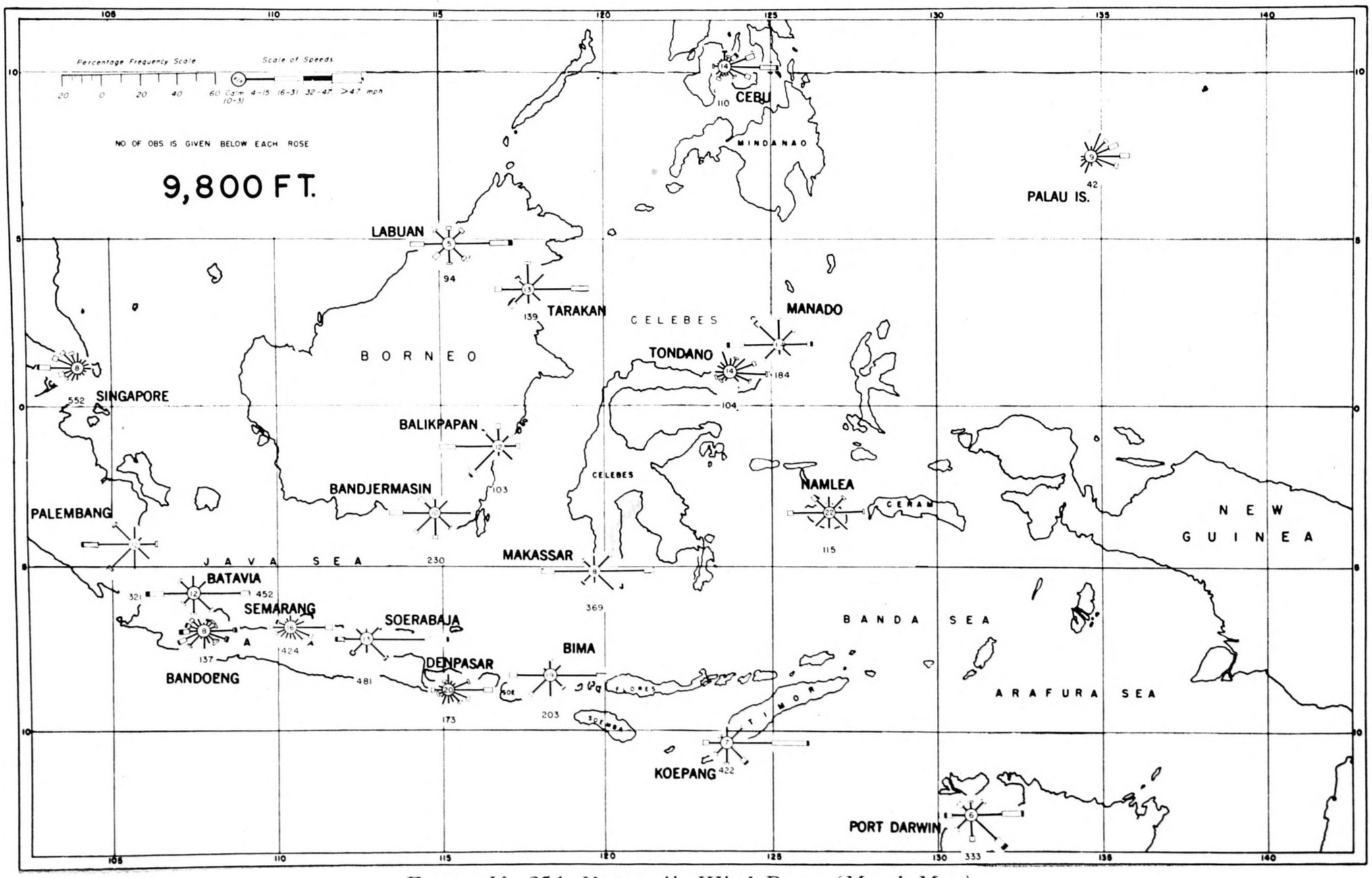

FIGURE V - 25d. *Upper Air Wind Roses (March-May).*
9,800 feet.

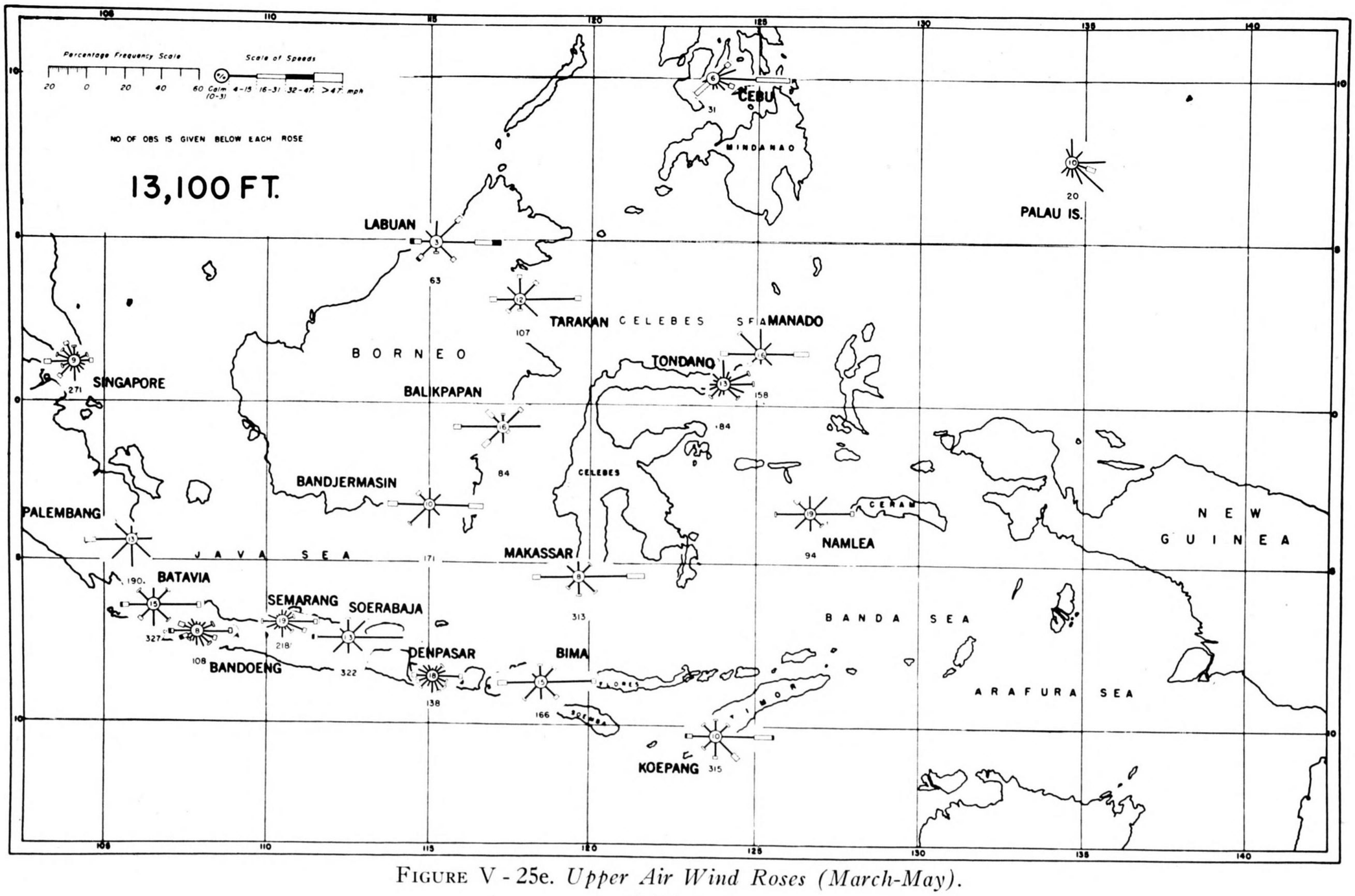

FIGURE V - 25e. *Upper Air Wind Roses (March-May).*
13,100 feet.

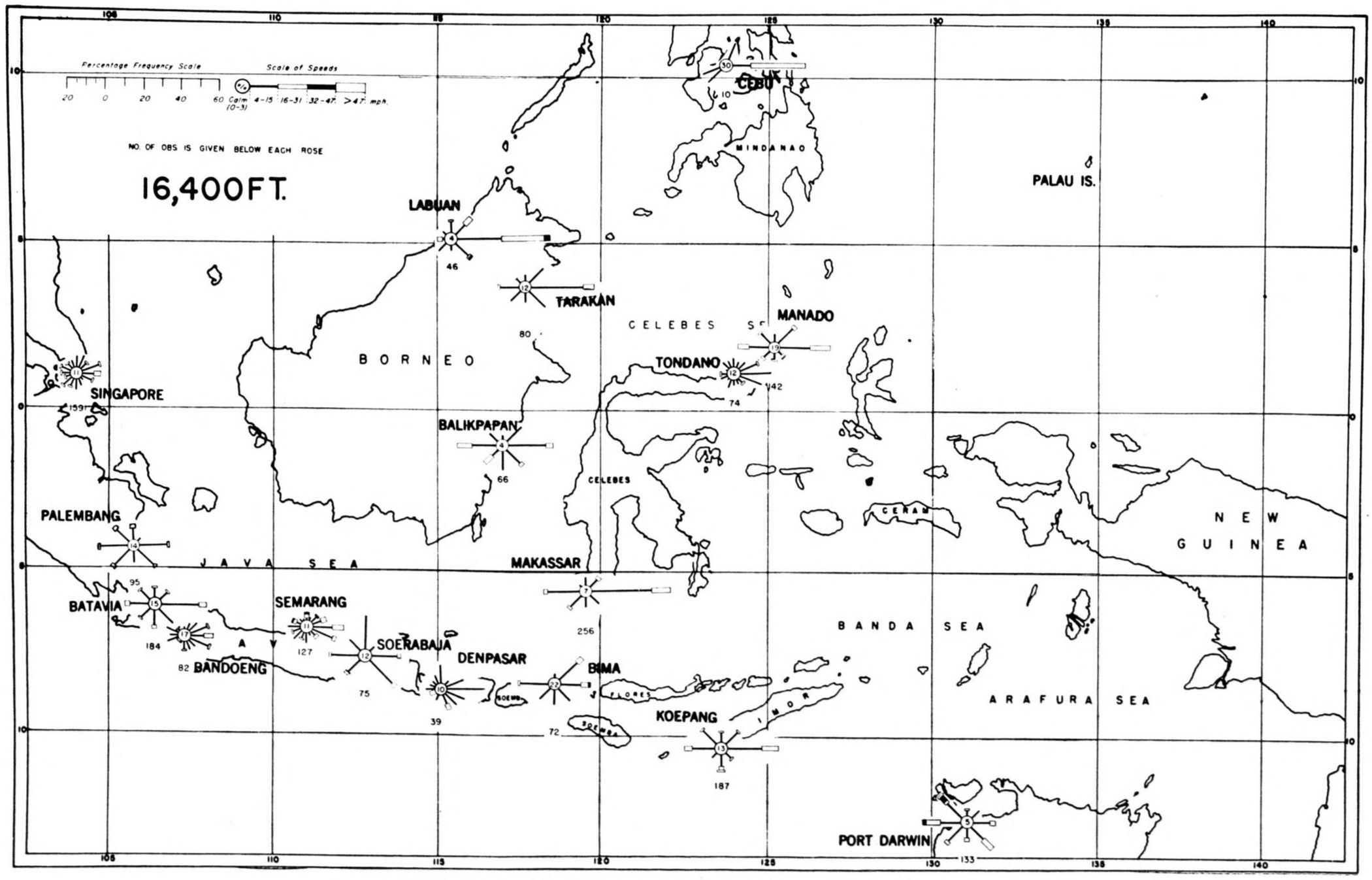

FIGURE V - 25f. *Upper Air Wind Roses (March-May).*
16,400 feet.

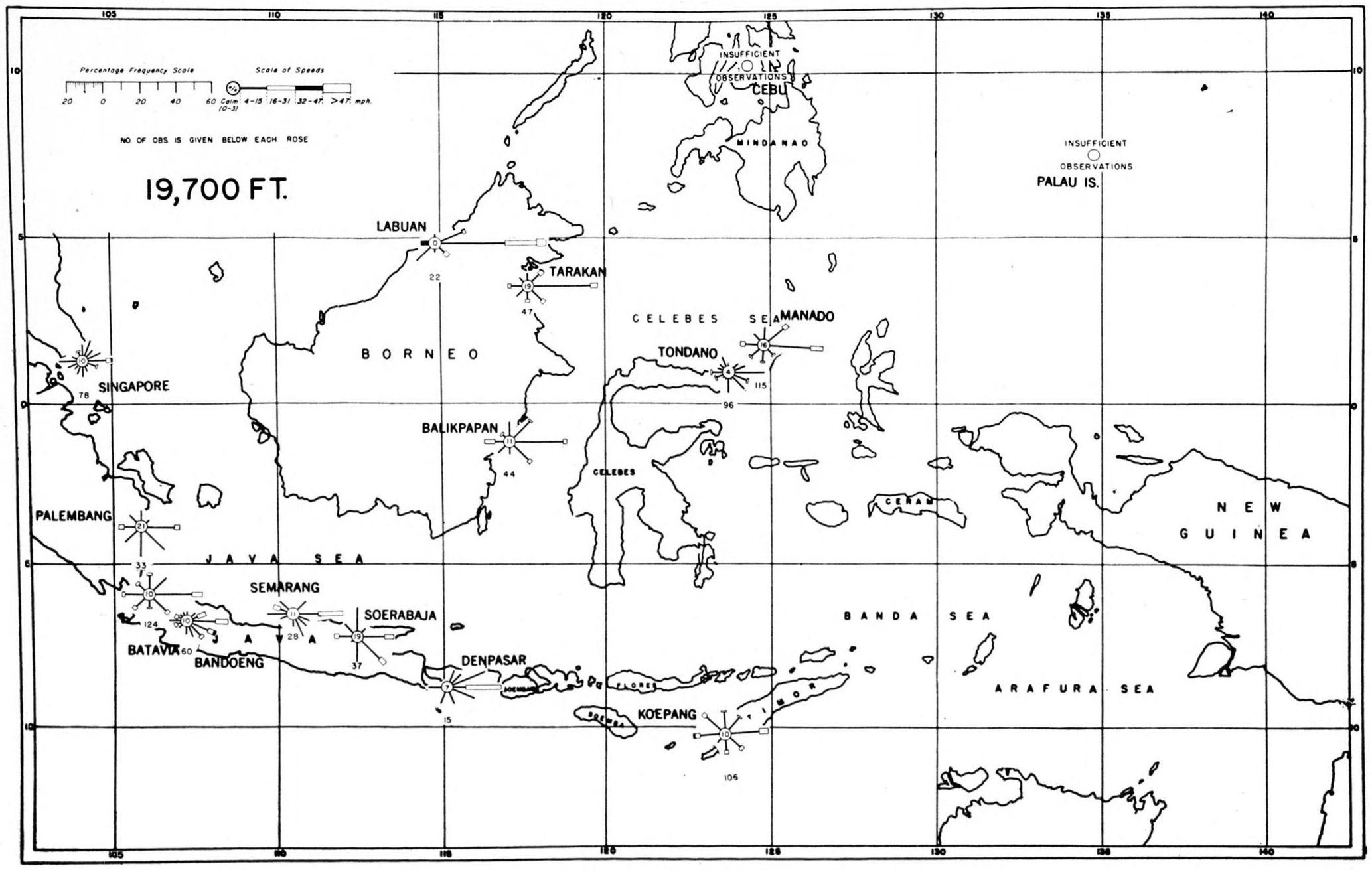

FIGURE V - 25g. *Upper Air Wind Roses (March-May).*
19,700 feet.

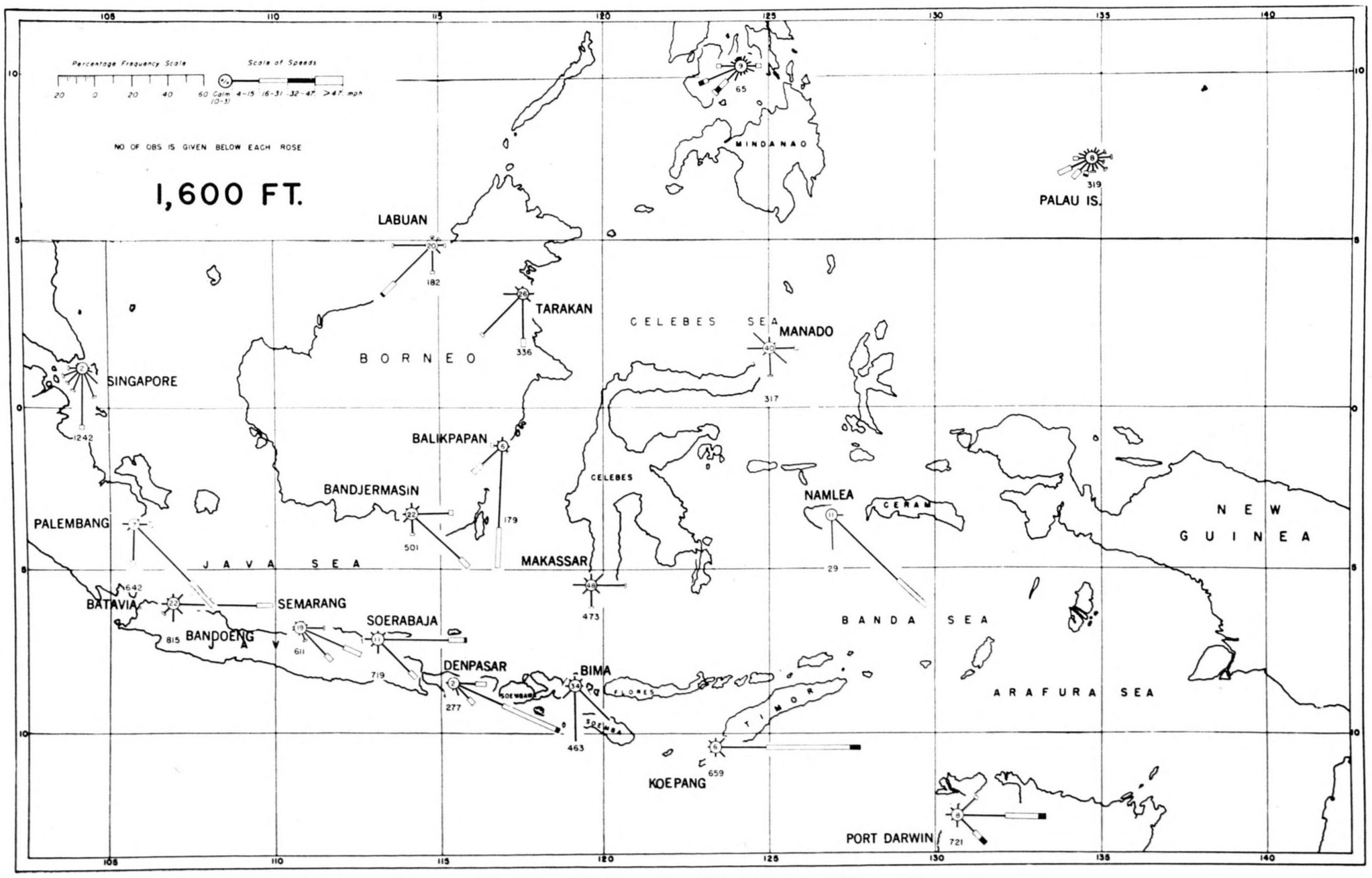

FIGURE V - 26a. *Upper Air Wind Roses (June-August).*
1,600 feet.

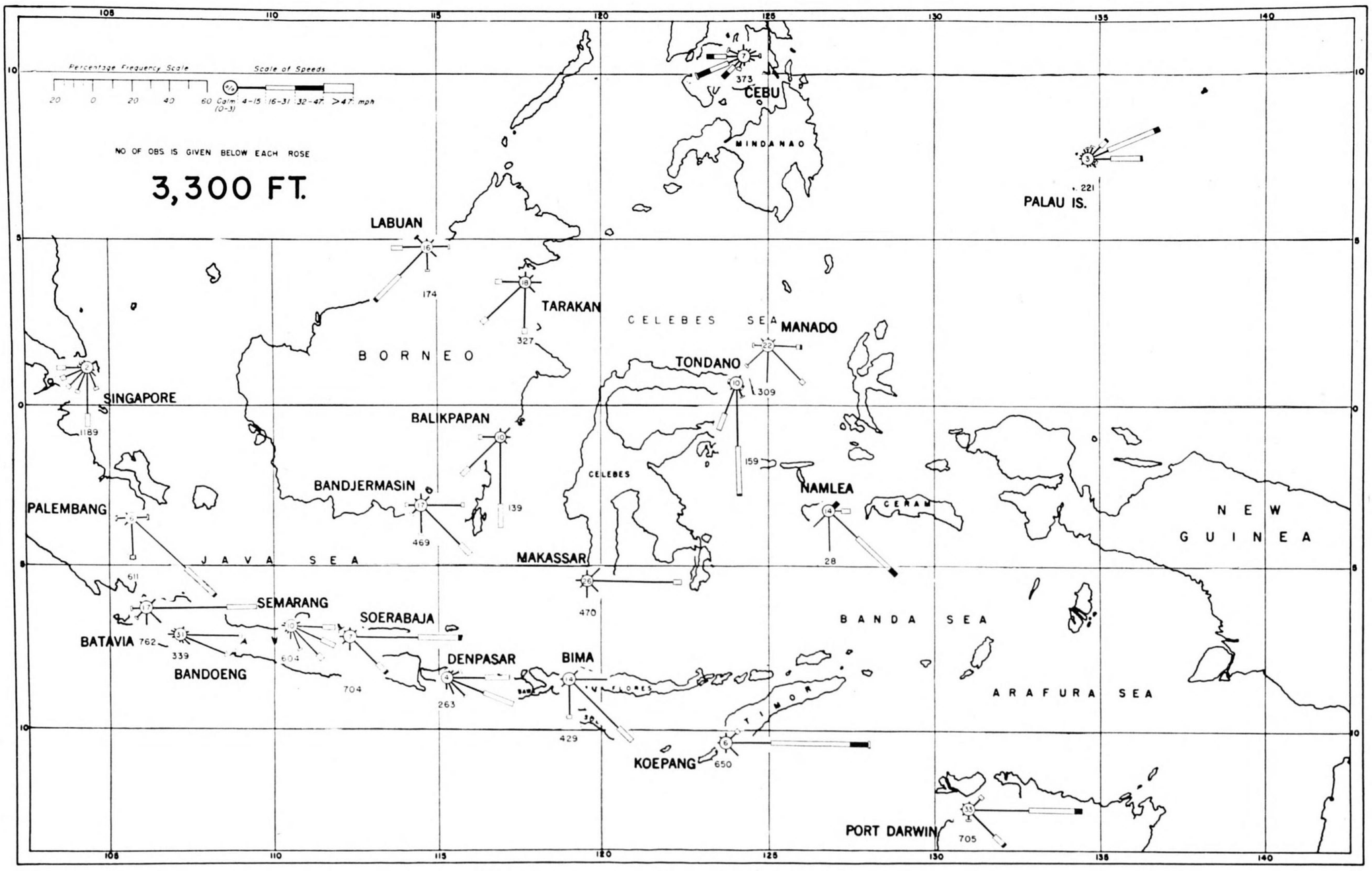

FIGURE V - 26b. *Upper Air Wind Roses (June-August).*
3,300 feet.

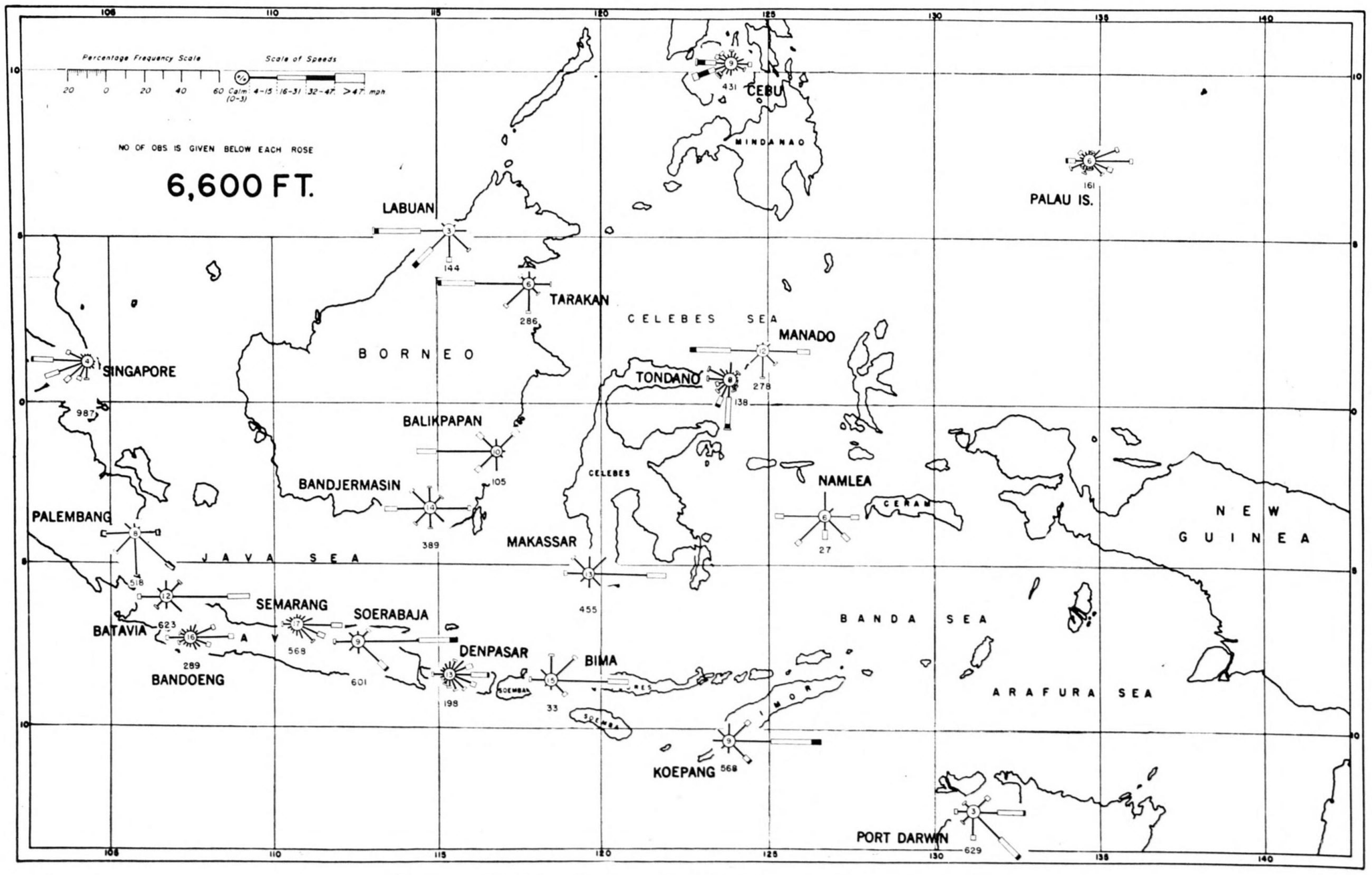

FIGURE V - 26c. *Upper Air Wind Roses (June-August).*
6,600 feet.

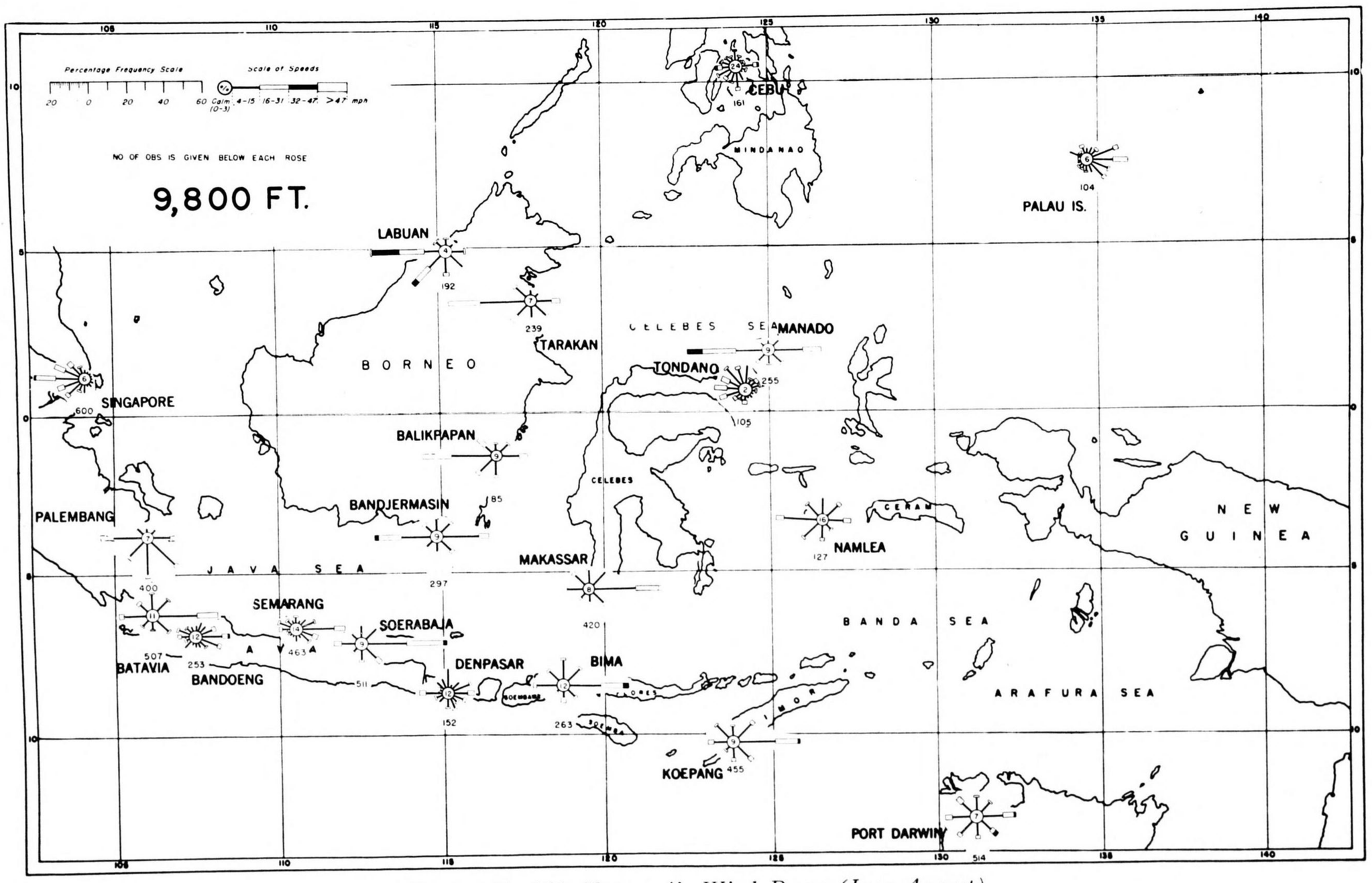

FIGURE V - 26d. *Upper Air Wind Roses (June-August).*
9,800 feet.

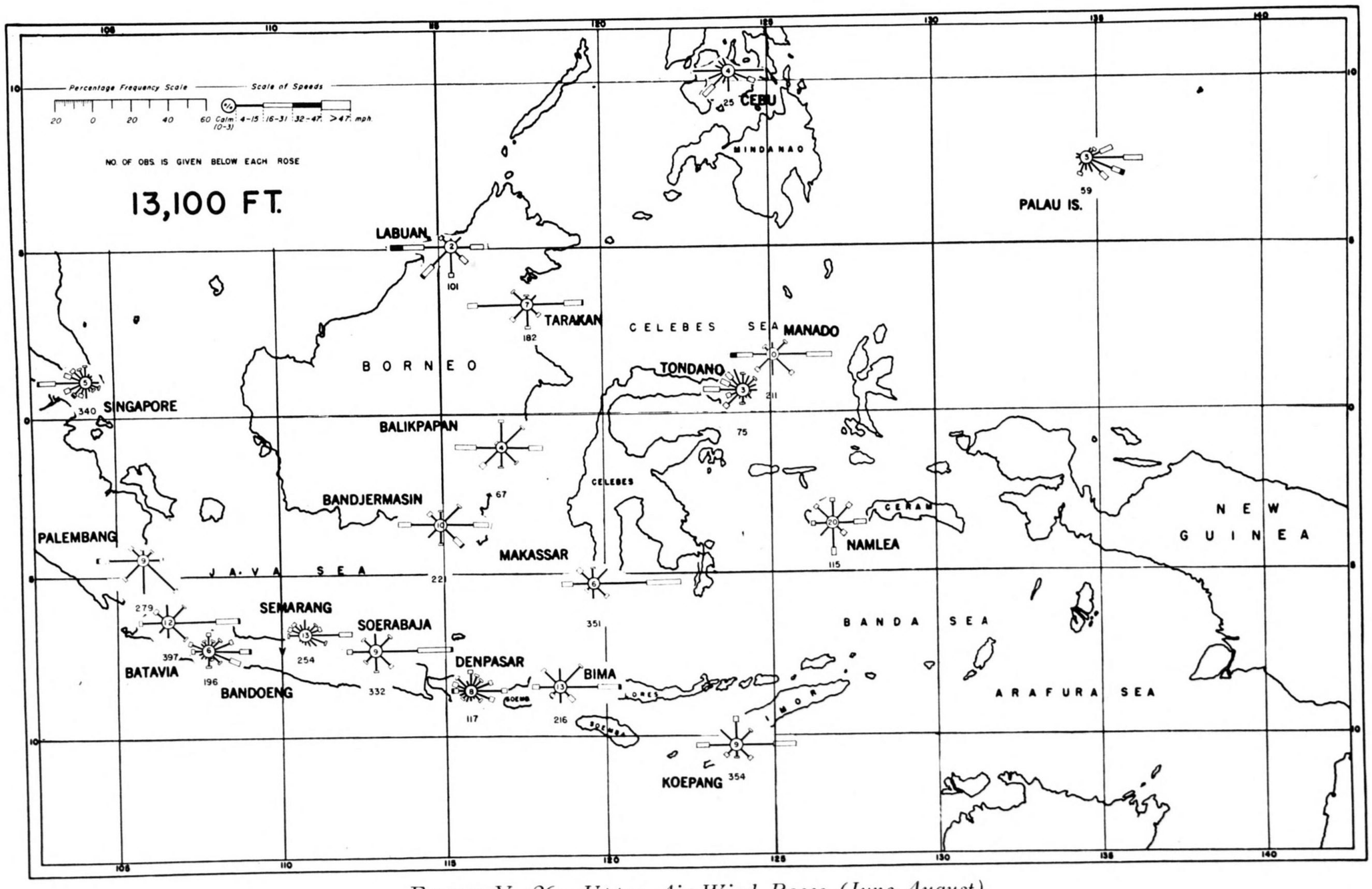

FIGURE V - 26e. *Upper Air Wind Roses (June-August).*
13,100 feet.

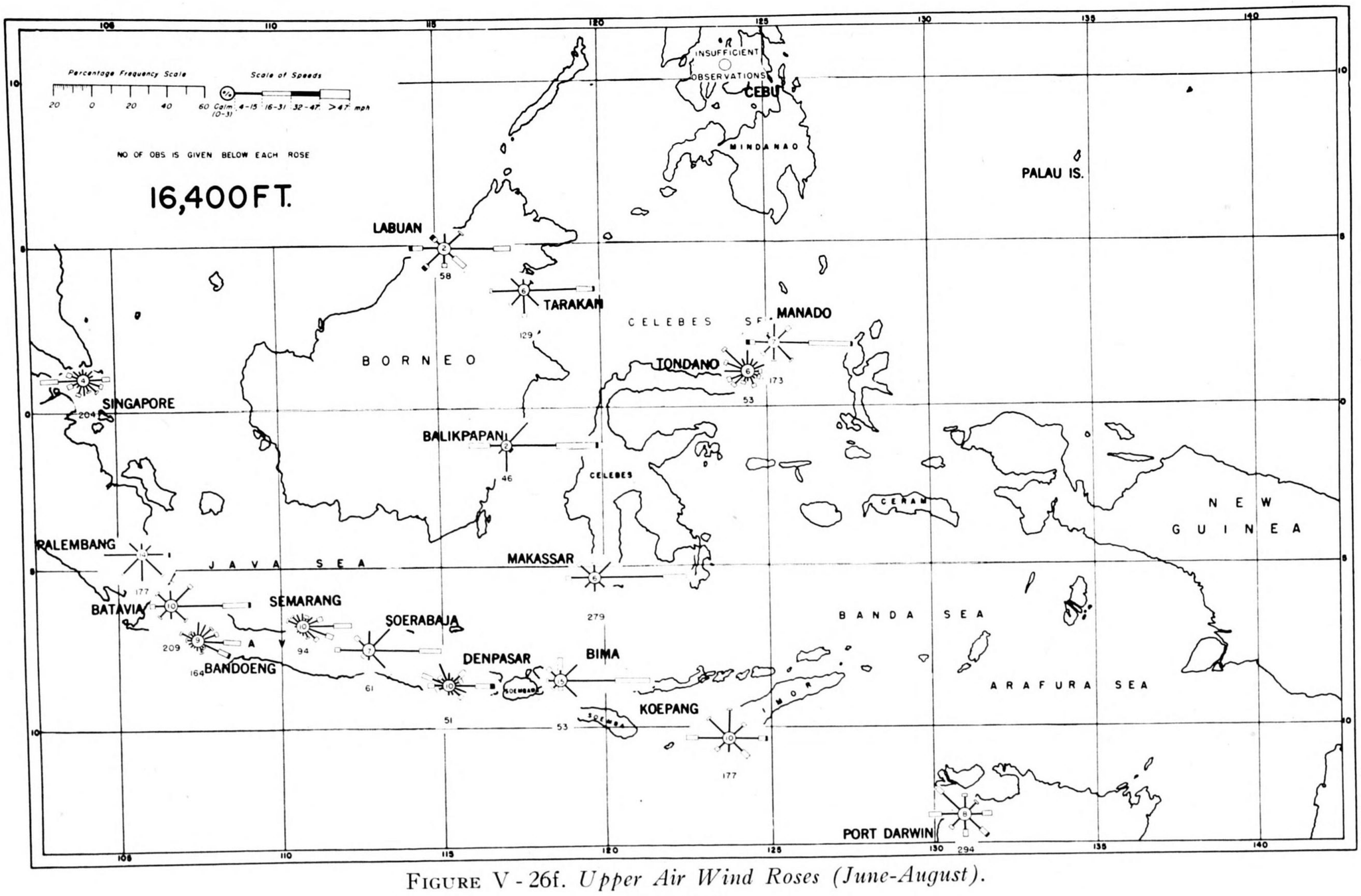

FIGURE V - 26f. *Upper Air Wind Roses (June-August).*
16,400 feet.

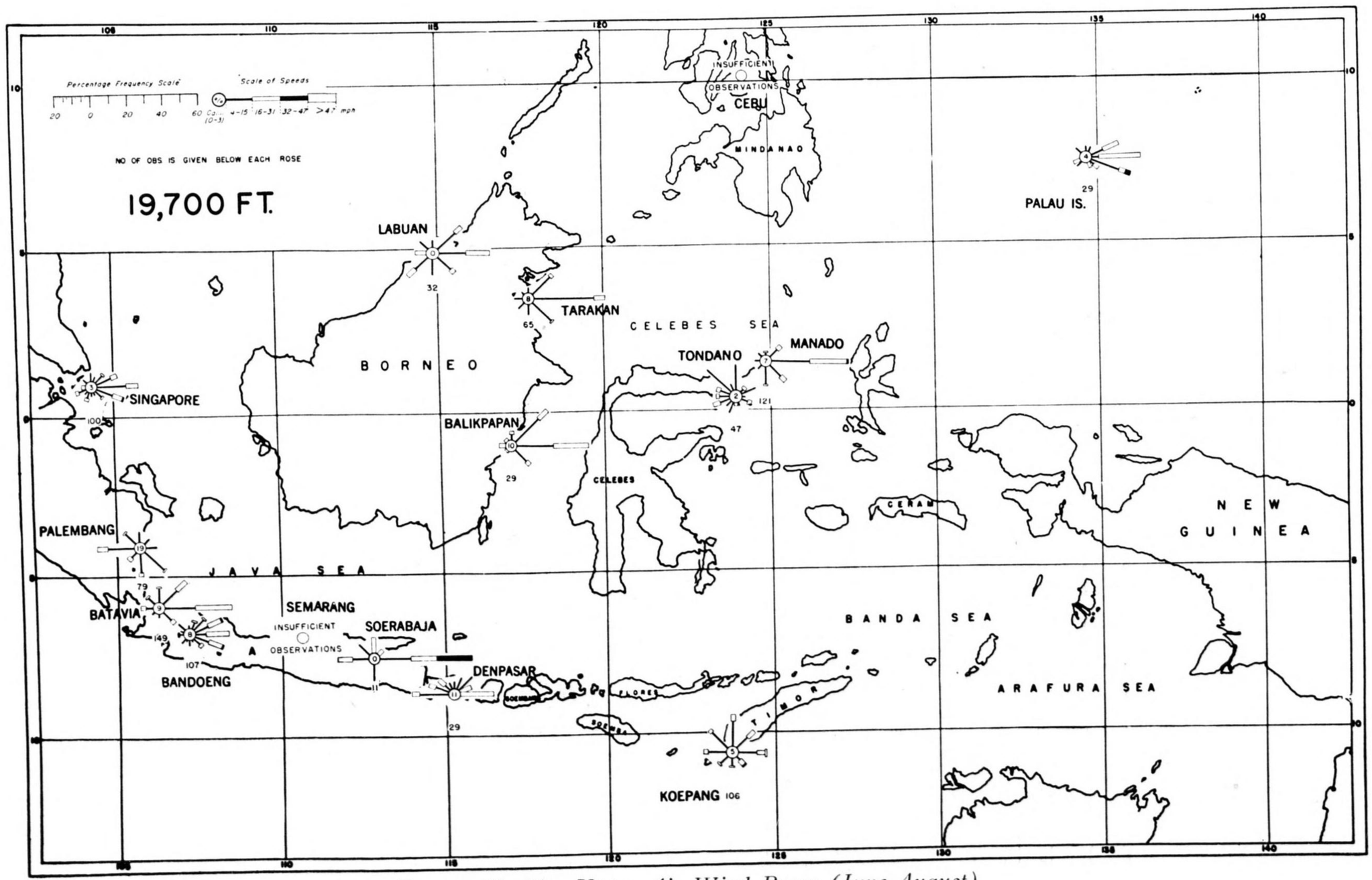

FIGURE V - 26g. *Upper Air Wind Roses (June-August).*
19,700 feet.

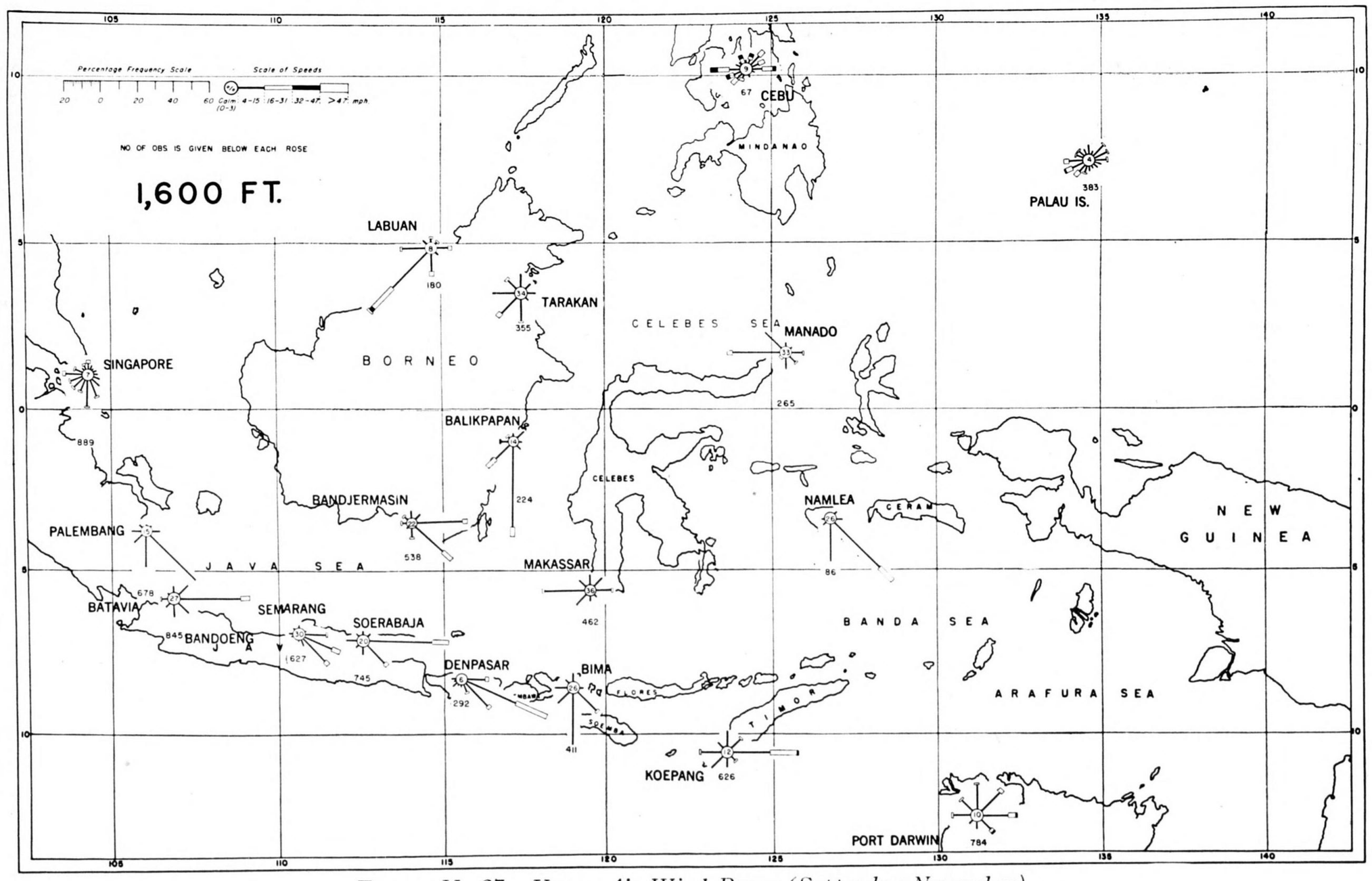

FIGURE V - 27a. *Upper Air Wind Roses (September-November).*
1,600 feet.

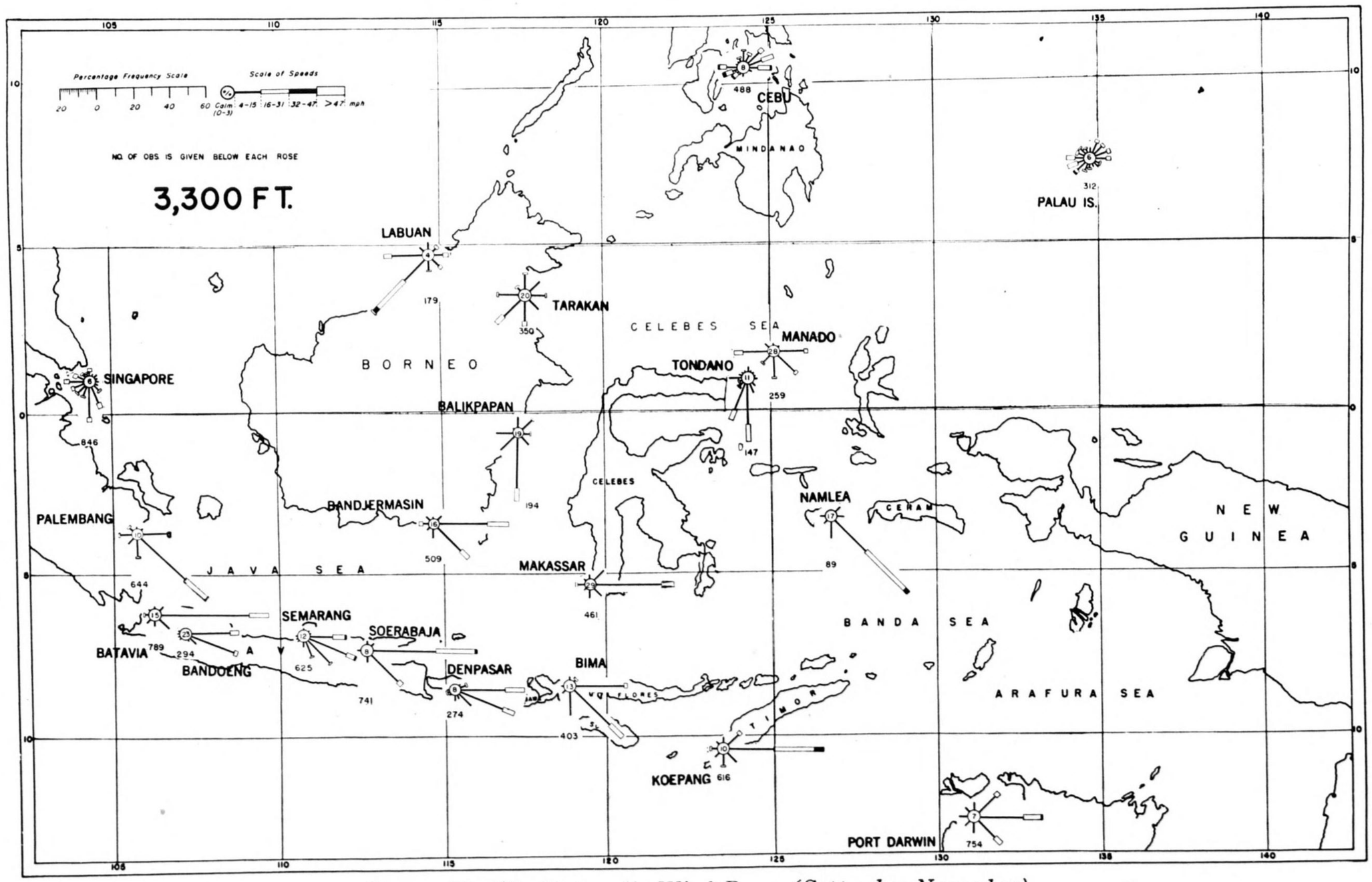

FIGURE V - 27b. *Upper Air Wind Roses (September-November).*
3,300 feet.

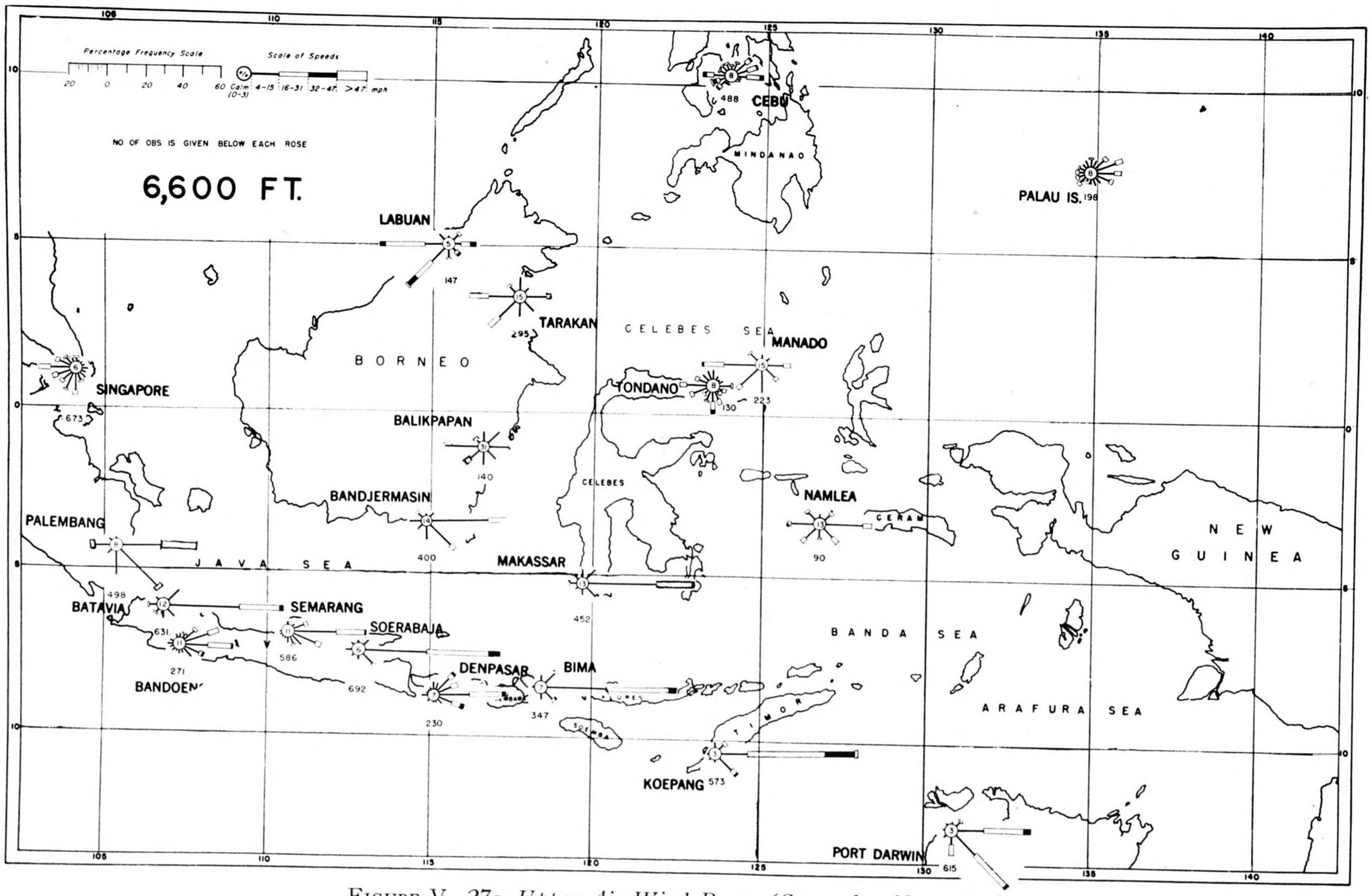

FIGURE V - 27c. *Upper Air Wind Roses (September-November).*
6,600 feet.

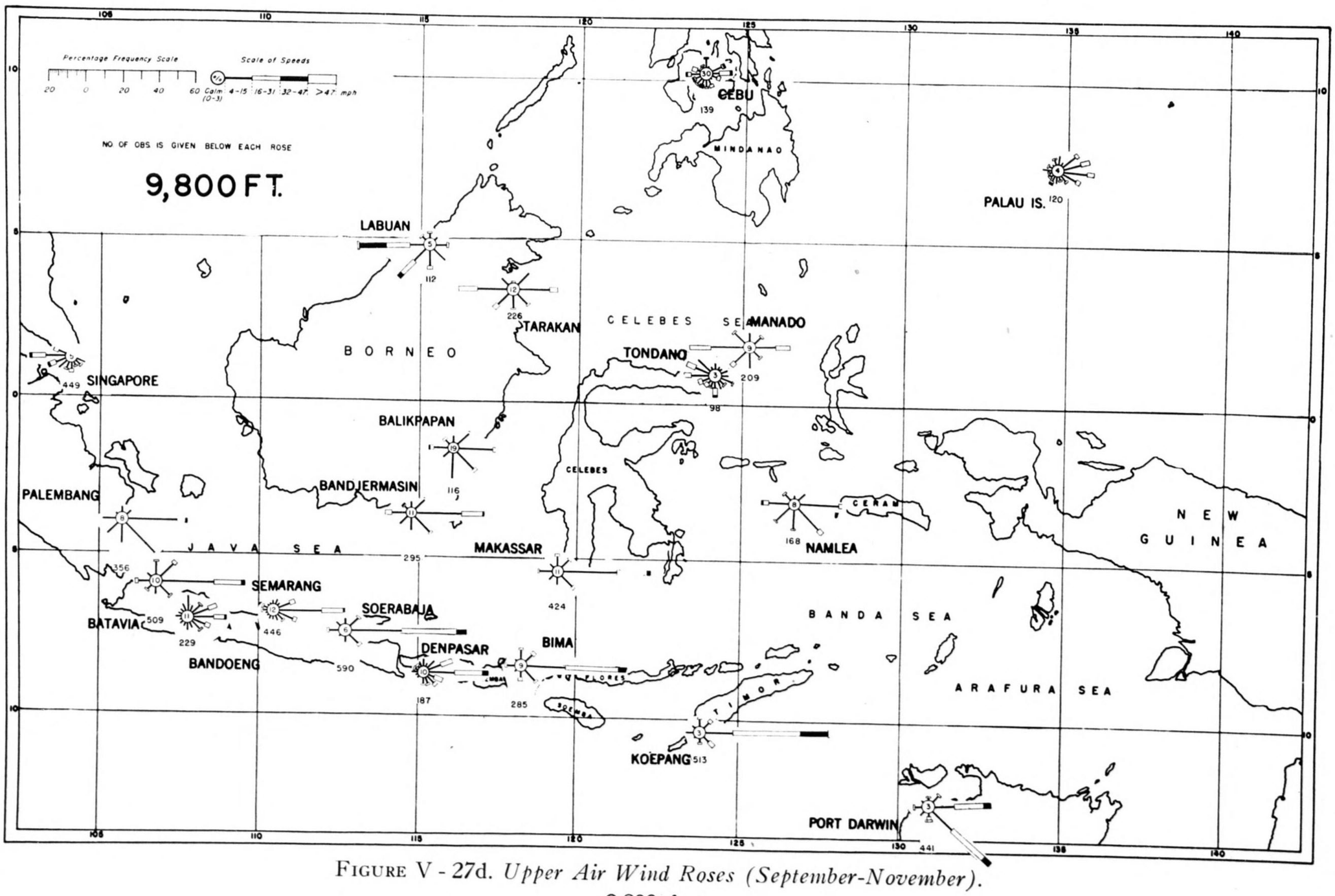

FIGURE V - 27d. *Upper Air Wind Roses (September-November).*
9,800 feet.

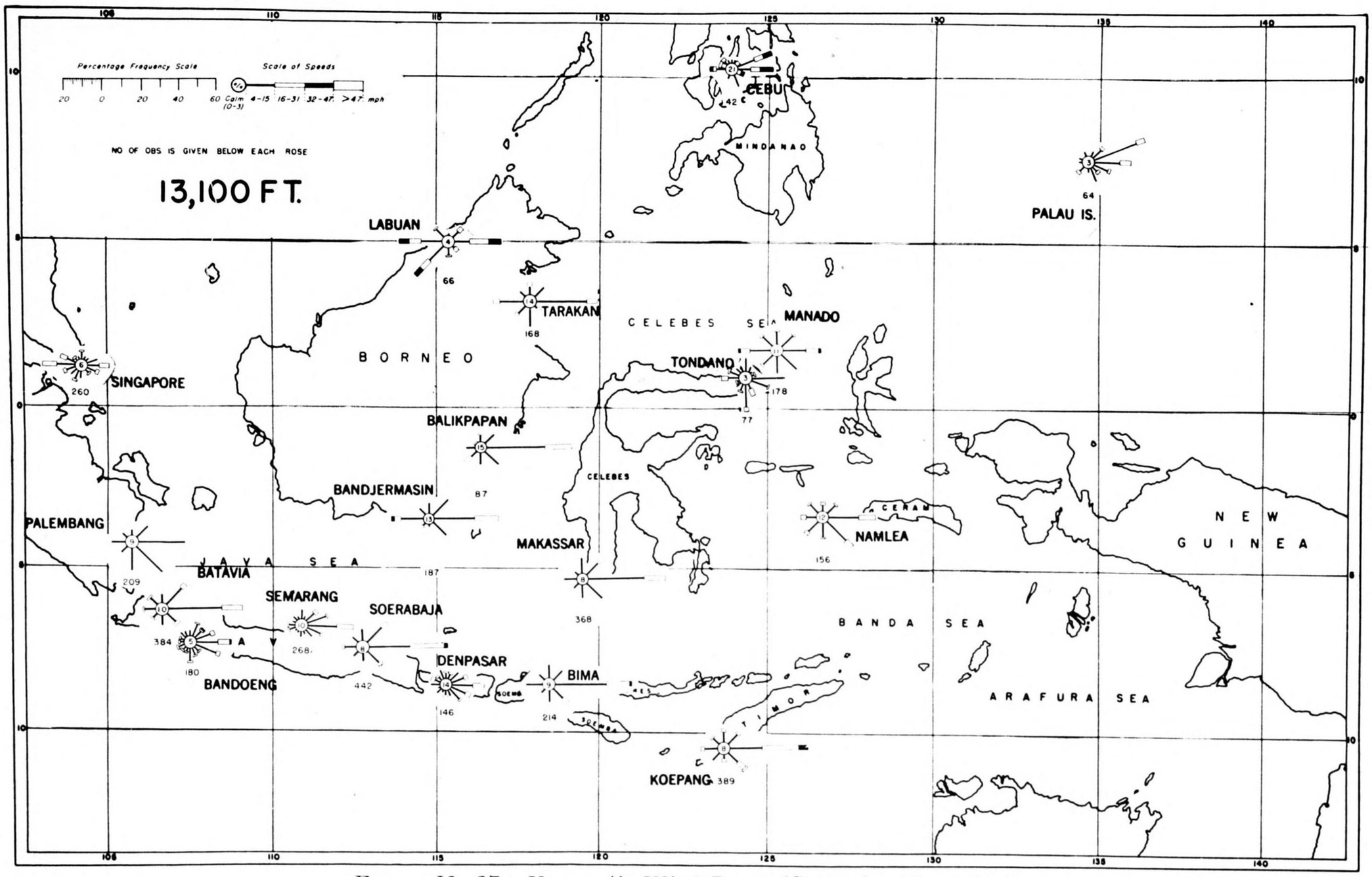

FIGURE V - 27e. *Upper Air Wind Roses (September-November).*
13,100 feet.

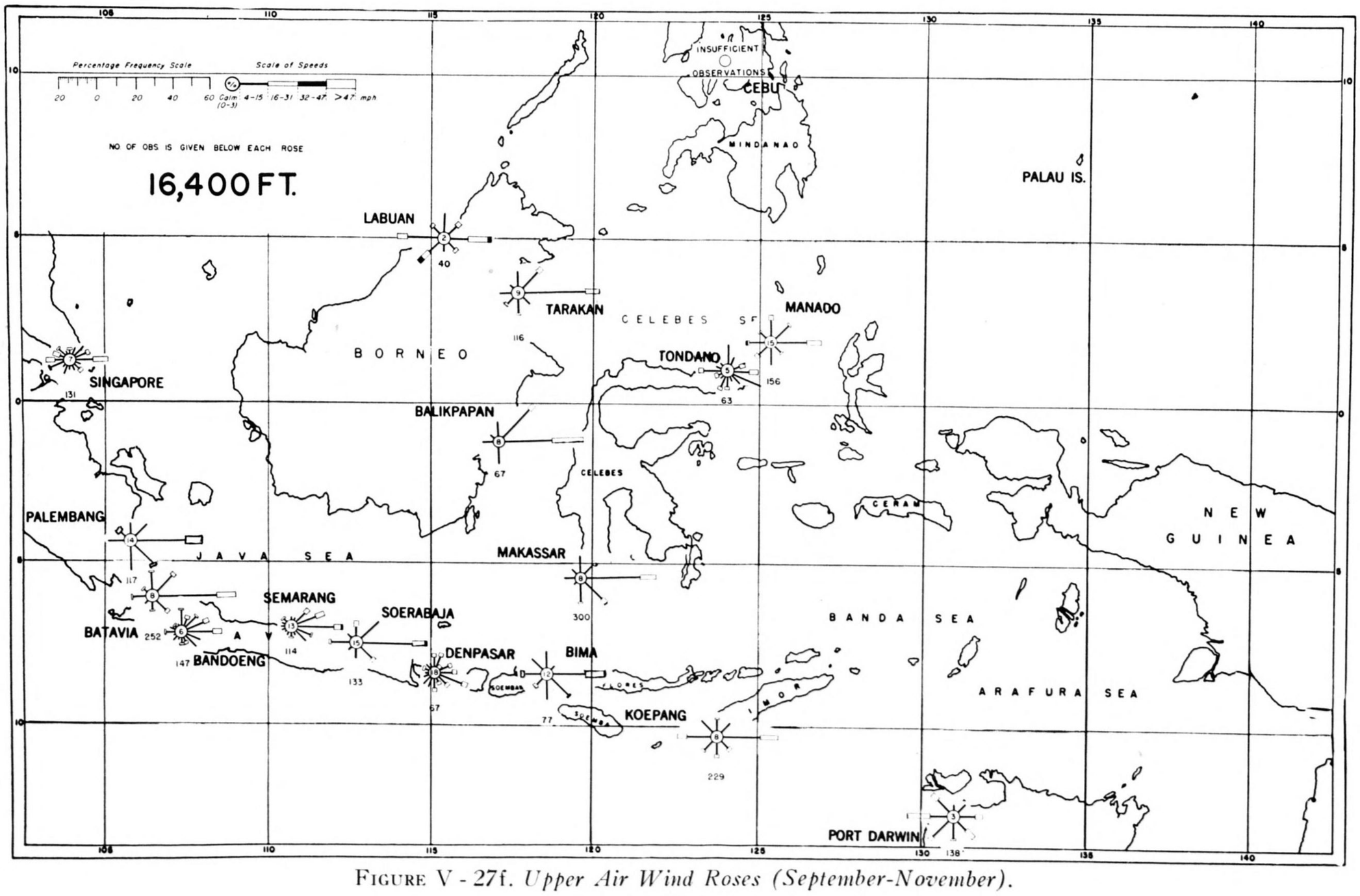

FIGURE V - 27f. *Upper Air Wind Roses (September-November).*
16,400 feet.

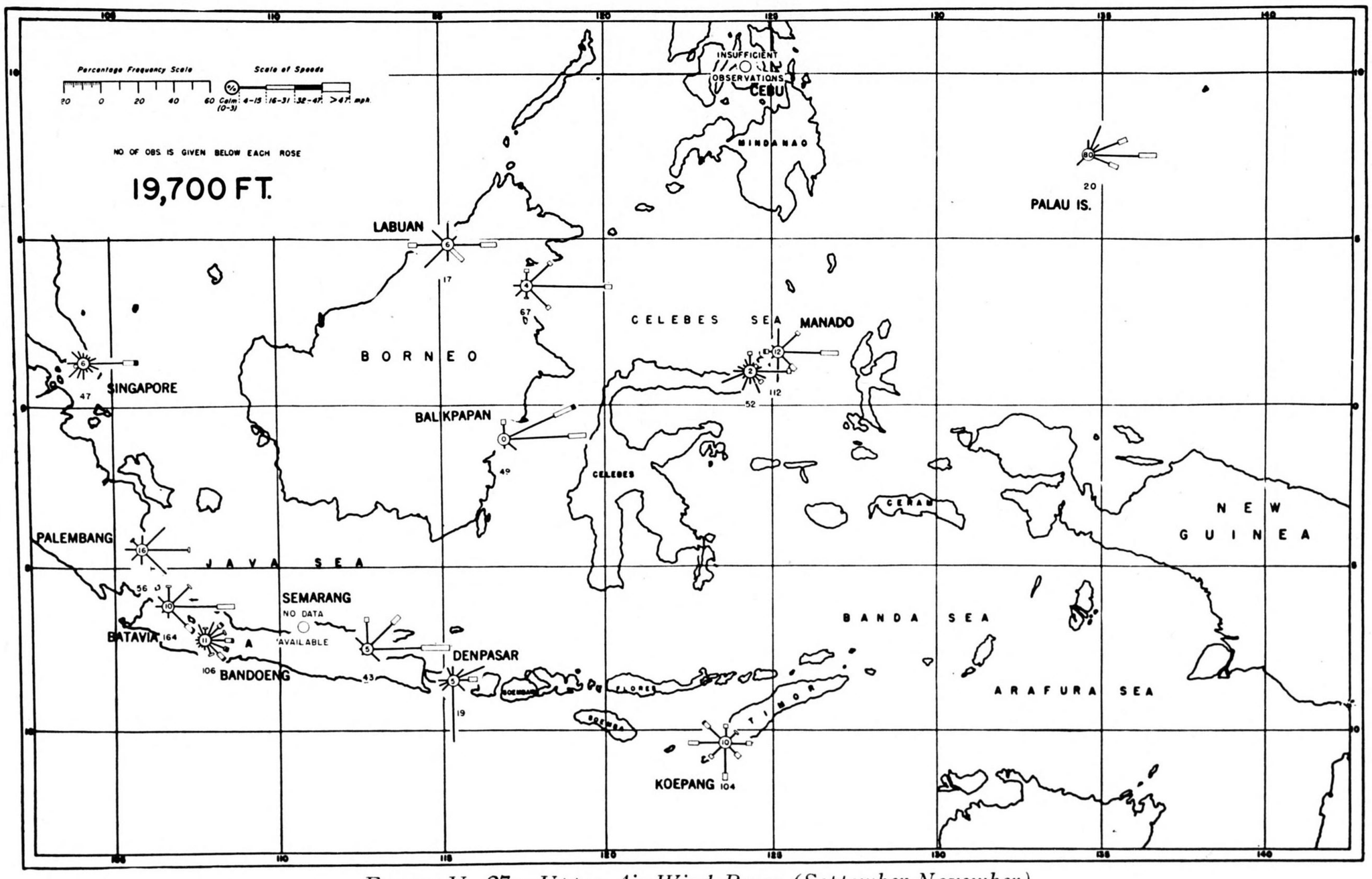

FIGURE V - 27g. *Upper Air Wind Roses (September-November).*
19,700 feet.

F. Cloudiness and ceiling.

TABLES V-14 through V-17 give data on clouds and ceiling.

TABLE V - 14

MEAN CLOUDINESS (PERCENT OF SKY COVERED) AT SPECIFIED LOCAL TIME (105° E MERIDIAN)

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF REC.
0700														
Balikpapan	68	64	67	63	63	61	65	66	62	68	64	70	65	5–6
Pontianak	42	56	60	52	47	52	46	49	48	52	48	52	50	3–4
Tarakan	57	56	64	62	64	65	62	62	64	62	67	59	62	9
0900														
Labuan	59	61	60	59	61	61	61	62	64	66	61	62	61	8
Sandakan	62	55	48	39	36	38	42	43	42	38	50	50	45	5–6
1200														
Balikpapan	76	78	75	67	64	65	59	60	56	69	77	77	69	5–6
Pontianak	42	46	55	52	49	48	45	43	52	56	52	56	50	3–4
Tarakan	66	61	69	66	61	57	55	53	54	59	64	65	61	9
1500														
Labuan	64	61	62	60	64	61	61	68	66	65	62	64	63	8
Sandakan	56	46	38	45	48	45	47	55	48	45	53	52	48	5–6
1700														
Balikpapan	75	72	74	64	63	62	55	51	48	53	68	74	63	5–6
Pontianak	53	48	60	60	48	50	46	41	55	64	56	62	54	3–4
Tarakan	54	43	51	49	47	43	41	40	42	48	50	44	46	10

TABLE V - 14 *Continued*

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF REC.
2100														
Labuan	71	65	64	66	69	66	71	71	76	74	72	70	70	8
Sandakan	49	35	29	29	29	41	49	58	54	49	50	47	43	5–6
Mean (0700, 1200, 1700)														
Balikpapan	73	71	72	65	63	63	60	59	55	63	70	74	66	5–6
Pontianak	46	50	58	55	48	50	46	44	52	57	52	57	51	3–4
Tarakan	59	53	61	59	57	55	53	52	53	56	60	56	56	9–10
Mean (0900, 1500, 2100)														
Labuan	65	62	62	62	65	63	64	67	69	68	65	65	65	11
Sandakan	56	45	38	38	38	41	46	52	48	44	51	50	45	5–6

TABLE V - 15
CLEAR AND CLOUDY DAYS

a. Mean Number of Clear Days (0 to 20% Cloud Cover)

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF REC.
Kuching*	12	7	13	16	18	13	18	15	16	15	16	13	172	7
Labuan**	2	2	3	3	2	1	2	1	2	2	1	1	22	10

b. Mean Number of Partly Cloudy Days (20 to 80% Cloud Cover)

Kuching*	3	5	4	2	1	2	2	2	1	1	2	2	27	7
Labuan**	23	20	23	20	20	21	22	19	15	20	19	22	244	10

c. Mean Number of Cloudy Days (80 to 100% Cloud Cover)

Kuching*	16	16	14	12	12	15	11	14	13	15	12	16	166	7
Labuan**	6	6	5	7	9	8	7	11	13	9	10	8	99	10
Sandakan**	15	12	16	9	7	11	14	8	14	15	16	16	153	4–5

d. Mean Number of Overcast Days (100% Cloud Cover)

Kuching*	3	5	4	2	1	1	1	2	1	2	2	2	26	6–8
Labuan**	4	3	2	3	4	5	6	5	7	7	5	7	58	6

Local Time (105° E Meridian).
* 0800 observation only.
** Mean of 0900, 1500, and 2100.

TABLE V - 16
PERCENTAGE FREQUENCY OF OBSERVATIONS OF LOW CLOUDS AT SPECIFIED LOCAL TIME (105° E MERIDIAN)

a. Bandjermasin

CLOUD TYPE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
0600												
None	5.7	6.7	6.9	14.6	13.1	19.9	30.1	36.0	41.1	35.9	19.6	6.8
1	24.4	24.0	19.3	13.1	8.8	6.5	0.0	0.0	1.2	0.0	25.8	41.1
2	0.4	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.4	3.5	4.4	0.0	0.0	0.5	5.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.6	0.0
5	42.6	37.6	55.3	60.2	51.3	67.6	60.4	64.0	57.1	63.4	46.7	32.4
6	3.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	19.3	27.9	13.7	11.6	26.4	5.0	4.5	0.0	0.0	0.7	7.3	19.7
8	3.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	275	287	248	199	238	201	222	192	170	145	163	219

TABLE V - 16 *Continued*

CLOUD TYPE	JAN.	FEB.	MAR.	APRIL.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1100												
None	0.6	1.4	1.4	1.8	5.0	2.4	8.6	4.7	3.7	6.2	2.2	3.0
1	28.9	44.4	46.6	53.1	49.1	35.2	54.0	48.7	54.2	50.4	51.5	55.2
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
3	25.7	27.5	17.6	29.2	22.6	11.2	12.2	3.2	17.0	12.4	18.9	20.9
4	0.0	0.0	0.0	0.9	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0
5	19.6	8.4	23.2	0.9	12.5	33.6	13.1	16.8	8.1	9.7	13.7	17.9
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	24.6	17.6	3.5	14.1	10.0	17.6	10.3	11.0	16.3	20.4	13.7	3.0
8	0.0	0.7	7.7	0.0	0.8	0.0	1.8	7.8	0.0	0.9	0.0	0.0
9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	179	142	142	113	120	125	106	129	135	113	95	67

b. Balikpapan

0700												
None	4.1	2.9	2.6	2.9	4.9	1.3	1.2	0.0	0.0	0.0	4.0	2.1
1	5.5	7.1	13.0	2.8	6.4	5.0	11.7	9.0	14.3	5.7	0.0	0.0
2	4.1	1.4	1.3	1.4	3.2	2.6	7.0	1.3	0.0	1.9	0.0	0.0
3	5.4	5.8	3.9	2.8	0.0	6.3	2.4	6.4	7.2	1.9	5.8	0.0
4	2.8	1.4	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	5.9	2.1
5	71.2	75.7	71.4	85.8	79.1	68.4	69.6	64.1	64.3	82.9	76.4	91.6
6	1.4	2.8	3.9	0.0	4.8	13.8	0.0	6.4	0.0	0.0	0.0	0.0
7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	3.8	3.9	4.2
8	4.1	2.9	3.9	1.4	1.6	2.6	8.1	12.8	2.8	3.8	4.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	73	70	77	70	62	80	86	78	70	53	51	48
1100												
None	3.9	0.0	0.0	4.2	5.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0
1	3.8	8.6	0.0	0.0	0.0	0.0	0.0	1.9	4.2	25.9	3.8	3.8
2	0.0	0.0	0.0	0.0	0.0	4.2	0.0	3.8	2.1	7.4	15.3	11.5
3	0.0	0.0	0.0	0.0	5.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0
4	7.7	0.0	0.0	0.0	5.0	0.0	0.0	0.0	2.1	0.0	0.0	11.5
5	50.1	74.0	80.0	79.1	65.0	91.6	82.8	92.4	91.6	59.3	77.1	50.2
6	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
8	30.7	17.4	20.0	16.7	15.0	0.0	13.8	1.9	0.0	7.4	3.8	19.2
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	26	23	25	24	20	24	29	53	48	27	26	26

c. Tarakan

0700												
None	0.0	0.0	6.8	5.1	1.5	3.0	2.0	1.0	1.1	6.6	0.0	0.0
1	65.6	67.9	37.2	38.8	60.7	59.7	59.5	59.0	63.2	64.1	69.1	60.4
2	19.4	12.8	23.8	27.2	18.2	12.0	20.8	13.7	15.7	13.3	8.8	11.1
3	3.0	8.0	17.0	18.7	10.6	8.9	6.2	9.5	7.8	5.3	8.9	12.7
4	1.5	1.6	1.7	3.4	3.0	4.5	1.0	2.0	1.1	1.3	0.0	0.0
5	9.0	9.7	13.5	6.8	6.0	11.9	10.5	13.8	10.0	6.7	13.2	15.8
6	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	67	62	59	59	66	67	96	95	89	75	68	63
1300												
None	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0
1	36.0	33.3	36.0	50.0	40.0	71.4	75.0	66.0	63.5	40.0	26.2	52.7
2	44.0	45.8	56.0	32.1	40.0	25.0	16.7	30.2	32.7	50.0	43.5	33.4
3	16.0	20.9	8.0	14.3	20.0	0.0	5.6	1.9	3.8	10.0	21.6	13.9
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	3.6	2.7	1.9	0.0	0.0	4.4	0.0
6	4.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	25	24	25	28	25	28	36	53	52	20	23	36

TABLE V - 17

PERCENTAGE FREQUENCY OF OBSERVATIONS OF MIDDLE CLOUDS AT SPECIFIED LOCAL TIME
(105° E MERIDIAN)

a. Bandjermasin

CLOUD TYPE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
0600												
None	82.2	87.5	79.4	74.8	84.9	84.6	81.5	65.1	71.2	71.0	74.8	85.4
1	8.7	5.2	8.9	12.1	7.6	11.4	11.7	22.4	19.4	16.6	13.5	7.3
2	9.1	7.3	11.3	12.6	7.1	3.5	5.9	12.5	8.8	11.7	11.7	7.3
3	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.7	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
7	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	275	287	248	199	238	201	222	192	170	145	163	219
1100												
None	68.2	65.5	69.0	62.8	56.8	73.6	70.7	59.6	69.6	62.8	48.4	46.2
1	13.4	5.6	12.0	14.2	20.0	14.4	17.0	23.3	19.3	20.4	27.4	20.9
2	17.3	25.4	16.9	22.1	20.0	10.4	12.3	16.3	11.1	16.8	24.2	29.9
3	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.8	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.5
7	1.1	2.8	2.1	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	1.5
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	179	142	142	113	120	125	106	129	135	113	95	67
0700												
None	1.4	1.4	1.3	2.9	0.0	12.5	12.8	0.0	0.0	0.0	0.0	0.0
1	19.2	31.4	38.9	35.7	25.8	20.0	33.7	16.7	24.3	32.1	23.5	29.2
2	26.0	15.7	15.6	17.1	21.0	12.5	4.7	19.2	11.4	7.5	17.6	12.5
3	6.8	15.7	7.8	1.4	4.8	1.3	0.0	5.1	4.3	3.8	2.0	2.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	46.6	35.8	36.4	42.9	48.4	53.7	48.8	59.0	60.0	56.6	56.9	56.2
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	73	70	77	70	62	80	86	78	70	53	51	48
1100												
None	0.0	0.0	4.0	0.0	5.0	0.0	3.4	1.9	2.1	0.0	0.0	0.0
1	11.5	8.7	12.0	37.5	20.0	25.0	34.5	24.5	39.6	40.7	38.5	19.2
2	7.7	4.3	12.0	0.0	0.0	8.3	0.0	5.7	2.1	3.7	11.5	15.4
3	0.0	4.3	4.0	0.0	0.0	0.0	0.0	5.7	2.1	0.0	3.8	3.8
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
6	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	80.8	82.7	64.0	54.1	75.0	66.7	62.1	60.3	54.1	51.9	46.2	61.6
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	26	23	25	24	20	24	29	53	48	27	26	26

c. Tarakan

0700												
None	7.5	8.1	1.7	1.7	0.0	3.0	13.5	4.2	5.6	6.7	5.9	7.9
1	49.2	61.3	57.6	62.6	43.9	44.8	46.9	53.7	55.1	62.7	60.3	49.3
2	20.9	14.5	22.0	15.3	28.9	31.3	18.8	26.3	23.6	17.3	16.2	19.0
3	17.9	16.1	13.6	11.9	21.2	20.9	20.8	15.8	13.5	13.3	13.2	17.5
4	4.5	0.0	3.4	8.5	4.5	0.0	0.0	0.0	2.2	0.0	2.9	6.3
5	0.0	0.0	1.7	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	67	62	59	59	66	67	96	95	89	75	68	63

TABLE V - 17 *Continued*

b. Balikpapan

CLOUD TYPE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1300												
None	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	1.9	0.0	4.3	2.8
1	68.0	62.5	72.0	75.0	28.0	46.4	55.6	71.7	71.2	85.0	65.3	63.8
2	12.0	12.5	0.0	10.7	20.0	14.3	8.3	9.4	9.6	5.0	13.0	16.7
3	4.0	8.3	24.0	10.7	32.0	35.7	33.3	17.0	15.4	10.0	8.7	13.9
4	12.0	12.5	4.0	3.6	20.0	3.6	0.0	1.9	1.9	0.0	8.7	2.8
5	4.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. of Obs.	25	24	25	28	25	28	36	53	52	20	23	36

G. Turbulence and thunderstorms.

TABLE V-18 gives recorded data on thunderstorms.

TABLE V - 18

MEAN NUMBER OF DAYS WITH THUNDERSTORMS

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	YEARS OF REC.
Pontianak	5	5	9	9	7	6	4	5	7	8	6	2	73	4
Labuan	3	3	3	6	5	3	5	9	9	5	6	4	61	9

H. Visibility.

TABLE V-19 gives recorded data on visibility.

TABLE V - 19

VISIBILITY. LOCAL TIME (105° E MERIDIAN). YEARS OF RECORD: 5

a. Percentage Frequency of Occurrence of Visibility <1¼ Miles

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	NO. OF OBS.
0500														
Bandjermasin	0.0	2.1	6.5	11.3	9.8	8.2	8.3	5.7	15.7	18.2	23.7	4.7	9.5	582
Balikpapan	0.0	0.0	0.0	0.0	0.0	8.8	3.2	3.3	0.0	0.0	2.8	0.0	1.5	412
Pontianak	6.5	4.0	0.0	0.0	7.1	5.3	0.0	0.0	7.7	2.7	0.0	0.0	2.8	344
Tarakan	1.7	3.0	1.4	4.4	0.0	4.2	0.0	2.7	1.7	1.5	3.8	1.7	2.2	696
Labuan	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	548
Sandakan	1.8	4.7	4.3	3.0	0.0	3.0	3.9	1.5	2.4	0.0	3.7	8.1	3.0	837
1300														
Bandjermasin	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	489
Balikpapan	0.0	0.0	0.0	—	—	—	—	0.0	0.0	0.0	4.5	6.3	—	—
Pontianak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.2	0.4	552
Tarakan	2.2	2.1	0.0	1.8	2.3	0.0	0.0	2.3	0.0	0.0	0.0	1.8	1.0	580
Labuan	0.0	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	5.0	0.7	661
Sandakan	1.6	2.4	1.1	1.1	1.4	1.4	0.0	3.1	0.0	0.0	0.0	1.5	1.1	844

b. Percentage Frequency of Occurrence of Visibility <2½ Miles

0500														
Bandjermasin	7.1	4.3	12.9	22.6	12.2	16.3	27.1	17.0	25.5	30.9	26.3	11.6	17.8	582
Balikpapan	0.0	0.0	2.3	0.0	6.9	17.6	16.1	20.0	11.4	14.7	8.3	2.3	8.3	412
Pontianak	16.1	12.0	10.5	25.0	21.4	21.1	23.5	39.3	42.3	18.9	13.0	8.0	21.0	344
Tarakan	1.7	4.5	1.4	4.4	2.4	6.2	0.0	5.4	5.0	1.5	3.8	3.3	3.3	696
Labuan	0.0	2.7	0.0	0.0	1.5	1.4	0.0	0.0	0.0	0.0	0.0	3.2	0.7	548
Sandakan	8.9	12.8	10.3	5.0	0.0	3.0	5.9	3.0	2.4	0.0	11.1	14.5	6.4	837
1300														
Bandjermasin	2.3	0.0	1.7	0.0	0.0	3.4	0.0	0.0	0.0	8.7	2.4	0.0	1.5	489
Balikpapan	7.1	5.9	5.9	0.0	0.0	0.0	—	5.6	0.0	0.0	9.1	6.3	—	—
Pontianak	4.7	1.8	0.0	6.0	2.1	0.0	4.3	2.6	2.6	0.0	2.4	6.7	2.6	552
Tarakan	2.2	2.1	1.7	1.8	4.5	2.3	2.0	2.3	0.0	0.0	0.0	1.8	1.7	580
Labuan	0.0	2.2	0.0	0.0	1.4	0.0	1.4	0.0	0.0	0.0	0.0	5.0	1.2	661
Sandakan	4.8	6.1	1.1	2.2	2.7	4.2	2.0	4.6	0.0	0.0	1.5	1.5	2.6	844

TABLE V - 19 *Continued*

c. Percentage Frequency of Occurrence of Visibility >6 Miles

STATION	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL	No. OF OBS.
0500														
Bandjermasin	78.6	83.0	83.9	58.5	75.6	77.6	68.8	64.2	56.9	58.2	65.8	69.8	70.1	582
Balikpapan	72.5	60.7	67.4	65.5	69.0	44.1	45.2	43.3	34.3	41.2	61.1	74.4	56.6	412
Pontianak	51.6	32.0	23.7	14.3	25.0	15.8	5.9	3.6	19.2	13.5	39.1	28.0	22.6	344
Tarakan	93.3	83.6	80.6	88.9	90.2	79.2	94.1	79.7	81.7	90.8	83.0	90.0	86.3	696
Labuan	97.3	97.3	96.9	91.7	93.8	95.7	96.8	88.7	100.0	87.5	93.5	93.5	94.4	548
Sandakan	87.5	81.4	89.7	94.1	100.0	95.5	94.1	97.0	97.6	98.5	88.9	83.9	92.4	837
1300														
Bandjermasin	97.7	98.1	96.6	100.0	92.9	93.1	100.0	100.0	93.5	80.4	87.8	95.2	94.6	489
Balikpapan	42.9	47.1	58.8	—	—	—	—	55.6	64.3	31.6	45.5	68.8	—	—
Pontianak	79.1	74.5	64.3	40.0	47.9	55.0	34.8	61.5	46.2	52.0	56.1	77.8	57.4	552
Tarakan	93.5	91.5	90.0	91.1	90.9	95.5	98.0	93.0	100.0	98.1	97.6	96.4	94.6	580
Labuan	100.0	97.8	100.0	97.1	98.6	100.0	98.6	98.6	100.0	98.0	100.0	92.5	98.0	661
Sandakan	95.2	92.7	98.9	97.8	97.3	95.8	95.9	95.4	98.1	100.0	98.5	98.5	97.0	844

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BORNEO

METEOROLOGICAL STATIONS

• Meteorological Station

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20 0 40 80 120 160 200 240 280 KILOMETERS

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CHAPTER VIII

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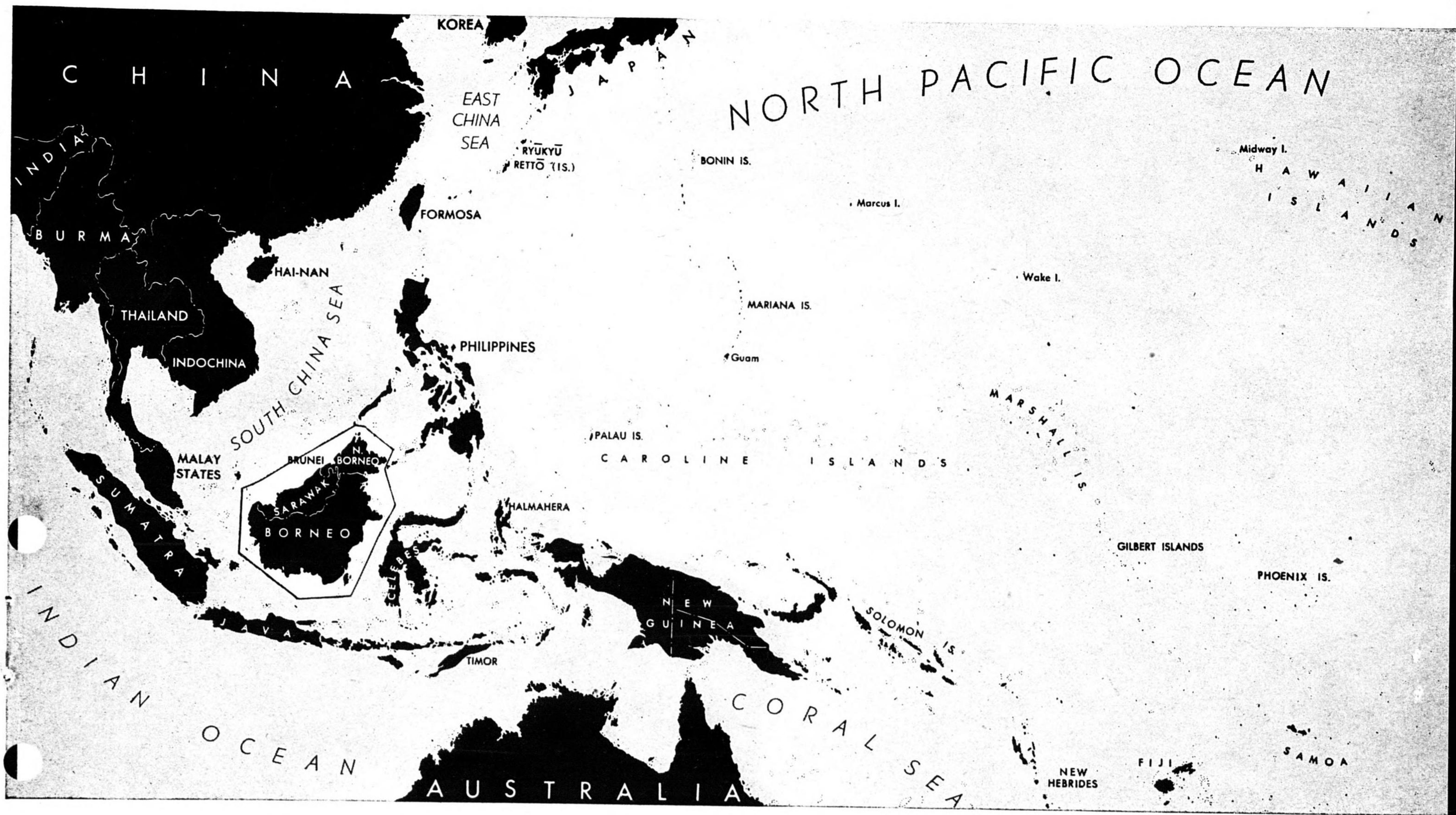

JOINT ARMY-NAVY INTELLIGENCE STUDY
OF
BORNEO
CITIES AND TOWNS

MAY 1945

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(1) Importance.
(2) Means of access.
(3) Physical characteristics.
(4) Factories.
(5) Warehouses and storage.
(6) Billeting facilities.
(7) Health and sanitation facilities.
(8) Buildings.
(9) Internal transportation.
(10) Public utilities.
(11) Repair and service facilities.
(12) War damage.

CITIES AND TOWNS

80. General Description

In this chapter the cities and towns of Borneo are treated in a counterclockwise direction, beginning with Pontianak in northwestern Netherlands Borneo and proceeding in turn to the cities and towns of North Borneo, Labuan, Brunei, and Sarawak (FIGURE VIII - 68). In many instances the extent to which Japanese occupation has modified conditions is unknown; in such cases the past tense is regularly employed.

A. Fattern of urban settlement.

The urban centers of Borneo are small, and there are no areas of urban agglomeration. Important cities and towns are on or near the coast, most of them at the mouths of rivers or on bays. The inadequacy of facilities for land transport enhances the value of sites on navigable rivers near the sea.

B. Functions of cities and towns.

The cities and towns of Borneo are primarily commercial in function, and their importance is based upon trade in tropical products. A few (Balikpapan, Lingkas, and Miri) are important as centers of oil refining and oil export. With these exceptions, there are no important industrial cities.

C. General characteristics of cities and towns.

Settlements are dominated by company harbor installations and commercial buildings, although government structures are often prominent features. Asiatics are usually housed in barrack-like quarters or in rude timber dwellings. Transportation within towns is generally facilitated by a few surfaced streets, but access to nearby areas is often extremely poor, particularly during the rainy season. Telecommunications are undeveloped and are largely restricted to the radiotelegraph. A few towns have local telephone exchanges. Most cities and towns have public water supply systems, but sewerage systems are not common. All the cities described have hospital facilities. Hookworm, filariasis, leprosy, and malaria are only a few of the diseases prevalent in Borneo. Malaria is particularly widespread in coastal regions.

D. Cities treated.

Sixteen cities are described: Pontianak, Bandjermasin, Balikpapan, Samarinda, and Lingkas, in Netherlands Borneo; Tawau, Lahad Datu, Sandakan, Kudat, and Jesselton, in North Borneo; Victoria, on Labuan Island (a Straits Settlements island); Brunei and Kuala Belait, in Brunei; and Miri, Sibu, and Kuching in Sarawak. Balikpapan, an oil-refining and oil-exporting center on the Straat Makassar (Makasser Strait), is probably the most highly industrialized city in Borneo. Bandjermasin, the largest city of the island, is a center of the major agricultural area on the southeastern coast. Lingkas, on Poelau Tarakan (island) in Netherlands Borneo, is an active oil-exporting town, as is Miri in Sarawak. Jesselton and Kudat, in North Borneo, are particularly important rubber exporting centers.

E. Glossary.

Baai (Dutch)	bay
Batang (Malay)	river
Eiland (Dutch)	island
Kuala, Koeala (Malay)	river mouth, estuary
Maatschappij (Dutch)	company
Poelau (Malay)	island
Soengai, Sungai, Sungei (Malay)	river
Straat (Dutch)	strait
Tandjoeng (Malay)	cape, headland, promontory
Zee (Dutch)	sea

81. Cities and Towns

A. Pontianak, Netherlands Borneo (1930 population: 45,196).

(1) Importance.

Pontianak, the chief port on the west coast of Netherlands Borneo, is just south of the equator on the Soengai Kapoeas-ketjil (Little Kapoeas River), a distributary of the Soengai Kapoeas (Great Kapoeas River) (FIGURE VIII - 68). It is connected with an extensive coastal and inland road system. The chief exports were rubber and coconut oil.

(2) Means of access.

(*a*) *Water.* A bar at the entrance of the Soengai Kapoeas-ketjil (Little Kapoeas River), 12 miles to the west, limits the use of the river to vessels of less than 7-foot draft. River boats ply southeastward via the Soengai Kapoeas-ketjil to the Soengai Kapoeas, 30 miles from Pontianak. At high tide the Soengai Kapoeas is navigable for vessels of 12-foot draft as far as Sintang, 150 miles east of Pontianak. Vessels drawing 10 feet may continue to Poetoessibau, 260 miles east-northeast of Pontianak. The Soengai Landak, which joins the Soengai Kapoeas-ketjil at Pontianak, is navigable most of the year by small motor boats. At Pontianak the main wharf has depths of 12 to 18 feet. There was regular steamship service to Singapore and Batavia as well as to other ports in Borneo.

(*b*) *Road.* A main all-weather route from Pontianak extends from the north side of the Soengai Kapoeas-ketjil to Sambas, 100 miles to the north. A dry-weather road goes 10 miles farther to Paloh, north of Sambas. Roads branch from the Pontianak – Sambas road to Siloeas, 100 miles northeast of Pontianak, and to Sintang, on the Soengai Kapoeas, thence southward to Karanganpoeroeng, 170 miles east-southeast of Pontianak. An all-weather road extends 12 miles westward from Pontianak to the mouth of the Soengai Kopoeas. A dry-weather road leads 10 miles southeast to Limboeng on the Soengai Kapoeas-ketjil.

(*c*) *Air.* An airfield with 1 runway is 4½ miles north of Pontianak.

(3) Physical characteristics.

Pontianak lies 12 miles inland at the junction of the Soengai Landak and the Soengai Kapoeas-ketjil. The site of the town and the surrounding area is low, swampy, and sometimes

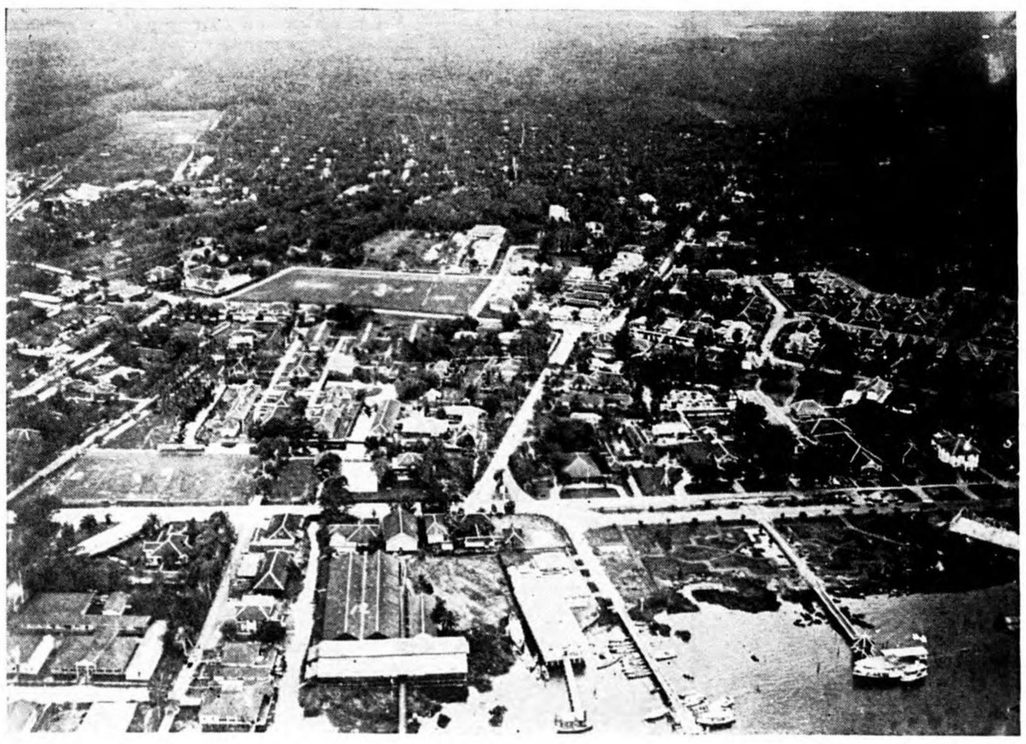


FIGURE VIII - 1. *Pontianak.*
View of town and part of waterfront.

FIGURE VIII - 2. *Pontianak.*
Street scene.

FIGURE VIII - 3. *Pontianak.*
The club.

flooded. The main portion of the town, including the European and Chinese sections, extends along the southeastern bank of the Soengai Kapoeas-ketjil for about 1 mile; a few business houses and warehouses border the north bank (FIGURE VIII - 1). Streets are wide and paved with asphalt (FIGURE VIII - 2). Numerous drainage canals flow through the town.

(4) Factories.

There were 6 sawmills, 3 coconut-oil mills, 2 rice mills, 1 fiber factory, and 1 printing plant in Pontianak.

(5) Warehouses and storage.

There are several warehouses in the main part of the city, and others, with dimensions of 100 feet by 50 feet, are reported to be on the north bank of the river.

(6) Billeting facilities.

Barracks in the main section of the city housed 50 to 60 native troops. At least 5 schools, 3 hotels (one of which had 13 rooms), and a club are available for billeting purposes (FIGURE VIII - 3).

(7) Health and sanitation facilities.

Pontianak had 1 Roman Catholic Mission hospital, with a reported capacity of 84 beds, and a military hospital. Cesspools and drainage canals were used for sewage disposal.

(8) Internal transportation.

A ferry connects the north and south banks of the river.

(9) Public utilities.

There was an artesian well from which water was pumped to the wharf area. Most of the inhabitants, however, use rain water for all purposes.

There were 2 ice plants and a diesel power plant; the latter produced 2,333,000 kilowatt hours in 1939.

Pontianak had telephone and telegraph connections with the surrounding district, a submarine cable to Java, a radiotelegraph station, and a local broadcasting station.

There was mechanized fire-fighting equipment.

(10) Repair and service facilities.

There are reported to be 2 small shipbuilding yards which can repair small vessels. Three workshops, one of which is a machine shop, are on the north bank of the river. Several small auto repair shops are reported.

B. Bandjermasin, Netherlands Borneo (1930 population: 65,698).

(1) Importance.

Bandjermasin, the capital of Netherlands Borneo, lies about 15 miles from the southern coast and the Java-zee (sea) and slightly more than 100 miles west of Straat Makassar (Makasser Strait) (FIGURE VIII - 4). It is an old commercial and industrial center in a rich agricultural district served by a network of paved roads.

(2) Means of access.

(*a*) *Water.* Vessels of 12-foot draft can reach Bandjermasin via the Soengai Martapoera (river), a tributary of the Soengai Barito. Boats drawing 7½ feet can go northward on the Soengai Barito to Moearatewe, 165 miles from Bandjermasin. At the town are several piers with depths of 10 to 13 feet alongside. About 2 miles downstream from Bandjermasin the Bataafsche Petroleum Maatschappij (Batavia Petroleum Company) had a pier with a depth of 15 feet alongside.

(*b*) *Road.* Two paved roads connect Bandjermasin with Martapoera, 20 miles to the southeast. The more southerly

BORNEO
BANDJERMASIN

- Built-up area
- Area of scattered houses
- Water meadow
- Marsh
- Identified building
- Power plant
- Main road
- Secondary road
- Bridge
- Ferry

Pulau, P. .....island
Soengai, S. .....river

0 300 600 900 METERS
0 300 600 900 YARDS

Scale Approximate

RELIABILITY OF DATA

DATA	QUAN.	QUAL.	LOC.
ROADS		GRI	NE
BUILDINGS			OA

Quantitative & Qualitative Data
R - Reliable
GR - Generally Reliable
U - Unreliable
Coverage of Data
C - Complete
I - Incomplete
Location of Data
A - Accurate
NE - Not Entirely Accurate
OA - Only Approx. Accurate

QUANTITATIVE DATA The letters R, GR, and U are an estimate of the reliability of the map's quantitative data, the data which are measurable, including economic or population statistics, hypsometric data, the width of roads, gauges of railroads, etc.

QUALITATIVE DATA The letters R, GR, and U are an estimate of the reliability of the map's qualitative data which shows the types of road surfaces, character of beaches, types of terrain, etc.

COVERAGE The letters C and I in combination with R, GR, or U are an estimate of the degree of completeness of quantitative and qualitative data.

LOCATIONAL DATA The letters A, NE, and OA are estimates of the plotted accuracy of data within the limits of scale and width of line.

R A, OSS

N

P. KEMBANG

T A T A S

Soengai Barito

Soengai Martapoera

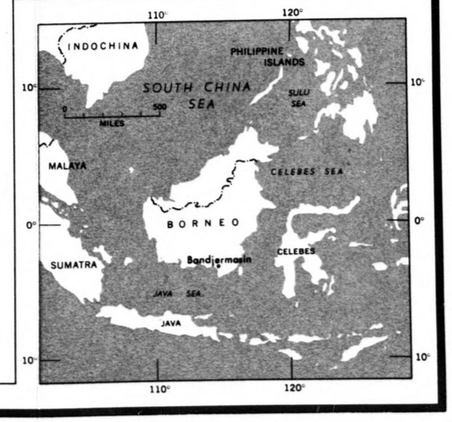
Soengai Kwesan

BOEGIS (native village)

1. Fire Brigade Station
2. Army Barracks
3. District Council (possible location)
4. Boat Wharf
5. Smelting Works
6. Hospital
7. Old European Cemetery
8. Workshops
9. Parade Ground

Rifle Range
Chinese Section
Club
Hotel
Prison
Oil Storage
Warehouses
Coaling Station
Oil Storage
To Oelin & Martapoera

S. Sigaling, S. Djogobaja, S. Pagaran, S. Talaok Ketjil, S. Djerorang, S. Dangkaetji, S. Palamboean, S. Rawa-rawa, S. Kidoeang, S. Gajam, S. Taboekan, S. Tawaktak, S. Andai, S. Mardjid, S. Dingo, S. Koeboer, S. Bitong, S. Benawa, S. Palamboean Besar, S. Kartak, S. Bahara, S. Saka Besar, S. Saka Ketjil, S. Djaronang, S. Bagoentin, S. Saka Benteng, S. Bakantan, S. Saka Sindawa, S. Banjoelioer, S. Banjoe, S. Bahoeor, S. Panggal, S. Basirih, S. Alinau, S. Tabenkan, S. Pelopoeran, S. Pahalau, S. Gëlagar, S. Boehar, S. Kolojan, S. Pijoeng, S. Bagoo



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16 MARCH 1945

route passes through the town of Oelin, 14 miles to the southeast. At Martapoera a north – south paved highway leads to Kintap, 40 miles southeast of Martapoera, and to Tandjoeng, 95 miles north of Martapoera. It connects with the main towns on the Soengai Negara and its tributaries. There are several short roads from Bandjermasin westward to the Soengai Barito.

(*c*) *Air.* An airfield is 14 miles southeast of Bandjermasin and ½ mile southeast of Oelin.

(3) Physical characteristics.

Bandjermasin occupies a swampy site on both banks of the Soengai Martapoera, approximately 4 miles northeast of its confluence with the Soengai Barito. The main part of the city, which contained the official Netherlands quarter, lies on reclaimed land at the eastern side of Tatas (Taos Island). Tatas is bordered by the Soengai Barito on the west, the Soengai Martapoera on the south and east, and the Soengai Kween on the north. The Chinese section is on the east bank of the Martapoera, opposite the Netherlands quarter. Native villages and swamps surround the city. It is reported that most streets are 30 feet wide and paved with asphalt (FIGURE VIII - 5). The main street, which runs along the western water front, is 80 feet wide. Drainage canals, bridged by wooden walks, extend along streets leading to the river.

(4) Factories.

The following industrial establishments are in or near Bandjermasin:

4 rubber factories.
2 rice mills.
Oil factory (probably vegetable oil).
Paper mill (from Japanese report).
Government printing works.
Textile mill (from Japanese report).
Tanning factory.
Smelting works.

(5) Warehouses and storage.

There were several warehouses along the water front in the main part of the city, and other warehouses and 2 oil-storage depots on the Soengai Martapoera southwest of Bandjermasin (FIGURE VIII - 6).

(6) Billeting facilities.

About 1,000 native troops and their families were billeted in the city on the west bank of the river. There were three or four schools, a club, and a hotel. A Seaman's Training Center for 250 students is reported at Bandjermasin.

(7) Health and sanitation facilities.

Bandjermasin has 3 hospitals with a total of approximately 100 beds; an insane asylum with 32 beds; and a 12-bed polyclinic for native troops.

Cesspools provided the only means of sewage disposal.

(8) Internal transportation.

Four ferry lines and 1 bridge connect the 2 parts of the town.

(9) Public utilities.

Most of the inhabitants used rain water or water brought from other towns. A public waterworks was reported in 1940.

Two power plants are reported in Bandjermasin, one in the Netherlands section and the other on a barge moored in the Soengai Martapoera. There are also 2 generating stations.

FIGURE VIII - 5. *Bandjermasin.*
Street scene.

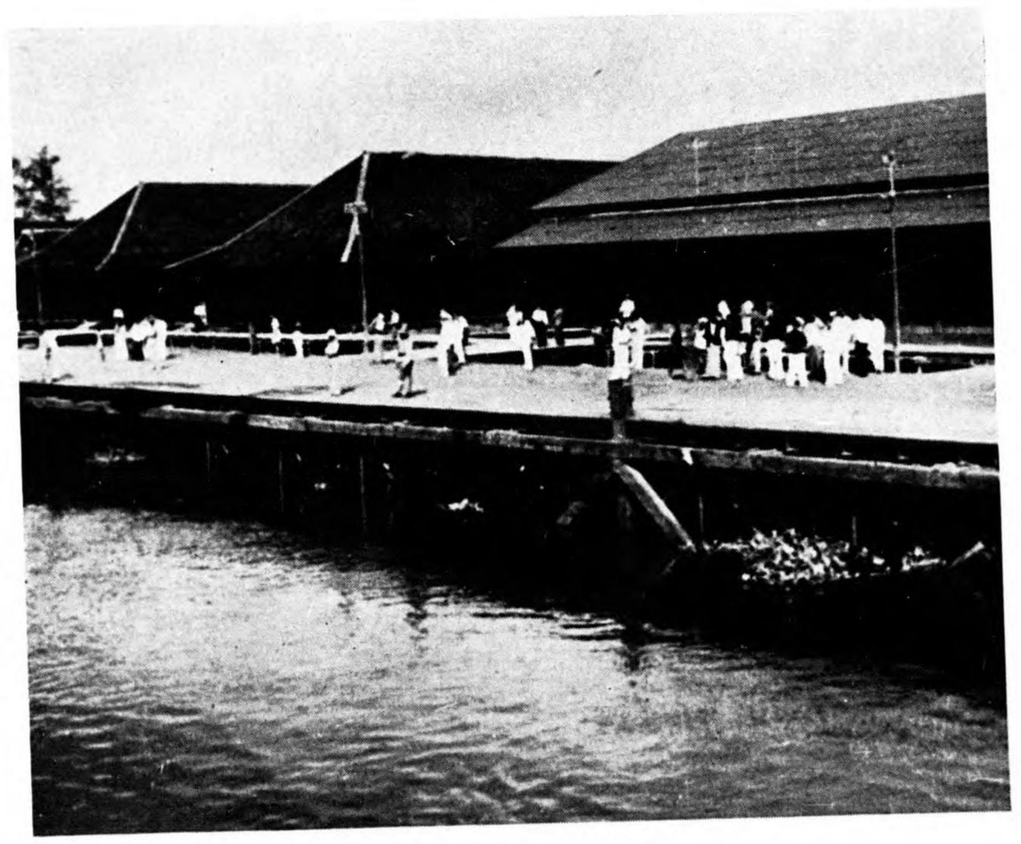

FIGURE VIII - 6. *Bandjermasin.*
Warehouses on waterfront. 1940.

Two ice factories have been reported. Telephone service was available between Bandjermasin and Martapoera, and cable service with Java; there were radiotelegraph and radiotelephone facilities and a local broadcasting station.

(10) Repair and service facilities.

There are 2 machine shops and 3 shipyards with a combined total of 2 slipways, 1 floating drydock, and a repair shop for small steamers.

C. Balikpapan, Netherlands Borneo (1930 population: 29,843).

(1) Importance.

Balikpapan (FIGURE VIII - 7), one of the most important oil ports of the Far East, exports large quantities of oil to Japan. It is on Straat Makassar (Makasser Strait), about midway between the Celebes Sea and Java-zee. Petroleum refining, lumbering, and shipping are the principal industries. The refineries of Balikpapan are served by oil pipelines from the

oil fields at Sangasanga, 62 to 74 miles to the north, and from the Sambodja fields, 36 to 43 miles to the north. The settlement formed a subsection of the district known as Southeast Borneo; although it was nominally under the administration of the Governor of Netherlands Borneo, all affairs of the town and its hinterland were managed by officials of the Bataafsche Petroleum Maatschappij (Batavian Petroleum Company) (FIGURE VIII - 8).

(2) Means of access.

(*a*) *Water.* Balikpapan-baai (bay), on which the harbor is situated, is formed by the estuaries of several rivers. Vessels with a draft of 24 feet can enter the harbor, which provides safe anchorage in all seasons. Vessels of the Koninklijke Paketvaart Maatschappij (Royal Packet Navigation Company) called regularly at Balikpapan.

(*b*) *Road.* A dry-weather road extends along the pipeline to Sambodja on the north. The Japanese may have completed a 2-lane dry-weather highway south to Bandjermasin, via Tanahgrogot and Amoentai. A dry-weather road to Samarinda, begun by the Dutch before Japanese occupation, has probably been completed. Two or three very short roads extend out of the city.

(*c*) *Air.* There is a seaplane station on a small river near the northern margin of Balikpapan. The Koninklijke Nederlandindsche Luchtvaart Maatschappij (Royal Netherlands Indies Airlines Company) provided regular service to Lingkas, 320 miles north, and to Bandjermasin. An airfield with surfaced runways has been reported 6 miles east of the town.

(3) Physical characteristics.

Balikpapan extends around the tip of a southward-projecting peninsula (FIGURE VIII - 7). It is bordered on the west and south by Balikpapan-baai and on the east by Straat Makassar. The town extends along the shore for about 3 miles, principally on the western side of the peninsula, and averages about ¼ mile in depth. Industrial and harbor development occupy most of the western section. European, Chinese, and native quarters are on the southern margin (FIGURE VIII - 9) which is separated from the area to the north by a prominent hill (Signal Station Hill).

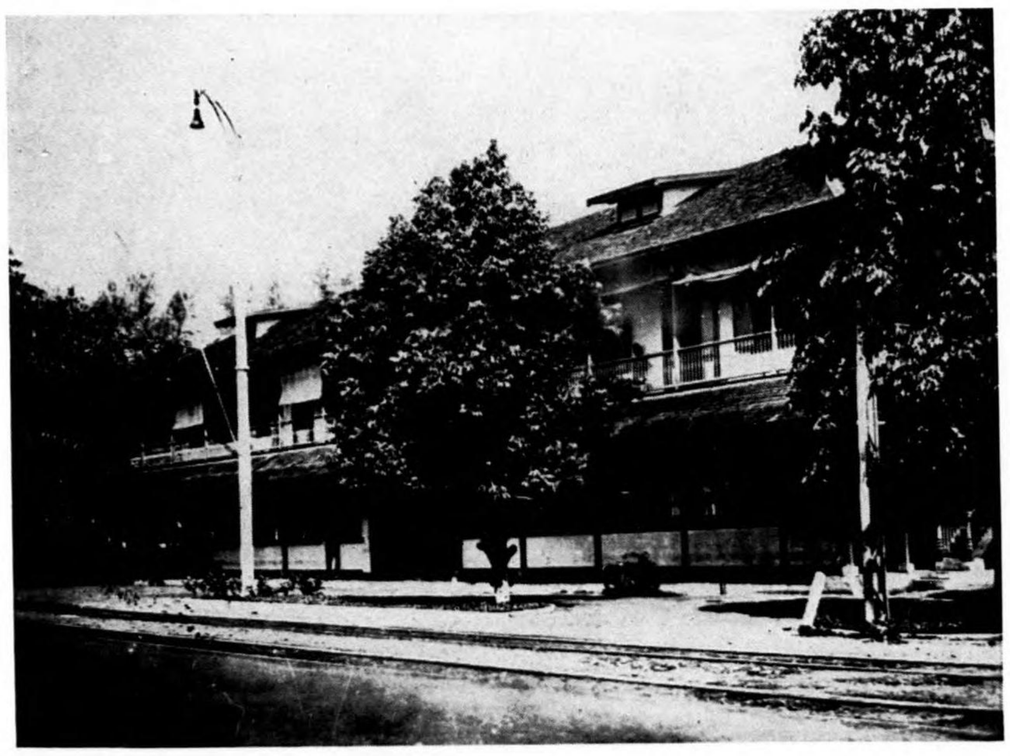

FIGURE VIII - 8. *Balikpapan.*
Offices of Bataafsche Petroleum Maatschappij. Looking E.

FIGURE VIII - 9. *Balikpapan.*
View from Signal Station Hill, showing coolie quarters in southern residential section. Looking SW.

(4) Factories.

Balikpapan is probably the most important industrial city of Borneo. The industrial plants (FIGURE VIII - 7) are:

New oil refinery (Pandansari Refinery), northern part of the town.

Sulfuric acid plant, east of the new refinery.

Plant for the manufacture of oil drums and gasoline cans, east of the new refinery (daily capacity: 7,500 cans).

Paraffin and lubricating oil refinery, south of the new refinery.

Old disused refinery, south of paraffin and lubricating oil refinery.

Cracking plant, partially destroyed, east of the old refinery.

(5) Warehouses and storage.

Oil-storage tanks are distributed throughout the northwestern section of the town, and extend southward paralleling the water front. Their prewar capacity was about 7,600,000 barrels (42 gallons per barrel) and about ½ this space is still serviceable. There are warehouses near the new refinery and a storage depot north of the old refinery.

(6) Billeting facilities.

Workmen's barracks are situated near the new refinery and other oil refineries (FIGURE VIII - 7). A barracks area with more than 50 buildings is in the hills about 2½ miles southeast of the new refinery. There are several other barracks, some constructed by the Dutch and others by the Japanese.

(7) Health and sanitation facilities.

The oil company maintained a hospital, and there was also a district hospital. The total number of hospital beds was 350. Sanitary conditions are reported to be much better than in most of Netherlands Borneo.

(8) Internal transportation.

A steam railroad connects the northern and southern parts of the city. It has connections with 6 of the 8 piers. A paved street parallels the railroad (FIGURE VIII - 10).

(9) Public utilities.

(*a*) *Water.* Water of poor quality is supplied through an 8-inch pipeline from the Soengai Semui (river), about 15 miles to the north. Consumption is estimated at about 49,700 U.S. gallons per day. There are a number of wells in the town. A new waterworks is reported to have been under construction in 1939.

FIGURE VIII - 7
BALIKPAPAN
JANIS 150
CONFIDENTIAL

BORNEO
BALIKPAPAN

- STREET OR ROAD
- ROAD, APPROXIMATE LOCATION
- LIGHT RAILROAD
- NON-INDUSTRIAL BUILDING
- INDUSTRIAL INSTALLATION, APPROXIMATE LOCATION
- APPROXIMATE LIMITS OF PLANT AREA
- OIL TANK FIELD, APPROXIMATE LOCATION (SOME TANKS DESTROYED)

0 250 500 750 METERS

0 250 500 750 YARDS

RELIABILITY OF DATA			
DATA	QUAN	QUAL	LOC
COASTLINE		GR-I	OA
STREETS, ROADS			NE
ROADS, APPROXIMATE LOCATION			OA
RAILROADS			NE
NONINDUSTRIAL BUILDINGS		GR-I	NE
INDUSTRIAL INSTALLATIONS		GR-I	OA
OIL TANKS			OA

Quantitative & Qualitative Data
R Reliable
GR Generally Reliable
U Unreliable
Coverage of Data
C Complete
I Incomplete
Location of Data
A Accurate
NE Not Entirely Accurate
OA Only Approx. Accurate

QUANTITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's quantitative data, the data which are measurable, including economic or population statistics, hypsometric data, the width of roads, gauges of railroads, etc.

QUALITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's qualitative data which shows the types of road surfaces, character of beaches, types of terrain, etc.

COVERAGE. The letters C and I in combination with R, GR, or U are an estimate of the degree of completeness of quantitative and qualitative data.

LOCATIONAL DATA. The letters A, NE, and OA are estimates of the plotted accuracy of data within the limits of scale and width of line.

R.A. OSS

B A L I K P A P A N –

B A A I

(B A Y)

NEW (PANDASARI) REFINERY
Boilerhouse Unit
Being reclaimed
Pumphouses
Furnaces
Fractionating Towers
Distillation Units
Pier or Breakwater
WAREHOUSE AREA OR WORKMEN'S QUARTERS
WAREHOUSE AREA
SULFURIC ACID PLANT
Sulfur Dioxide Plant
Sulfuric Acid Storage
New Sulfuric Acid Plant
Old Sulfuric Acid Plant
Sulfur Storage
Boilerhouse
Drum Storage
Storage Sheds
Drum Storage
Drum Construction Plant
Drum Storage
Drum Reconditioning Plant
DRUM FACTORY
Pier No. 7
Pier No. 6
Pumphouse (Tank Installations)
Ammonia Plant
Power House
Administrator's Residence
Paraffin Refinery
Railroad Office
Paraffin Storage Sheds
Pier No. 5
PARAFFIN AND LUBRICATING OIL REFINERY
New Saw Mills
Patent Slip
Probable Transformer Station
Railroad Repair Shop
WORKMEN'S QUARTERS
Storage Buildings
Telephone Office
Pier No. 4
WAREHOUSE AREA
OLD REFINERY
Pier No. 3
Water Pumphouse
Crude Oil Battery
Fractionating Column
Boilerhouse
Ethyl Plant
Pier No. 2
Pier No. 1a
10-Ton Crane
WORKMEN'S QUARTERS
Crude Oil Tanks
Pier No. 1
Government Pier
Customhouse
Cable Station
Telephone Exchange
Harbor Master's Office
Furnaces
Fractionating Column
Pumphouse
Pumphouse
Fractionating Column
Furnace
Boilerhouse
Compressor
Gasometer
Stabilizers
CRACKING PLANT
SIGNAL STATION HILL
Signal Station
NATIVE QUARTERS
RESIDENTIAL AREA
Administrator's Residence
Hospital
To Radio Station 3 Miles
School
Assistant Administrator's Residence
Police Quarters
STRAAT MAKASSAR
N

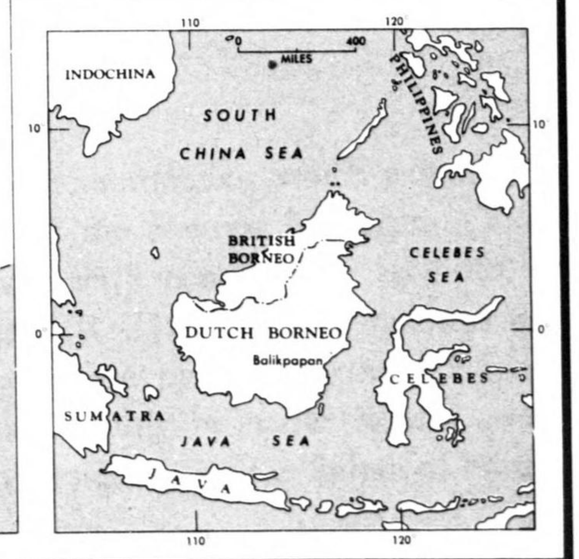

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FIGURE VIII - 10. *Balikpapan.*
Main road and railroad line along waterfront. 1928.

FIGURE VIII - 11. *Samarinda.*
Riverfront and residential section.

FIGURE VIII - 12. *Samarinda.*
Main street and commercial section. Looking E. Before 1942.

(*b*) *Power.* The oil company operated a power station which furnished light and power to the industrial plants and to the town.

(*c*) *Ice.* There was equipment for the production of small quantities of ice.

(*d*) *Communications.* There is a good local telephone system. A radiotelegraph station also furnished radiotelephone communications with other East Indian islands. Balikpapan had land-telegraph connections with Bandjermasin and Samarinda, and cable connections with Manado, Soerabaja, and Makassar.

(*e*) *Fire fighting.* There is a hydrant system in the industrial area. A complete chemical fire-fighting system was installed in 1935.

(10) Repair and service facilities.

There is a patent slip for marine repairs, a railway repair shop, an iron foundry, and an instrument maker's shop in Balikpapan. The refineries have equipment for making minor machine repairs.

(11) War damage.

The oil-storage capacity has been reduced to about ½ the prewar figure by Dutch demolition and aerial bombing. The cracking plant and the old refinery are reported to have been severely damaged and are no longer in operation. The new refinery and paraffin plants have been damaged but are probably operating at near capacity rates.

D. Samarinda, Netherlands Borneo (1930 population: 11,086).

(1) Importance.

Samarinda is on the Soengai Mahakam (Kutei River) about 25 miles west of Straat Makassar (Makasser Strait) and 60 miles north of Balikpapan (FIGURE VIII - 68). It was an export center for coal, ironwood, ivory, and jungle produce. Netherlands Borneo officials of the area had their headquarters in Samarinda, and the Sultan of Koetai (Kutei) maintained a residence in the town.

(2) Means of access.

(*a*) *Water.* Coastal steamers 100 to 125 feet long can reach Samarinda by way of at least 2 of the distributaries of the Soengai Mahakam. A government pier and several wharves accommodate ships drawing up to 18 feet. The town of Soengaimariam, about 8 miles downstream from Samarinda, was a settlement of the Bataafsche Petroleum Maatschappij (Batavian Petroleum Company) and a center of oil export for the Samarinda area. Coal is exported from the area at Loabokong, a village about 4 miles upstream from Samarinda. Samarinda was visited regularly by small ocean-going vessels of the Koninklijke Paketvaart Maatschappij (Royal Packet Navigation Company), and there was daily motor-boat communication with Tenggarong, 22 miles upstream.

(*b*) *Road.* An all-weather road follows the west bank of the Soengai Mahakam about 30 miles from Samarinda to Tenggarong. During extraordinarily heavy rains some sections are flooded. A dry-weather road, begun by the Dutch before Japanese occupation, probably has been completed to Balikpapan.

(*c*) *Air.* There was a seaplane landing at Soengaimariam, 8 miles downstream from Samarinda. A small airfield with grass runways is reported near Samarinda.

(3) Physical characteristics.

Samarinda is an elongated settlement which extends about 2 miles along each side of the Soengai Mahakam (FIGURE VIII - 11). The European settlement, harbor facilities, commercial section (FIGURE VIII - 12), and the quarters of the Chinese and native traders are on the northern bank; the southern bank is occupied mainly by native houses, some of them on rafts, and by the residences of the Sultan of Kutei.

(4) Factories.

A small boatyard on the north bank near the eastern edge of the settlement had 2 marine railways and 4 slipways. It built craft of 50 tons or less. There was a soap factory in Samarinda.

(5) Warehouses and storage.

At least 40 large warehouses are to the west of the boatyard.

(6) Billeting facilities.

Japanese personnel buildings are associated with the warehouse area. A rest house, a former Dutch school, and several Chinese schools are other possible billets.

(7) Health and sanitation facilities.

The Dutch government maintained a district hospital (244 beds) and a military hospital in the town. Sewage disposal was largely by private cesspool.

(8) Internal transportation.

The streets of Samarinda were gravel-surfaced. There were a few taxis. A ferry of 5-ton capacity operated across the Soengai Makaham.

(9) Public utilities.

Water was obtained from the river and filtered at a plant in the hills northwest of the town. Daily consumption was about 25,300 gallons. A power plant supplied electricity for lighting. There were 2 ice manufacturing plants.

Telephone lines extended upstream to Loateboe, a short distance north of Tenggarong. There was a radiotelegraph station in Samarinda.

(10) Repair and service facilities.

The boatyard, equipped with a winch for pulling vessels from the water, repaired vessels ranging up to 100 tons. The boatyard foundry made small steel castings.

There were several garages in Samarinda.

(11) War damage.

During the Japanese invasion Samarinda was subjected to artillery fire.

E. Lingkas (Linkas), Netherlands Borneo (1930 population: 11,589).

(1) Importance.

Lingkas is on the southwestern shore of Poelau Tarakan (island), about 65 miles south of the North Borneo frontier (FIGURE VIII - 13). It is an important oil port developed by the Bataafsche Petroleum Maatschappij (Batavian Petroleum Company), and exports about 850,000 tons of oil a year. The port has been very active under Japanese domination.

(2) Means of access.

(*a*) *Water.* Ocean vessels of deep draft (29 feet) can enter the harbor from the Celebes Sea to the east and berth at several piers (FIGURES VIII - 13 and VIII - 14).

(*b*) *Rail.* A narrow-gauge railroad connects Lingkas with the village of Tarakan (Pamoesian) in the Pamoesian oil field, 2½ miles to the north.

(*c*) *Road.* An asphalt road constructed on a coral bed extends to Tarakan and on to the Djoeata oil field, about 8 miles northwest of Lingkas. Frequent bus service was maintained on this highway. Another highway extended directly northwest to Djoeata field.

(*d*) *Air.* An airfield about 3½ miles northwest of Lingkas is reported to have been much enlarged by the Japanese. Seaplanes can land and take off in the harbor, which has good anchorage and a seaplane dock.

(3) Physical characteristics.

The island of Tarakan is hilly, rising to a maximum elevation of 512 feet. Most of it is covered with dense jungle. The commercial section of Lingkas (FIGURE VIII - 13), consisting principally of Chinese shops, extends along the water front. The homes of European employees of the oil fields were farther inland. The village of Tarakan is a densely populated integral part of the Lingkas urban area (FIGURE VIII - 14). It has a system of metalled streets, but the Lingkas area has comparatively little street development (FIGURE VIII - 15).

(4) Factories.

A large oil-separating reservoir and a sawmill are near the harbor.

(5) Warehouses and storage.

There are approximately 18 oil-storage tanks at Lingkas, of which about half have been destroyed by recent bombing. Many of the original oil-storage tanks at Tarakan inland have been destroyed, but some are still in operation. There are underground storage facilities and 7 fuel tanks near the airfield.

(6) Billeting facilities.

There are 2 groups of large workers' barracks in Tarakan (FIGURE VIII - 16) and about 12 barracks at the Djoeata oil field.

(7) Health and sanitation facilities.

A modern pavilion-type hospital with 120 beds was maintained by the oil company. There was also a poorly equipped Dutch military hospital with 12 beds. Lingkas has a sewerage system with a settling basin on the northwestern outskirts of the towns.

(8) Internal transportation.

A Decauville railroad to Tarakan furnishes transportation for the settlement.

(9) Public utilities.

(*a*) *Water.* Water is taken from the Soengai Pamoesian (river) and is filtered and chlorinated. Many streams and wells have been heavily contaminated with oil.

(*b*) *Power.* There is a small power plant on the harbor front and another in Tarakan.

(*c*) *Communications.* A telephone exchange connected Lingkas with the various parts of the oil fields. There was a radiotelegraph station in Lingkas.

(10) Repair and service facilities.

The oil company had engine repair shops at Tarakan to repair oil pumps. There was also a locomotive shed at Tarakan.

First Revision

BORNEO
LINGKAS AND SOUTH TARAKAN ISLAND

PRINCIPAL HIGHWAY
SECONDARY ROAD
TRAIL

SETTLED AREA
OIL FIELD
OIL TANKS

▲ 176 SPOT HEIGHT (IN FEET)

0 ½ 1 2
MILES
0 ½ 1 2
KILOMETERS

FROM: *Topografische Dienst, Batavia, 1936*

117°36′
117°38′
3° 22′
3° 20′
3° 18′

Djoeata
176 ▲
▲ 344
▲ 334
▲ 220
▲ 295
AIRFIELD
Peningki-baroe
Karanganjar
Simpangtiga
Klapa
Sibengkok
Lingkas
Tarakan (Pamoesian)
Peningki
S. Sesanit
S. Seloenit
S. Sibengkok
S. Lalanga
S. Meloendoeng
S. Pamoesian
S. Boeaja
S. Sakalawa
S. Nengitan
DECAUVILLE R.R.

NO. 3276
REVISED 7 MARCH 1945

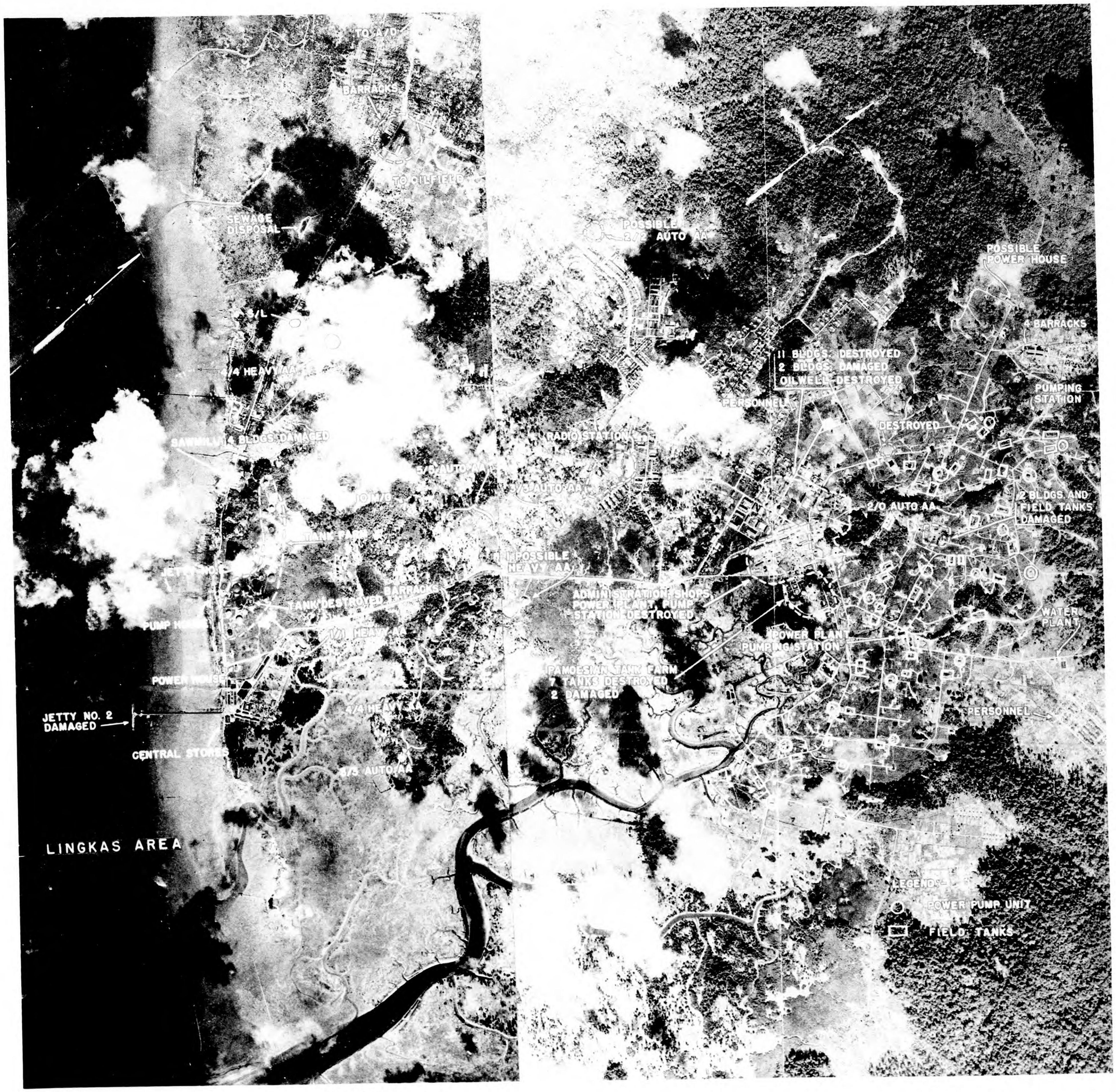


FIGURE VIII - 14. *Lingkas.*
Airview of Lingkas and Tarakan. Looking NW. 1944.

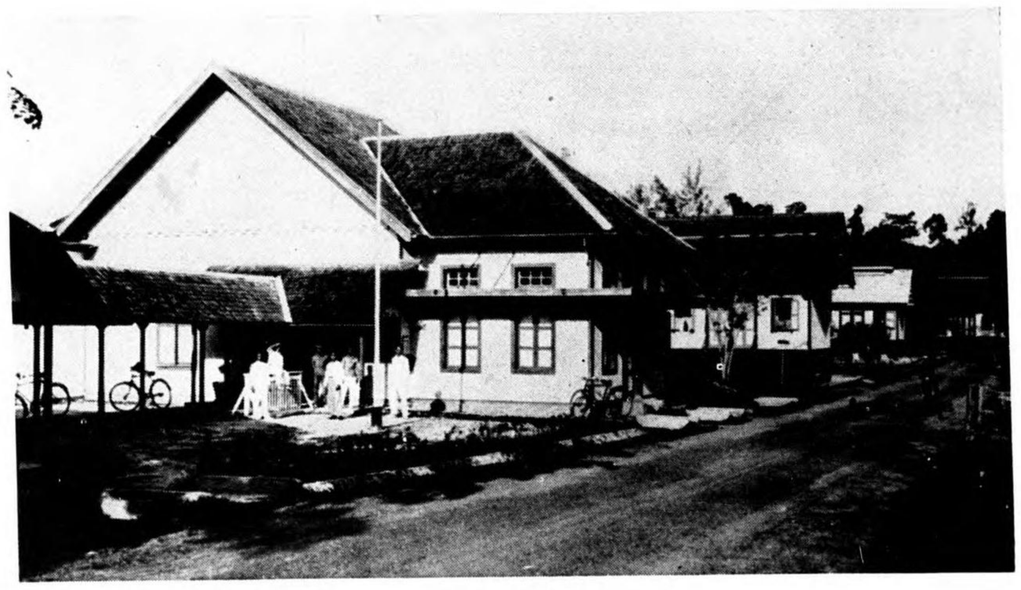


FIGURE VIII - 15. *Lingkas.*
Main street. 1931.

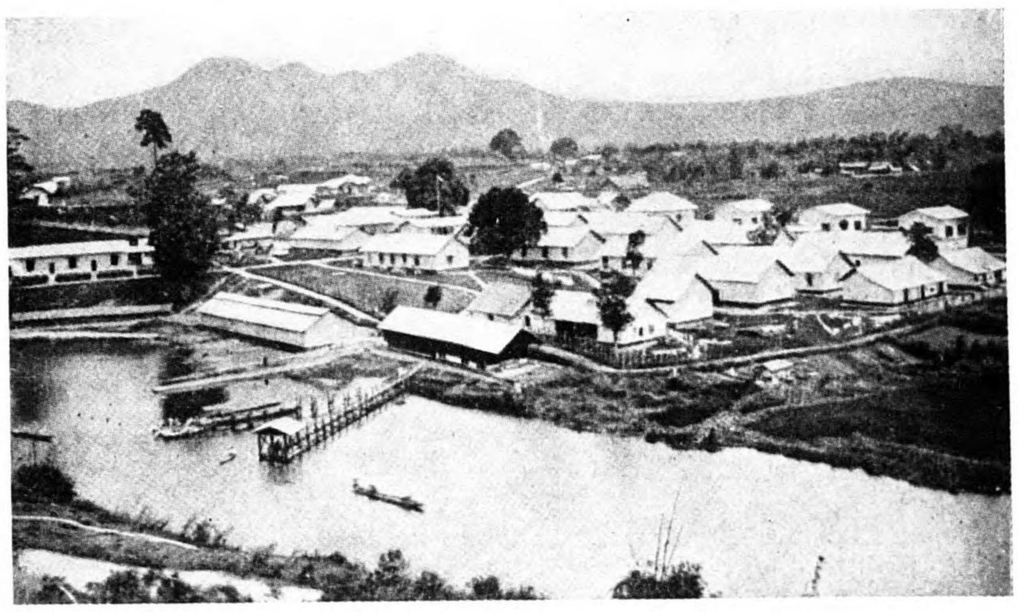


FIGURE VIII - 16. *Lingkas.*
Coolie quarters of Bataafsche Petroleum Maatschappij.

(11) War damage.

A large part of the oil-storage facilities of Lingkas and Tarakan have been destroyed or seriously damaged. Power pumps, shops, a powerhouse, and barracks have been destroyed at Tarakan. Many of the buildings in the commercial section of Lingkas have been destroyed.

F. Tawau (Tawao), North Borneo (1931 population: 1,840; 20,000 in immediate area).

(1) Importance.

The port of Tawau is on the northeast coast of Borneo (FIGURE VIII - 68), about 5 miles north of the Netherlands Borneo boundary. It is on the north side of Cowie Harbour, 1½ miles west of the Sungai Tawau (river). The town was an export point for rubber, coconuts, timber, and hemp, and the administrative headquarters of the East Coast Residency.

(2) Means of access.

(*a*) *Water.* Tawau had direct steamship communication with Japan, Hong Kong, and China, and connections with Sandakan and the ports of the east coast of Borneo. A long pier with a T-head wharf can accommodate vessels drawing up to 21½ feet, but ships of any size can enter the harbor anchorage. Junks and lighters were sometimes used for transshipping cargo.

(*b*) *Rail.* A hand-operated railway (narrow-gauge) runs from the pier head 6 miles north through a large rubber estate. This line is double-tracked on the pier.

(*c*) *Road.* An all-weather road extends about 7½ miles northeast of Tawau. A dry-weather road runs about 13 miles north through the rubber estate. Another dry-weather road extends about 2½ miles northwest to the Tawau Forest Reserve.

(*d*) *Air.* An airfield with 1 serviceable runway was recently constructed about a mile north of the town.

(3) Physical characteristics (FIGURES VIII - 17 and VIII - 18).

Tawau is an elongated town which follows the gentle curve of Tawau Point. Dunlop Street, the principal thoroughfare, is a metalled street 18 feet wide and extends roughly east – west (FIGURE VIII - 19). It is bordered by commercial buildings in the wharf area. Government buildings are concentrated in the western part of the town (FIGURE VIII - 20). A tidal mud flat, in places 100 yards wide, divides the principal part of the village from a few scattered dwellings to the north. A 2,070-acre coconut plantation (Tawau Estate) borders the town on the north and east, and the Kuhara Estate, with 13,000 acres in rubber and 3,550 acres in Manila hemp, lies farther north.

(4) Factories.

In 1940 there were 13 coconut mills and a hemp factory in the Tawau area. A small sawmill on the south side of Dunlop Street, about 1 mile east of the pier, was owned by the Kuhara Estate. Reports indicate that the Japanese have installed machinery for the manufacture of clothing on the rubber estate and elsewhere. At the Japanese Fishing Company's headquarters, 1½ miles east of the town, there is a shipbuilding yard for lighters and launches.

(5) Warehouses and storage.

Storage facilities are available in a customs godown on the pier, a government rice godown at the base of the pier, and a small storage dump at the airfield. The Japanese are reported to have constructed a large number of new godowns.

(6) Billeting facilities.

The police barracks in western Tawau has a capacity of about 30 men (FIGURE VIII - 21). A government rest house and government quarters, in the same section, and a motion-picture theater, in the commercial section, can probably be used for billeting.

(7) Health and sanitation facilities.

A hospital with 26 beds for Asiatics was located northwest of Tawau (FIGURE VIII - 22). There was a modern hospital at the rubber estate.

(8) Buildings.

Two-story timber structures predominate.

(9) Internal transportation.

At the end of 1939 there were 21 automobiles, 13 busses, 2 trucks, and a few motorcycles in the town.

FIGURE VIII - 18. *Tarawa.*
Aerial view of town. 23 October 1944.

FIGURE VIII - 19. *Tarawa.*
Dunlop Street and commercial section behind pier. 1932.

FIGURE VIII - 20. *Tarawa.*
Government offices.

FIGURE VIII - 17
TAWAU
JANIS 150
CONFIDENTIAL

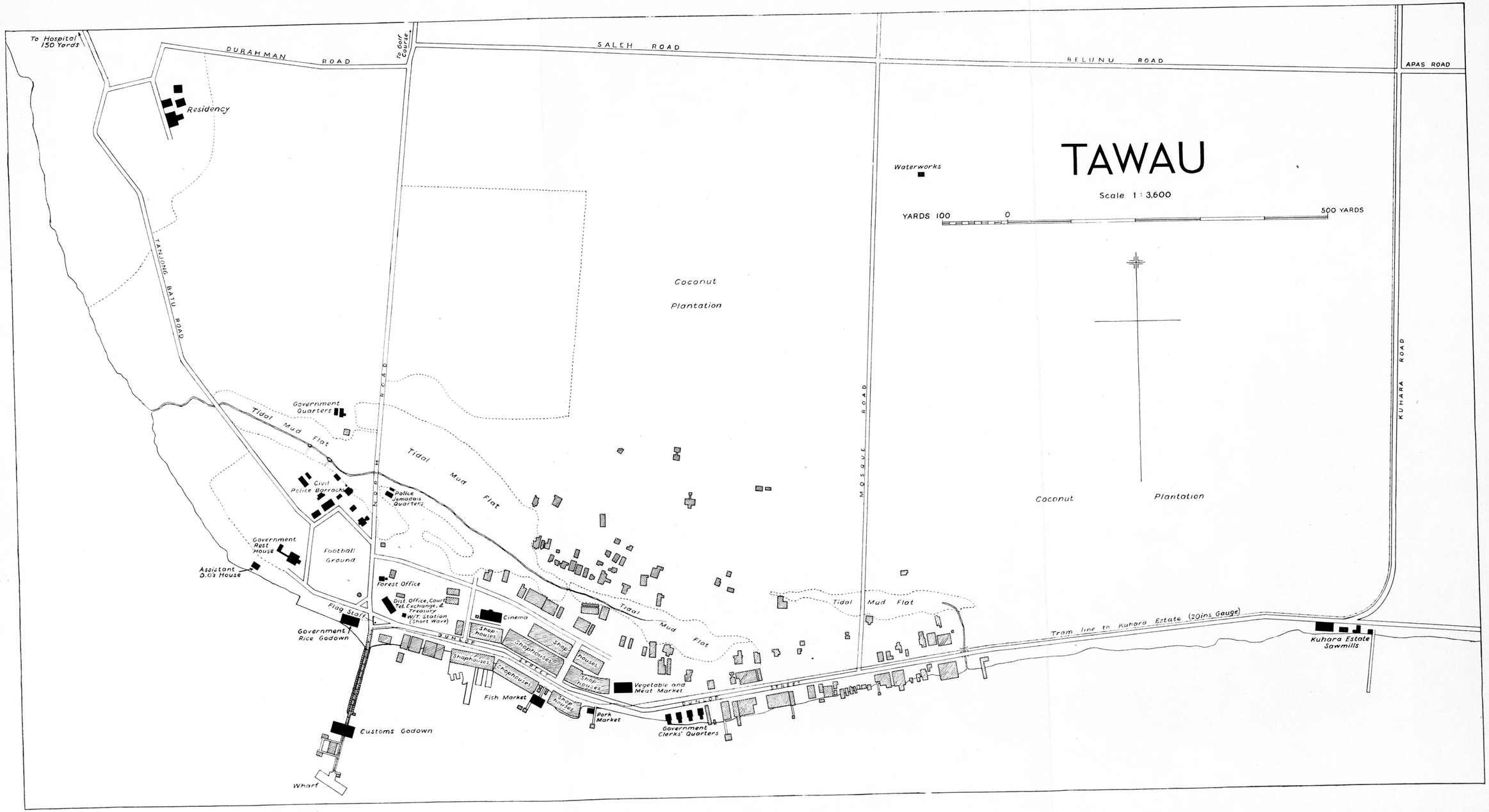


FIGURE VIII - 17. *Tawau.*
Town plan.

FIGURE VIII - 21. *Tawau.*
Police barracks.

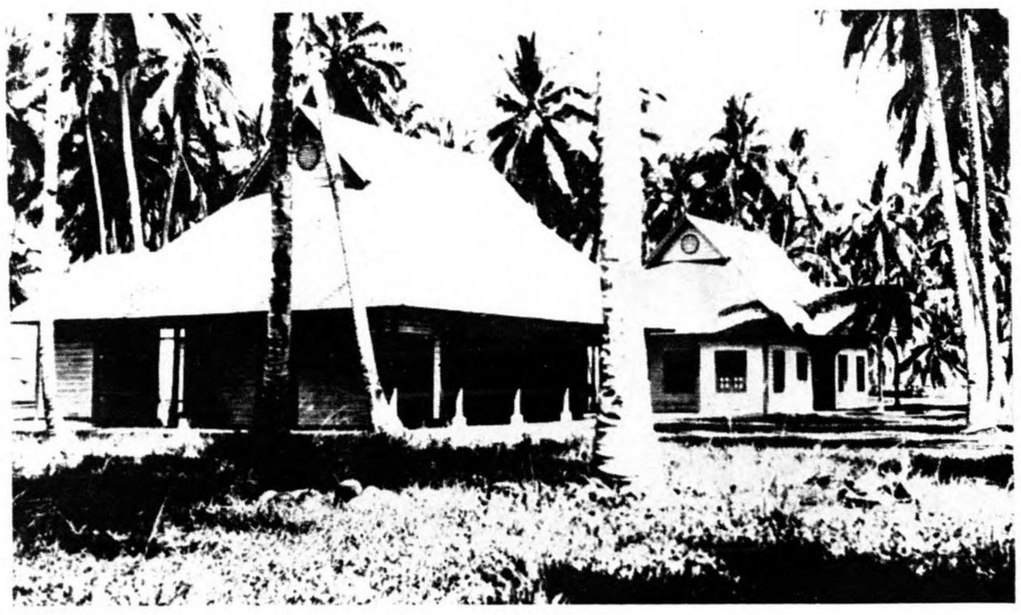


FIGURE VIII - 22. *Tawau.*
Government hospital. 1931.

(10) Public utilities.

(*a*) *Water.* Water was pumped from wells to a reservoir about ½ mile northeast of the town, and then delivered by gravity to standpipes. Water consumption is estimated to be about 21,500 U.S. gallons per day. Flow from the reservoir to the town is reported to have been at the rate of about 22 U.S. gallons a minute. In times of drought river water is used.

(*b*) *Communications.* A telephone exchange and a radiotelegraph transmitter were near the base of the pier in the commercial section.

(11) Repair and service facilities.

A small workshop is reported at the airfield.

G. Lahad Datu, North Borneo (1931 population: 800).

(1) Importance.

Lahad Datu is situated in northeast Borneo on the north side of Darvel Bay, about 65 miles north of the boundary between British and Dutch Borneo (FIGURE VIII - 68). The village is a commercial center and port for local agricultural products, mainly tobacco, rubber, and copra.

(2) Means of access.

(*a*) *Water.* The harbor, a small inlet of Darvel Bay, opens to the south. Pulau Sakar (island) blocks the western half of the entrance and numerous coral reefs fringe the shoreline at varying distances. North of Pulau Sakar is a large anchorage area with depths of 7 to 14 fathoms (FIGURE VIII - 23). The main jetty has depths of 18 feet alongside. In peacetime there was regular steamship service to Sandakan, approximately 60 miles to the north, and to Tawau, about 60 miles to the south.

(*b*) *Road.* Three short roads lead from the village: one runs about 8 miles to the northwest; the second extends eastward along the coast about 8 miles; and the third runs 2 miles northward.

(*c*) *Air.* An airfield with 1 runway lies approximately 2,000 feet north of the town (FIGURE VIII - 23).

(3) Physical characteristics.

The village is built mainly on the water front; a few scattered structures are on the slightly higher ground to the north. The surrounding area is relatively flat and covered with coconut palms. Roads are of coral, well constructed and asphalted. Segama and Tengah Nipah Roads, the main roads in the village, are 15 feet wide. (FIGURE VIII - 23)

(4) Factories.

In 1940 there were 14 coconut-oil mills in the Lahad Datu district. A small workshop was reported at the airfield.

(5) Warehouses and storage.

There were several godowns, including 2 customs godowns with a total area of 2,888 square feet, on the seaward end of the main jetty. One warehouse (120 by 30 feet) is on the west bank of Canal River in the eastern part of the town. A large warehouse-type building lies 1,800 feet northeast of the northwest end of the airfield runway. The Japanese have supply areas in the town and immediately southwest of the runway. Seven warehouses at the base of the jetties were destroyed by bombing in January 1945. (FIGURE VIII - 23)

(6) Billeting facilities.

There are 10 barracks and other probable barracks at the airfield. There are quarters on Segama estate, 8 miles northwest of the village, which house 1,000 coolies. The barracks north of the main jetty has been destroyed. There are also a hotel, a rest house, and several European bungalows in the town. (FIGURE VIII - 23)

(7) Health and sanitation facilities.

A hospital with 20 native beds is probably located east of Canal River (FIGURE VIII - 23).

(8) Internal transportation.

Before the war there were about 25 trucks and busses. Native boats ply Canal River.

(9) Public utilities.

The water supply is probably pumped from a small stream ¼ to ½ mile from the town, and piped to street outlets and fire hydrants.

Several residences are reported to have had small lighting plants.

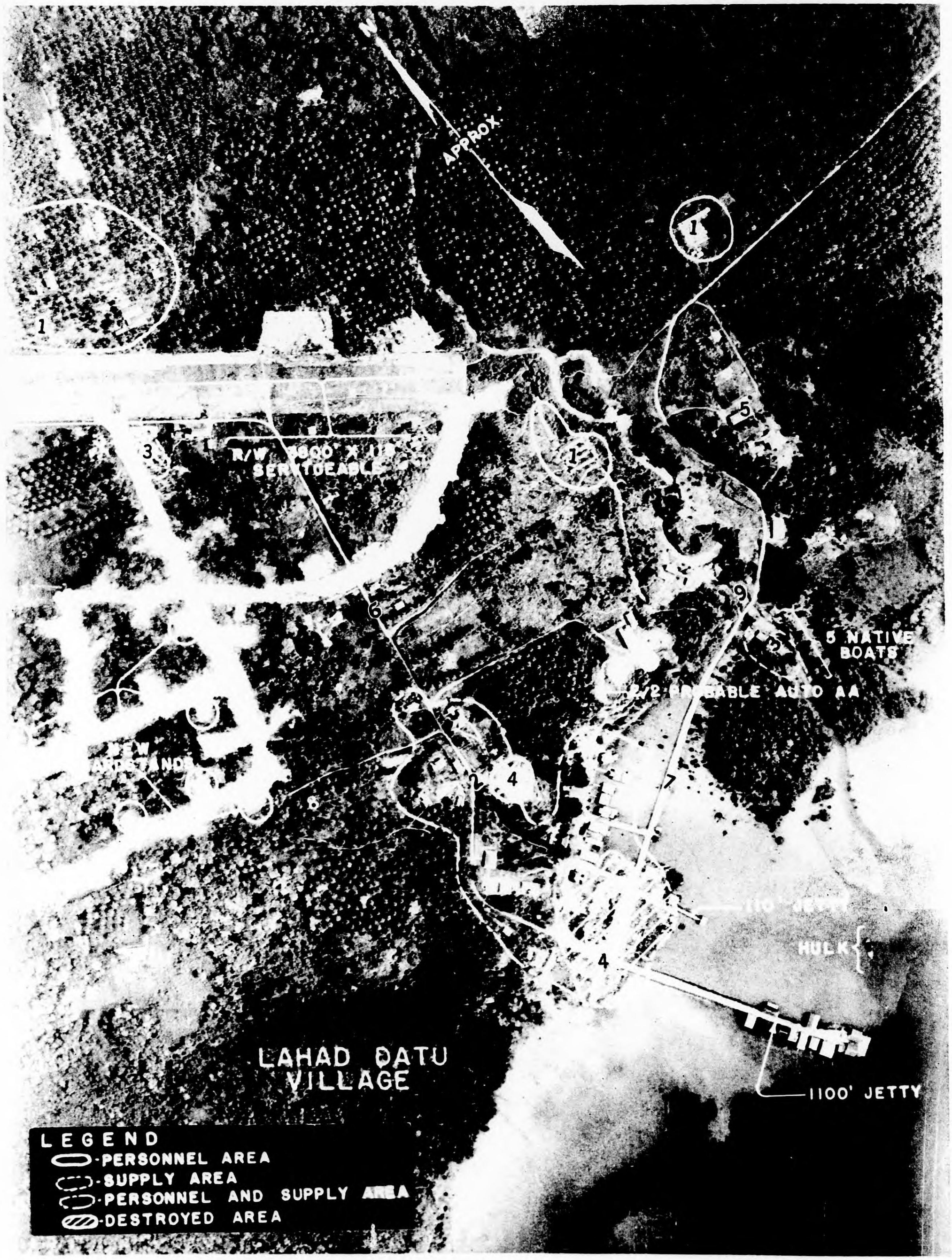


FIGURE VIII - 23. *Lahad Datu.*
Vertical airview of town, 12 January 1945. 1. Personnel area. 2. Personnel and supply area. 3. Supply area. 4. Destroyed area. 5. Hospital. 6. Segama Road. 7. Tengah Nipah Road. 8. Tamoi Road. 9. Canal River.

FIGURE VIII - 24
SANDAKAN
JANIS 150
CONFIDENTIAL

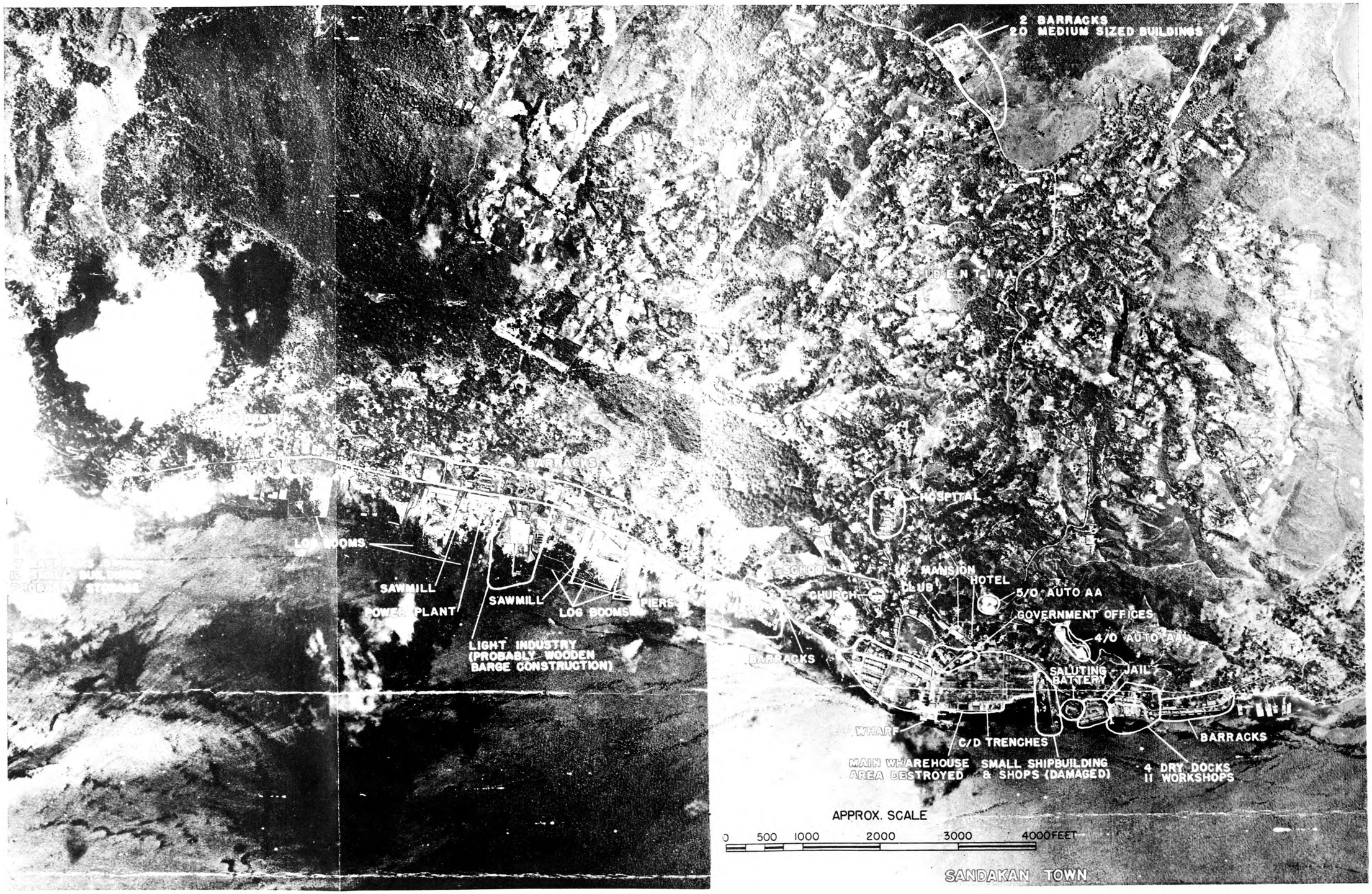


FIGURE VIII - 24. *Sandakan.*
Vertical airview of town, 15 November 1944.

FIGURE VIII - 25
SANDAKAN
JANIS 150
CONFIDENTIAL

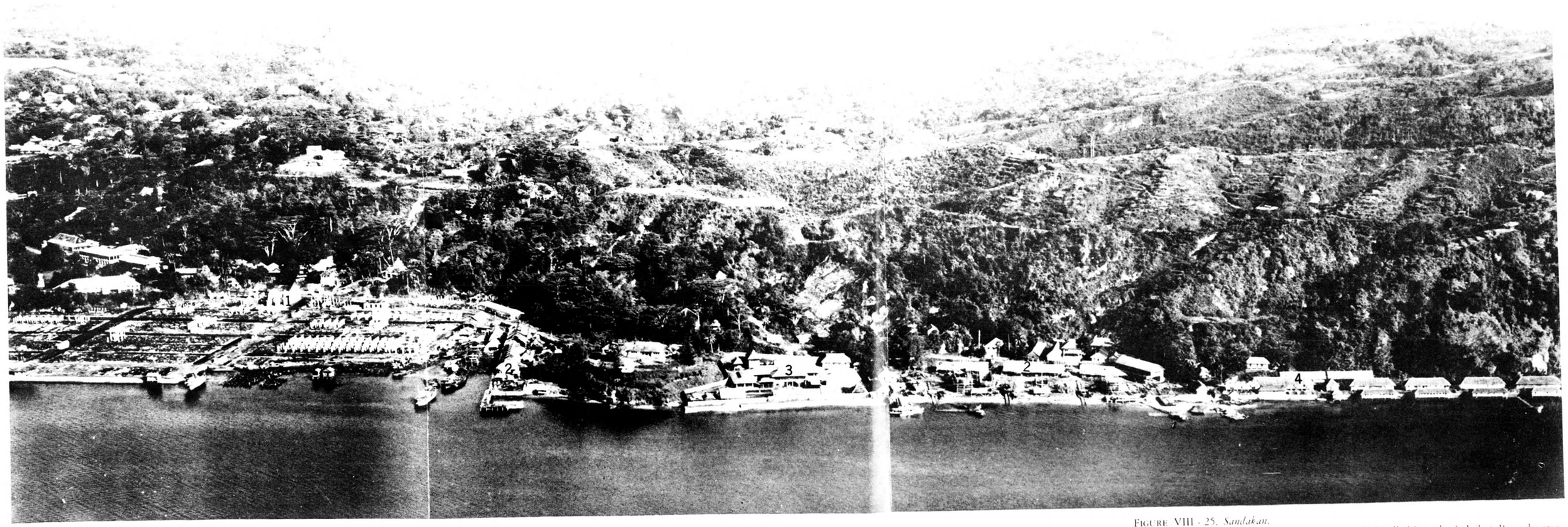


FIGURE VIII - 25. *Sandakan.*

Oblique view of eastern section of the town. Looking N. 18 February 1945. 1. Destroyed warehouse area. 2. Small shipyards. 3. Jail. 4. Barracks area.

There was local telephone service and radiotelegraph communication with Tawau and Sandakan. The radiotelegraph station was located southwest of the junction of Tomoi and Segama Roads (FIGURE VIII - 23).

H. Sandakan, North Borneo (1931 population: 13,723).

(1) Importance.

Sandakan is the principal port and capital of North Borneo. It lies on a small peninsula on the northeastern coast of the island and faces Sandakan Harbour, a large inlet of the Sulu Sea (FIGURE VIII - 24). The principal exports were timber, rubber, copra, cutch, and fish. The Japanese are reported to be constructing wooden ships of 100 to 500 tons at Sandakan.

(2) Means of access.

(*a*) *Water.* The harbor affords spacious anchorage for a large number of ships drawing 29 feet or more. The wharf has a depth of 16¼ feet alongside. There are several piers for smaller vessels.

(*b*) *Rail.* There is reported to be a narrow-gauge logging railroad from Sandakan 8 miles into the jungle. A narrow-gauge railway connects the airfield (4½ miles northwest of the town) with a wharf on the Soengai Kabon China (river), 2 miles northeast of the airfield.

(*c*) *Road.* An all-weather road extends 15 miles northwest, where it joins a 25-mile trail which in turn leads to Beluran at the mouth of the Sungai Sapi. An eastern fork of this road connects with a second trail which extends to the coast 10 miles northeast of Sandakan. Another all-weather route extends westward for 6 miles along the north shore of Sandakan Harbour.

(*d*) *Air.* The Sandakan airfield (2 runways) lies 4½ miles northwest of the town. There is a seaplane landing area in the harbor.

(3) Physical characteristics.

The town, on the north shore of the harbor, is concentrated along the water front (FIGURE VIII - 25). The main part of the town includes government offices, warehouses, and workshops, and lies inland from the Government Wharf (FIGURES VIII - 26 and VIII - 27). Reclamation work has taken place in this section. To the west of the reclaimed area is a native settlement. There are 2 residential sections: one on the coast in the western part of the town, and the other in the hills north of the town. The streets, which are 20 to 30 feet wide, are paved with local sandstone and asphalt macadam.

(4) Factories.

The chief industrial establishments are:

2 large sawmills, west of the town proper (FIGURE VIII - 28).

1 large and 2 small workshops, in the shipyards adjoining the main warehouse area (FIGURE VIII - 25).

Several shipyards with building slips, and marine railways, east of the main warehouse area (FIGURE VIII - 25).

Small shipyard with 3 slipways, 1½ miles southwest of the sawmills.

Former cutch (tanning bark) factory, between the 2 sawmills, reported to be building wooden ships.

Government printing work.

2 coconut-oil mills.

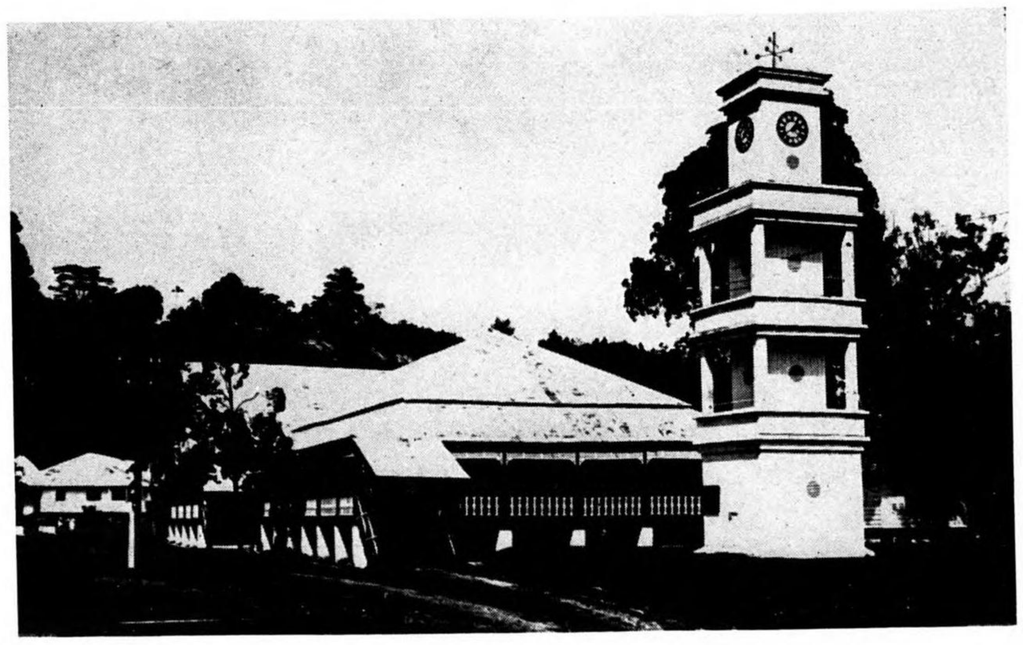


FIGURE VIII - 26. *Sandakan.*
Government offices and clock tower in the main part of the town. Looking N.

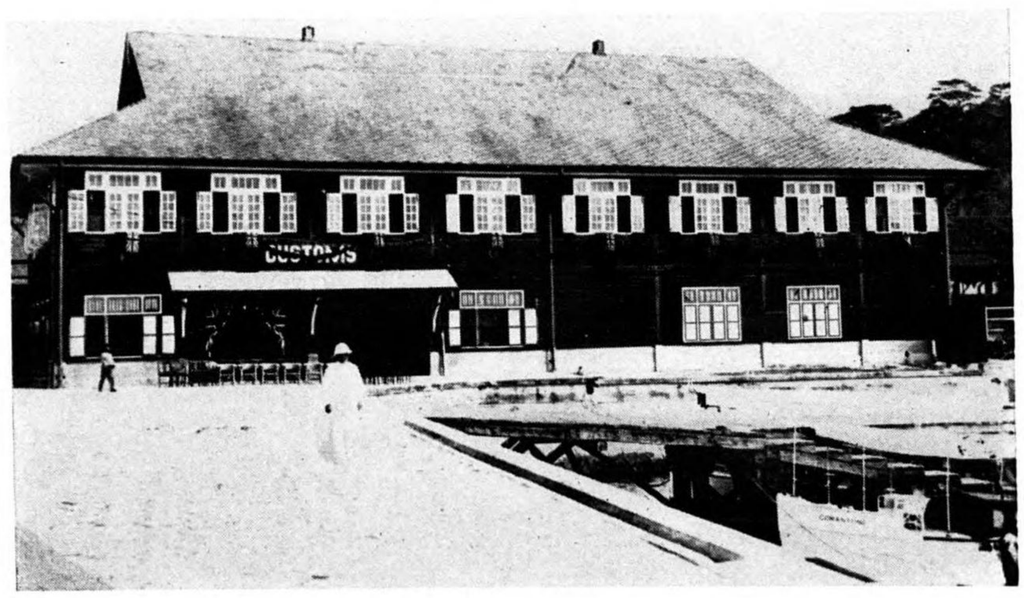


FIGURE VIII - 27. *Sandakan.*
Customs house on the waterfront. Looking NE.

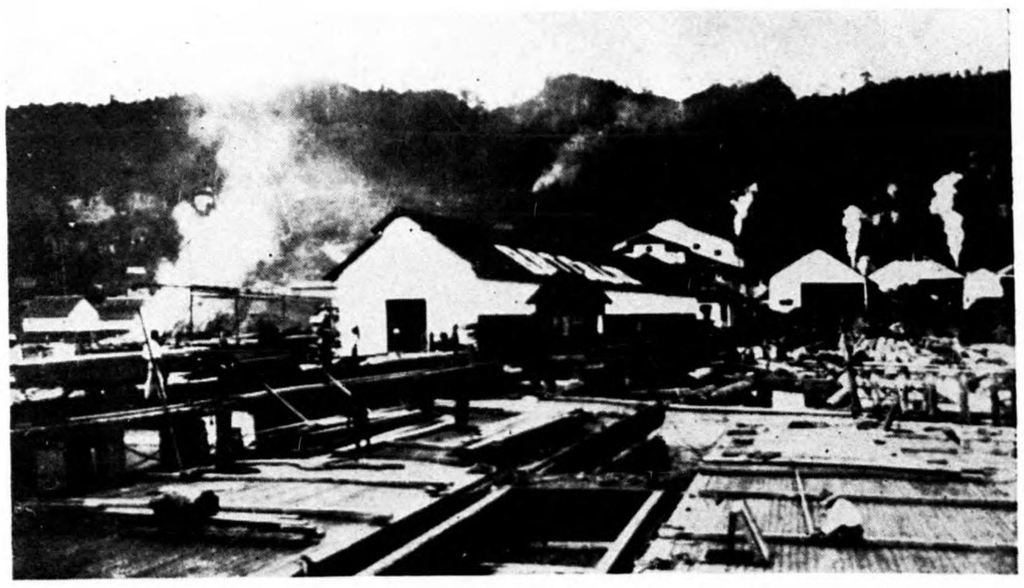


FIGURE VIII - 28. *Sandakan.*
British Borneo Timber Company sawmill. Looking N.

(5) Warehouses and storage.

In December 1944, 80% of the buildings in the main warehouse area had been destroyed. Only seven or eight commercial buildings, some of which were warehouses, remained. Other covered storage included:

1 warehouse, 125 feet long, in the barracks area on the eastern shore (FIGURE VIII - 25).

12 small buildings, probably used for storage, 1½ miles west of the sawmills.

3 probable warehouses, capacity about 15,000 square feet, 1½ miles north of the town.
3 supply areas at the airfield.
6 warehouses, 2½ miles southwest of the airfield.

(6) Billeting facilities.

There are 29 barracks or barrack-type buildings at Sandakan and other facilities near the airfield. The principal ones are:

11 barracks on the shore in the eastern portion of the town (FIGURE VIII - 25).
2 barracks north of the native village.
7 barracks north of the sawmills.
2 barracks in the hills north of the large residential area.
2 barracks near the warehouses southwest of the airfield (FIGURE VIII - 24).
2 personnel areas at the airfield.
85 buildings at a prisoner-of-war camp near the airfield.

(7) Health and sanitation facilities.

A government hospital north of the town had 100 beds. It was equipped with operating facilities, a laboratory, and a dispensary. A mental asylum and a clinic for the treatment of venereal diseases were in Sandakan, and a leper asylum was on Pulau Berhala (island), 3 miles east of Sandakan.

It is reported that the town had a closed sewerage system.

(8) Public utilities.

(*a*) *Water.* The town water supply is pumped from a catchment area 4½ miles to the northwest and from a supplementary catchment area 1 mile from the town. The average daily consumption in 1940 was about 300,000 U.S. gallons. Several springs near the town supply a few of the industrial establishments.

(*b*) *Power.* The Sandakan Light and Power Company, in the barracks area north of the sawmills, has a reported capacity of 400 kilowatts and generates alternating current. Two small steam power plants are associated with the westernmost sawmills. (FIGURE VIII - 24)

(*c*) *Ice.* Air cover indicates that the Sandakan ice factory has been destroyed.

(*d*) *Communications.* There was an automatic telephone system and a telegraph office. Sandakan had 2 radiotelegraph stations, one in the telegraph office and the other 2 miles north-northwest of the town. There is probably a radio direction finder at the airfield.

(*e*) *Fire fighting.* The police department had hand-operated fire-fighting equipment. There were street hydrants.

(9) Repair and service facilities.

The shipyards were equipped for many kinds of marine repairs. There was a workshop at one of the sawmills.

I. Kudat, North Borneo (1931 population: 3,850).

(1) Importance.

Kudat, on the west side of the entrance to Marudu Bay, is the most northerly port of Borneo (FIGURE VIII - 68). It is a distributing center for tobacco and rubber estates and an export point for copra, corn, and eggs. There was regular steamship service to Singapore, as well as to Sandakan and other North Borneo ports. Sandakan is reported to be the capital of the Japanese province of Marudu.

(2) Means of access.

(*a*) *Water.* Kudat Harbour (FIGURE VIII - 29), an indentation on the western shore of the bay, is about 6 miles south of the entrance to the bay. Anchorage is good. The government wharf, at the end of a long pier on the southwestern shore of the settlement, has depths of about 14 feet alongside.

(*b*) *Road.* A 1-lane road extends to Sikuati, 16 miles to the west. Except for the last 2 miles, this is an all-weather road. Another all-weather road extends 11 miles north to Bak Bak. A bridle path, which terminates on the south side of Kudat Harbour, connects with a route to Jesselton about 100 miles to the southwest.

(*c*) *Air.* There is an airfield adjacent to the northeastern margin of Kudat.

(3) Physical characteristics.

The village is on the north side of the harbor entrance. Its commercial section (FIGURE VIII - 30) is near the government wharf and is separated from the government residential section to the north by a tidal mud flat through which a small stream flows. Police barracks and government buildings (FIGURE VIII - 31) are east of the commercial section. The streets of the village are for the most part narrow and coral-surfaced. The most important street, Larut Street, parallels the water front and extends, via a 2-span girder bridge, across the stream dividing the northern and southern sections of Kudat.

(4) Warehouses and storage.

There is a large customs godown on the approach pier to the wharf, and at least 3 warehouses are near the base of the pier. A golf course east of the port area affords open storage space (FIGURE VIII - 32).

(5) Billeting facilities.

Billeting space is afforded by the police barracks and jail in southeastern Kudat, and government quarters, government coolie quarters, and government clerks' quarters in the northern section.

(6) Health and sanitation facilities.

There is a hospital with 32 native beds near the north-northwestern outskirts of the town. Special precautions against malaria are necessary during the southwest monsoon.

(7) Buildings.

Most of the buildings in Kudat are of timber construction, although a few have masonry first stories. Some structures are on piles.

(8) Public utilities.

(*a*) *Water.* Water was obtained from wells and pumped to a storage tank near the hospital. The average daily consumption is reported to have been about 54,000 U.S. gallons.

(*b*) *Communications.* A small local telephone system served Kudat and provided a line around the southern margin of Marudu Bay to Pitas on the east. A radiotelegraph station furnished regular communications with Sandakan, Jesselton, and Labuan.

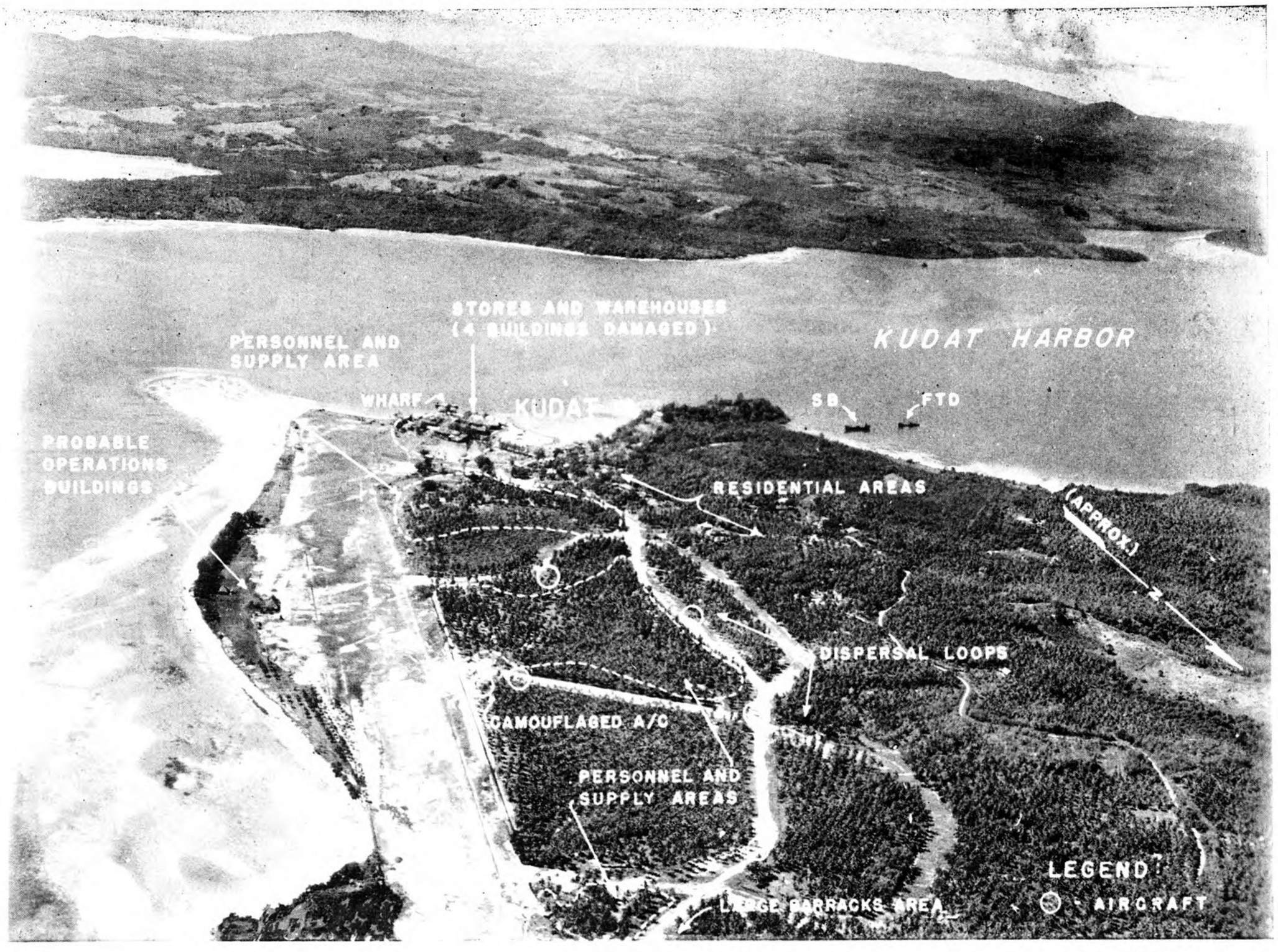


FIGURE VIII - 29. *Kudat.*
Oblique airview of town and harbor. Looking SW. 1944.

FIGURE VIII - 30. *Kudat.*
View of waterfront. Looking NE. 1936.

FIGURE VIII - 31. *Kudat.*
Government offices and courthouse. 1926.

J. Jesselton, North Borneo (estimated 1940 population: 10,000).

(1) Importance.

Jesselton, approximately 90 miles southwest of the northernmost tip of island, is the principal port on the west coast of North Borneo. It is the northern terminus of the longest rail line on the island. Rubber and rice are grown in the surrounding district and exported from Jesselton. (FIGURES VIII - 33 and VIII - 34)

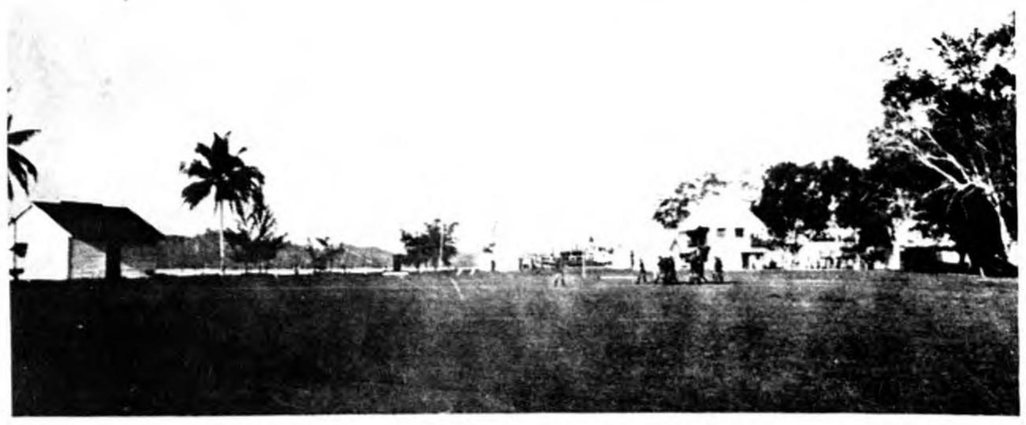
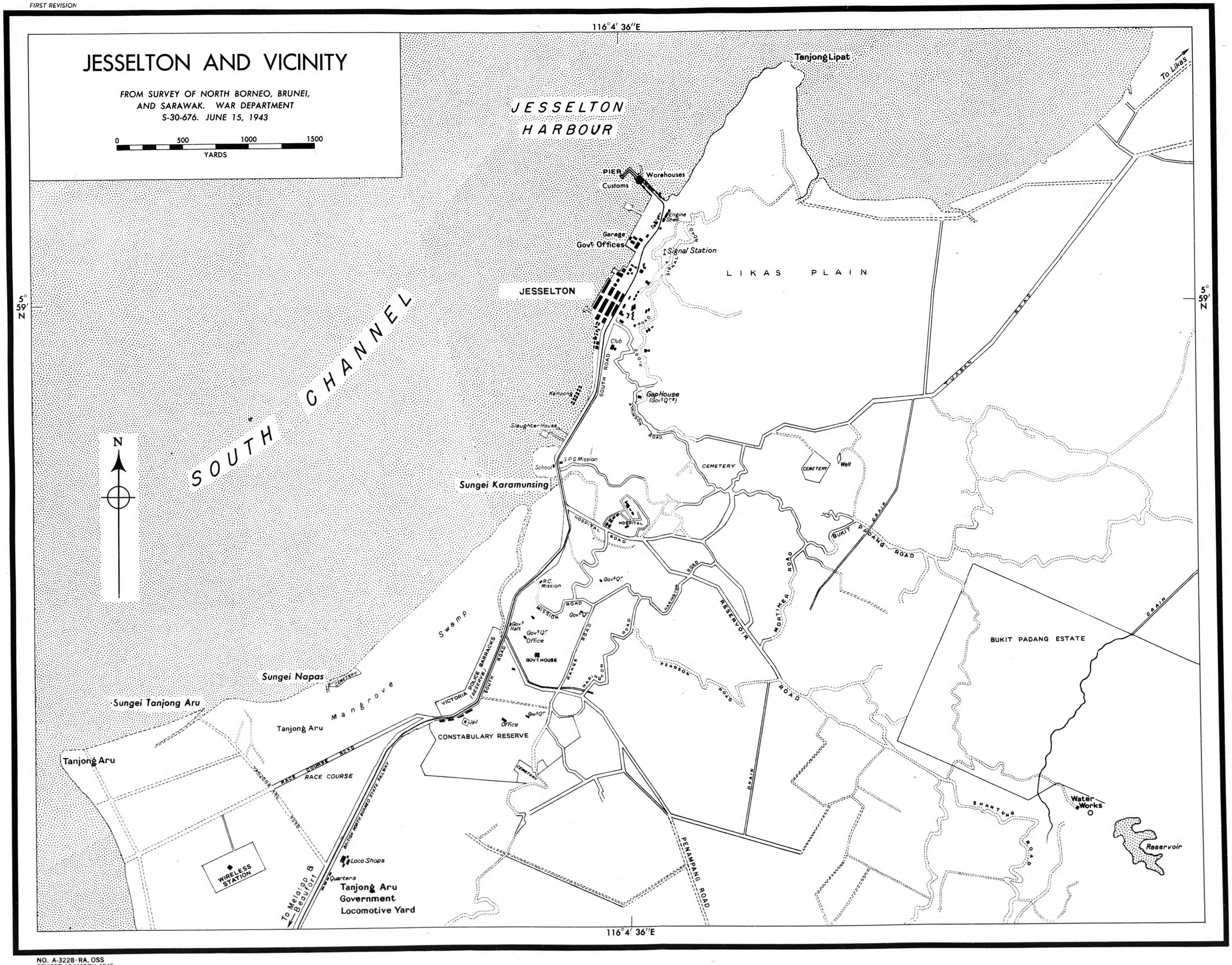


FIGURE VIII - 32. *Kudat.*
Golf course with radiotelegraph station in background.

FIGURE VIII - 34. *Jesselton.*
Vertical airview of town. Looking NE. 3 February 1945.

FIGURE VIII - 33
JESSELTON AND VICINITY
JANIS 150
CONFIDENTIAL

FIRST REVISION



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(2) Means of access.

(*a*) *Water.* The harbor lies northwest of the town and is bounded on the west by Pulau Gaya (island). Ocean vessels enter it through Gaya Bay, northeast of Pulau Gaya. Reefs in the southern approach, between Pulau Gaya and the mainland, limit passage to small vessels. The main pier, which carries an extension of the railroad, has depths alongside of 18 to 26 feet (FIGURE VIII - 35). Before the war there was regular service to other Borneo ports and to Singapore.

(*b*) *Rail.* The British North Borneo State Railway runs 50 miles southward to Beaufort, where a ferry crosses the Sungei Padas to a rail line which leads 15 miles southward to Brunei Bay. At Beaufort a branch of this line extends to Melalap, 20 miles east of Beaufort.

(*c*) *Road.* An all-weather road extends 25 miles northward to Tenghilan whence a trail extends 55 miles farther to Kudat, near the northern tip of Borneo, and to Pitas, across the bay from Kudat. Other all-weather roads extend to Tanjong Aru (cape), 3 miles southwest, and to Penampang, 5 miles southeast.

(*d*) *Air.* An airfield, approximately 3 miles south of Jesselton, has 2 runways and probably an underground hangar.

(3) Physical characteristics. (FIGURE VIII - 36).

The town, much of which is on reclaimed land, stretches along the water front for more than a mile. Low hills parallel the shore at a distance of about ⅓ mile. A mangrove swamp lies between the Sungei Karamunsing (river) and Tanjong Aru south of the town. The main streets are of sandstone and asphalt; widths range from 12 to 98 feet (FIGURE VIII - 37). Warehouses and commercial establishments are concentrated immediately south of the pier. The railway station and yards are east of the largest warehouse area (FIGURE VIII - 34). A native village is along the shore south of the town proper and the European residential section is in the hills east of the town. Government offices and barracks are east of the mangrove swamp (FIGURE VIII - 38).

(4) Factories.

A sawmill and rice mill were located in the damaged area immediately south of the pier. It is reported that 2 new sawmills have been built by the Japanese.

(5) Warehouses and storage.

A warehouse area about 2,000 feet southwest of the pier contains 17 buildings with a total of 163,000 square feet of storage space. Two godowns on the jetty afford additional storage space. At least 3 large supply areas are near the airfield.

(6) Billeting facilities.

The following billeting facilities are available in the Jesselton area:

13 barracks, 6 of which have been destroyed, 1,200 feet northeast of the main warehouse area; 4 more under construction.
5 small barracks, 1 mile northeast of the main warehouse area.
44 barracks (size varies from 200 by 40 feet to 100 by 20 feet) in the Victoria Reserve barracks area about 2 miles south of Jesselton; 3 more probably under construction.

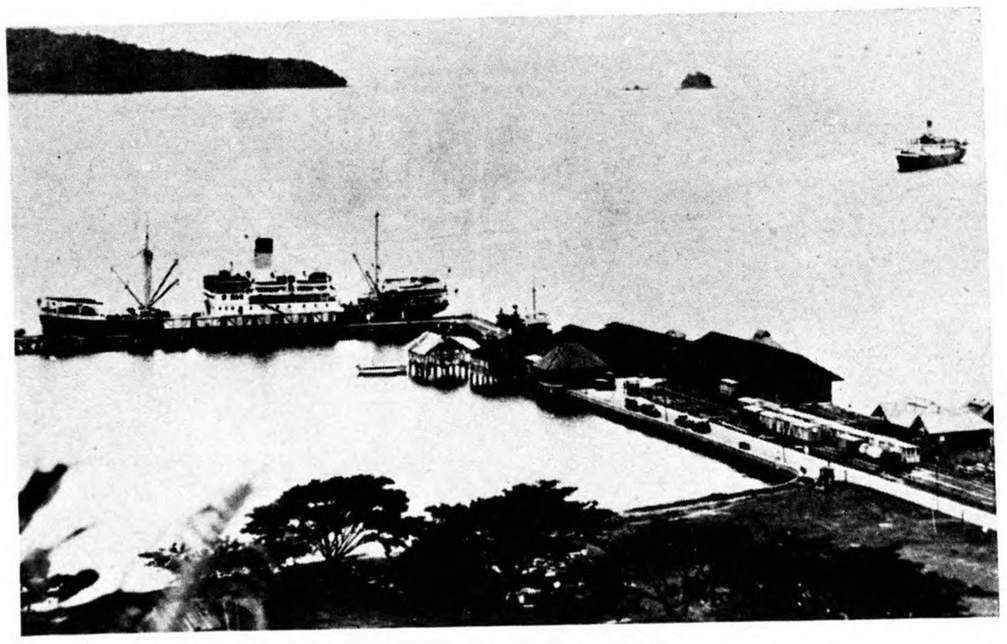


FIGURE VIII - 35. *Jesselton.*
The main pier. Looking NW. 1936.

2 barracks, totaling 4,000 square feet, 3 miles east of the town.
75 barracks in the vicinity of the airfield.
2 schools (total capacity: 200 pupils).
1 hotel (FIGURE VIII - 39).
3 clubs.
25 residences in the European residential area.

(7) Health and sanitation facilities.

A large hospital with 10 interconnected buildings and 9 smaller buildings is 1 mile south of the town. It has 66 beds.

(8) Buildings.

Most of the buildings are 1- or 2-story frame structures.

(9) Internal transportation.

In 1939 there were 36 cars, 30 busses, 15 trucks, and 30 motorcycles in Jesselton.

(10) Public utilities.

The town water supply is obtained from a catchment reservoir 3 miles east of the Victoria Police Barracks and is pumped to a concrete service reservoir with a capacity of 60,000 U.S. gallons. The average daily consumption in 1940 was about 135,000 U.S. gallons.

The Jesselton Ice and Power Company plant, about 550 yards south of the base of the pier, had a reported capacity of 143 kilowatts and generated both alternating and direct current. It operated ice-making equipment.

Jesselton is the center of the telephone network on the west coast of North Borneo. The telephone and telegraph office is just east of the railway station and about 880 yards south of the base of the pier. Jesselton had telegraph communication with Labuan Island, where there is a submarine cable to Singapore and Hong Kong, and a broadcasting station. There was a radiotelegraph station near Tanjong Aru.

Fire-fighting facilities consisted of a pump and street hydrants.

(11) Repair and service facilities.

The Tanjong Aru Government Locomotive yards, south of the town, had ample facilities for the construction, maintenance, and repair of rolling stock and other railway equipment. Three large shops have been damaged by bombs. The power plant had an electrical workshop. There were 2 garages.

A

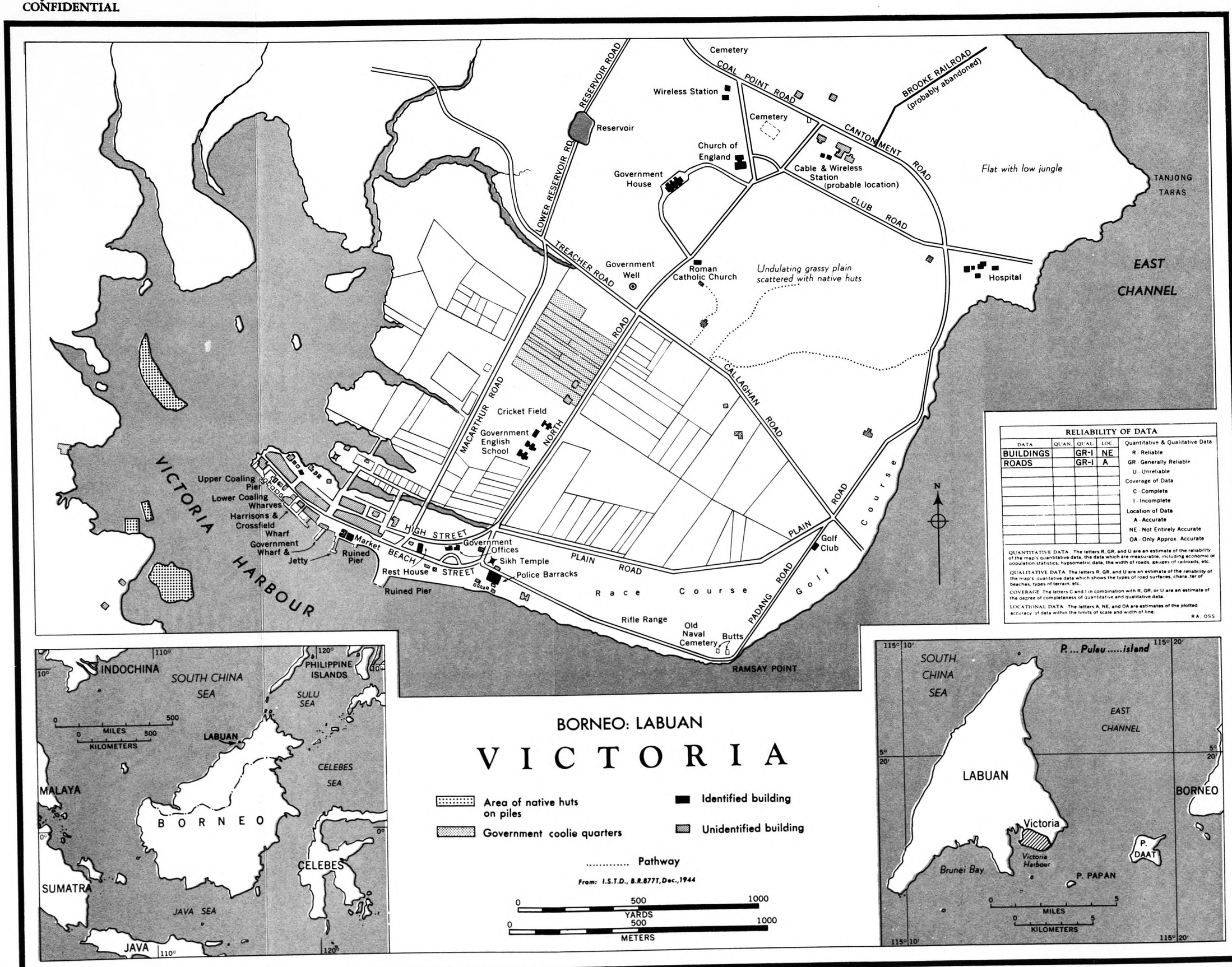
B

FIGURE VIII - 36. *Jesselton.*
Oblique airview of town. 6 February 1945.

FIGURE VIII - 37. *Jesselton.*
Street scene. 1932.

FIGURE VIII - 38. *Jesselton.*
Government offices.

FIGURE VIII - 40
VICTORIA
JANIS 150
CONFIDENTIAL



RELIABILITY OF DATA				
DATA	QUAN.	QUAL.	LOC.	Quantitative & Qualitative Data
BUILDINGS		GR-I	NE	R - Reliable
ROADS		GR-I	A	GR - Generally Reliable
				U - Unreliable
				Coverage of Data
				C - Complete
				I - Incomplete
				Location of Data
				A - Accurate
				NE - Not Entirely Accurate
				OA - Only Approx. Accurate

QUANTITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's quantitative data, the data which are measurable, including economic or population statistics, hypsometric data, the width of roads, gauges of railroads, etc.

QUALITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's qualitative data which shows the types of road surfaces, character of beaches, types of terrain, etc.

COVERAGE. The letters C and I in combination with R, GR, or U are an estimate of the degree of completeness of quantitative and qualitative data.

LOCATIONAL DATA. The letters A, NE, and OA are estimates of the plotted accuracy of data within the limits of scale and width of line.

R.A., OSS

BORNEO: LABUAN

VICTORIA

Area of native huts on piles

Government coolie quarters

Identified building

Unidentified building

..... Pathway

From: I.S.T.D., B.R.877T, Dec., 1944

0 500 1000 YARDS

0 500 1000 METERS

NO. 6259–R&A, OSS
12 MARCH 1945

FIGURE VIII - 39. *Jesselton.*
Hotel near railway station. Looking E.

K. Victoria, Straits Settlement (1934 population: 7,497).

(1) Importance.

Victoria (FIGURE VIII - 68), on the southeastern shore of Labuan Island and 35 miles northeast of Brunei, is the transshipment center for the Brunei Bay area. Rice, rubber, and coconuts were exported. The island of Labuan and 7 smaller islands, about 5 miles off the southwest coast of North Borneo at the entrance to Brunei Bay, form one of the Straits Settlements. Victoria is the seat of government for this administrative unit.

(2) Means of access.

(*a*) *Water.* Victoria Harbour (FIGURE VIII - 40) faces southeastward and may be approached via East Channel from the north and from Brunei Bay on the south. In peacetime small steamships supplied regular service from Victoria to Singapore and to Brunei. Wharves and piers extend along approximately 1,500 feet of the water front.

FIGURE VIII - 41. *Victoria.*
Airview of town and harbor. 3 January 1945.

(*b*) *Rail.* There was a shore railroad, now probably abandoned, near Tanjong Taras (Collier Head) on the northeastern outskirts of Victoria.

(*c*) *Road.* Several roads, cart tracks, and paths converge on Victoria from all parts of the island. About 30 miles of macadam road extend to rice paddies or to government forest reserves.

(*d*) *Air.* There is an airfield about 2½ miles north-northeast of Victoria and a seaplane station on the harbor.

(3) Physical characteristics.

Victoria (FIGURE VIII - 40) on the northern shore of Victoria Harbour, measures about 1 mile both east – west and north – south. The harbor and commercial sections (FIGURE VIII - 41) are bordered by a residential section to the north. Still farther north are a few important public buildings. There are clusters of native huts on piles in the harbor. To the east of the harbor area are a race track and golf course. Rubber plantations have been reported on the outskirts of Victoria.

(4) Warehouses and storage.

A large brick warehouse near the Harrisons & Crossfield wharf affords storage space. There is a government godown at the government wharf. Stores in the commercial area undoubtedly have storage space.

(5) Billeting facilities.

A police barracks and a prison are on the eastern margin of the commercial section. There are 2 schools in the residential section. Government coolie quarters afford billeting space for about 50 men.

(6) Health and sanitation facilities.

A hospital with 36 native beds is on the northeastern margin of Victoria (FIGURE VIII - 42). Government bungalows had septic tanks.

(7) Buildings.

Buildings in the commercial district are commonly of brick construction. Throughout the residential section timber construction prevails. Government House (FIGURE VIII - 43) in the northern part of the town, is one of the larger and more important structures.

(8) Internal transportation.

Streets are 15 to 20 feet wide and surfaced with gravel. The main street, parallel to the water front, has a macadam surface. There were a few busses and private cars in Victoria.

(9) Public utilities.

(*a*) *Water.* A reservoir north of the town has a storage capacity of about 4,000,000 U.S. gallons. Water flows to Victoria by gravity and is treated with chlorine. Estimated average daily consumption is about 38,400 U.S. gallons. A new system was reported to be under construction in 1938.

(*b*) *Power.* The government operated an electric generating station with an installed capacity of 50 kilowatts. It supplied electricity for lighting the town and hospital area, and power to Cable and Wireless, Limited.

(*c*) *Communications.* There is a small telephone exchange. Submarine telegraph cables from Hong Kong and Singapore land at Victoria. A government-operated radiotelegraph station is in northern Victoria.

FIGURE VIII - 42. *Victoria.*
Hospital and dispensary.

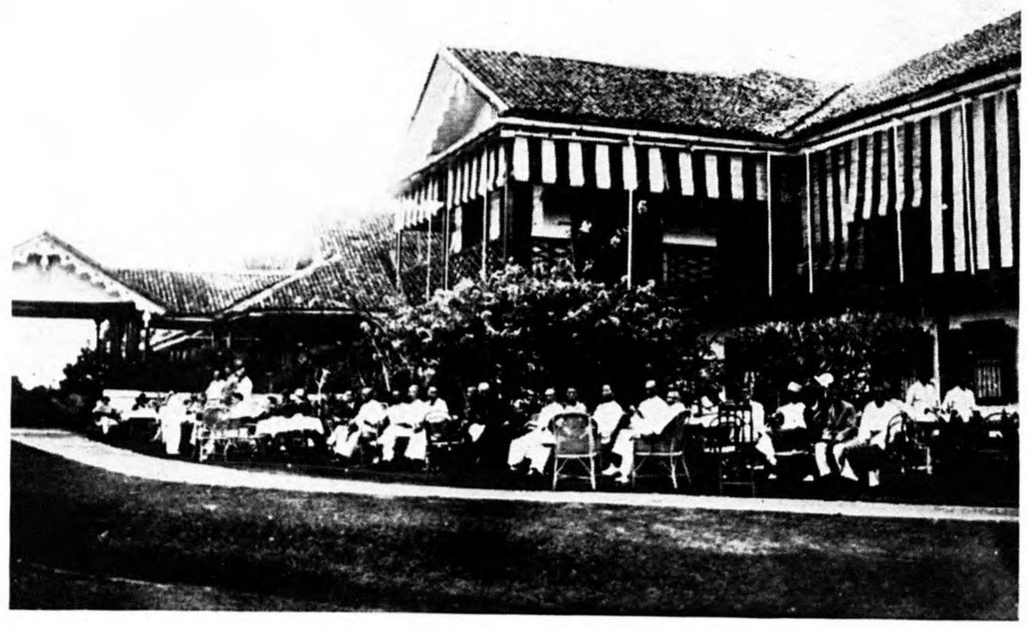


FIGURE VIII - 43. *Victoria.*
Government house.

(*d*) *Fire fighting.* The only fire-fighting equipment was a hand-drawn motor pump.

(10) Repair and service facilities.

Equipment for small cable repairs was stored at Victoria.

L. Brunei, Brunei (estimated 1938 population: 12,000).

(1) Importance.

Brunei Town (FIGURE VIII - 68), the capital of Brunei, is on the estuary of the Sungei Brunei (river), near the boundary of North Borneo. It exports cutch (a tanning bark from the mangrove tree), rubber, sago (a starch product), and other jungle products. The Brunei United Rubber Plantations were north and northwest of the town.

(2) Means of access.

(*a*) *Water.* Brunei is accessible from Brunei Bay to ships drawing up to 12 feet and not exceeding 200 feet in length. Before the Japanese occupation about 200 vessels entered the port annually. About 30 sampans operated from Brunei, and there was frequent communication with Labuan Island to the north by means of small steam craft. There are 3 wharves in the harbor, of which the most important is an excellent