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M3

JAPANESE
PACIFIC ISLANDS

TAIHOKU No. 91.3
TAIWAN WEST No. 91.4
TAIWAN EAST No. 91.5
TAKAO No. 91.6

ISSUED DECEMBER 1, 1942

AIR OBJECTIVE FOLDER—TAIWAN (FORMOSA)

NO. 91.3 Taihoku Area

NO. 91.4 Taiwan West Area

NO. 91.5 Taiwan East Area

NO. 91.6 Takao Area

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This Air Objective Folder contains the four areas which make up the Island of Taiwan . . . Formosa . . . Japanese Pacific Islands

EXPLANATION OF FOLDER

This folder is primarily for the use of group and squadron commanders and intelligence officers in the planning of operations and the briefing of crews. **NEITHER THE FOLDER NOR ANY PART OF IT MAY BE TAKEN INTO THE AIR ON OFFENSIVE MISSIONS.**

Targets and objective areas are numbered from one to infinity within each country. These numbers are combined into a code showing the country, objective area, and target. Thus, 91.3-48 indicates Japanese Pacific Islands (91), Taihoku, Taiwan (3) and TARGET 48 in the Japanese Pacific Islands Series.

Supplementing the objective folder, target charts are provided separately for the use of air crews. Each chart is centered on a target; it spots other targets lying within a four-mile radius; and it identifies landmarks within a twelve-mile radius. Each chart bears the number of its central target.

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TAIHOKU AREA No. 91.3 TAIWAN [FORMOSA]

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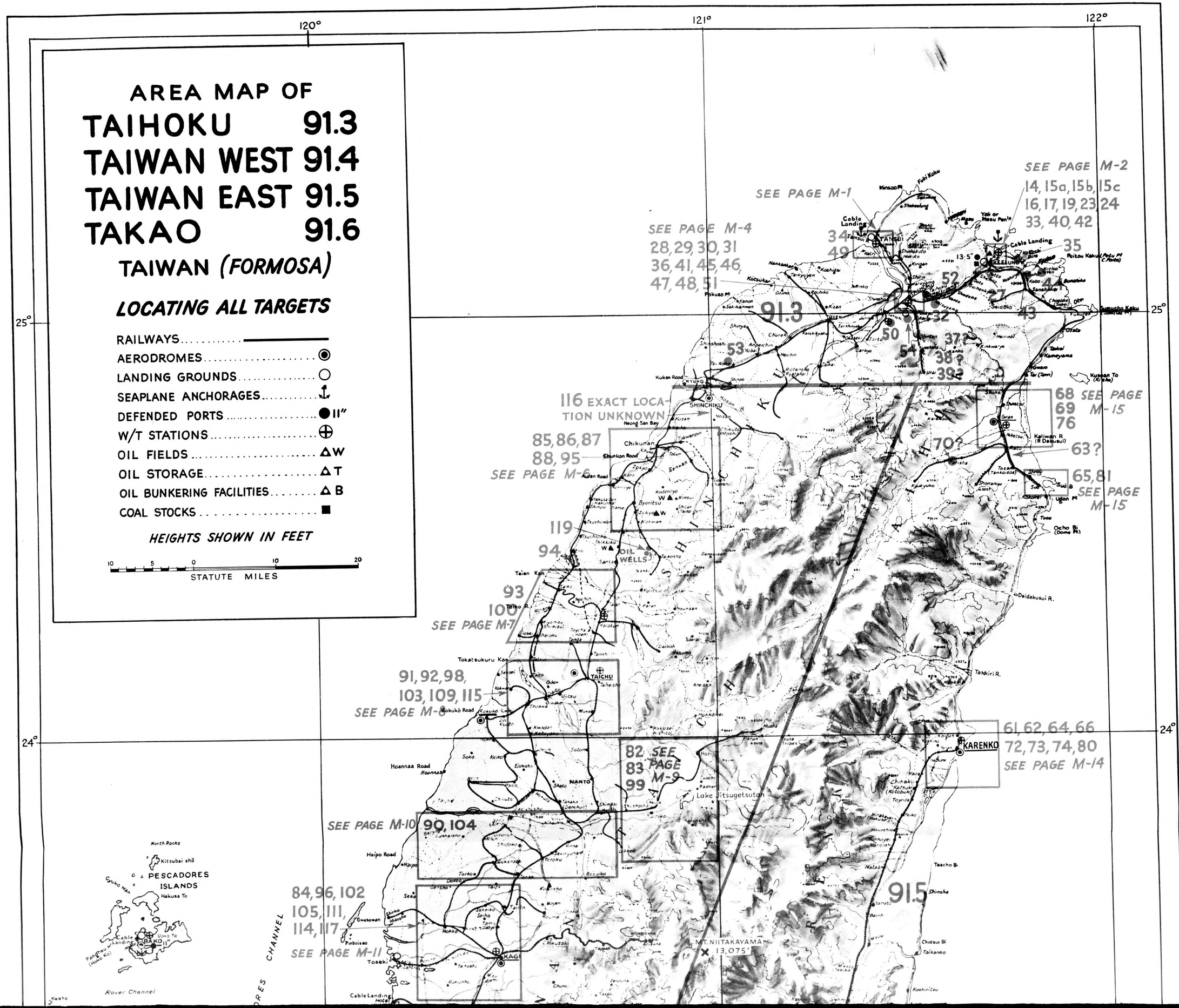
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13,075'
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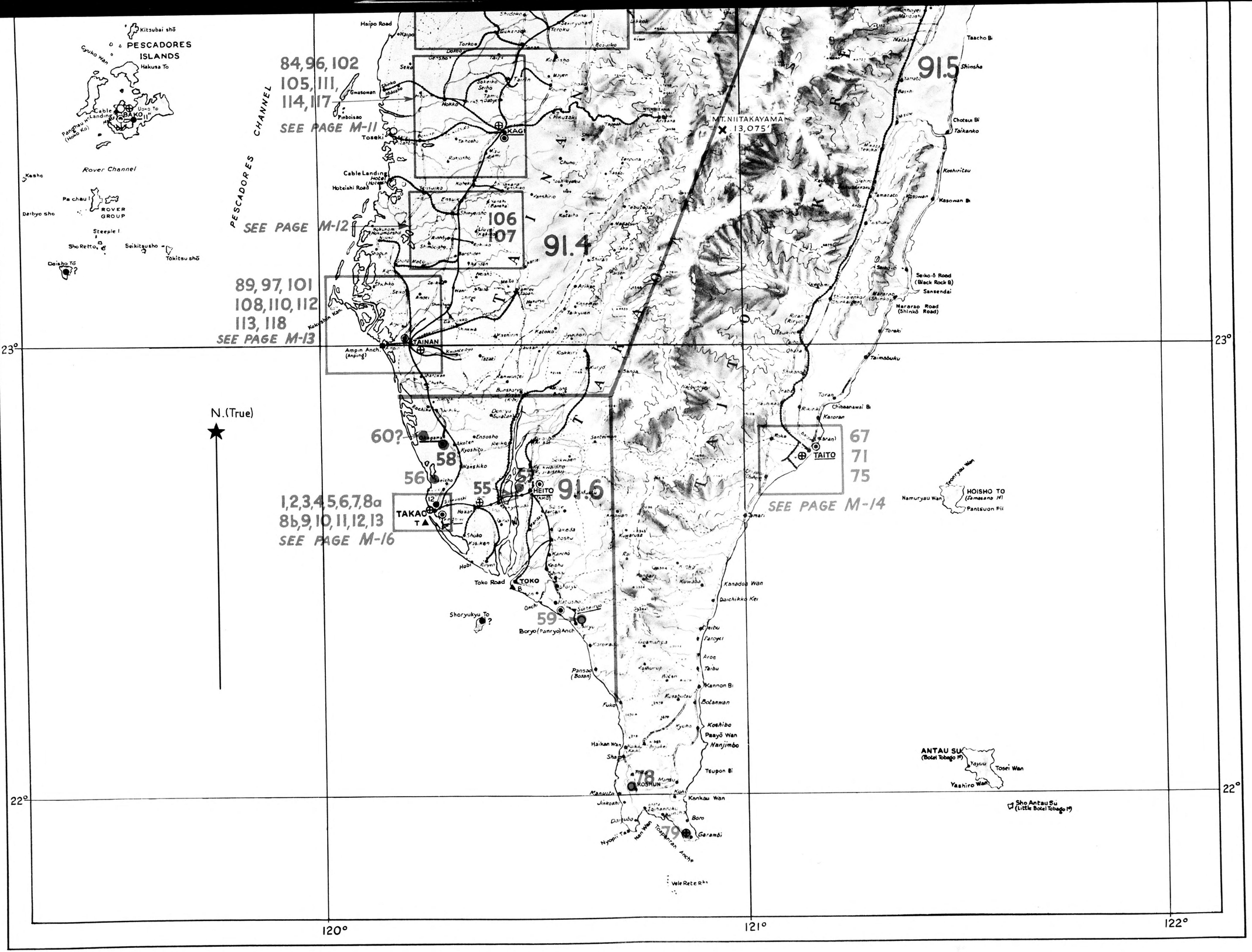

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3526M—T-3—Taihoku, Taiwan, Takao

TABULATION OF TARGETS IN TAIHOKU AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			TRANSPORTATION FACILITIES	
27	Bridges & Tunnels near Hatto	25° 07′ N 121° 44′ E	Carry all heavy traffic in or out of Keelung. About 1.8 mi S of Keelung. 2 brs & 3 parallel tunnels on trunk Rd & RR line to Taihoku. Zuiho-Keelung RR joins trunk line near Hatto where there is switching yd. Valley very narrow; hills 1000-2000 ft high.	27
28	Shinten River Railroad Bridge	25° 02′ N 121° 29′ E	Only RR connecting Taihoku area with S Taiwan. About 1.9 mi SW of center of Jonai district of Taihoku. Steel cantilever bridge about 1280 feet long. Small Rd bridge just S of RR Br. (See photo G on page P-3 and map on page M-4.)	28
29	Taihoku Highway Bridge	25° 04′ N 121° 30′ E	About 1.5 mi NW of center of Jonai district of Taihoku. 1st class Mil Rd connecting with S Taiwan. (See photo I on page P-4 and map on page M-4.)	29
30	Meiji Highway & Railroad Bridges	25° 05′ N 121° 31′ E	About 2.25 mi NE of center of Jonai district of Taihoku. Brs on Taihoku-Tansui RR & Rd, only traffic arteries between Tansui and Taihoku. Bridges 0.25 mi apart. Conspicuous hilltop shrine just to NE. (See map on page M-4.)	30
31	Taihoku Railroad Terminal	25° 03′ N 121° 31′ E	Adjacent to N border of Jonai district of Taihoku. Taihoku RR sta on trunk line equipped with roundhouse and extensive whses. (See photo J on page P-4 and map on page M-4.)	31
32	Matsuyama Railroad Shops & Iron Foundry	25° 03′ N 121° 35′ E	On SW outskirts of Matsuyama. RR shops reported to cover 44 acres. Exact location not known.	32
			HARBOR FACILITIES	
15a	Northwest Keelung Wharves	25° 09′ N 121° 44′ E	On NW side of harbor. Probably military storehouses; concrete; accommodate large ships. (See photos A and B on page P-1 and map on page M-2.)	15a
15c	Southwest Keelung Wharves	25° 08′ N 121° 44′ E	SW side of harbor—5 three-story whses. Keelung RR sta and custom house. (Unconfirmed report) small arms mfg plant or wolfram processing plant about 700 ft W of Wharves nos. 2 & 3. (See photos A and B on page P-1 and map on page M-2.)	15a
16	Eastern Keelung Wharves	25° 08′ N 121° 44′ E	E side of harbor—secondary importance. Wharves for junks, storehouses. (See photo A on page P-1 and map on page M-2.)	15a
			SHIPYARDS	
15b	Gyucho Harbor Dockyard of the Taiwan Dockyard Company, Keelung	25° 09′ N 121° 44′ E	Major objective. Repair, overhaul—construction & fueling of ships. 1 drydock for 3,000-ton ships; 1 patent slip for 1,000-ton ships; complete repair shops and foundry. W side of Keelung harbor; only big dockyard in Taiwan. May have been enlarged. (See photos A and B on page P-1 and map on page M-2.)	15a
23	Sharyo To Shipyard	25° 10′ N 121° 45′ E	Secondary importance. NE side of Keelung harbor. Constructs small fishing boats and small patrol craft. (See map on page M-2.)	15a
			NAVAL BASES	
24	Keelung Submarine Base	25° 09′ N 121° 45′ E	NE side of Keelung harbor. No confirmation available of reports that bay used as submarine base. If so used important installations are along N shore. Bldgs on S shore are fish packing & storage plants. (See photo C on page P-1 and map on page M-2.)	15a

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SUMMARY AND EVALUATION OF TAIHOKU AREA 91.3

3526—T-5—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

NOTE: This folder is the result of an effort to obtain the best information thus far available in the U. S. A. The check of such information by photo reconnaissance has not been possible. Every effort should be made in the field to correct by photo reconnaissance the data given herein.

OBJECTIVE AREA: The objective area includes all of Taiwan (Formosa) north of 24° 50′ 00″ N. Within this area are included the cities of Taihoku (the capital), Keelung (often called Kiirun), Tansui and many small towns.

IMPORTANCE: The Taihoku Area is important chiefly because it constitutes the "communications funnel" through which must pass virtually all troops and supplies moved through Taiwan. Among the more important industrial objectives in this area are metallurgical plants, chemical plants, and a sugar alcohol plant. Also important is the Jonai district of the City of Taihoku, the administrative and military nerve center of Taiwan.

DESCRIPTION: The most distinctive physiographic features of this area are the Tansui River Plain at the center and the foothills of the Niitaka Range along the north and east sides. Mountains rise to about 4,000 feet at the north and southeast sides, and to about 1,000 feet near the cities of Tansui, Taihoku, and Keelung. The Tansui and Keelung Rivers provide an unmistakable day and night approach landmark to these cities from west to east.

DEFENSES AND VULNERABILITY: 1. Tansui District. The only known defenses in this district are shore batteries. A seaplane anchorage and an emergency landing field are located nearby, but information is not available to indicate that planes are stationed there.

2. Taihoku District. The defenses of this district consist of AA batteries and protective aircraft. AA guns have been observed on rooftops in the eastern side of the City of Taihoku, and near the Taihoku R. R. Bridge. Other guns are probably available to cover the other approaches to the city. The Taiwan Army Command H. Q. are located in Taihoku, and the garrison stationed here comprises 1 anti-aircraft unit, 1 infantry regiment, 1 artillery regiment and an armored car company. The aircraft defenses of the entire Taihoku Area are centered at the Matsuyama Airport (about 3.5 miles east of Taihoku) where complete facilities for the maintenance of operational aircraft are available.

3. Keelung District. The defenses here consist primarily of shore batteries. However, AA batteries are reported to be located in the surrounding hills and an artillery regiment is quartered near the city. Parts of the harbor have been used as a seaplane alighting area, and an emergency landing field is located about 2 miles NE of the city, but no information is available to indicate that planes are stationed there.

Weather Chart for Taihoku Area 25° 02′ N., 121° 31′ E., elevation 26 ft.

UPPER AIR DATA. Percentage frequency and average velocity (miles per hour):
Data from Naha, 26° 12′ N., 127° 39′ E., elevation 92 ft.

	Winter				Spring				Summer				Autumn			
	6600 ft.		9800 ft.		6600 ft.		9800 ft.		6600 ft.		9800 ft.		6600 ft.		9800 ft.	
	%	Vel.	%	Vel.	%	Vel.	%	Vel.	%	Vel.	%	Vel.	%	Vel.	%	Vel.
N	5	4	4	4	8	12	....	....	17	13	6	10	12	11	4	7
NE	5	6	....	....	8	13	....	....	7	8	12	7	5	5	....	....
E	3	8	8	25	2	4	....	....	9	12	....	....	12	8	2	18
SE	2	7	....	....	....	....	6	2	6	12	25	14	5	7	12	8
S	3	17	....	....	....	....	12	10	16	17	13	20	10	11	8	12
SW	20	18	8	24	14	17	6	29	26	14	25	16	11	10	22	12
W	43	23	62	32	49	17	72	23	17	20	12	25	20	12	38	12
NW	18	15	19	17	20	16	6	18	2	9	6	15	23	12	16	66
Calm	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....

SURFACE WINDS: Frequency in % Data from Naha	Dec. Jan. Feb.	Mar. Apr. May	June July Aug.	Sept. Oct. Nov.
N	2	4	5	3
NE	17	17	10	21
E	53	43	22	52
SE	5	6	15	7
S	3	3	10	4
SW	3	3	9	2
W	5	7	13	3
NW	8	11	10	5
Calm	5	5	6	3
Velocity (m.p.h.)				
Average	7.8	7.3	5.7	8.0
Maximum	27.7	31.1	68.2	68.5

No. of days with	Fog	Gales	Precipitation	Thunder	Temperature (° F.) Average	Abs. Max.	Abs. Min.	Clear Days	Cloudy Days	Partly Cloudy	Average Percentage of Cloudiness	Precip. in inches Average	Max. in 24 hrs.	Probable Icing Limits in Feet		
Winter	5.0	0.4	49	2.0	60.0	85.3	31.6	6	58	26	85%	11.8	3.1	Jan.	15,000	7,000
Spring	4.0	1.4	48	9.9	68.9	97.7	39.6	4	55	33	81%	21.3	6.2	Apr.	20,600	13,100
Summer	3.0	3.5	44	27.7	81.4	98.8	62.2	8	31	53	59%	31.8	11.3	July	above	20,000
Autumn	2.0	2.6	44	6.6	73.3	95.2	44.2	13	41	37	74%	18.4	8.2	Oct.	20,000	12,500

ICING may occur in the upper levels of cumulo-nimbus during the warmer part of the year, and in the upper part of the orographically produced cloud deck during the NE monsoon of the colder season.

CEILINGS are generally very low in winter. They are commonly at least moderately high in summer, except when a typhoon brings bad flying weather, or during thunderstorm activity.

VISIBILITY is poor in winter due to low clouds and frequent precipitation. The upper part of mountains is obscured by clouds. Good visibility prevails the rest of the year, except during periods of precipitation.

TYPHOONS: About 11 typhoons a year may affect the weather in this area. They produce either strong winds or heavy precipitation or both, low ceilings, and poor visibility. Typhoon season usually extends from July to October. Each typhoon will influence the weather for 1 to 5 days.

SUMMARY OF FLYING CONDITIONS: Good flying weather prevails during the regime of the warm SW monsoon, except during precipitation or during a typhoon, which may cause bad weather for from 1 to 5 days. Winter flying conditions are very poor at all times, except when a depression moving eastward from China causes a break in the NW monsoon and brings clear skies for 2-3 days. Extreme variations are encountered within short distances in response to the topography. Conditions are generally more favorable a few miles inland than on the coast.

TABULATION OF TARGETS IN TAIHOKU AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			Chemical Plants—continued	
43	Sulphuric Acid Plant	25° 07′ N 121° 49′ E	Near Zuiho. Light gauge RR runs from Keelung to Zuiho. Open-pit coal mine installations conspicuous near Zuiho. Cap 17,223 long tons per yr.	43
44	Cyanide Plant	25° 07′ N 121° 51′ E	Kinkaseki mines district. Gold and coal mine installations conspicuous.	44
			MISCELLANEOUS INDUSTRIAL PLANTS	
45	Taihoku Camphor Monopoly Plant	25° 03′ N 121° 31′ E	On SE edge of Jonai district. Camphor products used in manufacture of celluloid, drugs, chemicals, etc. Several storage tanks visible. (See photo K on page P-5 and map on page M-4.)	47
46	Taihoku Plant of the Taiwan Sugar Refining Co.	25° 02′ N 121° 30′ E	About 1.5 mi SW of SW corner of Jonai district. Alcohol, cane processing. Cap 500 tons per day. (See photo G on page P-3 and map on page M-4.)	28
			PUBLIC BUILDINGS	
47	Jonai District of Taihoku	25° 03′ N 121° 31′ E	In center of Taihoku. Bldgs of Government General, Military H.Q., Taiwan Communications Office, Central Post Office. (See photos G and H on page P-3 and map on page M-4.)	47
			MILITARY BARRACKS AND TRAINING CENTERS	
17	Keelung Artillery Barracks	25° 08′ N 121° 44′ E	On SW edge of Keelung—12 large barracks. (See photo E on page P-2 and map on page M-2.)	15a
48	Taihoku Barracks	25° 03′ N 121° 31′ E	Just off SE corner of Jonai District—about 15 barracks & officers' quarters. (See photo K on page P-5 and map on page M-4.)	47
			COMMUNICATIONS FACILITIES	
19	Keelung Wireless Station	25° 08′ N 121° 45′ E	Important communications sta. Five steel masts. About 1 mi E of inner Keelung Harbor. Probably ship signal sta. (See photo D on page P-1 and map on page M-2.)	15a
49	Tansui Wireless Station	25° 11′ N 121° 25′ E	About 1.7 mi NW of Tansui. Four steel masts visible on beach. Receiving sta for radio communications in Taihoku area. (See map on page M-1.)	49
50	Itahashi Wireless Telegraph Station	25° 01′ N 121° 27′ E	Most important transmitting sta in Taihoku area. About 6 mi SW of Jonai district of Taihoku. (See photo M on page P-6.)	50
			WATER SUPPLY	
51	Taihoku Reservoir & Filtering Plant	25° 01′ N 121° 32′ E	About 2 mi SE of Jonai Dist. Of minor importance. Very conspicuous landmark. Water supply for Taihoku. (See photo L on page P-5 and map on page M-4.)	47
			AIRPORTS AND SEAPLANE BASES	
52	Matsuyama Airport	25° 03′ N 121° 33′ E	Most important air base in Taihoku area. Just NW of Matsuyama. Land base for operational aircraft. N of Taihoku-Keelung RR line. Complete facilities—hangars, radio beacon, repair shops, 12 barracks.	32
53	Koko Airport	24° 52′ N 121° 03′ E	Major adrm. Near Koko—used as major paratroop training base. Mil air base.	53
54	Itahashi Airport	24° 59′ N 121° 27′ E	Major mil adrm near Itahashi, 3150 x 1980 ft.	50

. . . concluded

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TABULATION OF TARGETS IN TAIHOKU AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			OIL STORAGE	
33	Kyushi Zan Oil Storage	25° 09′ N 121° 44′ E	Largest fuel storage in Taihoku area. About 0.2 mi NE of drydock in Keelung harbor. About 10 tanks (Cap 70,000 tons) located halfway up S slope of Kyushi Zan Hill. Tank farm & 5 whses at ft of hill. Tanks probably camouflaged. Several submarine tanks, fed from this storage, reported somewhere in harbor. (See map on page M-2.)	15a
14	Underground Oil Storage	25° 09′ N 121° 44′ E	About 0.2 mi due N of drydock in Keelung Harbor. Receiving tank, probably camouflaged, visible on S slope of hill, just W of Kyushi Zan Hill. (See map on page M-2.)	15a
34	Rising Sun Petroleum Co. Storage	25° 10′ N 121° 27′ E	Only important storage at Tansui. Fuel oil, kerosene, benzine, lubricating oil. On waterfront about 1 mi SE of Tansui. Two large tanks, 1 small tank, 3 large whses, and tin factory (probably making drums & cans). Cap 2500 tons fuel oil, 1200 tons kerosene—other amounts unknown. (See photo F on page P-2 and map on page M-1.)	49
			ELECTRIC POWER PLANTS	
35	Hatto Harbor Steam Power Plant	25° 09′ N 121° 47′ E	Important objective. On coast about 3.6 mi NNE of Keelung. 38,000 KW—main source of power for Keelung. Believed housed in "T"-shaped bldg on SE shore of Hatto Harbor, N of Rd & RR line. (See map on page M-3.)	35
36	Transformer	25° 01′ N 121° 32′ E	About 2.1 mi SE of Jonai district of Taihoku. Distributing sta for power coming into Taihoku—distinguished by characteristic open-air steel framework. RR line nearby. (See map on page M-4.)	47
37	Shosoko Hydro-Electric Sub-station	24° 56′ N 121° 32′ E	About 7.5 mi SE of Jonai district of Taihoku—auxiliary or peak-load sta. 4 conspicuous penstocks. Cap 4,400 KW. Supplies city of Taihoku. (See map on page M-5.)	38
38	Kizan Hydro-Electric Sub-station	24° 54′ N 121° 34′ E	2 mi up Shinten R from Shosoko sta, probably on W side of Shinten R, at mouth of E tributary. Probably booster sta. Cap 750 KW or more. (See map on page M-5.)	38
39	Shin-Kizan Hydro-Electric Plant		Exact location unknown. Somewhere up Shinten R from Kizan sta (recently under construction; believed to be in operation) power lines lead N connecting with above-mentioned stas near Taihoku. Cap 13,000 KW. (See map on page M-5.)	38
			STEEL AND OTHER METAL PLANTS	
40	Taiwan Electro-Chemical Co. (Taiwan Denka Kaisha)		Exact location unknown. Somewhere in or near Keelung. (Not spotted.) Magnesium (or magnesium alloys), electro-ferro-silicon and carbide.	None
41	Maruyama Special-Alloys Plant	25° 05′ N 121° 31′ E	About 1.7 mi N of Jonai district of Taihoku. Steel and unidentified alloys. No further information. (See map on page M-4.)	30
			CHEMICAL PLANTS	
42	Taiwan Hiryo KK		Exact location unknown. Somewhere in Keelung. 9,842 long tons sulphuric acid, 2,362 long tons nitrogen per yr. (See note on map on page M-2.)	None

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By ... NARA, Date ...

REVIEW OF TARGETS IN TAIHOKU AREA

1. Bridges and Tunnels at Hatto, (TARGET 27): This is the most vulnerable part of the transportation system of the Taihoku Area. The destruction of these objectives would halt the flow of RR traffic from Keelung to southern Taiwan, and cut the only good road connection.

2. Harbor and Industrial Installations at Keelung: This is the principal port of entry for troops and supplies moving south through Taiwan. (TARGETS 15a, 15b, and 15c). The important industrial objectives at Keelung are a magnesium plant and a chemical plant, (TARGETS 40 and 42), the locations of which have not yet been established. These plants might be partially neutralized by the destruction of the nearby Hatto Harbor Steam Power Plant (TARGET 35), the main source of power for Keelung.

3. Objectives in and near Taihoku: The primary target in Taihoku is the centrally located Jonai District, (TARGET 47), a rectangular-shaped area of official buildings, which is distinctly outlined on all four sides by a three-lane, landscaped roadway. Other important objectives in this area are a steel alloy plant, (TARGET 41), a sugar and alcohol plant, (TARGET 46), several vital bridges, (TARGETS 28 and 29), and a series of hydro-electric power plants, (TARGETS 37, 38, and 39).

4. Matsuyama District: The important objectives here are the extensive railroad shops (TARGET 32) and the Matsuyama Airport (TARGET 52).

5. Zuiho Mining District, (TARGET 43): The important objectives in this area are open-pit mine installations and several large chemical plants, the exact locations of which have not yet been established.

6. Tansui District: An oil storage furnished the only important objective in this area, (TARGET 34).

LIST OF TARGET CHARTS AVAILABLE FOR TAIHOKU AREA

Charts are numbered according to the target on which they are centered.

Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart
15a	14, 15a, 15b, 15c, 16, 17, 19, 23, 24, 33	29	29	35	35	47	36, 45, 47, 48, 51
27	27	30	30, 41	38	37, 38, 39	49	34, 49
28	28, 46	31	31	43	43	50	50, 54
		32	32, 52	44	44	53	53

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By HR-m NARA, Date 7-27-11

TAIWAN WEST AREA No. 91.4 TAIWAN [FORMOSA]

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SUMMARY AND EVALUATION OF TAIWAN WEST AREA 91.4

NOTE: This folder is the result of an effort to obtain the best information thus far available in the U. S. A. The check of such information by photo reconnaissance has not been possible. Every effort should be made in the field to correct by photo reconnaissance the data given herein.

OBJECTIVE AREA: The Taiwan West Area comprises that part of Taiwan west of the Niitaka Mountain Range which extends between latitudes 22° 50′ N and 24° 50′ N.

IMPORTANCE OF AREA: While primarily an agricultural area, the western part of Taiwan is also the site of many important industries. Located here are power plants which generate 60% of Taiwan's power supply, large alcohol distilleries and sugar refineries, chemical plants, oil refineries, important airbases, and several vulnerable points on Taiwan's trunk line R.R. The primary target concentrations are found near:

(1) Lake Jitsugetsutan (power plants).
(2) Byoritsu (oil and gasoline refineries and chemical plants).
(3) Kagi (alcohol plants, airbase, R.R. targets).
(4) Tainan (industrial salt refinery, manganese plant, port works, airbase).

DESCRIPTION OF AREA: The western part of Taiwan is a flat plain, averaging about 20 miles in width. The coast is marked by sandy beaches, 50-100 yards wide at low water, which extend along the length of the island. Rice fields and sugar plantations cover much of the inland plain. To the east lies the Niitaka Mountain Range, many of the peaks of which rise to over 10,000 feet. Located at the very center of Taiwan is Mount Niitaka, 13,075 feet high, the highest peak.

DEFENSES AND VULNERABILITY: Air defenses are reported to be strong. Fighter aircraft are based at the Kagi, Eikosho, and Taichu Airports; AA guns are reported at Tainan, Kagi, and near other vital objectives. Wherever known, anti-aircraft defenses are shown on the appended maps. This information is to be used with reserve.

Weather Chart for Taiwan West Area

Data from Hokoto (Pescadores), 23° 32′ N., 119° 33′ E., elevation 36 ft.

UPPER AIR WINDS. Percentage frequency of wind directions and velocities (miles per hour).
Data from Hong Kong, 22° 18′ N., 114° 10′ E., elevation 109 ft:
I = 0-11.5 m.p.h. II = 11.6-31.0 m.p.h. III = Over 31.0 m.p.h.

	N			NE			E			SE			S			SW			W			NW		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
January:																								
6,000 ft.	9	2	0	8	2	0	5	2	0	10	2	0	11	7	0	6	2	1	7	13	1	7	5	0
10,000 ft.	1	4	0	1	2	2	3	0	0	4	4	0	4	2	0	4	9	1	4	26	4	5	20	0
16,000 ft.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	5	10	7	0	29	34	0	8	4
April:																								
6,000 ft.	13	6	0	8	0	0	7	0	0	0	0	0	3	3	0	14	19	0	14	0	0	13	0	0
10,000 ft.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	18	0	0	28	0	9	35	0
16,000 ft.										No	obse	rvatio	ns											
July:																								
6,000 ft.	6	4	0	3	9	0	8	7	0	8	9	0	5	9	0	6	6	0	8	4	0	4	4	0
10,000 ft.	7	4	0	8	13	0	8	14	0	5	6	0	3	4	0	8	1	0	10	2	0	5	2	0
16,000 ft.	0	2	0	15	9	0	19	17	0	10	5	0	4	2	0	6	0	0	7	0	0	4	0	0
October:																								
6,000 ft.	6	6	1	13	16	2	14	4	1	8	2	0	5	1	0	6	2	0	4	0	0	7	2	0
10,000 ft.	6	7	0	7	12	1	7	3	1	7	1	0	1	0	0	8	3	0	13	6	0	12	5	0
16,000 ft.	8	4	0	4	5	0	2	2	0	5	2	0	1	3	0	12	5	1	11	15	2	6	11	1

No. of days with	Fog	Gales (22-34 m.p.h.)	Gales (34-65 m.p.h.)	Thunder	Precipitation	Typhoons 65 m.p.h.	Temperature (° F.) Mean	Abs. Max.	Abs. Min.	Precipitation in inches Average	Max. in 24 hrs.	Clear Days	Cloudy Days	Average Cloudiness
Winter	3.0	20.5	58.7	0.9	18.0	0.7	62.0	83.0	45.0	2.9	2.1	6	54	74%
Spring	7.0	29.6	26.7	5.0	27.0	0.1	71.0	90.0	50.0	9.6	6.9	8	46	69%
Summer	2.2	21.6	7.9	6.0	32.0	1.0	80.7	92.0	68.0	20.0	12.0	11	27	57%
Autumn	0.3	23.3	45.7	1.7	15.0	1.3	75.3	92.0	55.0	5.5	13.5	14	30	58%

SURFACE WINDS: Frequency in %	Dec. Jan. Feb.	Mar. Apr. May	June July Aug.	Sept. Oct. Nov.
N	29.7	24.0	11.7	31.7
NE	66.3	48.0	10.3	54.0
E	1.0	2.7	2.0	1.0
SE	0.3	2.0	7.3	1.3
S	0.7	9.0	30.3	3.3
SW	0.7	7.3	23.7	2.3
W	0.0	3.3	7.7	2.3
NW	1.0	3.0	5.7	3.0
Calm	0.0	1.0	1.0	0.3

OVERCAST, consisting of strato-cumulus clouds, is fairly persistent during the winter monsoon. The base averages 2,000-4,000 ft., occasionally lowering to 1,000 ft. Above the overcast at 5 to 6 thousand feet, good flying prevails within westerly air which overruns the modified Polar air of the winter monsoon.

Low ceilings are infrequent in southerly winds during the summer monsoon.

VISIBILITY is mainly good in the summer monsoon, but relatively poor during the winter monsoon.

ICING is not likely to be a serious problem if the higher portion of cumulo-nimbus clouds are avoided.

TYPHOONS are frequent in late summer and in autumn.

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TABULATION OF TARGETS IN TAIWAN WEST AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			ELECTRIC POWER PLANTS	
82	Jitsugetsutan Power Plant No. 1 (Monpaiton)	23° 51′ N 120° 52′ E	2 rolled earth dams, 1180 ft long, 590 ft long. Plant constructed of ferro concrete. Capacity: 100,000 k.w. (See photo F on page P-10, and photos G, H on page P-11; and map on page M-9.)	82, 83
83	Jitsugetsutan Power Plant No. 2 (Suiriko)	23° 48′ N 120° 52′ E	Capacity, 43,500 k.w. Targets 82 and 83 supply 60% of total power generated in Taiwan. (See map on page M-9.)	83, 82
84	Kagi Substation (Kagi)	23° 29′ N 120° 26′ E	(See map on page M-11.)	102, 96
			OIL REFINERIES AND STORAGES	
85	Byoritsu Refinery (Byoritsu)	24° 34′ N 120° 49′ E	Gasoline, kerosene, and heavy oils. Capacity: 91,250 bbls a year. (See photo D on page P-8 and map on page M-6.)	None
86	Kinsui Casing Head Plant (Kinsui)	24° 37′ N 120° 53′ E	Casing-head gasoline and butanol. Capacity: 60,000 gal gasoline daily; oil wells near plant. (See photo A on page P-7 and map on page M-6.)	86
119	Shukkoku Oil Wells and Refinery	24° 25′ N 120° 51′ E	Crude oil and natural gasoline. (See photo C on page P-8.)	119
			CHEMICAL PLANTS	
87	Carbon Black Plant (Kinsui)	24° 37′ N 120° 53′ E	25% of Japanese carbon black requirements. (See photo B on page P-7 and map on page M-6.)	86
88	Taiwan Chemical Co. (Kinsui)	24° 37′ N 120° 53′ E	Ammonia, sulphate, nitrates. 20,000 tons annually of nitric acid. (See map page M-6.)	86
89	Tainan Salt Wks (Tainan)	22° 56′ N 120° 08′ E	246,039 long tons of salt annually, 12½% Japanese requirements. Wooden structure. (See map on page M-13.)	112, 89
			RAILROAD TRANSPORTATION	
90	Nisui Junction and Bridge (Nisui)	23° 47′ N 120° 38′ E	Terminal and bridge. Trunk lines joined by branches. South of terminal, trunk line crosses concrete girder bridge over Dakusui R. (See map on page M-10.)	90
91	Taito R Bridges (Oiwake)	24° 07′ N 120° 34′ E	North of River. Trunk line joined by spur from eastern branch. Trunk line crosses River via 2 iron girder bridges. Highway bridge parallels RR bridges. (See photo E on page P-9 and map on page M-8.)	91, 92, 98
92	Shoka RR Terminal (Shoka)	24° 06′ N 120° 33′ E	Three platforms connected by covered bridge, 11 tracks and sidings. (See map on page M-8.)	92, 91
93	Toyohara Tunnel and Bridge (Toyohara)	24° 17′ N 120° 45′ E	Eastern branch leads out of long tunnel and down steep incline to Taiko R, which is crossed by 1,000 ft bridge. (See map on page M-7.)	93
94	Taian River Bridge (Taiko)	24° 25′ N 120° 38′ E	Bridge across river mouth about 5,000 ft long.	94
95	Chickunan Terminal and Bridges (Chickunan)	24° 41′ N 120° 48′ E	Roundhouse, repair shops, about 12 lines and sidings. S of terminal RR crosses river where trunk line divides. (See map on page M-6.)	95

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TABULATION OF TARGETS IN TAIWAN WEST AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
	MILITARY AIRPORTS AND SEAPLANE BASES			
96	Kagi Airbase	23° 27′ N 120° 23′ E	1000 x 1000 yds, 14 hangars and 30 other buildings, 2 underground fuel tanks, radio; four AA guns and 8 AAMG at corners of field. (See map on page M-11.)	96, 102
97	Eikosho Airport (Tainan)	23° 02′ N 120° 12′ E	Five hangars, radio, fuel (1940) RR by eastern boundary. Bamboo groves to south and east. (Two emergency fields 2 miles SW of Tainan.) (See map on page M-13.)	97, 112
98	Taichu Airport	24° 10′ N 120° 41′ E	6 runways; road leads NW out of Taichu to S boundary of field. (See map on page M-8.)	91, 98, 103
99	Jitsugetsutan Seaplane Anchorage (Lake Jitsugetsutan)	23° 52′ N 120° 55′ E	No information. Military seaplane anchorage reported here (1940). (See map on page M-9.)	None
	HARBOR FACILITIES			
100	Gosei Harbor (Gosei)	24° 15′ N 120° 32′ E	Wharf, six warehouses reported 1940. Additional wharves and 2 breakwaters probably under construction. (See map on page M-7.)	100
101	Anping Harbor (Tainan)	22° 55′ N 120° 09′ E	2 breakwaters at entrance to port and Tainan Canal. Port works consist of 2 jetties, boat basin, and warehouses. Lights on end of breakwater. (See map on page M-13.)	89, 112, 97
	SUGAR AND ALCOHOL PLANTS			
102	Kagi Alcohol Plant	23° 29′ N 120° 26′ E	Butanol. Located east of RR and west of Kagi Substation (Target No. 84). (See photo I on page P-11 and map on page M-11.)	102
103	Taichu Alcohol Plant	24° 08′ N 120° 42′ E	RR lines connect Taichu RR sta with W of Plant. (See map on page M-8.)	103, 98
104	Kobi Sugar and Alcohol Plants Nos. 1 and 2	23° 42′ N 120° 26′ E	RR lines east from plants to Kobi sta. (See photo J on page P-12 and map on page M-10.)	104
105	Hokko Sugar Refinery (Hokko)	23° 34′ N 120° 17′ E	No information. (See map on page M-11.)	105
106	Shinei Sugar Refinery (Shinei)	23° 18′ N 120° 19′ E	Stream along S boundary; trunk line RR on east side, and light gauge line on W side. Two small bridges S of plant. (See photo K on page P-12 and map on page M-12.)	106
107	Mato Sugar and Alcohol Plant (Mato)	23° 11′ N 120° 16′ E	Along RR which passes E of Mato. (See map on page M-12.)	None
108	Sharoken Sugar Refinery	23° 55′ N 120° 14′ E	Village on trunk RR about 4 miles S by E of Tainan. (See map on page M-13.)	None
109	Shoka Sugar Refinery (Shoka)	24° 05′ N 120° 32′ E	No information. (See map on page M-8.)	None
	MISCELLANEOUS INDUSTRIAL PLANTS			
110	Tainan Magnesium Plant (Tainan)	22° 55′ N 120° 09′ E	No information. (See map on page M-13.)	89, 112
111	Kagi Lumber Mill (Kagi)	23° 29′ N 120° 26′ E	RR trunk line from Kagi on W of plant, bends due N above plant. Lines run from trunk to S of plant. (See map on page M-11.)	102, 96

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TABULATION OF TARGETS IN TAIWAN WEST AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			MILITARY BARRACKS AND TRAINING CENTERS	
112	Tainan Barracks	23° 00′ N 120° 12′ E	Barracks and training ground W of Tainan RR sta. Site 3,200 ft N-S by 2,000 ft E-W. (See map on page M-13.)	112, 89, 97
113	South Tainan Barracks	22° 56′ N 120° 11′ E	Near coastal village, N side of mouth Nisoko River. (See map on page M-13.)	None
114	Kagi Barracks	23° 28′ N 120° 25′ E	Replacement center. (See map on page M-11.)	None
115	Taichu Barracks	24° 08′ N 120° 42′ E	Located W of point where trunk RR leaves Taichu Station and bends due N. (See map on page M-8.)	98, 103
			COMMUNICATION FACILITIES	
116	Shinchiku Radio Station	24° 47′ N 120° 52′ E	Location unknown.	None
117	Kagi Radio Station	23° 28′ N 120° 12′ E	No information. (See map on page M-11.)	None
118	Tainan Radio Station	23° 00′ N 120° 12′ E	(See map on page M-13.)	None

. . . concluded

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REVIEW OF TARGETS IN TAIWAN WEST AREA

3526—T-15—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

1. Electric Power Plants (TARGETS 82 to 84).

Highest in priority among objectives in Taiwan are two Jitsugetsutan hydro-electric plants of the Taiwan Electric Power Co. The plants generate virtually all power consumed in southwestern and western Taiwan and most of the power used in northern Taiwan. They furnish power to:

(a) Japan Aluminum Plant and Chemical Fertilizer Plant at Takao (TARGETS 2 and 3 in Objective Folder No. 91.6),

(b) Large alcohol distilleries, chemical plants and oil refineries in western Taiwan (TARGETS 85 to 88, 102 to 109 in this folder),

(c) Taiwan Electro-Chemical Co. and Taiwan Chemical Fertilizer Plant in Keelung (TARGETS 40 and 42 in Objective Folder No. 91.3).

Another important objective is the Kagi substation. It distributes power to southwestern Taiwan from the Lake Jitsugetsutan power development.

2. Railroad Transportation Facilities (TARGETS 90 to 95)

The vulnerable points on western Taiwan's single trunk-line RR rank second only to the Jitsugetsutan power plants. Poor roads and inadequate coastal ports have made Taiwan very dependent on this RR line.

3. Oil Refineries and Storages (TARGETS 85, 86)

The Byoritsu Refinery (TARGET 85) contributes fuel oil needed in Taiwan. Of major importance is the Kinsui Casing-Head Plant (TARGET 86) which produces the casing-head gasoline and butanol and supplies a nearby Carbon Black Plant (TARGET 87). Of minor importance are the Shukkoku Oil Wells and Refinery (TARGET 119).

4. Chemical Plants (TARGETS 87-9)

The Carbon Black Plant (TARGET 87) supplies at least 25% of the Japanese production of carbon black, a vital and scarce material for the production of rubber tires. It can best be neutralized by the destruction of the Casing-Head plant (TARGET 86). A chemical fertilizer plant (TARGET 88). located near the Casing-Head Plant is a secondary objective.

Although its vulnerability to air attack is uncertain, the Tainan Salt Works (TARGET 89), at Anping is an important objective. This refinery supplies over 12% of Japan's output of industrial salt, deficiency of which has long hampered the caustic soda industry in Japan.

5. Sugar and Alcohol Plants (TARGETS 102 to 109)

They produce much of Japan's industrial alcohol, as well as some butanol and potassium.

6. Miscellaneous Industrial Plants (TARGETS 110, 111)

Reconnaissance of the Anping Area is recommended in order to confirm the location there of a magnesium plant (TARGET 110).

7. Harbor Facilities (TARGETS 100, 101)

The destruction of the port facilities at Gosei and Anping would burden further the congested ports of Keelung and Takao. Many lighters, coastal vessels and ocean-going vessels are usually present in these ports.

LIST OF TARGET CHARTS AVAILABLE FOR TAIWAN AREA

Charts are numbered according to the target on which they are centered.

Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart
82	82, 83	92	91, 92	98	91, 98, 103, 115	105	105
83	82, 83	93	93	100	100	106	106
86	86, 87, 88	94	94	102	84, 96,102, 111	112	89, 97, 101, 110 112
89	89, 101, 110, 112	95	95	103	98, 103, 115	119	119
90	90	96	84, 96, 111	104	104		
91	91, 92, 98	97	97, 101, 112				

TAIWAN EAST AREA No. 91.5 TAIWAN [FORMOSA]

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SUMMARY AND EVALUATION OF TAIWAN EAST AREA 91.5

NOTE: This folder is the result of an effort to obtain the best information thus far available in the U. S. A. The check of such information by photo reconnaissance has not been possible. Every effort should be made in the field to correct by photo reconnaissance the data given herein.

OBJECTIVE AREA: The Taiwan East area includes all of Taiwan east of the Niitaka Mountain Range and south of latitude 24° 50′ N.

IMPORTANCE: The eastern coast of Taiwan is the least important part of the island. Scarcity of level land, poor communications and poor harbors have made this region quite inaccessible. The objectives of primary strategic importance—aluminum, magnesium and nickel reduction plants—are located near the city of Karenko.

DESCRIPTION: The eastern part of Taiwan is dominated by the Niitaka Mountains, the foothills of which extend all the way to the coast. The highest peaks rise to about 14,000 feet about 30 miles west of Karenko.

DEFENSES AND VULNERABILITY: Information concerning active air defenses in this region is too scarce to warrant a general evaluation. There are at least three military airfields in this area, in addition to several auxiliary fields, but nothing is known concerning their fighter aircraft strength. Aircraft spotter posts are reported to be located along the coast. Pill boxes (machine guns, etc., for beach defenses) are located south and east of Garambi and along the coast between Taito and Karenko.

The objectives of primary importance — at Karenko — are located near the coast, within a conspicuous industrial area.

Weather Chart for Taiwan East Area

Data from Karenko, Taiwan, 23° 59′ N., 121° 36′ E., elevation 59 ft.

UPPER AIR WINDS. Percentage frequency of wind directions and velocities (miles per hour):
Data from Hong Kong, 22° 18′ N., 114° 10′ E., elevation 109 ft.
I = 0-11.5 m.p.h. II = 11.6-31.0 m.p.h. III = Over 31.0 m.p.h.

	N			NE			E			SE			S			SW			W			NW		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
January:																								
10,000 ft.	1	4	0	1	2	2	3	0	0	4	4	0	4	2	0	4	9	1	4	26	4	5	20	0
16,000 ft.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	5	10	7	0	29	34	0	8	4
April:																								
10,000 ft.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	18	0	0	28	0	9	35	0
16,000 ft.											No	obse	rvatio	ns										
July:																								
10,000 ft.	7	4	0	8	13	0	8	14	0	5	6	0	3	4	0	8	1	0	10	2	0	5	2	0
16,000 ft.	0	2	0	15	9	0	19	17	0	10	5	0	4	2	0	6	0	0	7	0	0	4	0	0
October:																								
10,000 ft.	6	7	0	7	12	1	7	3	1	7	1	0	1	0	0	8	3	0	13	6	0	12	5	0
16,000 ft.	8	4	0	4	5	0	2	2	0	5	2	0	1	3	0	12	5	1	11	15	2	6	11	1

No. of days with	Fog	Gales (22-34 m.p.h.)	Gales (34-65 m.p.h.)	Thunder	Precipitation	Typhoons (over 65 m.p.h.)	Temperature (° F.) Average	Abs. Max.	Abs. Min.	Precipitation in inches Average	Max. in 24 hrs.	Clear Days	Cloudy Days	Average Cloudiness
Winter	0.0	24.6	9.7	0.7	35.4	0.0	64.3	81.0	49.0	8.4	3.9	1	67	86%
Spring	0.0	16.7	1.3	6.0	47.9	0.0	71.1	89.0	51.0	14.0	5.3	1	61	83%
Summer	0.0	7.7	0.6	12.6	31.5	0.3	80.0	94.0	66.0	24.3	5.5	7	31	63%
Autumn	0.0	21.1	6.3	3.6	36.4	0.0	73.5	89.0	54.0	26.4	13.5	2	48	75%

SURFACE WINDS: Frequency in %	Dec. Jan. Feb.	Mar. Apr. May	June July Aug.	Sept. Oct. Nov.
N	21.3	25.7	10.0	23.7
NE	29.7	20.3	9.3	23.3
E	3.3	6.0	11.7	5.7
SE	2.3	7.3	14.7	3.7
S	3.0	5.3	7.7	6.0
SW	13.0	9.3	17.0	13.0
W	16.0	16.3	18.0	14.3
NW	9.7	9.0	10.7	10.0
Calm	1.3	1.3	1.7	0.3
Velocity (m.p.h.)				
Average	11.4	8.5	8.1	10.5
Maximum	57.5	36.0	39.4	91.3
	NE	NNE	NNE	N

SUMMARY OF FLYING CONDITIONS: June to October is definitely the season of finest weather on the east side of Taiwan, except for the occasional passage of a typhoon.

VISIBILITY is better and **LOW CEILINGS** are less frequent during this period, for Karenko lies to the leeward of the north-south mountain range of Taiwan.

Late autumn, winter, and early spring months are gloomy with relatively low overcast prevailing upwards of 60% of the time.

ICING of a serious nature will not be encountered frequently if the tops of cumulo-nimbus are avoided.

TYPHOONS occur in summer and autumn, and somewhat strangely, the weather may be exceptionally fine until the approaching storm is within 200-300 miles of the observer.

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TABULATION OF TARGETS IN TAIWAN EAST AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			STEEL AND OTHER METAL PLANTS	
61	Japan Aluminum Co. (Karenko)	24° 00′ N 121° 37′ E	Aluminum & Magnesium. About 2 mi NE of Karenko is the most important single objective in Taiwan East Area. Believed located within conspicuous industrial zone, near magnesium smelter. Cap. 8,000 tons aluminum (1941). (See map on page M-14.)	61
62	Nickel Smelter (Karenko)	24° 00′ N 121° 37′ E	Refined nickel and cobalt. About 2 mi NE of Karenko. Cap 1,000 tons nickel (1940). Can produce 10% of Japan's nickel requirement. (See map on page M-14.)	61
63	Manganese Smelter (Rato)	24° 40′ N 121° 46′ E	Exact location unknown. Uses 300 KW. Cap unknown.	None
			HARBOR FACILITIES	
64	Karenko Wharves	24° 00′ N 121° 38′ E	About 2 mi NE of Karenko. Most important harbor on E coast of Taiwan. Vital to aluminum, magnesium, and nickel plants at Karenko. A railway spur runs from Karenko RR sta to W side of port. Can berth 6 3,000 ton ships; handles 200,000 tons of goods annually. 10 whses, 2 cranes (1941). (See map on page M-14.)	61
65	Suo Basin (Suo)	24° 35′ N 121° 52′ E	About 1.8 mi SE of Suo. Area 92,000 sq ft—draught 6-9 ft. Port less developed than Karenko. Outer anchorage more protected. Primarily fishing port. Report (1936) that Japanese were considering naval base here. Outer harbor could be used by submarines and small surface vessels. (See photo I on page P-16 and map on page M-15.)	65
			OIL STORAGE FACILITIES	
81	Suo Oil Storage (Suo)	24° 36′ N 121° 53′ E	About 1.8 mi E of Suo—tip of N bight of Suo Bay. Report this port may be used as naval base. 12 tanks, largest fuel storage on E coast. (See map on page M-15.)	81
			RAILROAD TRANSPORTATION FACILITIES	
66	Karenko RR Station & Yards (Karenko)	23° 59′ N 121° 36′ E	SE outskirts of Karenko. Northern terminal of light-gauge Taito-Karenko line. (See photo G on page P-15 and map on page M-14.)	66
67	Taito RR Station (Taito)	22° 45′ N 121° 09′ E	SW side of Taito. Southern terminal of Taito-Karenko line. (See photo D on page P-14 and map on page M-14.)	67
68	Dakusui River RR Bridge (Rato)	24° 43′ N 121° 46′ E	About 3½ mi N of Rato. Suo's only RR link with Keelung. Very long br. (See map on page M-15.)	68
69	Giiran River RR Bridge (Giran)	24° 46′ N 121° 45′ E	Just N of Giiran. Suo and Karenko's only RR link with Keelung. (See map on page M-15.)	69
			ELECTRIC POWER PLANTS	
70	Maruyama Power Plant (Rato)	24° 39′ N 121° 40′ E	About 9 mi W of Rato on Dakusui R. Cap 18,000 KW. Hydro-electric, slated for completion 1941. One of principal sources of electric power for aluminum & magnesium reduction plants at Karenko. Course marked by high voltage power transmission lines and RR spur.	70

3526—T-18—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

TABULATION OF TARGETS IN TAIWAN EAST AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			Electric Power Plants — continued	
71	Taito Sub-Station (Taito)	22° 45′ N 121° 09′ E	On E side of Taito, about 1 mi from waterfront. Regulates and distributes power supply of Taito. (See photo D on page P-14 and map on page M-14.)	**67**
			MISCELLANEOUS INDUSTRIAL PLANTS	
72	Taroko Electro-Chemical Co. (Karenko)	23° 59′ N 121° 36′ E	Prod phosphoric acid fertilizer. Probably in W outskirts of city at coordinates given. Secondary importance. Supplies most of fertilizer used on E coast of Taiwan. (See photo G on page P-15; photo H on page P-16 and map on page M-14.)	**66**
			MILITARY H. Q. AND BARRACKS	
73	Military H. Q. and Barracks (Karenko)	23° 59′ N 121° 36′ E	About 0.6 and 0.8 mi NE of Karenko. Secondary importance. 2 groups of barracks, about 800 yds apart. (See photo G on page P-15 and map on page M-14.)	**66**
			MILITARY AIRPORTS	
74	Karenko Airport (Karenko)	24° 01′ N 121° 38′ E	Probably major mil airbase in East Taiwan. 120 acres, turf surface excellent. 2 small hangars, 3 barracks, fuel tanks. (See map on page M-14.)	**61**
75	Taito Airport (Taito)	22° 46′ N 121° 05′ E	Mil field. Rep alongside large sugar refinery on outskirts of Taito. Rep camouflaged. (See photo E on page P-15 and map on page M-14.)	**67**
76	Giiran Airport (Giiran)	24° 45′ N 120° 45′ E	Rep army airbase in 1940. Surface turf; drainage poor; difficult in wet weather. (See map on page M-15.)	None
77	Suo Airport (Suo)		Auxiliary field rep used by army, 1940. (Not spotted on maps.)	None
78	Garambi Airport (Koshun)		Reports conflicting, some indicate it major airbase, others as auxiliary landing field. (Exact location unknown.)	None
			COMMUNICATION FACILITIES	
79	Garambi Wireless Station (Garambi)	21° 56′ N 120° 49′ E	One of the key radio stas for mil communications. Site marked by several high masts; sta bldgs enclosed by sq concrete wall. (See photo B on page P-13.)	**79**
80	Karenko Wireless Station (Karenko)	23° 59′ N 121° 36′ E	Important signal sta. About 3 blocks E of RR sta. (See photo G on page P-15 and map on page M-14.)	**66**

. . . concluded

LIST OF TARGET CHARTS AVAILABLE FOR TAIWAN EAST AREA

Charts are numbered according to the target on which they are centered.

Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart
61	61, 62, 64, 74	67	67, 71, 75	69	69	79	79
65	65	68	68	70	70	81	81
66	66, 72, 73, 80						

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TAKAO AREA No. 91.6 TAIWAN [FORMOSA]

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MAPS:

Map of Takao Area, 91.6—locating ALL targets....FRONT
Takao City....M-16

3526—T-20—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

SUMMARY AND EVALUATION OF TAKAO AREA 91.6

3526—T-21—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

NOTE: This folder is the result of an effort to obtain the best information thus far available in the U. S. A. The check of such information by photo reconnaissance has not been possible. Every effort should be made in the field to correct by photo reconnaissance the data given herein.

OBJECTIVE AREA: The Takao Area comprises all of SW Taiwan west of the Niitaka Mountains and south of the city of Tainan.

IMPORTANCE: The Takao Area has assumed great importance in conjunction with Japanese operations in the south Pacific and in China. Takao, the southern terminus of Taiwan's only trunk highway and railway, has become a vital port of embarkation and many convoys assemble there. Takao is also important industrially, being the site of a large Nippon Aluminum Plant and several other large factories.

DESCRIPTION: The outstanding physiographic features of the Takao Area—from east to west—are:

(1) "Ape Hill," a 1170′ flat-topped hill located just northwest of Takao City, the barren sides of which are visible for 35 miles at sea level in clear weather:

(2) A low range of hills extending in a general N-S direction from Hozan to Hobi:

(3) The braided channel of the Shimo Tansui River.

(4) The foothills of the Niitaka Mountain Range.

The coast is distinguished by a long lagoon formed by the low and narrow Kigo Peninsula. Between Boryo and Toko the coast is low and sandy. Shoryukyu Island, S by W of Toko, is marked by two flat-topped hills, by yellow cliffs on the western side and by its conspicuous round and sandy northeastern point.

DEFENSES AND VULNERABILITY: Almost the entire Takao Area comprises a fortified zone, the port of Takao having been proclaimed a naval port in 1940. The active defenses consist of heavy calibre shore batteries, fighter aircraft and AA guns. There are about 7 military airports in this area, at least 3 of them being major operational airbases. A total of over 150 fighter aircraft are reported to be based at these fields, in addition to numerous bombers and reconnaissance planes.

Anti-aircraft batteries and searchlights are mounted along the coast W by N of Takao and on the NW tip of the Kigo Peninsula. Other AA guns are reported at Hobi (at the SE end of the Kigo Peninsula), and about 10 AA guns are located at the Heito airbase.

Camouflage has been reported over the major airbases and the Hozan Wireless Station.

The primary targets in this area, located in Takao City, are to be found within a conspicuous "L"-shaped area near the waterfront, making possible straight bombing runs. Most of the installations here are of ferro-concrete construction.

WEATHER CHART FOR TAKAO AREA

Data used taken from Tainan a few miles north of Takao, 22° 37′ N., 120° 16′ E.

Number of days with	Fog	Gales winds over 34 m.p.h.	Thunder-storms	Precipi-tation	Cloudy Skies	Precipitation in Inches		Temperatures (°F.)			Cloudiness
						Average	Max. in 24 hrs.	Average	Highest	Lowest	Average Percentage of Sky Covered
Winter	4.0	1.2	1.2	15.0	24.0	3.3	4.0	63.2	90	37	53.0%
Spring	1.6	0.6	7.2	23.4	25.0	9.6	6.6	73.5	95	42	56.0%
Summer	0.2	2.8	27.2	51.1	30.0	46.7	15.2	81.4	98	67	63.0%
Autumn	1.1	1.7	8.7	18.3	19.0	7.4	8.7	76.0	98	47	49.0%

SURFACE WINDS % Frequencies	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	Annual
N	68	68	57	44	27	8	8	10	23	43	61	73	41
NE	14	11	11	11	9	5	7	6	11	13	12	10	10
E	2	1	3	4	7	12	14	14	14	5	2	1	6
SE	1	2	3	4	10	25	19	21	11	4	1	1	8
S	1	1	3	5	7	20	15	12	6	2	1	0	6
SW	1	1	4	6	10	15	13	12	6	3	1	0	6
W	2	2	5	9	13	9	11	11	11	8	3	2	7
NW	12	13	14	14	12	5	9	10	13	18	16	12	12
Calm	1	1	1	3	4	2	3	4	4	5	3	1	3

TYPHOONS: Formosa is located immediately in the path of severe tropical cyclones, known in this region as typhoons. These storms occur chiefly during summer and autumn with the greatest average frequency in August. Wind velocities in these storms frequently exceed 75 miles per hour and have been known to reach considerably higher velocities. The following table gives the monthly distribution and total number of especially destructive typhoons which occurred over a 17-year period:

J	J	A	S	O	Total
2	5	15	6	2	30

CEILINGS: The condensation level in Formosa averages considerably higher than farther north in the main Japanese Islands. Here it averages about 2,000 feet in winter and lowers to 1,400 feet in summer. Ceilings formed by stratocumulus clouds will average considerably higher in elevation.

VISIBILITY: Fog occurs rarely except in winter when the average is 4 days during the season. For the most part, good visibility will prevail except in precipitation areas or actually within clouds. A semi-permanent cloud bank can be expected on the windward slope of the lofty north-south mountain range in the eastern half of Formosa.

ICING will seldom be encountered below 10,000 feet. Ice formation will probably be encountered more frequently over the high mountain range in eastern Formosa which averages 10,000 to 13,000 feet in elevation.

TABULATION OF TARGETS IN TAKAO AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			STEEL AND OTHER METAL PLANTS	
3	Nippon Aluminum Co. (Takao)	22° 37′ N 120° 17′ E	Cap 12,000 tons (1940). Modern complete unit. Alumina and aluminum reduction. Unconfirmed reports—plant greatly expanded, produces munitions. On waterfront just east of Mitsubishi Oil Storage (Target 4). NOTE: Area N and E of this aluminum plant extensive industrial zone. Following plants, location not known, reported within this zone: Taiwan Fertilizer Co, Nippon Oil Co (Refinery?), Nippon Mining Co, Kokusan Motor Co, Taiwan Iron Works, Maekawa Mining Co, Nitto Pet Co (Refinery?), Taiwan Elec Pr Co, Asahi Electro-Chem Co, and Technical School. Industrial zone set off conspicuously by water to SE, marshland to N and E and airport to S. (See map on page M-16.)	3
			CHEMICAL PLANTS	
2	Chemical Fertilizer Plant (Takao)	22° 38′ N 120° 17′ E	Chemical fertilizer & probably war chemicals—about 6 large buildings; high smokestack. (See map on page M-16)	2
			HARBOR FACILITIES	
8-a	Military Storehouses (Takao)	22° 37′ N 120° 17′ E	25 large warehouses—can berth 5 or 6 huge ships. 1 small dry dock 216 ft long. Military supplies, marine railways, heavy-duty cranes, and fuel oil bunkering facilities. Concrete quay, most of the warehouses are ferro-concrete. (See map on page M-16.)	8-a
8-b	Military Storehouses (Takao)	22° 37′ N 120° 17′ E	Newly-constructed. Important loading and storage facilities should be available. (See map, page M-16.)	None
			RAILROAD TRANSPORTATION FACILITIES	
9	Railroad Car Sheds (Takao)	22° 38′ N 120° 16′ E	Takao is southern terminal of Taiwan's only trunk line. Target area is "C" shaped; freight yard, station and roundhouse at S end and repair shop at N end. (See photo B, page P-18; map, page M-16.)	9
10	Railroad Car Sheds (Takao)	22° 37′ N 120° 17′ E	Secondary importance. Industrial alcohol plant (Target 6) located just to W. (See map, page M-16.)	
55	Shimo Tensui RR Bridge (Heito)	20° 40′ N 120° 26′ E	5,000 ft. steel bridge carries Hozan-Heito RR line over Shimo-Tensui River. (See photo I, page P-21.)	55
			OIL STORAGE FACILITIES	
4	Mitsubishi Oil Storage (Takao)	20° 37′ N 120° 17′ E	Two groups of tanks, believed about 6 tanks. Submerged pipeline carries oil to bunkering wharf, located at SE end of Target 8a (Mil Storehouses). Cap about 25,000 tons. (See photo C, page P-18; map, page M-16.)	None
5	Oil Storage (Takao)	22° 37′ N 120° 16′ E	2 large tanks just north of the RR line leading E by S along wharves. Three *water tanks* just NE of oil tanks. Cap about 10,000 tons. (See map, page M-16.)	None
			ELECTRIC POWER PLANTS	
1	Steam Power Plant (Takao)	22° 38′ N 120° 16′ E	Takao receives also abundant power supply from hydro-elec plant on Lake Candidus (See Objective Folder No 91.4) and other smaller plants. (See map, page M-16.)	1

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TABULATION OF TARGETS IN TAKAO AREA

TARGET NO.	TARGET NAME	APPROXIMATE COORDINATES	DESCRIPTION AND SIGNIFICANCE	TARGET CHART NO.
			NAVAL BASES AND SHIPYARDS	
7	Kigo Naval Dockyard (Takao)	22° 37′ N 120° 16′ E	Important objective, limited to minor repairs and construction of very small craft. Only shipyard in southern Taiwan. Ohba Iron Works (manuf'rs & repairers of marine engines) of about 10 bldgs, just SW of "T"-shaped plot of reclaimed ground. (See photo B, page P-18; map, page M-16.)	7
56	Toshien Dockyard (Toshien)	22° 41′ N 120° 16′ E	Unconfirmed report — 4 drydocks constructed at south end of large inlet NW of small village of Toshien.	56
			MISCELLANEOUS INDUSTRIAL PLANTS	
6	Industrial Alcohol Plant (Takao)	22° 37′ N 120° 17′ E	Believed one of largest industrial alcohol plants in Taiwan. (See photo E, page P-19; map, page M-16.)	None
13	Asano Cement Plant (Takao)	22° 39′ N 120° 16′ E	(See photo D, page P-19; map, page M-16.)	None
			PUBLIC BUILDINGS AND PUBLIC UTILITIES	
11	Water reservoir & Filtering Plant (Takao)	22° 38′ N 120° 16′ E	Secondary importance. (See map, page M-16.)	None
12	Prefectural Office (Takao)	22° 37′ N 120° 17′ E	Houses administrative records (civil and possibly military) of Takao Area. (See map, page M-16.)	None
			MILITARY AIRBASES	
57	Heito Airport (Heito)	22° 40′ N 120° 27′ E	Most important operational airbase in Takao Area. Elliptical shape, about 70 acres. About 40 bldgs (barracks, storehouses, etc.) east side of the field. Underground fuel storage (about 12,000 tons) at south end. Hangars (cap for about 150 planes) dug into hillside on north boundary. (March, 1941) 36 twin-engined bombers, 22 single-seater fighters, and 12 reconnaissance planes. (See photo H, page P-20.)	None
58	Okayama Airport (Okayama)	22° 48′ N 120° 16′ E	Recently enlarged and equipped with underground hangars. No information concerning number of planes here. A large wireless station with many high masts about 2 miles WNW of field serves as landmark.	58
59	Suteiryo Airport (Takao)	22° 27′ N 120° 27′ E	Landing area—1,800,000 sq. ft. Equipped with 4 hangars & underground fuel storage.	59
			COMMUNICATION FACILITIES	
60	Hozen Wireless Telegraph Sta. (Chikugo?)	22° 52′ N 120° 29′ E	About 3 mi NW of Okayama. Reported largest and most powerful in Japanese Empire. Formerly located at Hozen, reported moved to Chikugo, about 3 mi WNW of Okayama Airport. 18-20 high masts, equipped with smoke screening devices for protection against air attack.	None

. . . concluded

LIST OF TARGET CHARTS AVAILABLE FOR TAKAO AREA

Charts are numbered according to the target on which they are centered.

Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart	Chart Number	Targets Appearing on Chart
1	1	7	7	55	55	58	58
2	2	8a	8a	56	56	59	59
3	3	9	9				

3526—T-23—Taihoku Taiwan-Takao—11-20-42—3rd Proof

PHOTOGRAPHS OF TAIHOKU AREA 91.3

PHOTO A . . . KEELUNG. TARGET 15a-b-c — (a) Northwest Keelung Wharves, (b) Gyucho Harbor Dockyard of the Taiwan Dockyard Co., (c) Southwest Keelung Wharves, TARGET 16 — Eastern Keelung Wharves.

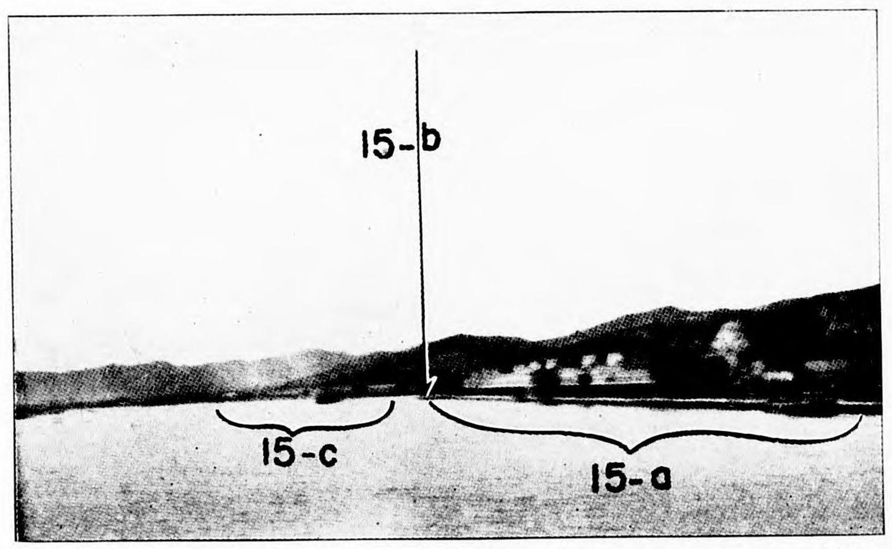


PHOTO B . . . TARGET 15a-b-c — Keelung waterfront looking SW about 1930. (See above.)

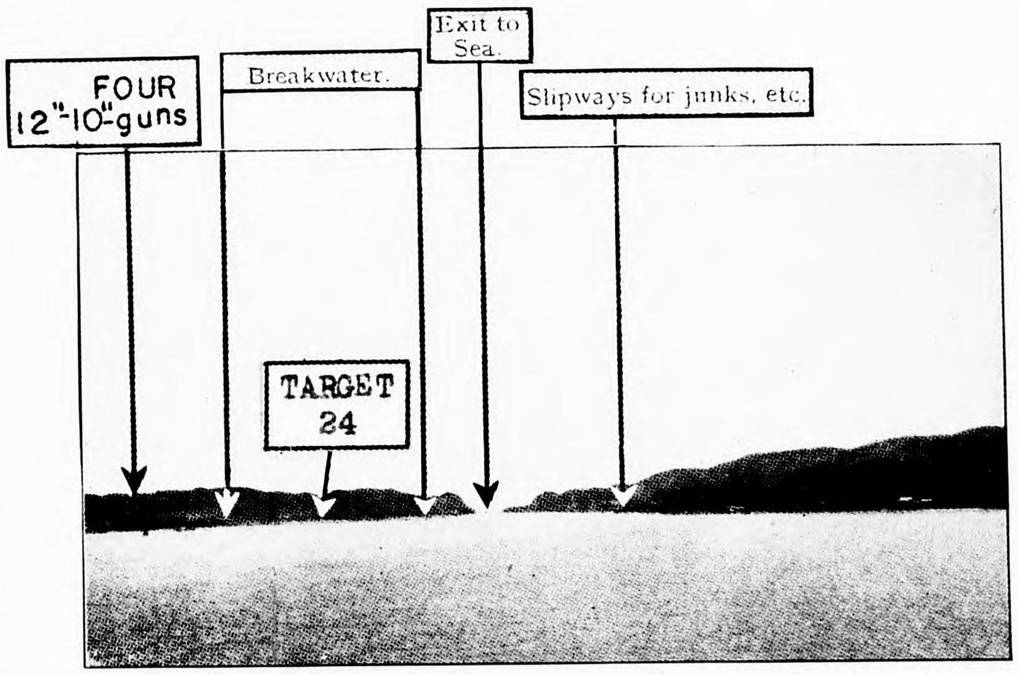


PHOTO C . . . TARGET 24 — Keelung Submarine Base looking NE about 1930.

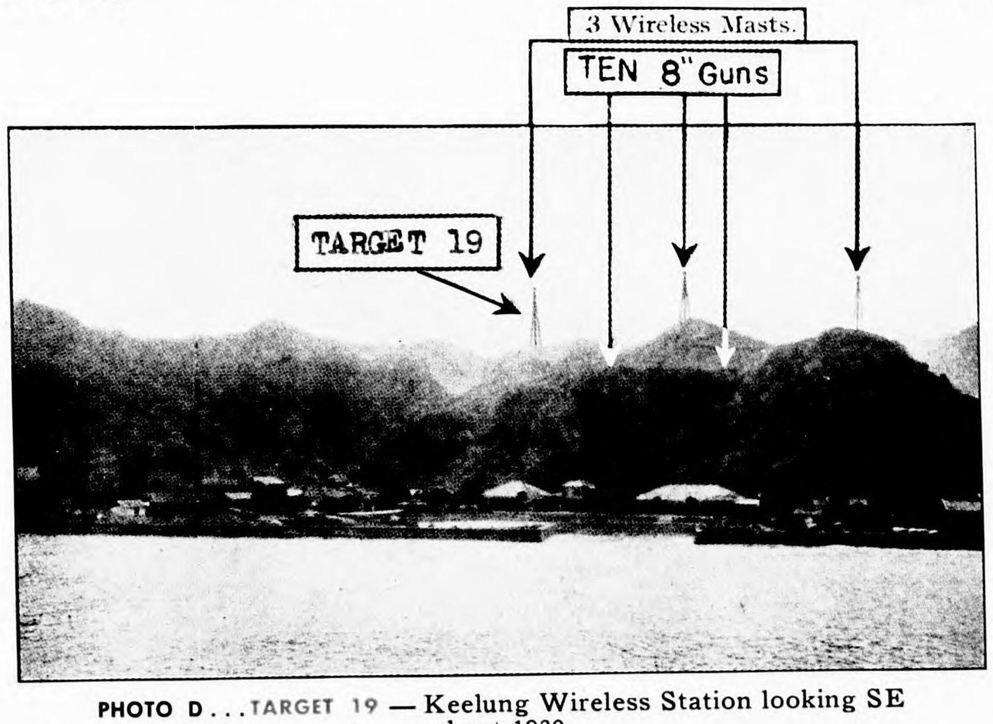


PHOTO D . . . TARGET 19 — Keelung Wireless Station looking SE about 1930.

3526—P-1—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

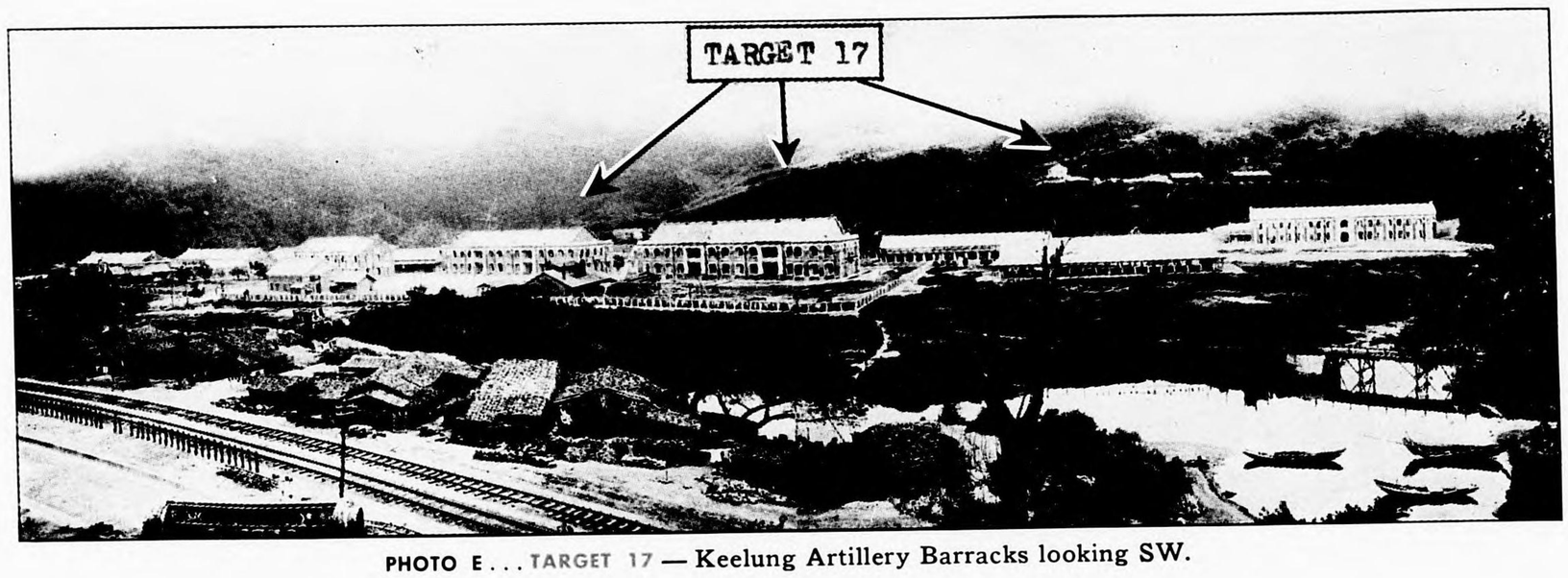


PHOTO E . . . TARGET 17 — Keelung Artillery Barracks looking SW.

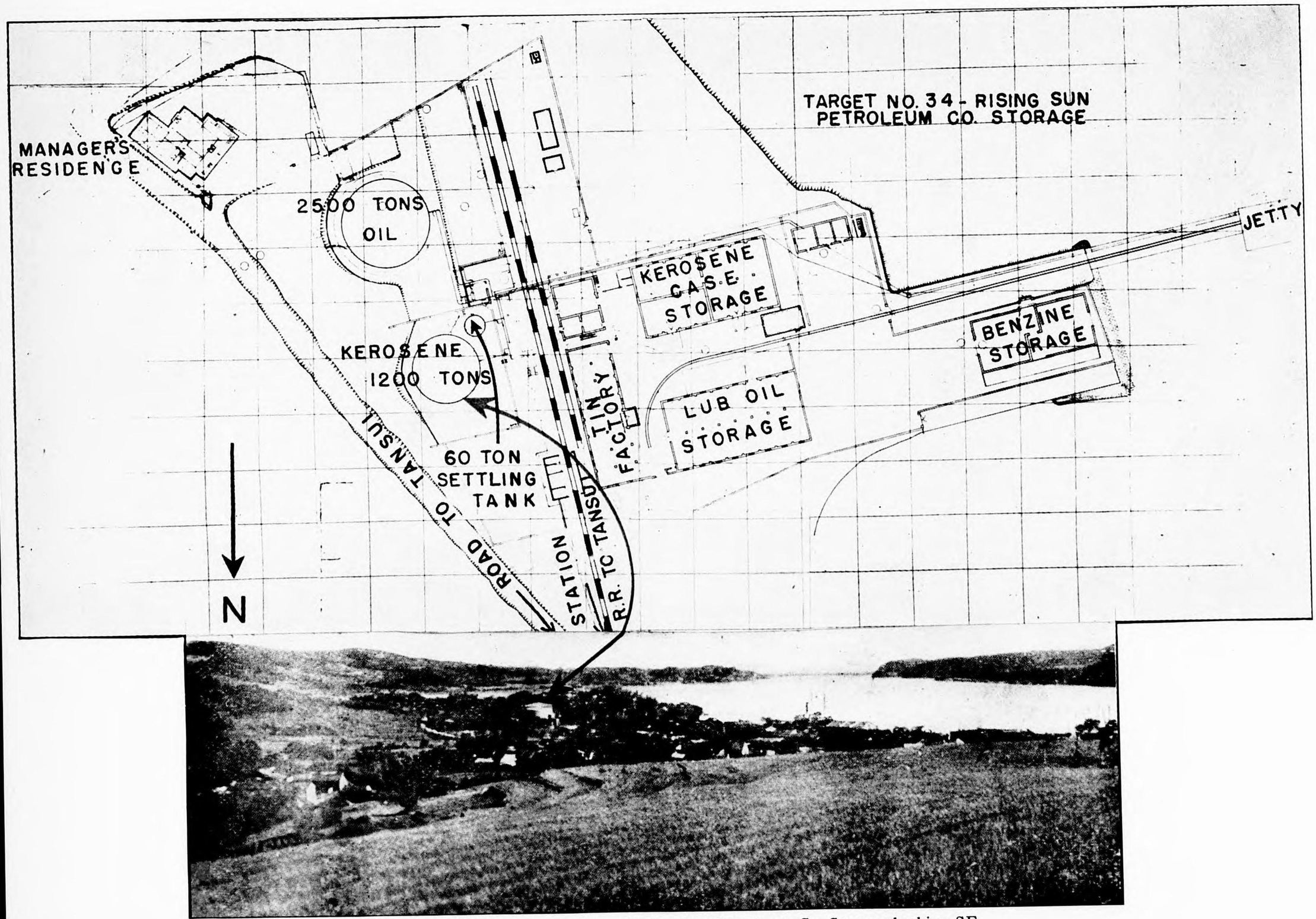


PHOTO F . . . TANSUI TARGET 34 — Rising Sun Petroleum Co. Storage looking SE.

3526—P-2—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

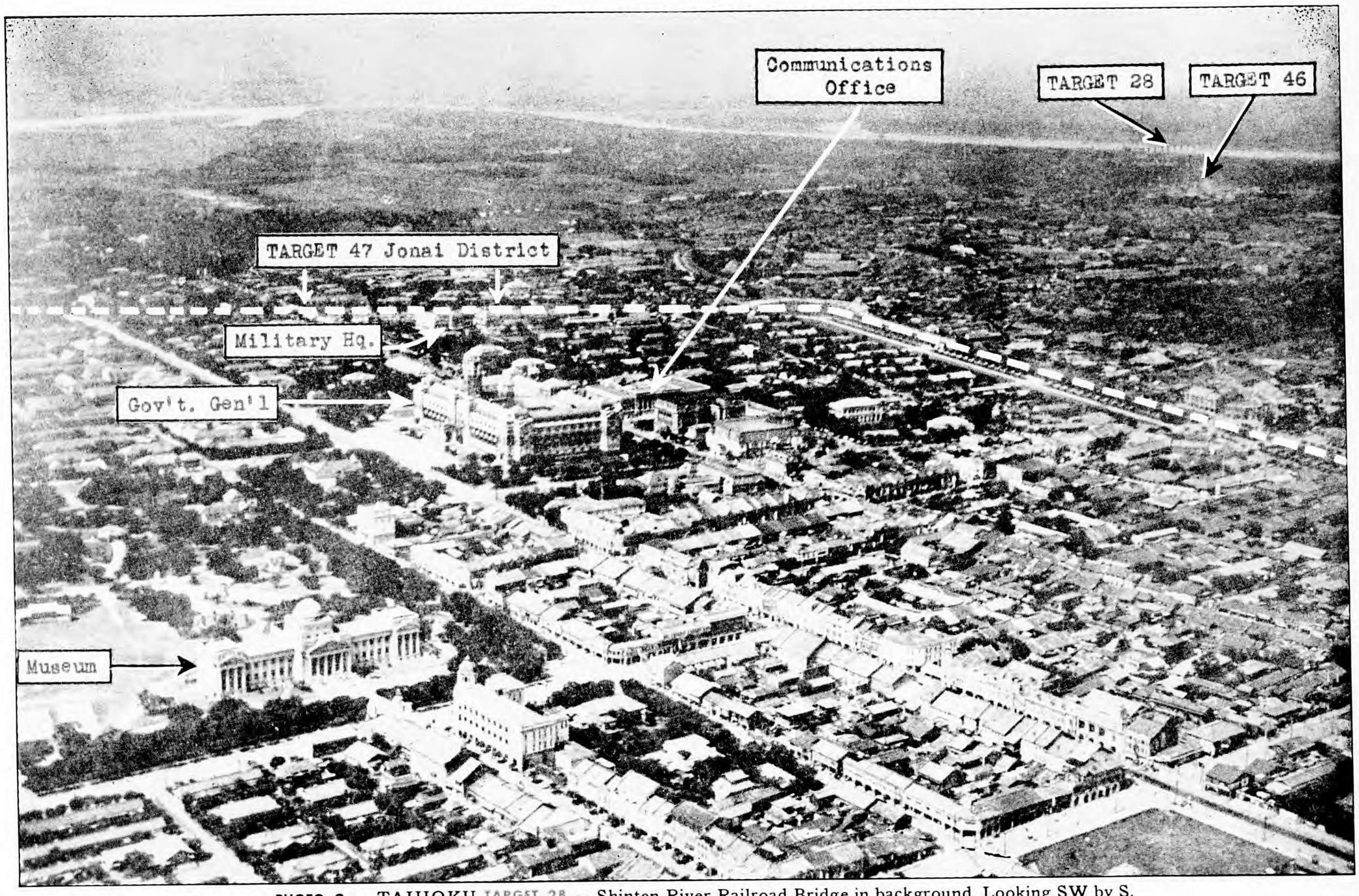


PHOTO G . . . TAIHOKU. TARGET 28 — Shinten River Railroad Bridge in background. Looking SW by S.
TARGET 46 — Taiwan Sugar Refining Company.
TARGET 47 — Jonai District.

PHOTO H . . . TARGET 47 — General view of Jonai District of Taihoku looking SW.

3526—P 3—Taihoku Taiwan Takao—11-20-42—3rd Proof

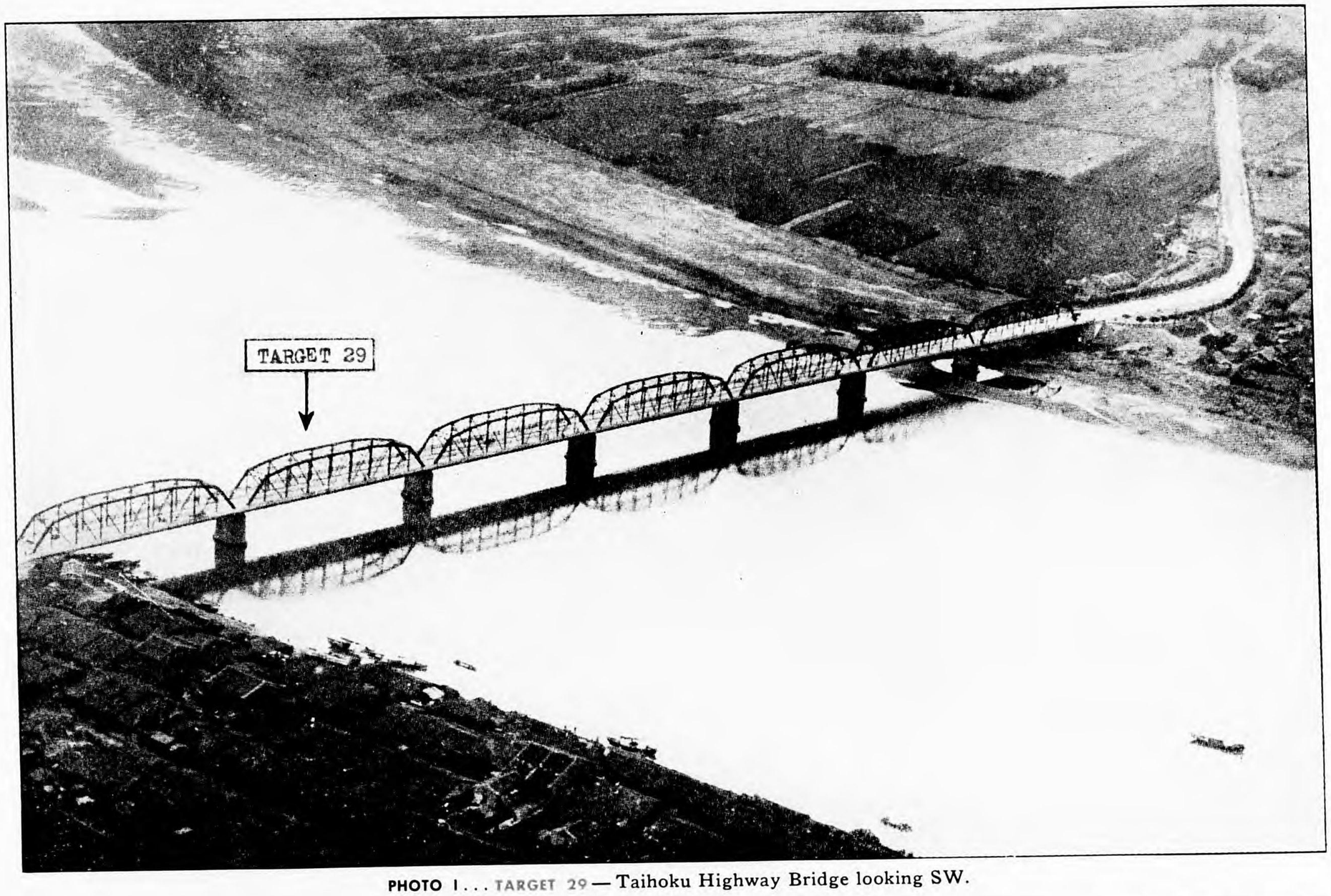


PHOTO I . . . TARGET 29 — Taihoku Highway Bridge looking SW.

PHOTO J . . . TARGET 31 — Taihoku Railroad Terminal looking W.

3526—P-4—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

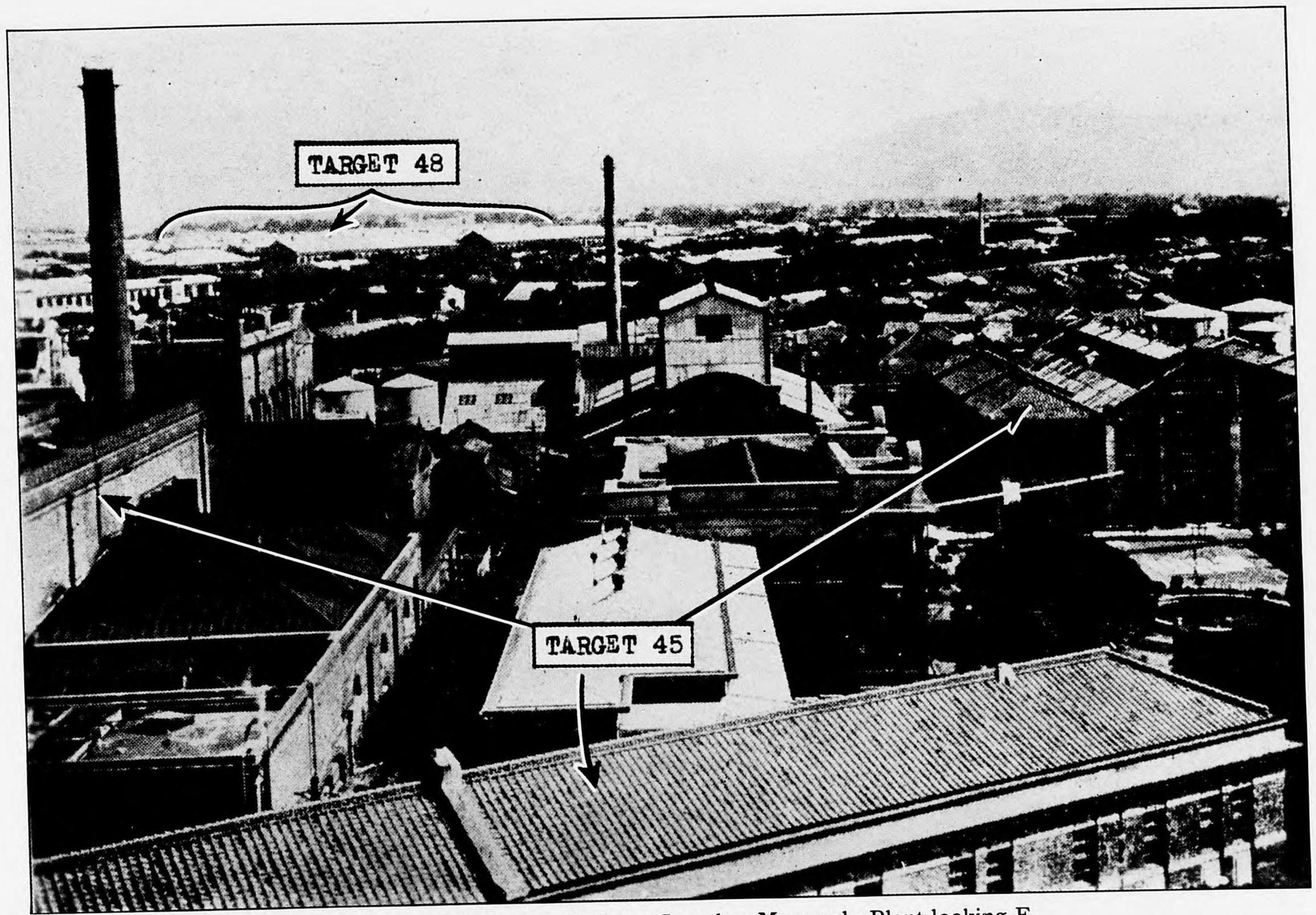


PHOTO K . . . TARGET 45 — Taihoku Camphor Monopoly Plant looking E.
TARGET 48 — Taihoku Barracks looking E.

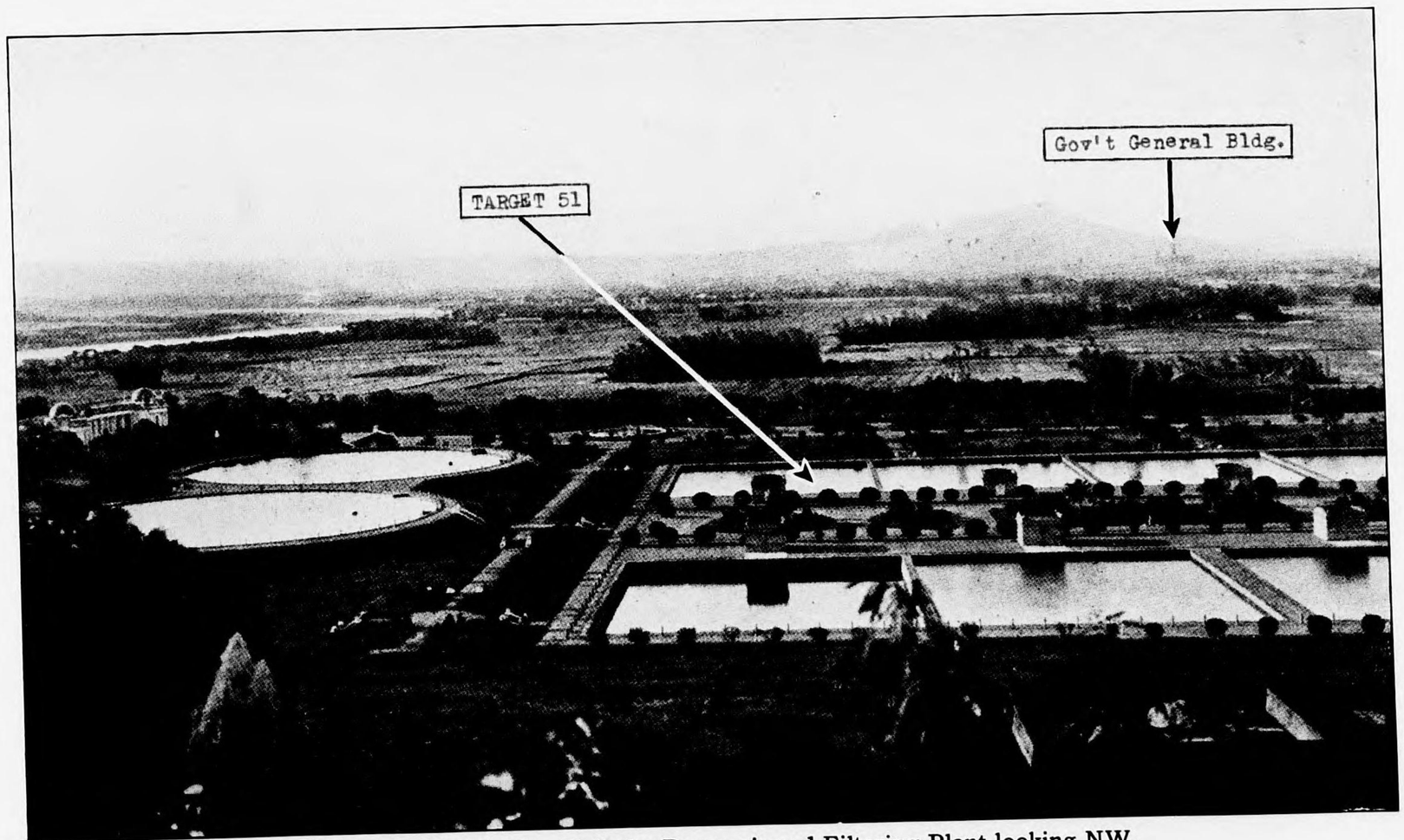


PHOTO L . . . TARGET 51 — Taihoku Reservoir and Filtering Plant looking NW.

3526—P-5—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

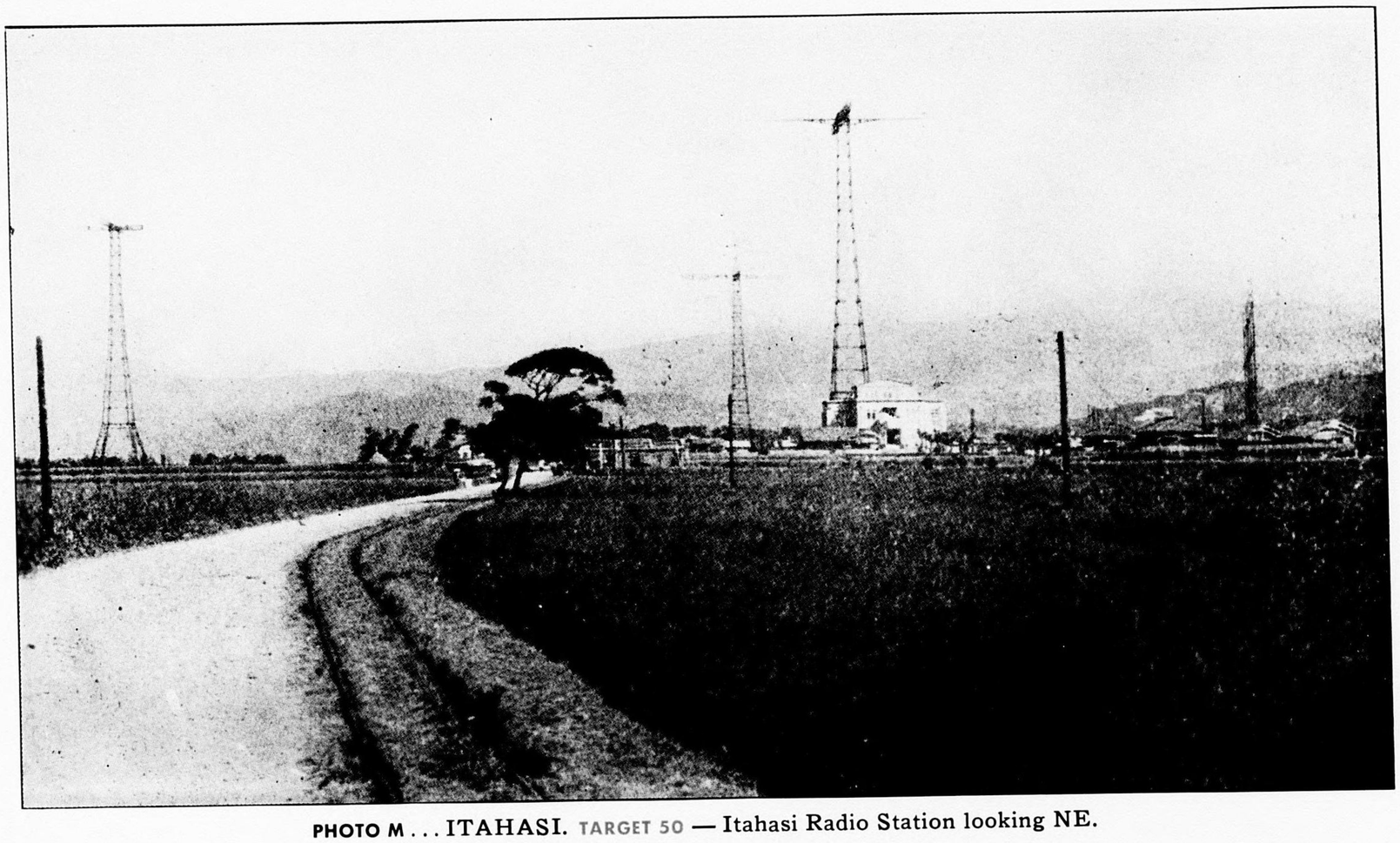


PHOTO M . . . ITAHASI. TARGET 50 — Itahasi Radio Station looking NE.

3526—P-6—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

PHOTOGRAPHS OF TAIWAN WEST AREA, No. 91.4

3526—P-7—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

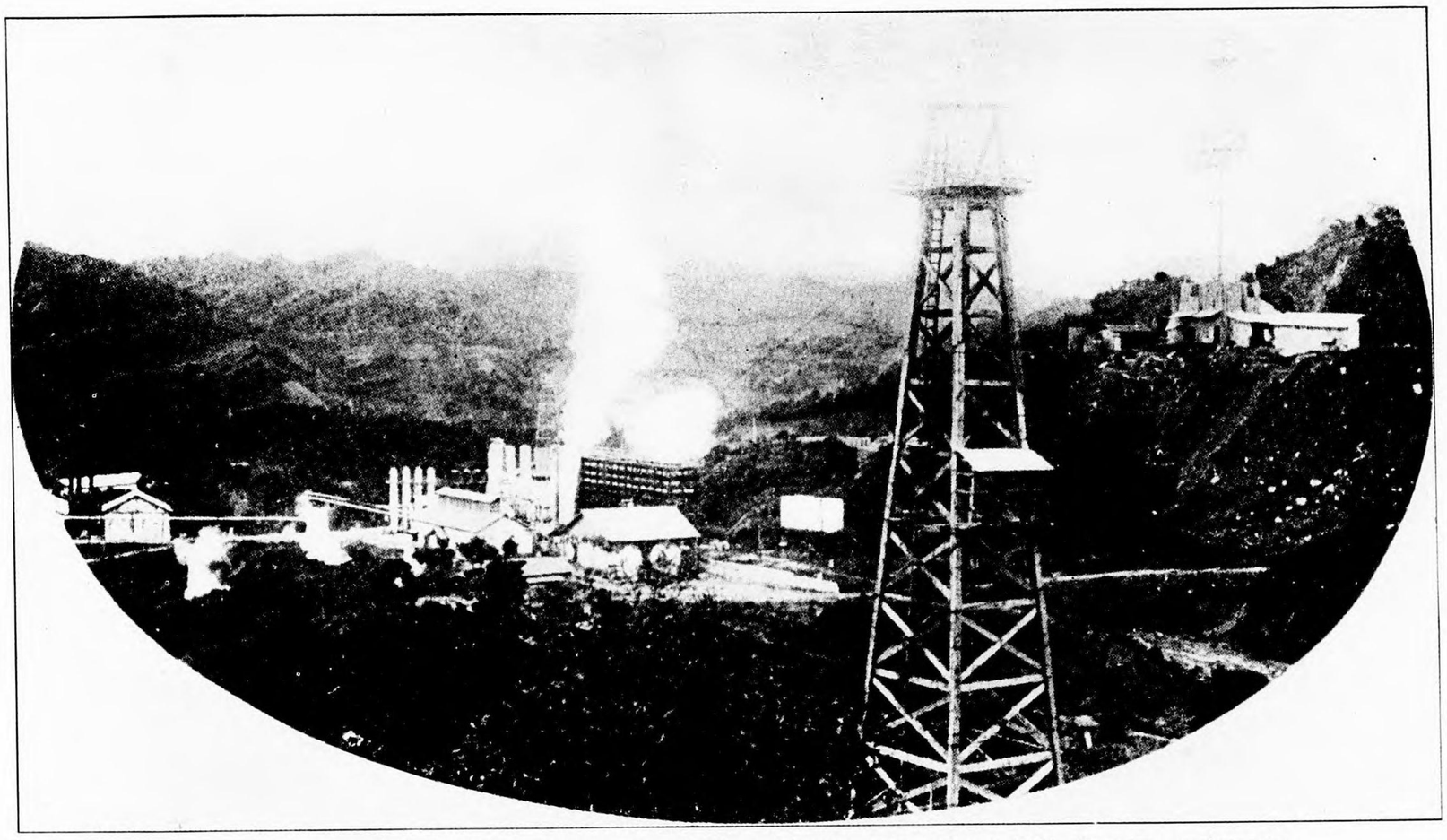


PHOTO A . . . TARGET 86 — Kinsui Casing Head Plant. Picture taken about 1935, direction unknown.

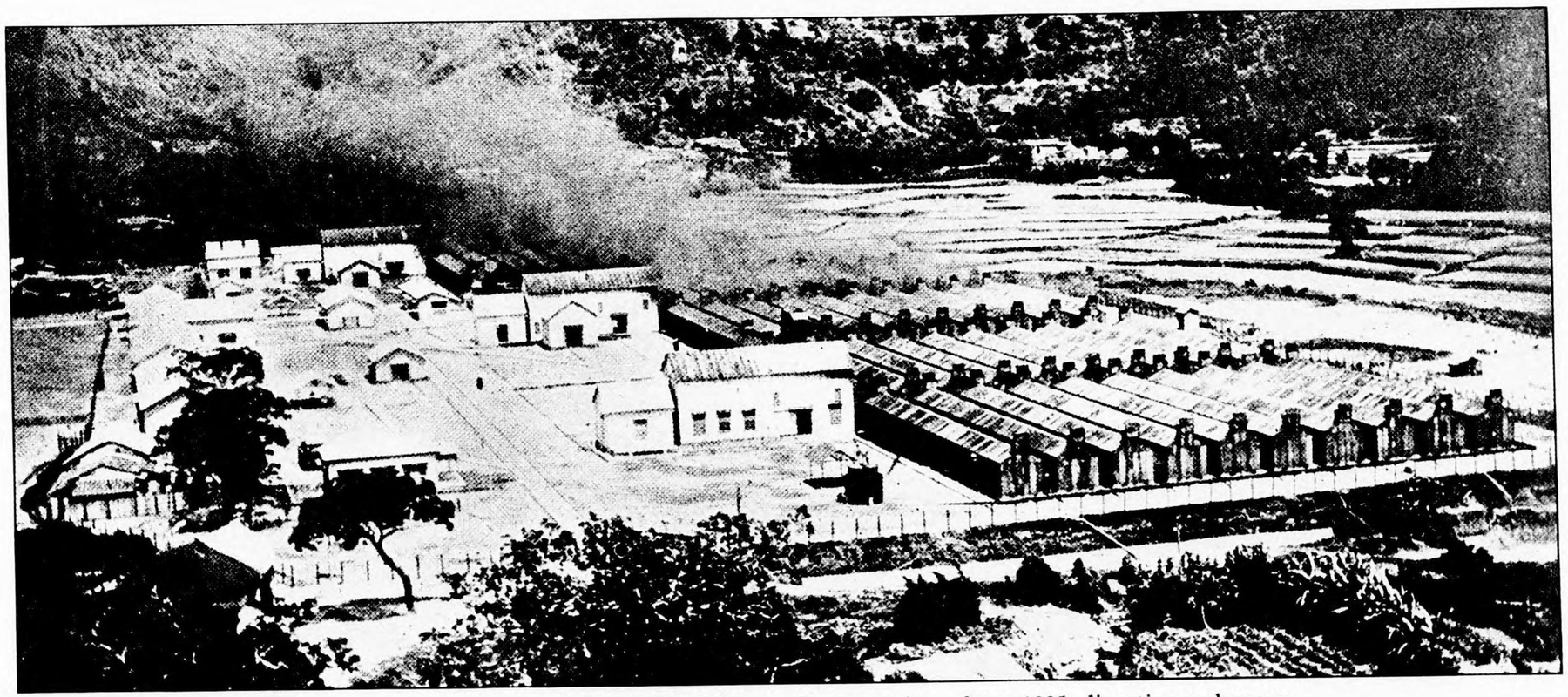
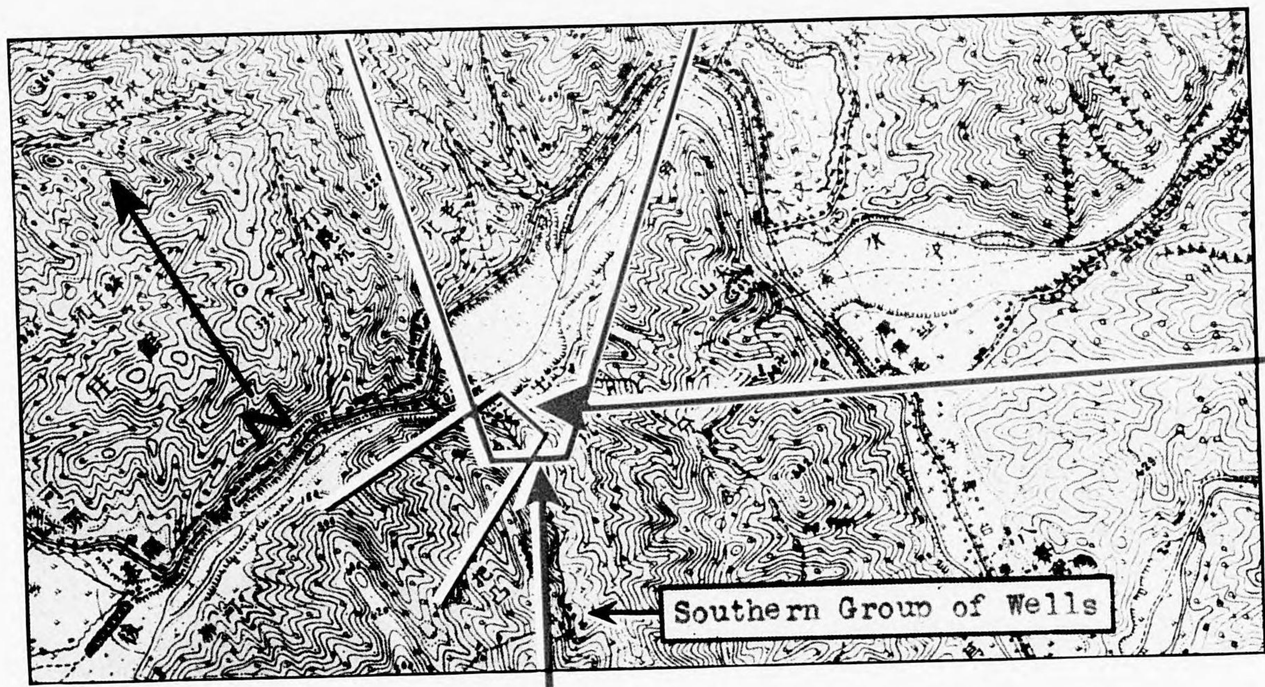
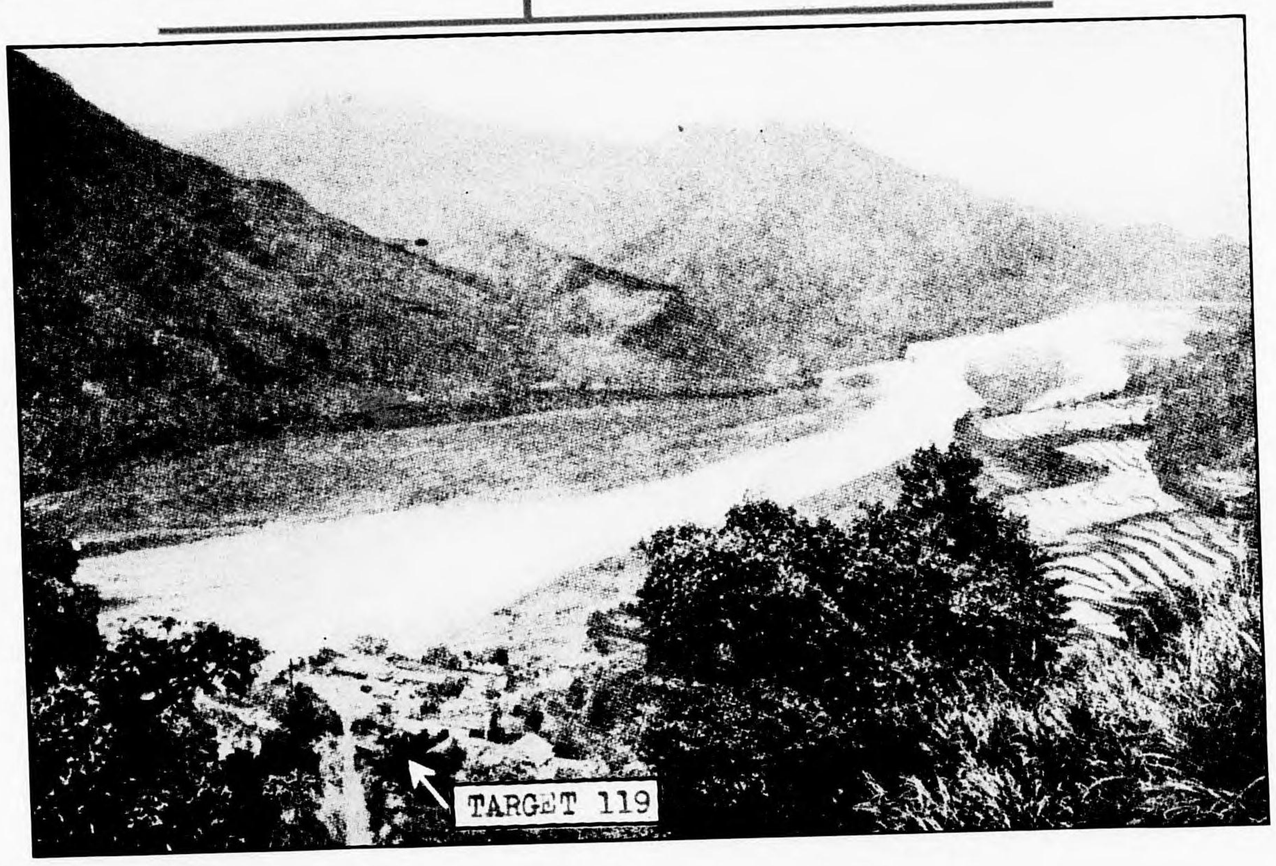


PHOTO B . . . TARGET 87 — Carbon Black Plant. Picture taken about 1935, direction unknown.

By ... NARA, Date ...





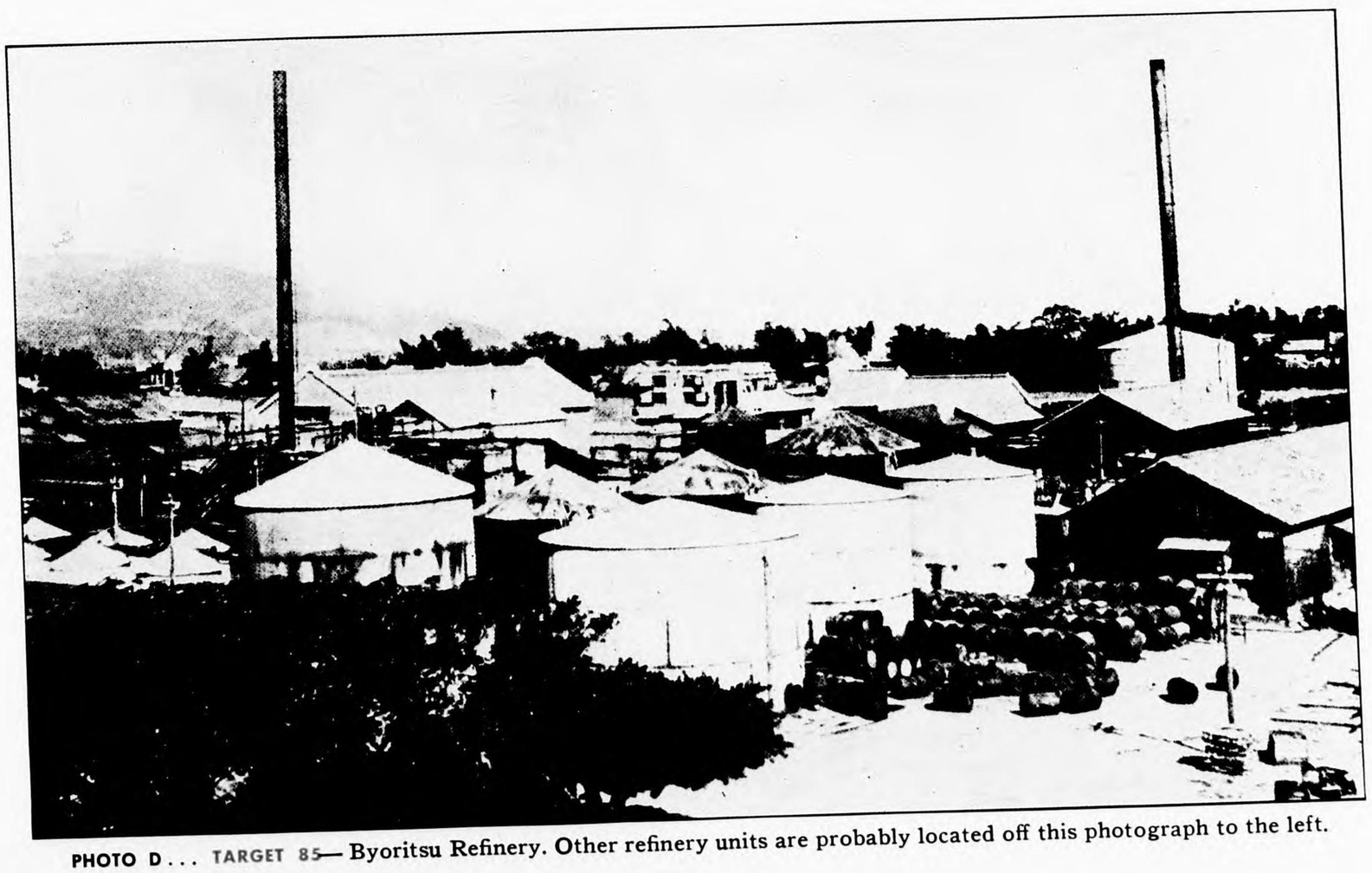
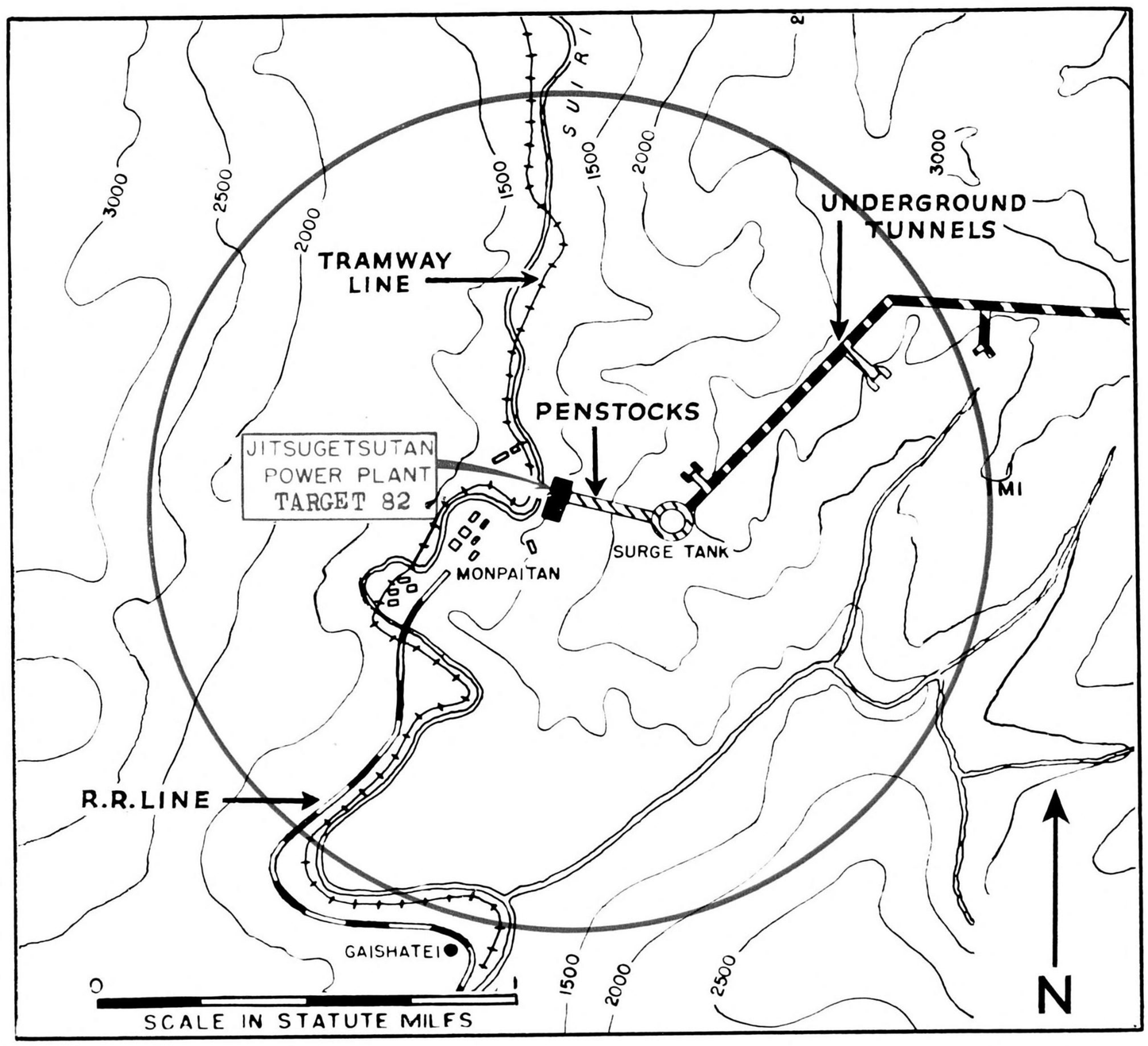


PHOTO D . . . TARGET 85— Byoritsu Refinery. Other refinery units are probably located off this photograph to the left.

3526—P 8—Taihoku-Taiwan-Takao—11-20-42—3rd Proof



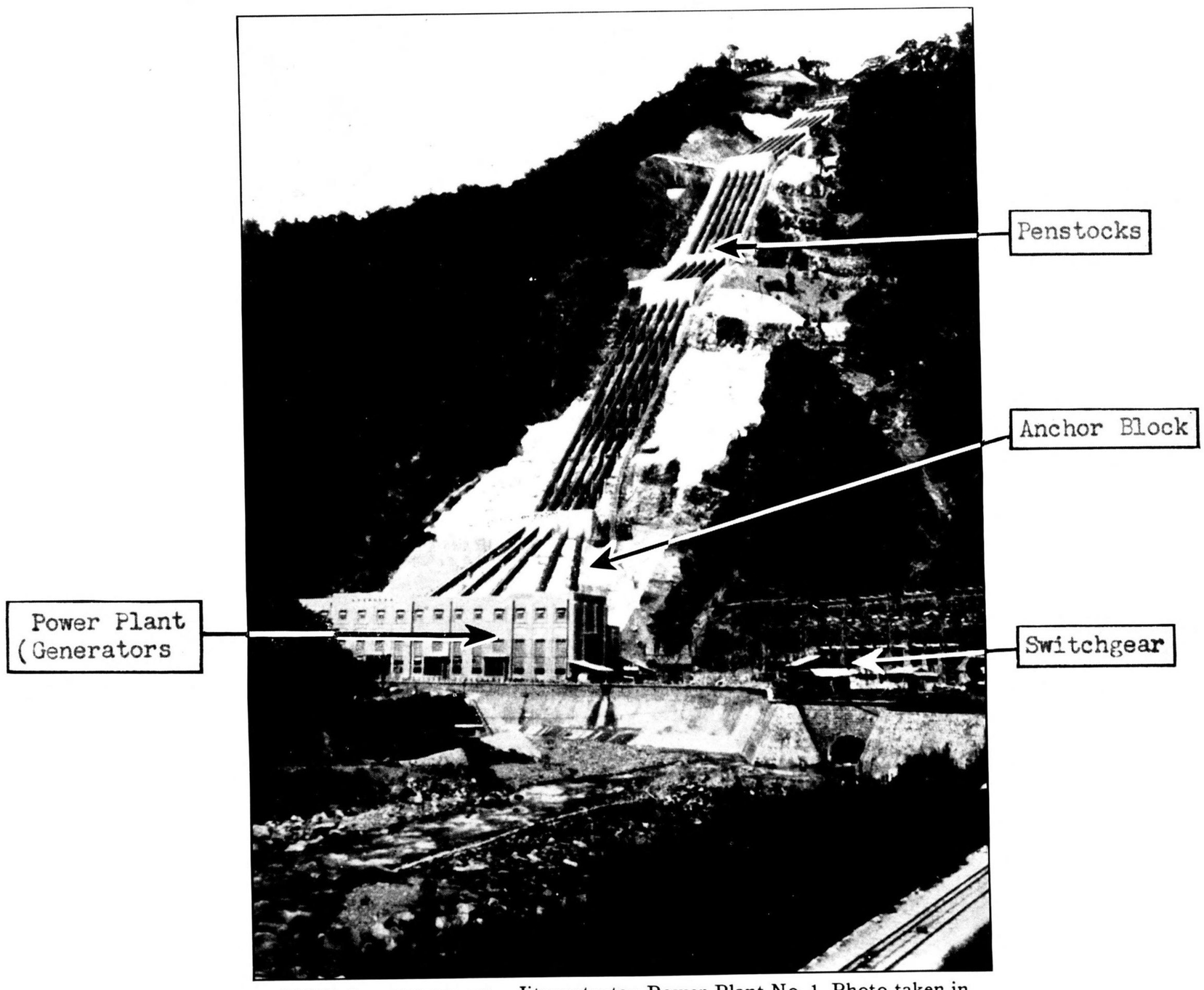


PHOTO F. . . TARGET 82 — Jitsugetsutan Power Plant No. 1. Photo taken in 1934 looking East.

3526—P-10—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

3526—P-9—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

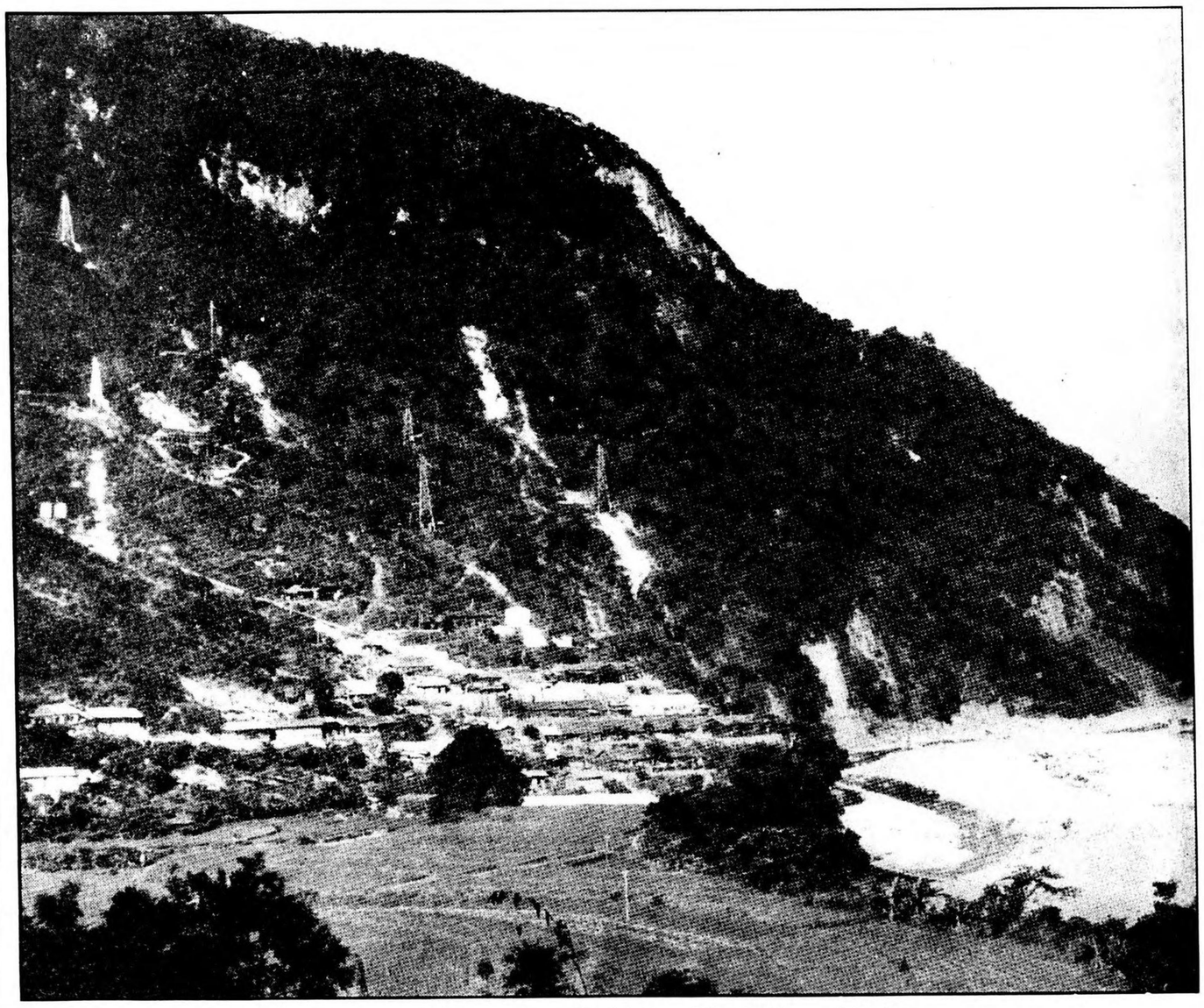


PHOTO C . . . TARGET 119 — Shukkoku Oil Wells and Refinery.
Photo above shows northern group of wells looking West.
Photo at left shows refinery looking NE.

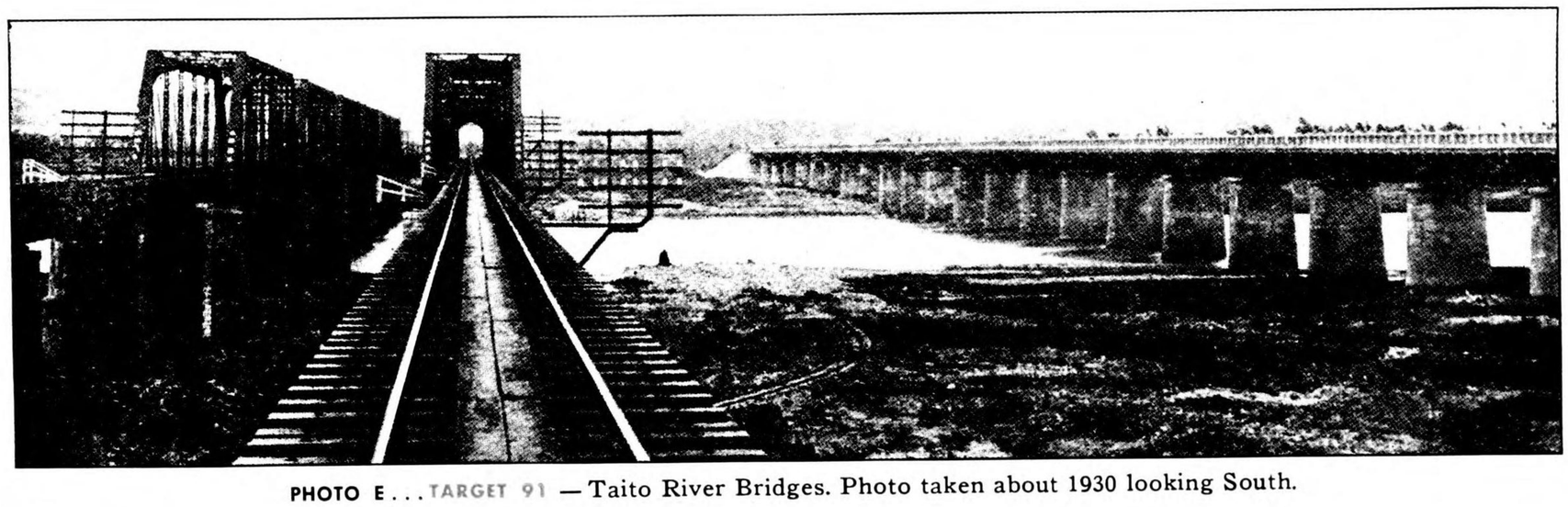
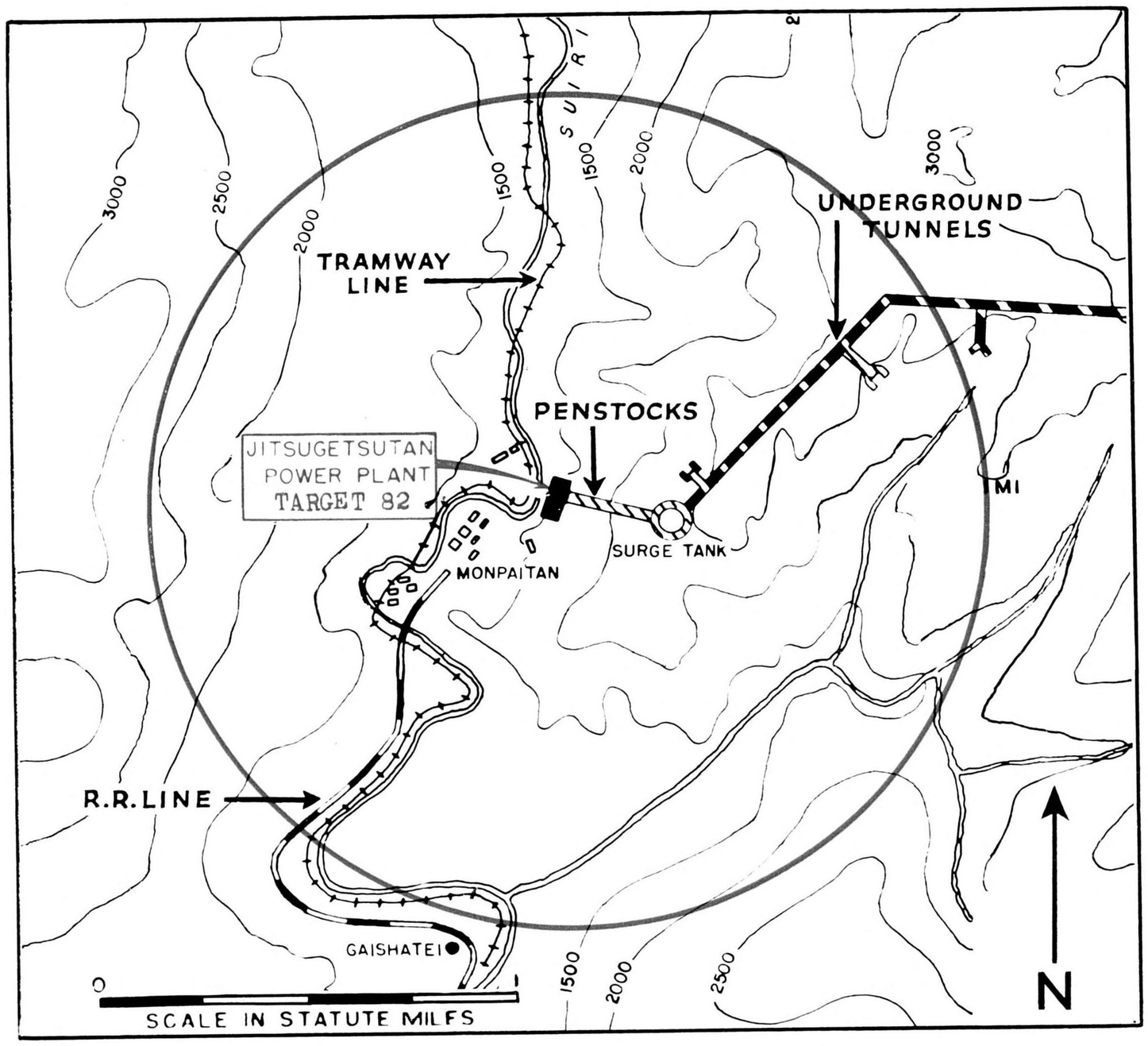


PHOTO E . . . TARGET 91 — Taito River Bridges. Photo taken about 1930 looking South.



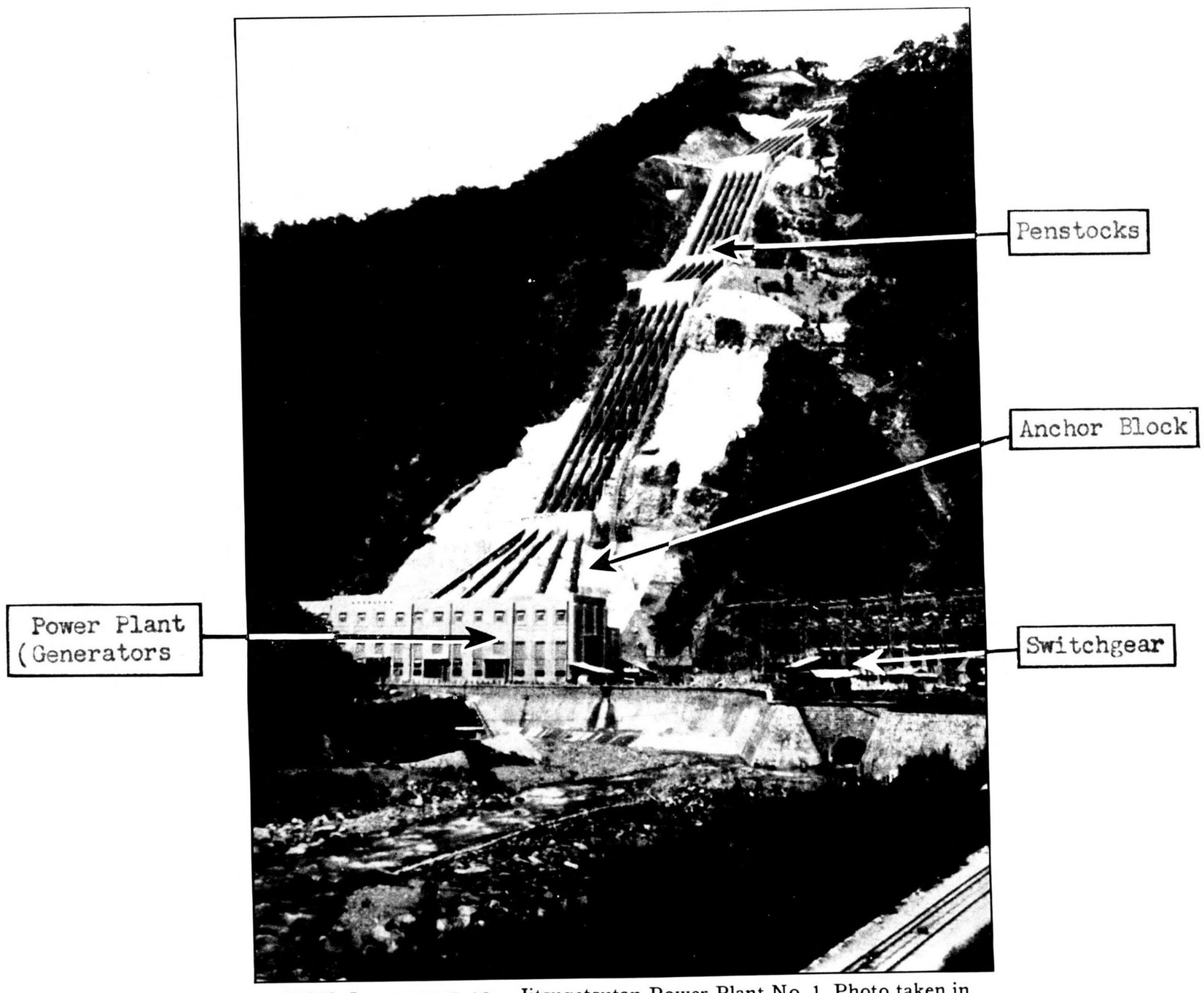


PHOTO F . . . TARGET 82 — Jitsugetsutan Power Plant No. 1. Photo taken in 1934 looking East.

3526—P-10—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

3526—P-11—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

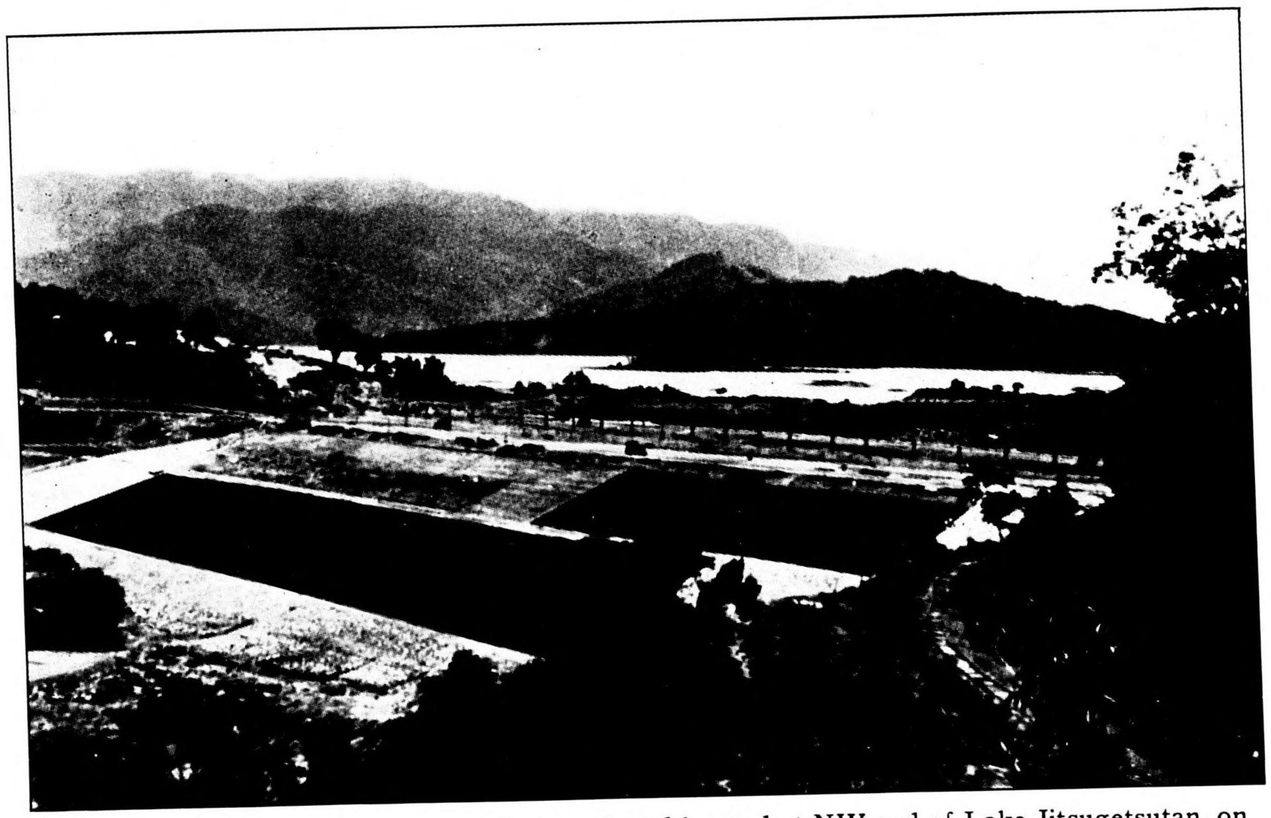


PHOTO G . . . Suisha Dam made of rolled earth and located at NW end of Lake Jitsugetsutan, on approach to TARGET 82. Taken 1934 looking SE.

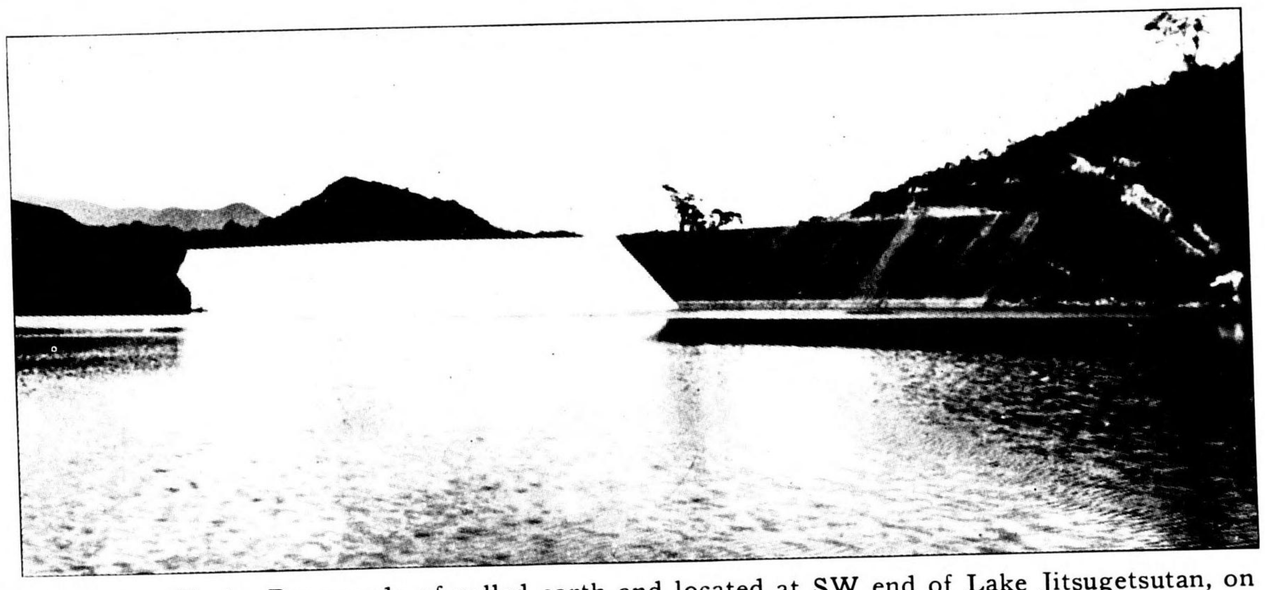


PHOTO H . . . Tosha Dam made of rolled earth and located at SW end of Lake Jitsugetsutan, on approach to TARGET 82. Taken 1934 looking West.

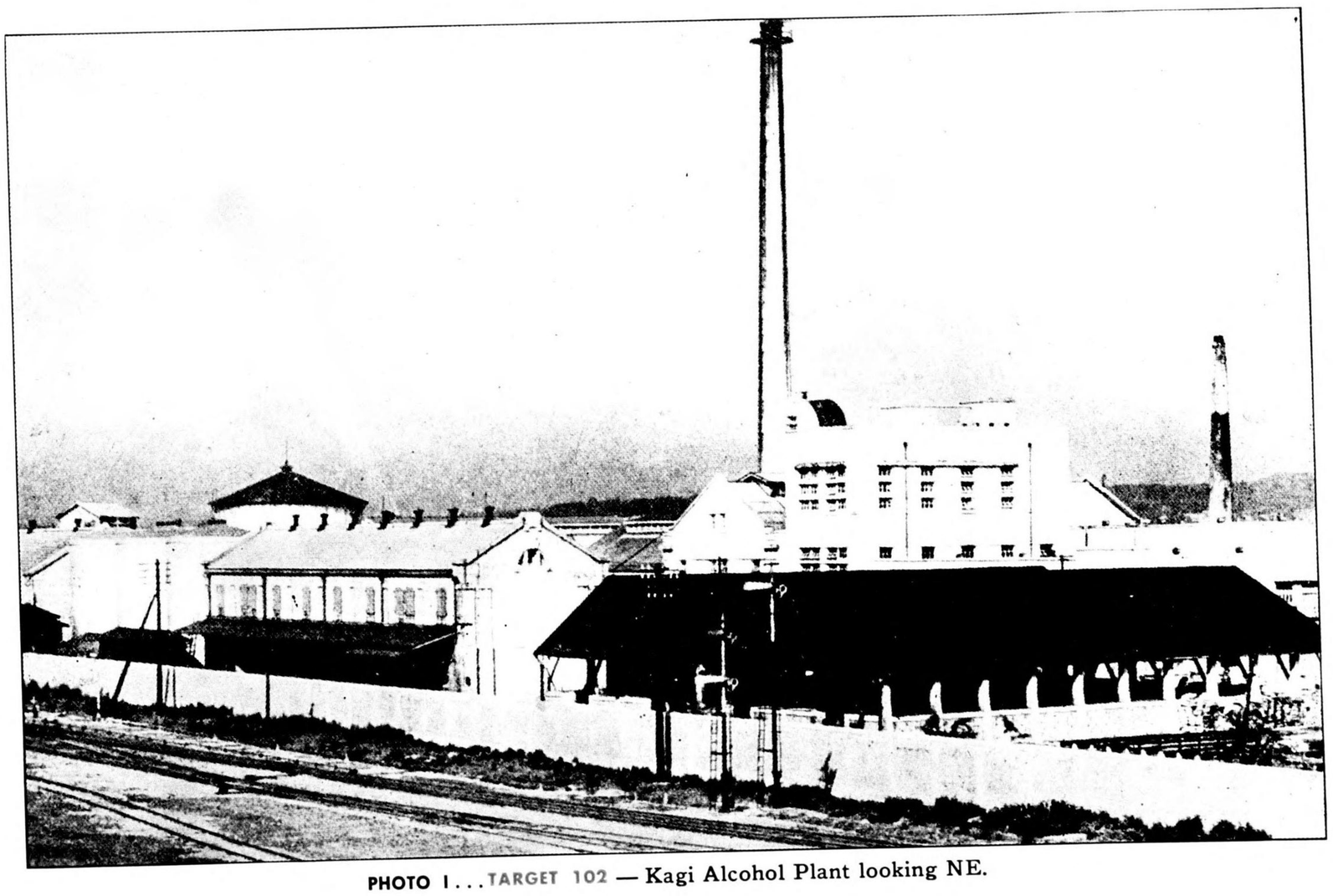


PHOTO I . . . TARGET 102 — Kagi Alcohol Plant looking NE.

By ... NARA, Date ...

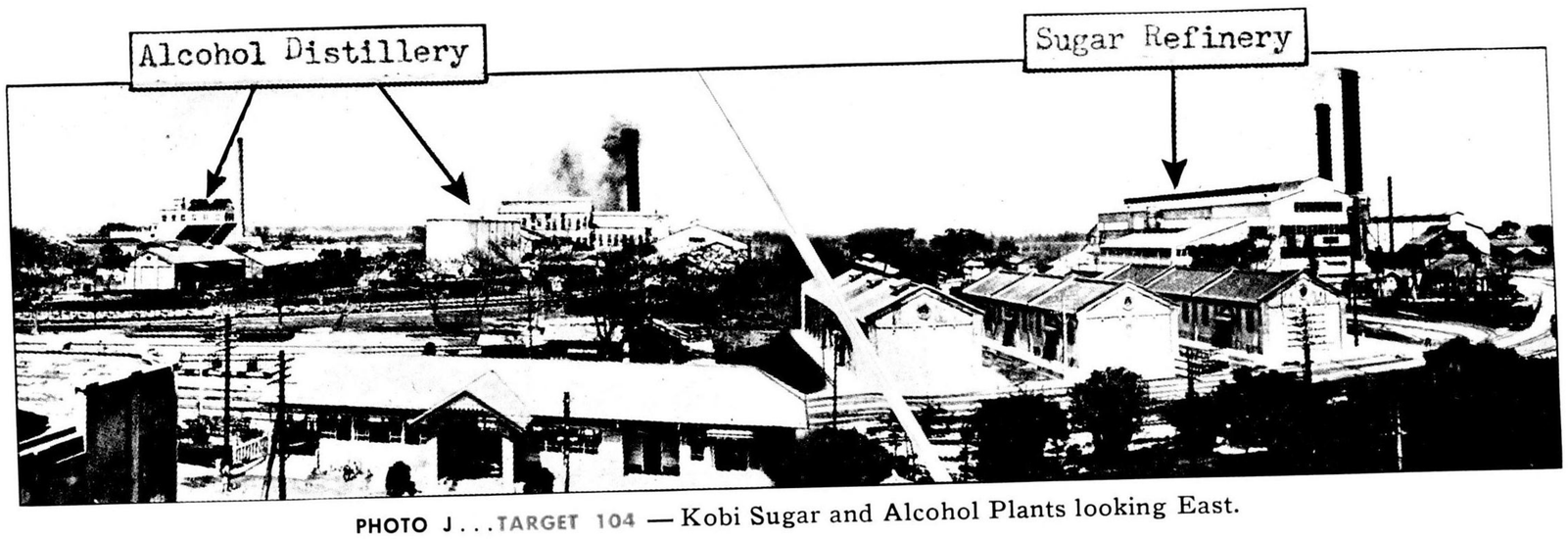


PHOTO J . . . TARGET 104 — Kobi Sugar and Alcohol Plants looking East.

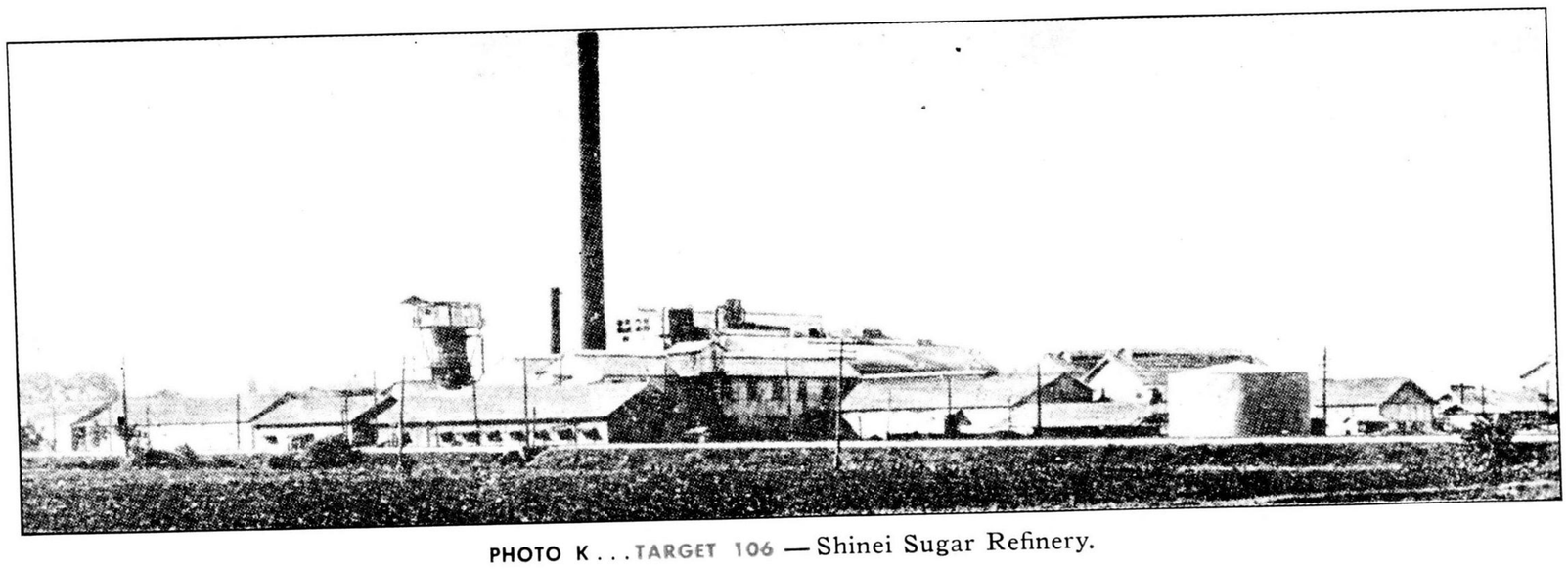


PHOTO K . . . TARGET 106 — Shinei Sugar Refinery.

3526—P-12—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

PHOTOGRAPHS OF TAIWAN EAST AREA 91.5

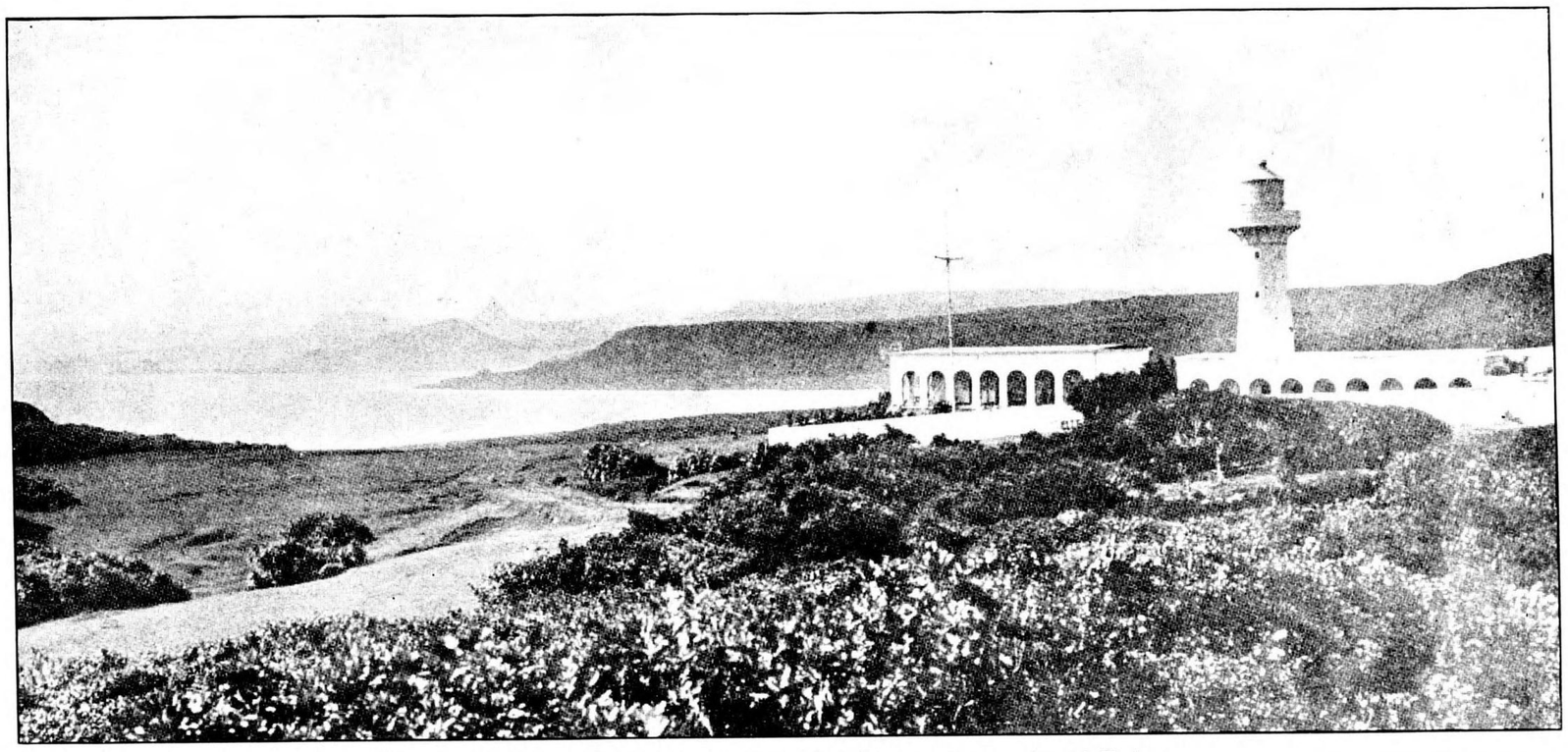


PHOTO A . . . GARAMBI. Garambi Light, southern tip of Taiwan.

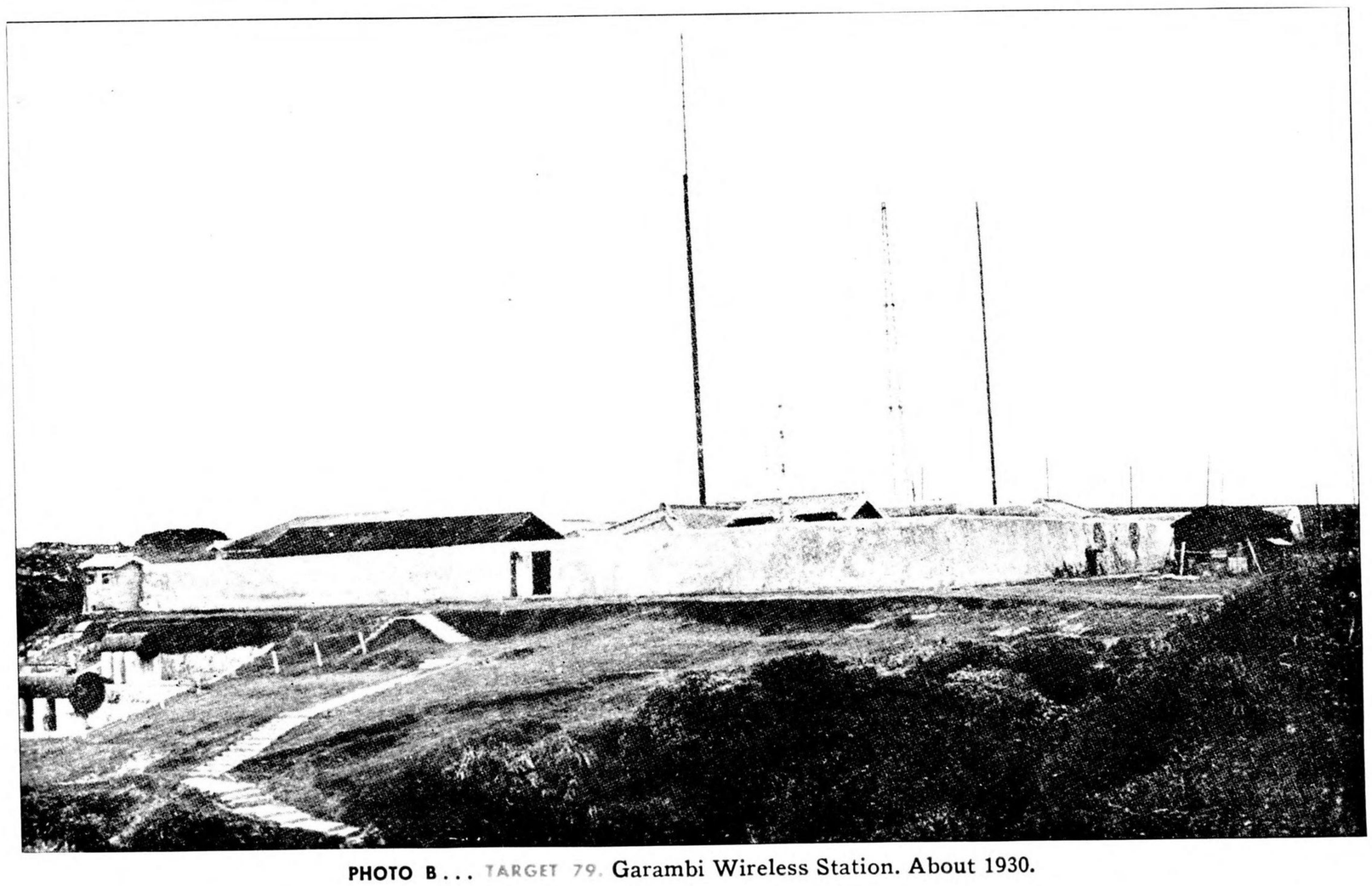


PHOTO B . . . TARGET 79. Garambi Wireless Station. About 1930.

3526—P 13—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

PHOTO C . . . TAITO. Bridge on Taito-Shinko Coast Road, looking E. About 17 miles N by E of Taito.

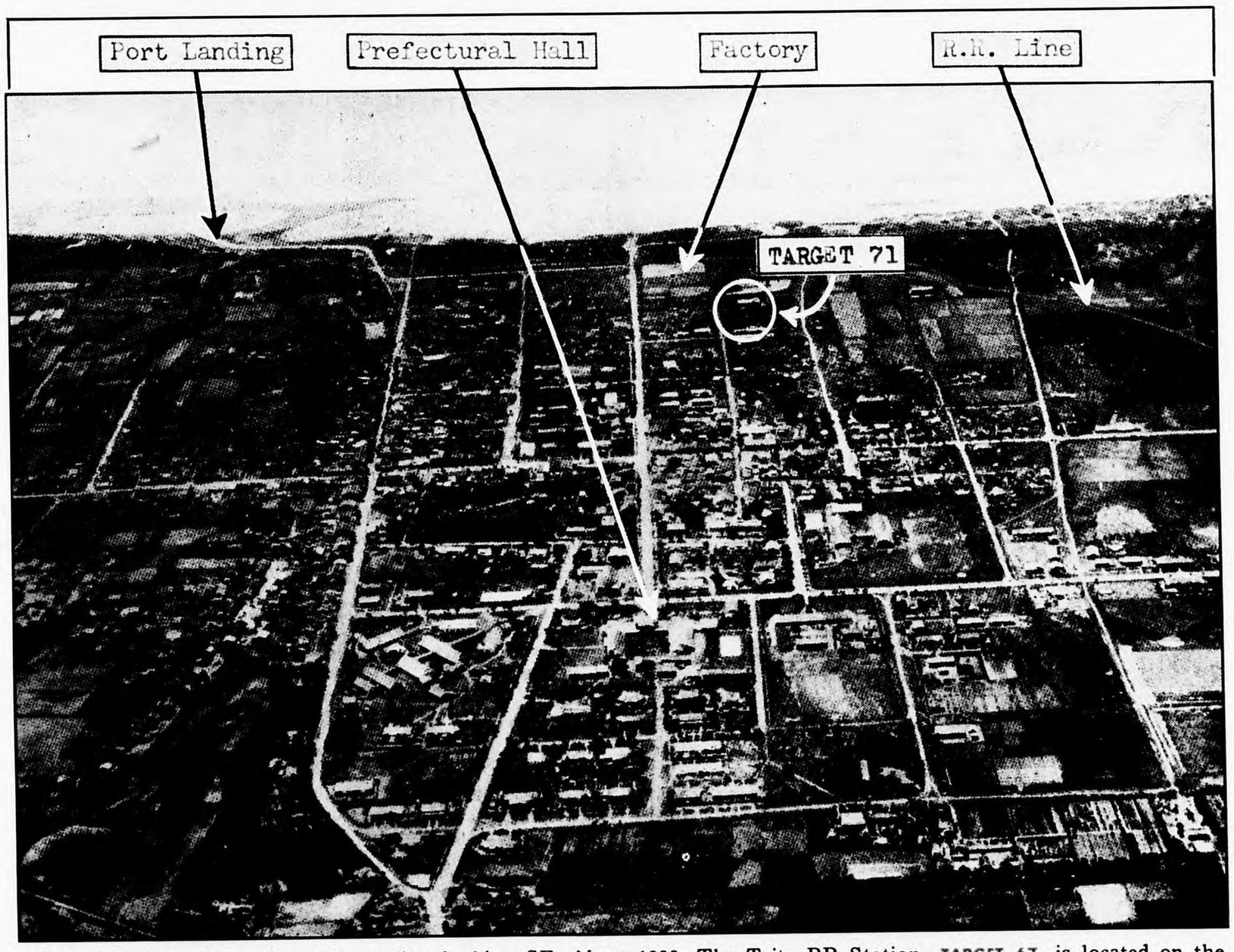


PHOTO D . . . TARGET 71. Taito Substation looking SE. About 1930. The Taito RR Station, TARGET 67, is located on the R R Line, just off the right margin of the photograph.

3526—P-14—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

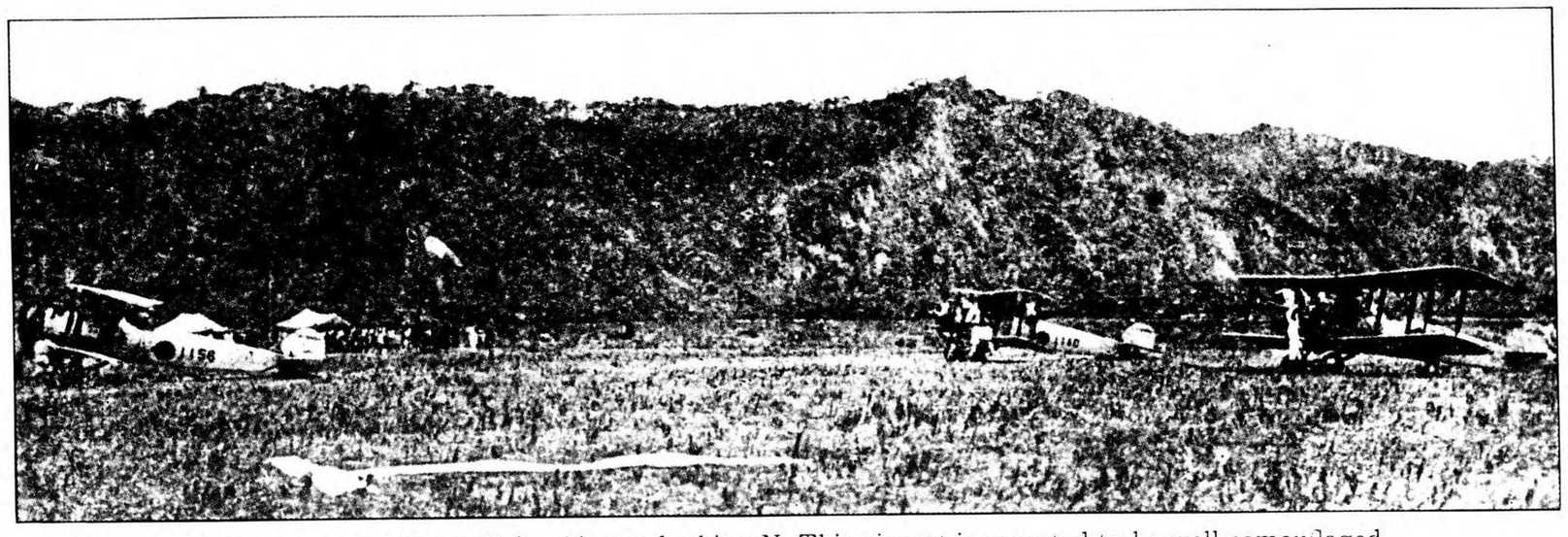


PHOTO E . . . TARGET 75. Taito Airport looking N. This airport is reported to be well camouflaged. Extensive sugar plantations are located to the south.

PHOTO F . . . Baran Sugar Mill. This sugar mill, located in the village of Baran, may serve as a landmark to the Taito Airport, which lies about 2 miles to the north.

PHOTO G . . . KARENKO. About 1930. Looking NW. TARGET 66, Karenko Railroad Station and Yards. TARGET 80, Karenko Wireless Station. Located just off this photograph are: (Upper Left) TARGET 72, Taroko Electro-Chemical Co. and (Upper Right) TARGET 73, Military H.Q. and Barracks.

3526—P-15—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

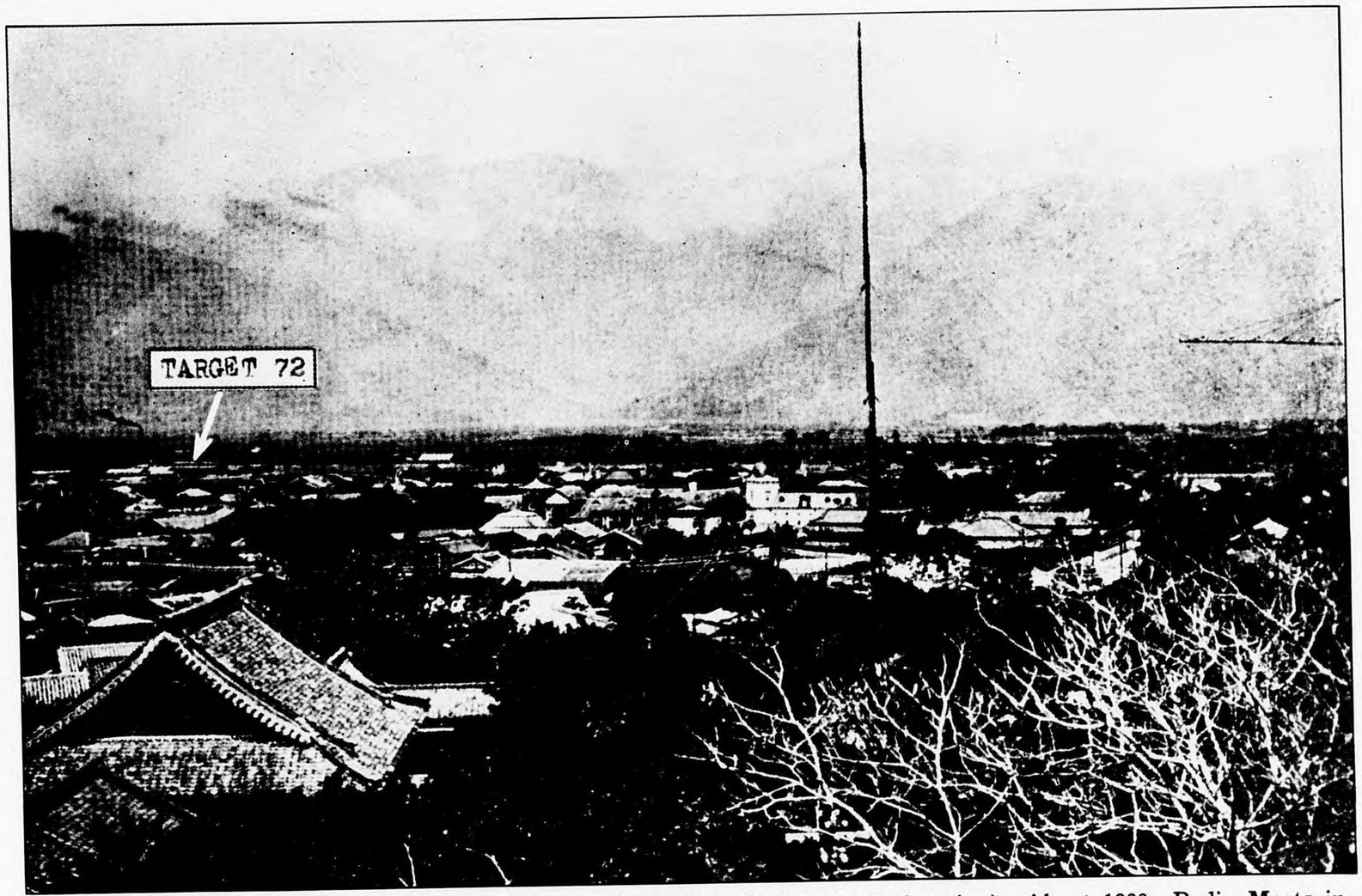


PHOTO H . . . TARGET 72. Taroko Electro-Chemical Co. looking W (probable location). About 1930. Radio Masts in foreground are probably transmitter installations of the Karenko Wireless Station (see Photo G).

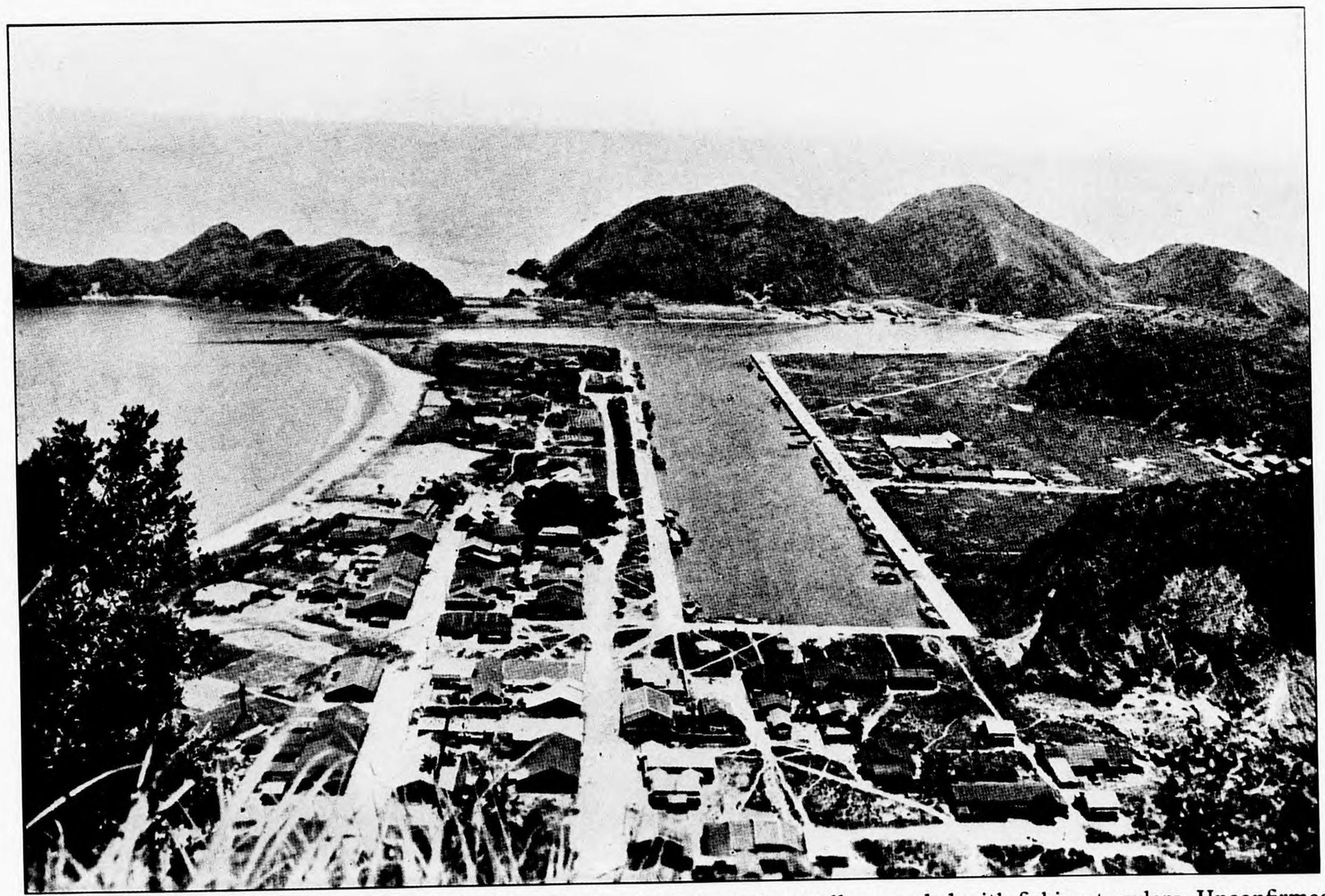
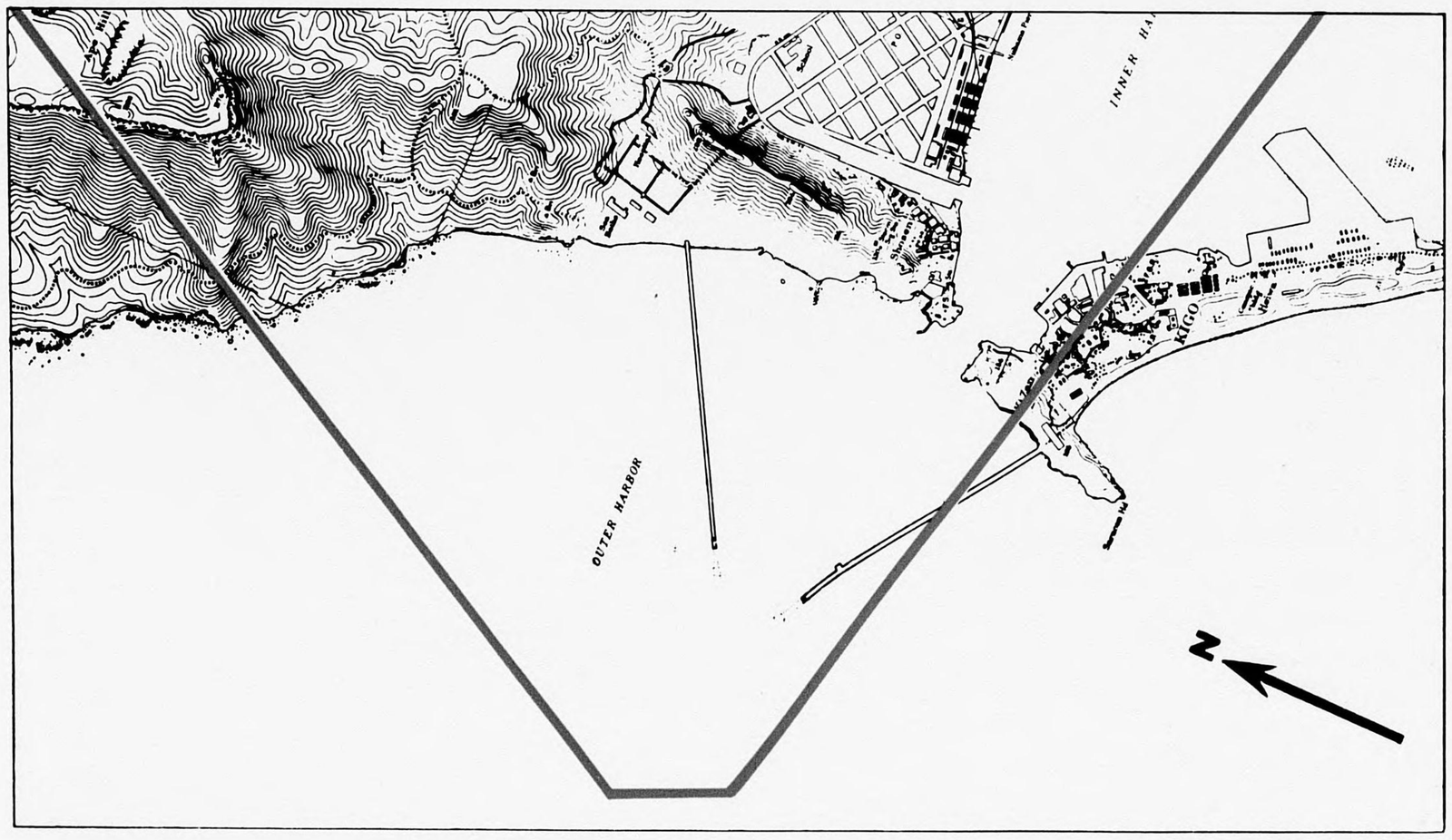


PHOTO I . . . SUO. **TARGET 65.** Suo Basin looking E. 1931. This basin is usually crowded with fishing trawlers. Unconfirmed reports indicate that this port may have been considerably improved for the use of light naval vessels.

3526—P-16—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

PHOTOGRAPHS OF TAKAO AREA 91.6



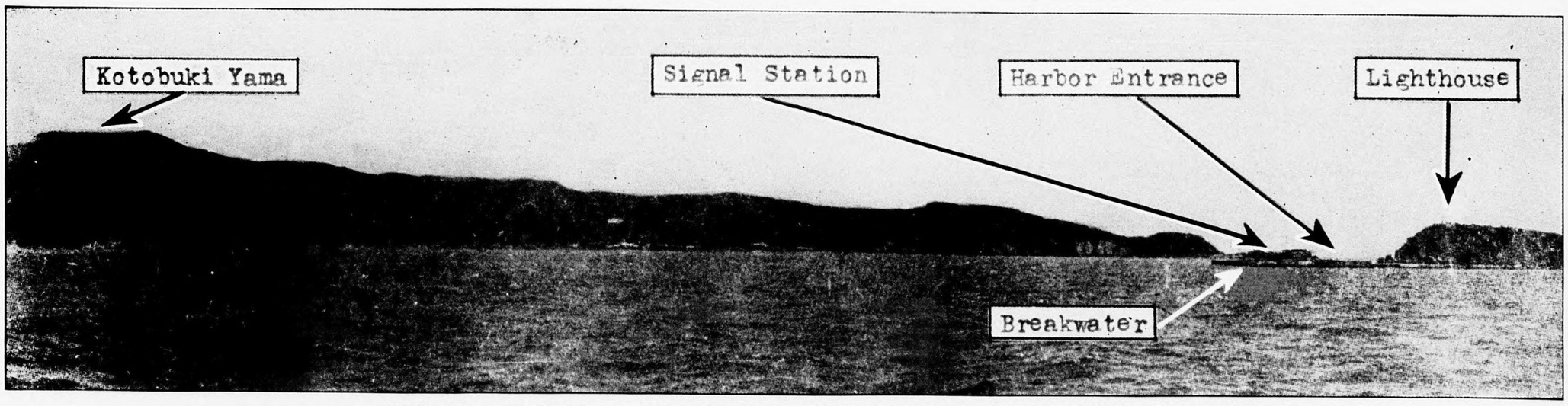


PHOTO A . . . TAKAO—western approach—looking NE toward entrance of harbor.

3526—P-17—Taihoku Taiwan-Takao—11-20-42—3rd Proof

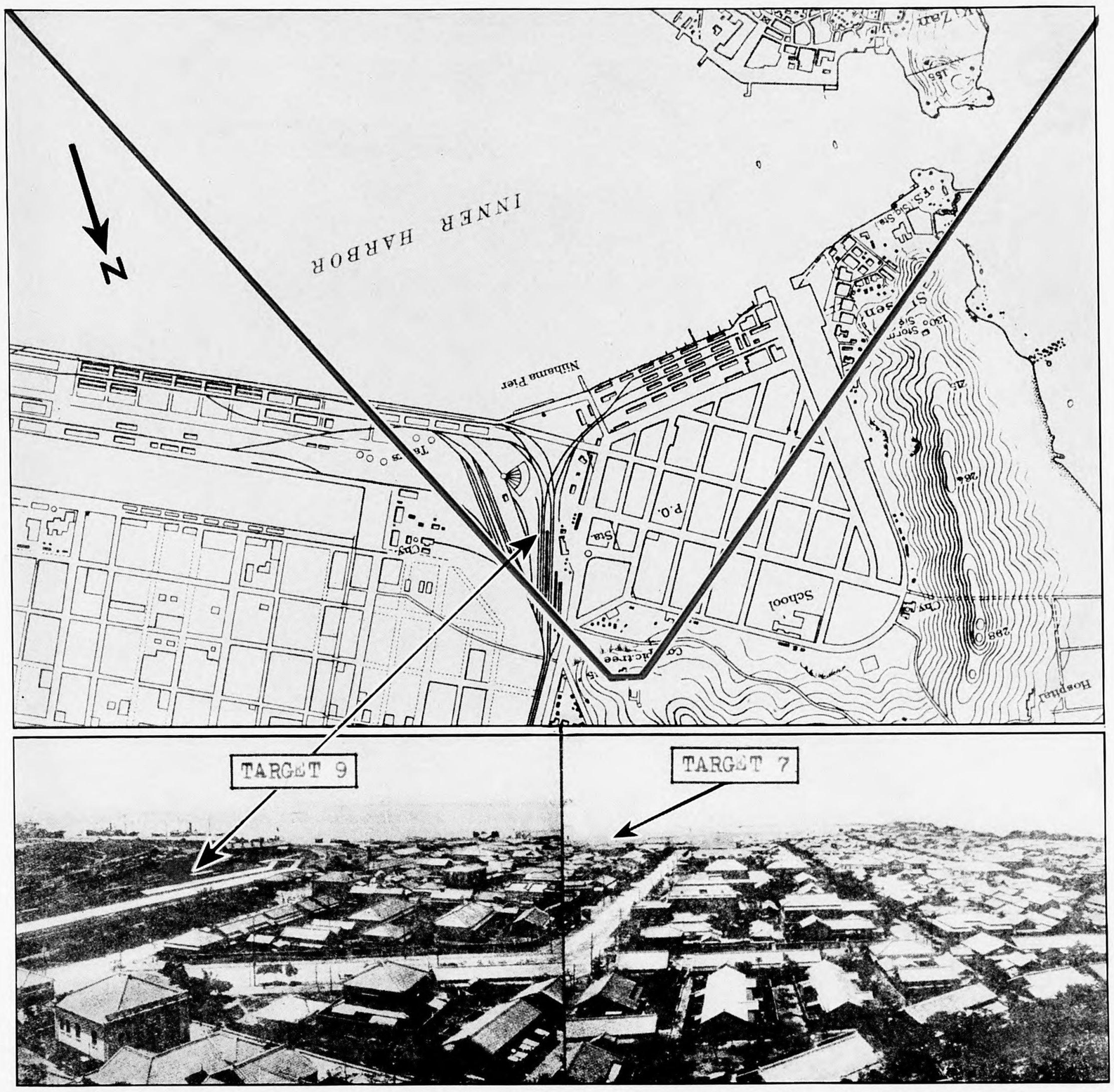


PHOTO B . . . TARGET 9. Railroad Yard and Repair Shop. **TARGET 7,** Kigo Naval Dockyard.

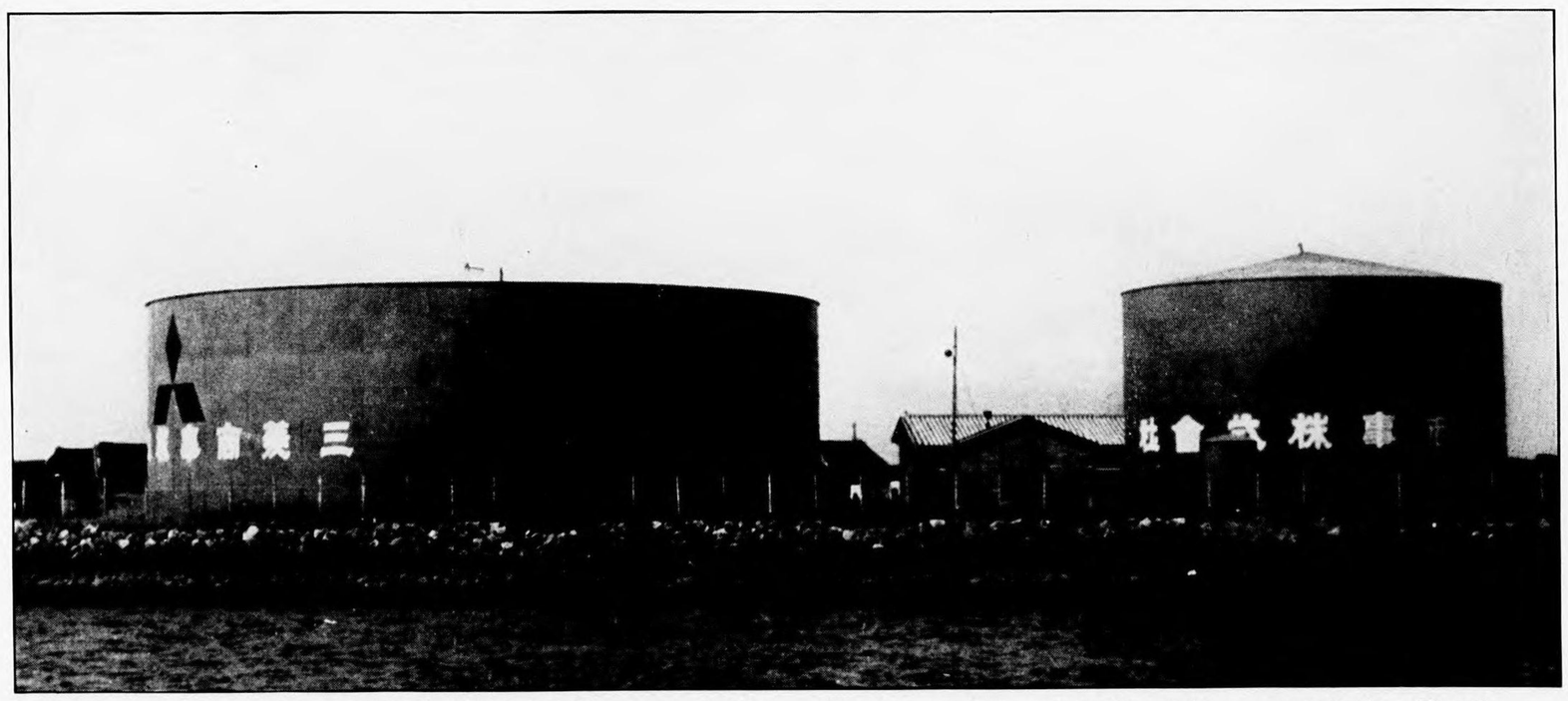


PHOTO C . . . TARGET 4. Mitsubishi Oil Storage. Additional tanks are located to the left, camera facing North.

3526—P-18—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

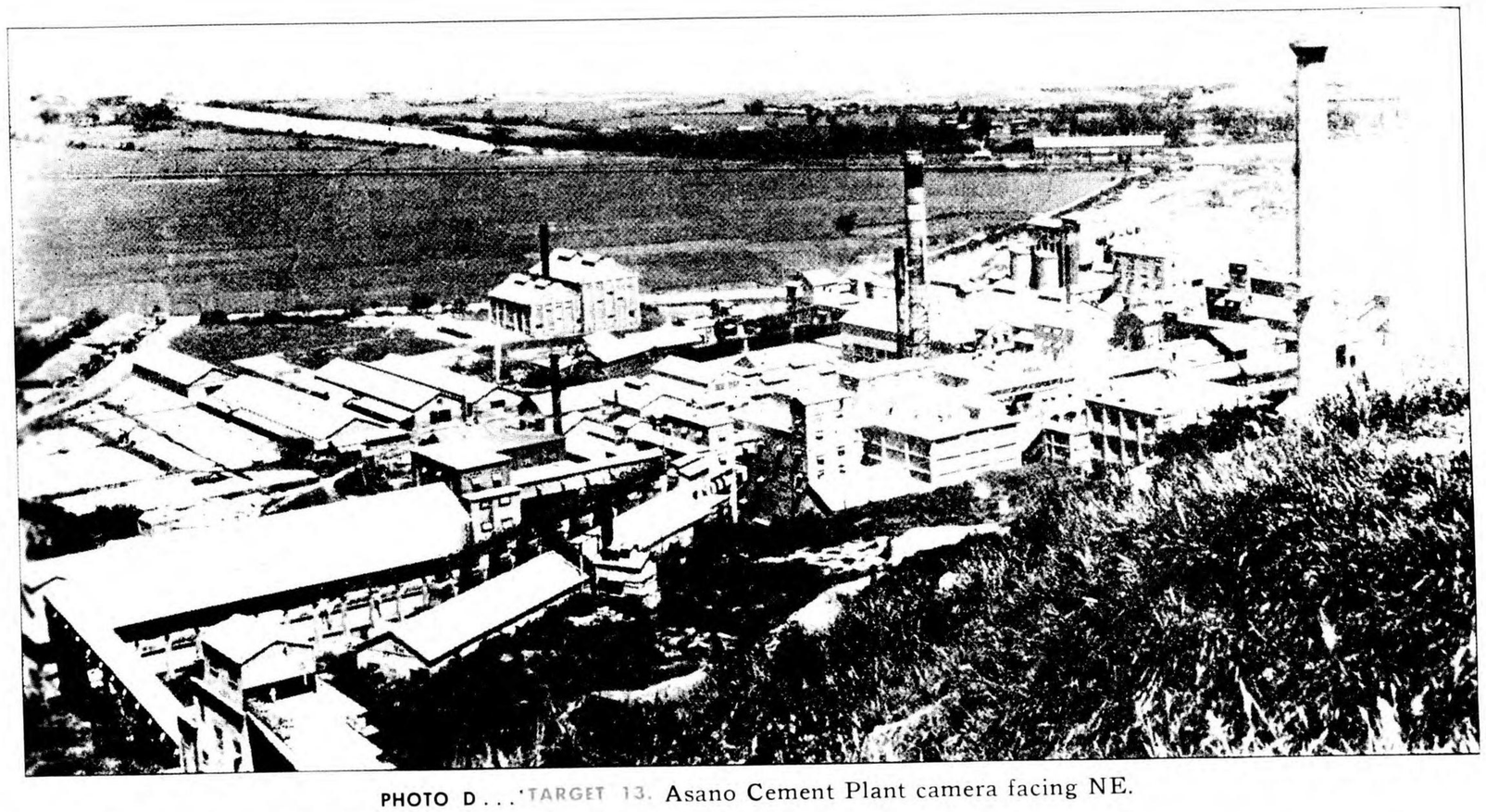


PHOTO D . . . TARGET 13. Asano Cement Plant camera facing NE.

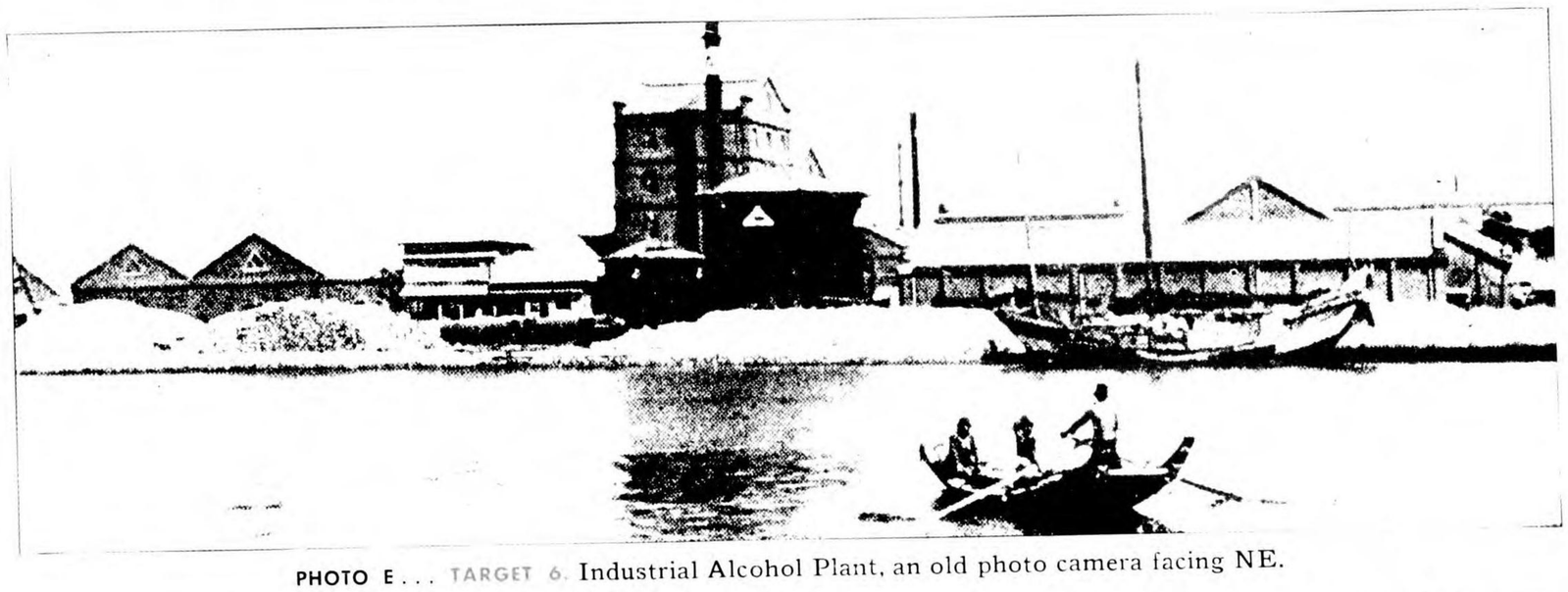


PHOTO E . . . TARGET 6. Industrial Alcohol Plant, an old photo camera facing NE.

PHOTO F . . . HEITO general view showing Agricultural School in the foreground, camera facing North.

3526—P-19—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

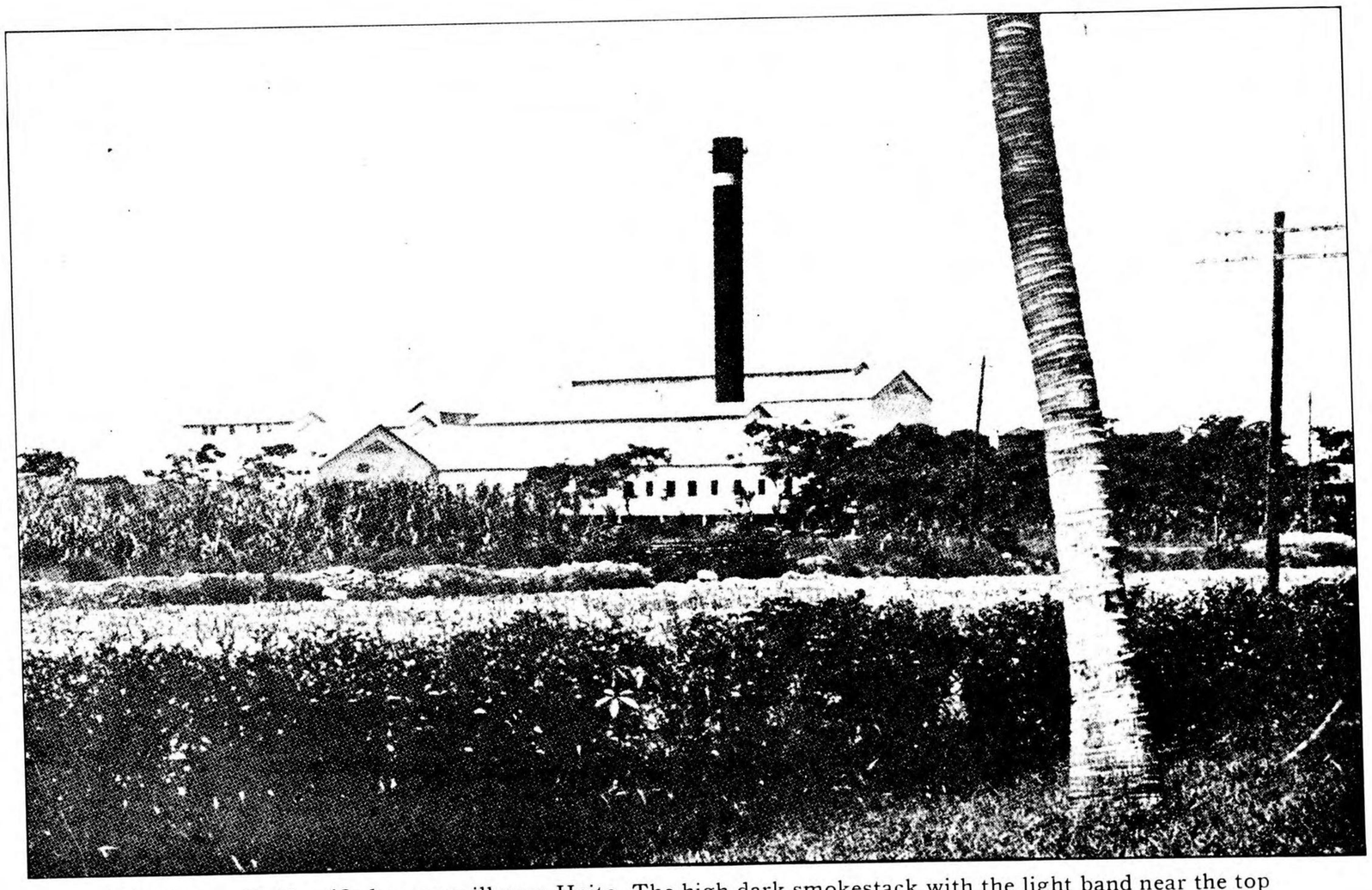


PHOTO G . . . Unidentified sugar mill near Heito. The high dark smokestack with the light band near the top is characteristic of sugar mills.

PHOTO H . . . TARGET 57. Heito Airport view of officers' quarters, located east of airport.

3526—P-20—Taihoku-Taiwan Takao—11-20-42—3rd Proof

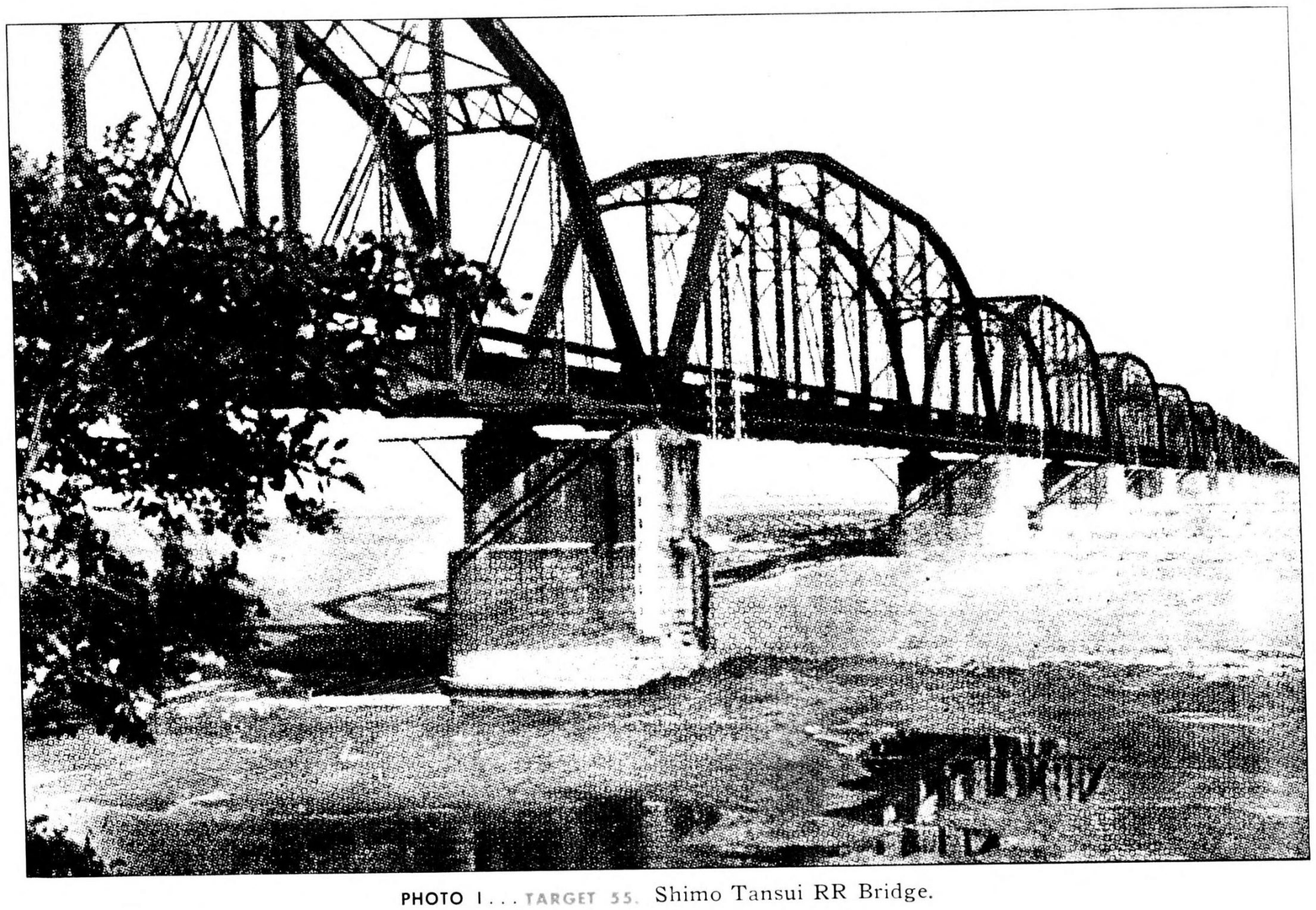
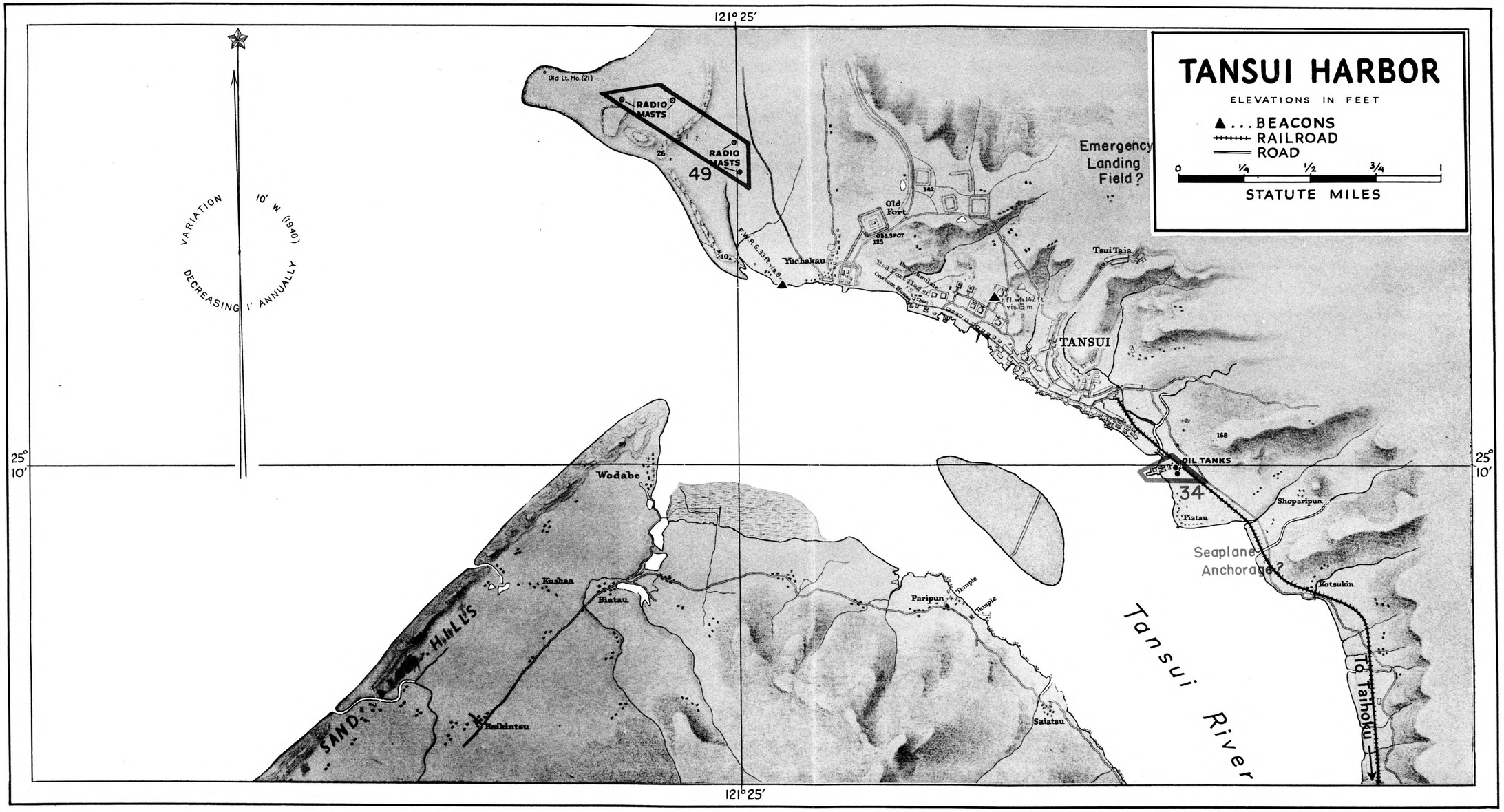
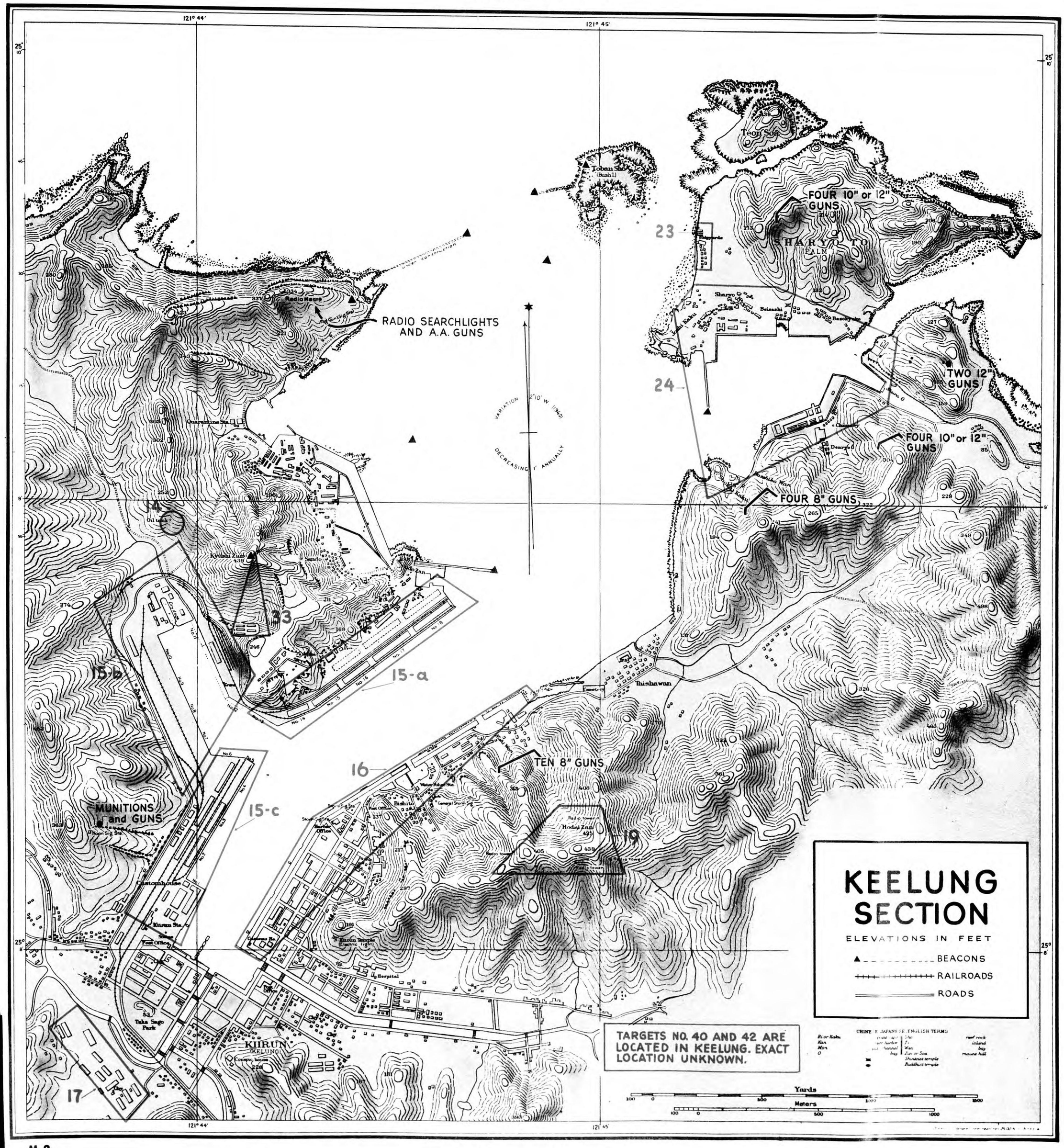


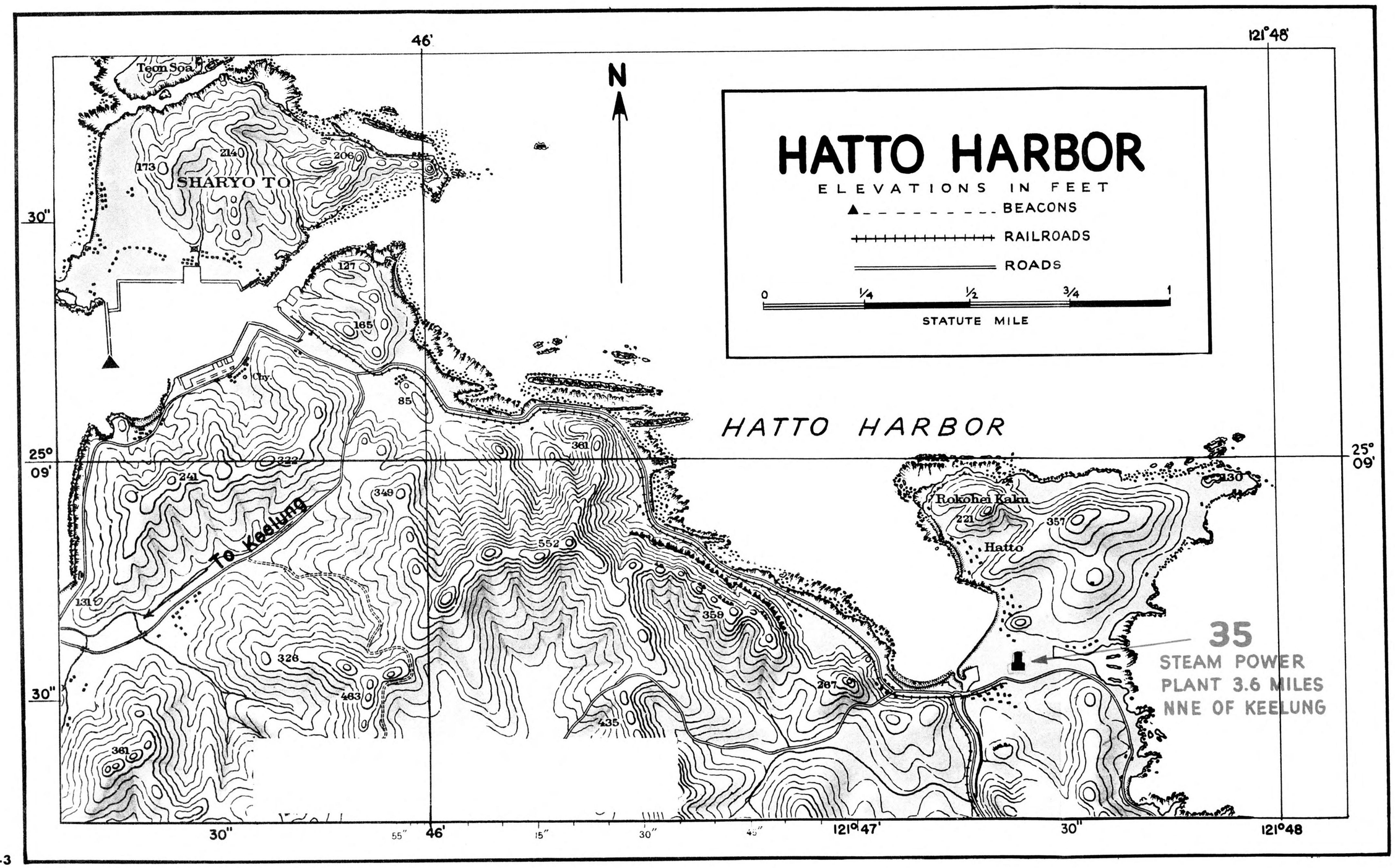
PHOTO 1 . . . TARGET 55. Shimo Tansui RR Bridge.

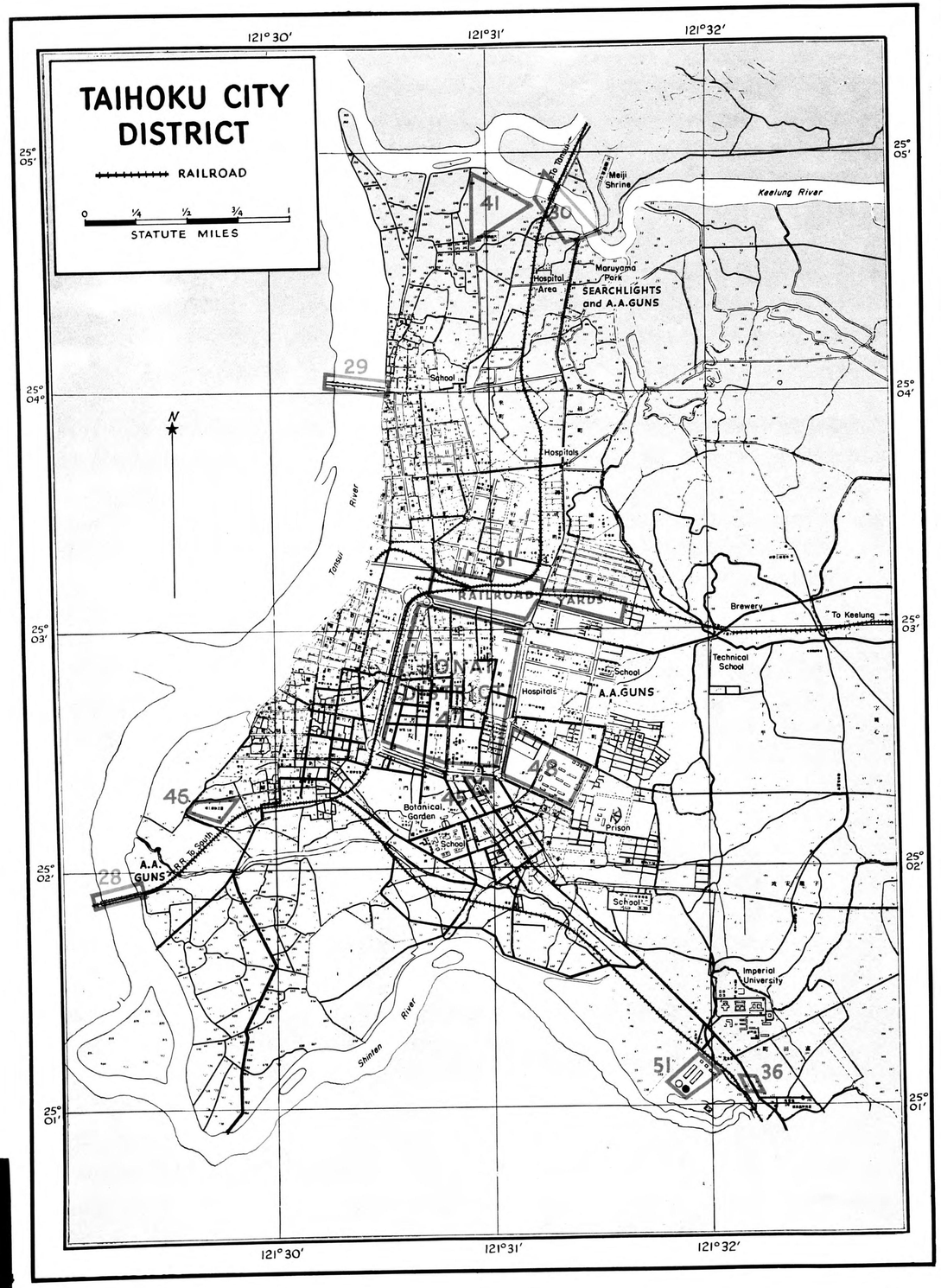
3526—P-21—Taihoku-Taiwan-Takao—11-20-42—3rd Proof

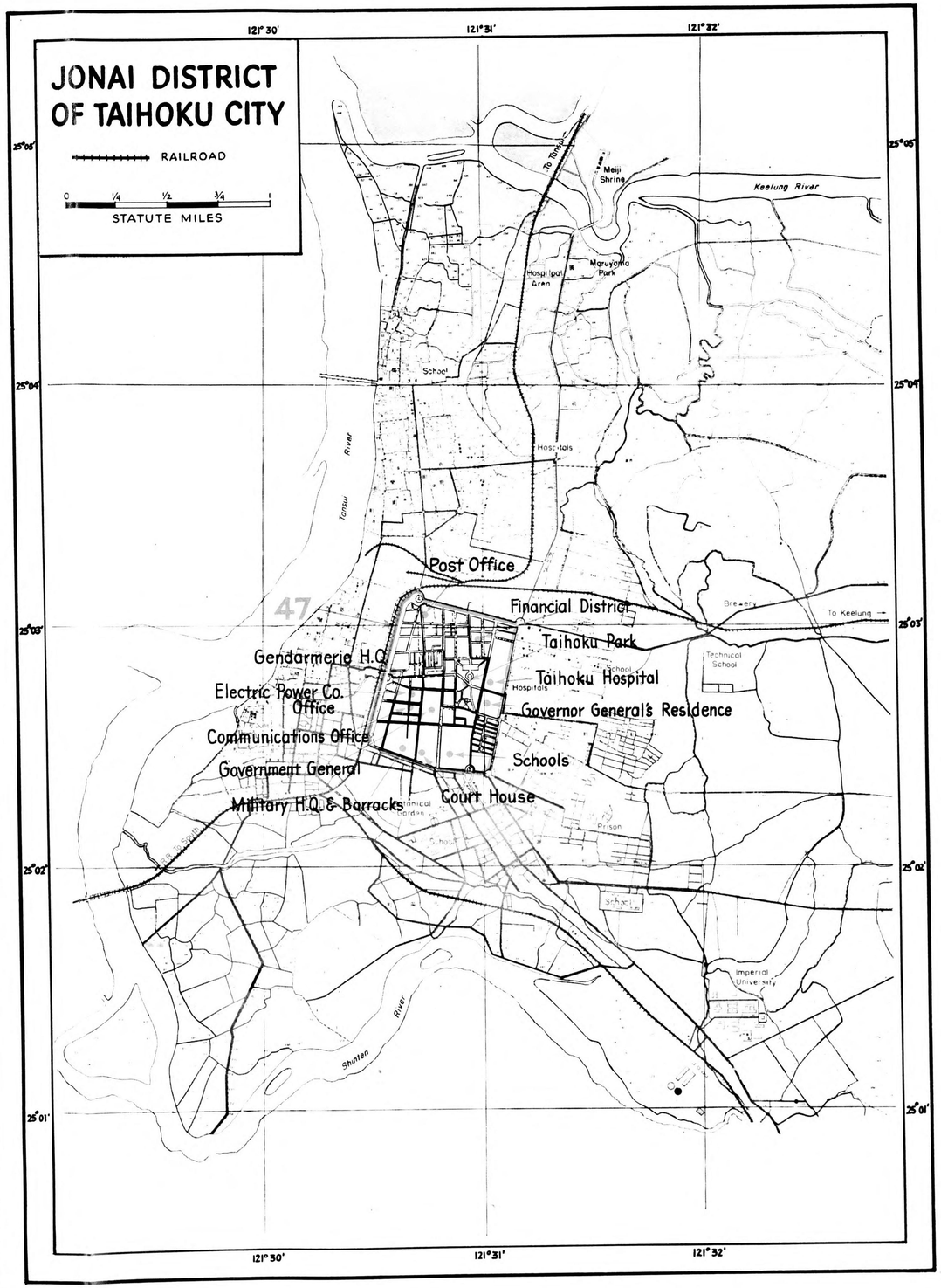


3526M—M-1—Taihoku, Taiwan, Takao

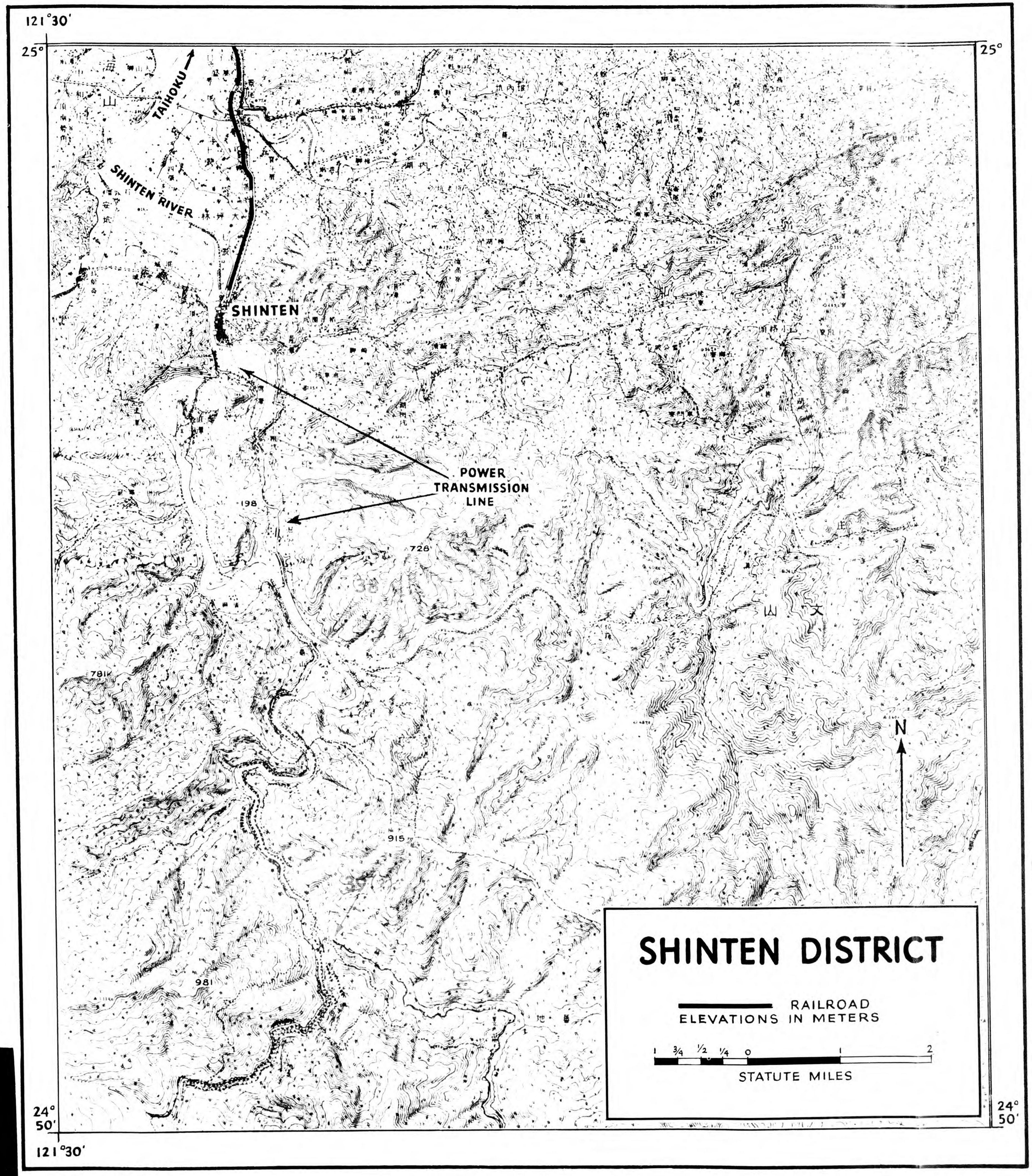

KEELUNG SECTION
ELEVATIONS IN FEET
BEACONS
RAILROADS
ROADS
TARGETS NO. 40 AND 42 ARE LOCATED IN KEELUNG. EXACT LOCATION UNKNOWN.
RADIO SEARCHLIGHTS AND A.A. GUNS
FOUR 10" or 12" GUNS
TWO 12" GUNS
FOUR 8" GUNS
TEN 8" GUNS
MUNITIONS and GUNS
SHARYO TO
PALM I.
KIIRUN
(KEELUNG)
Yards
Meters
VARIATION 2°10' W (1940)
DECREASING 1' ANNUALLY
121° 44'
121° 45'
25° 10'
25° 8'
23
24
33
34
15-a
15-b
15-c
16
17
19

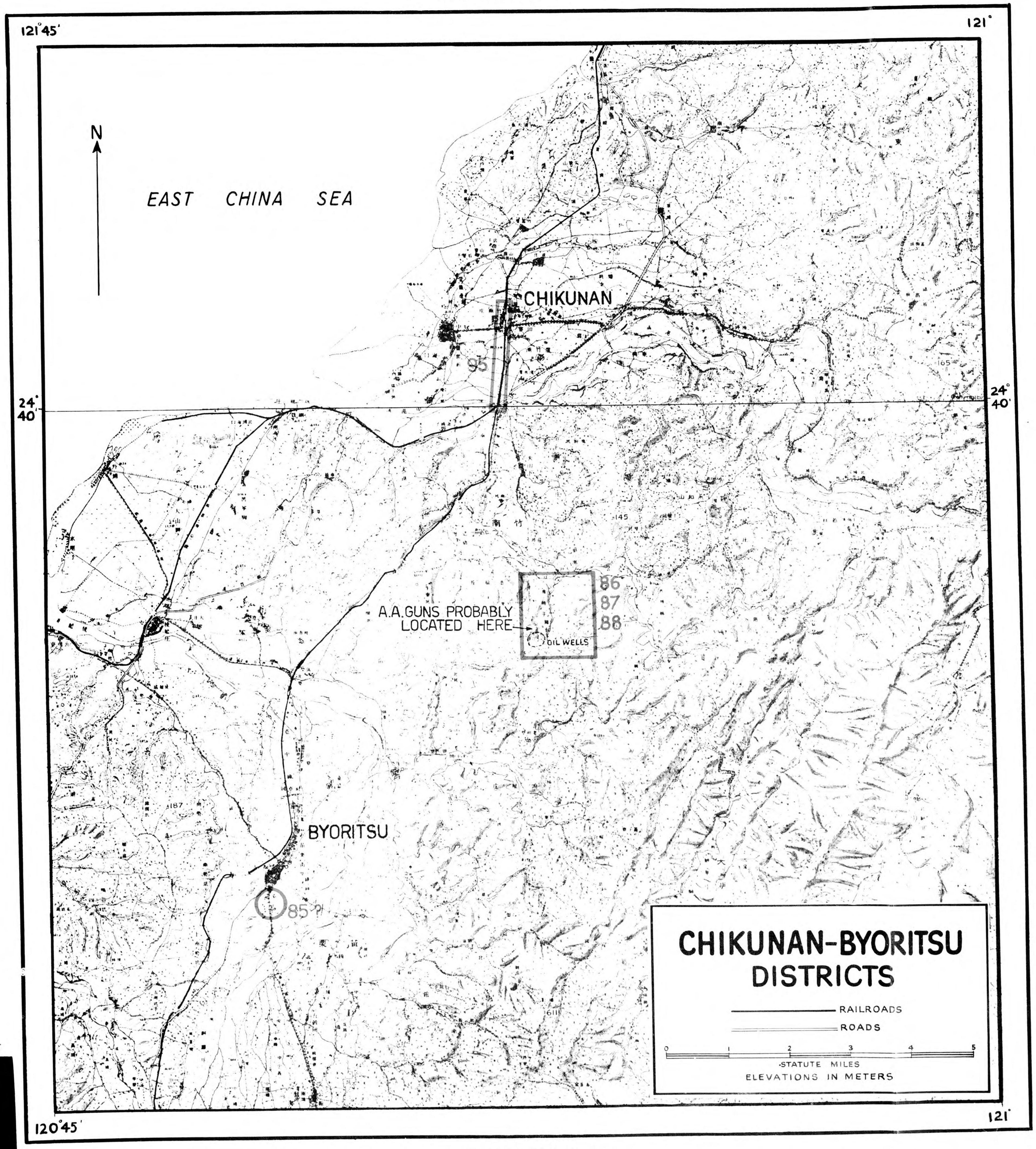

HATTO HARBOR
ELEVATIONS IN FEET
BEACONS
RAILROADS
ROADS
0
1/4
1/2
3/4
1
STATUTE MILE
N
HATTO HARBOR
Teon Soa
SHARYO TO
173
214
206
127
165
85
361
241
322
349
552
131
326
463
361
359
287
435
130
221
357
Rokohei Kaku
Hatto
To Keelung
35
STEAM POWER
PLANT 3.6 MILES
NNE OF KEELUNG
46'
121°48'
30"
25°
09'
30"
25°
09'
30"
55"
46'
15"
30"
45"
121°47'
30"
121°48



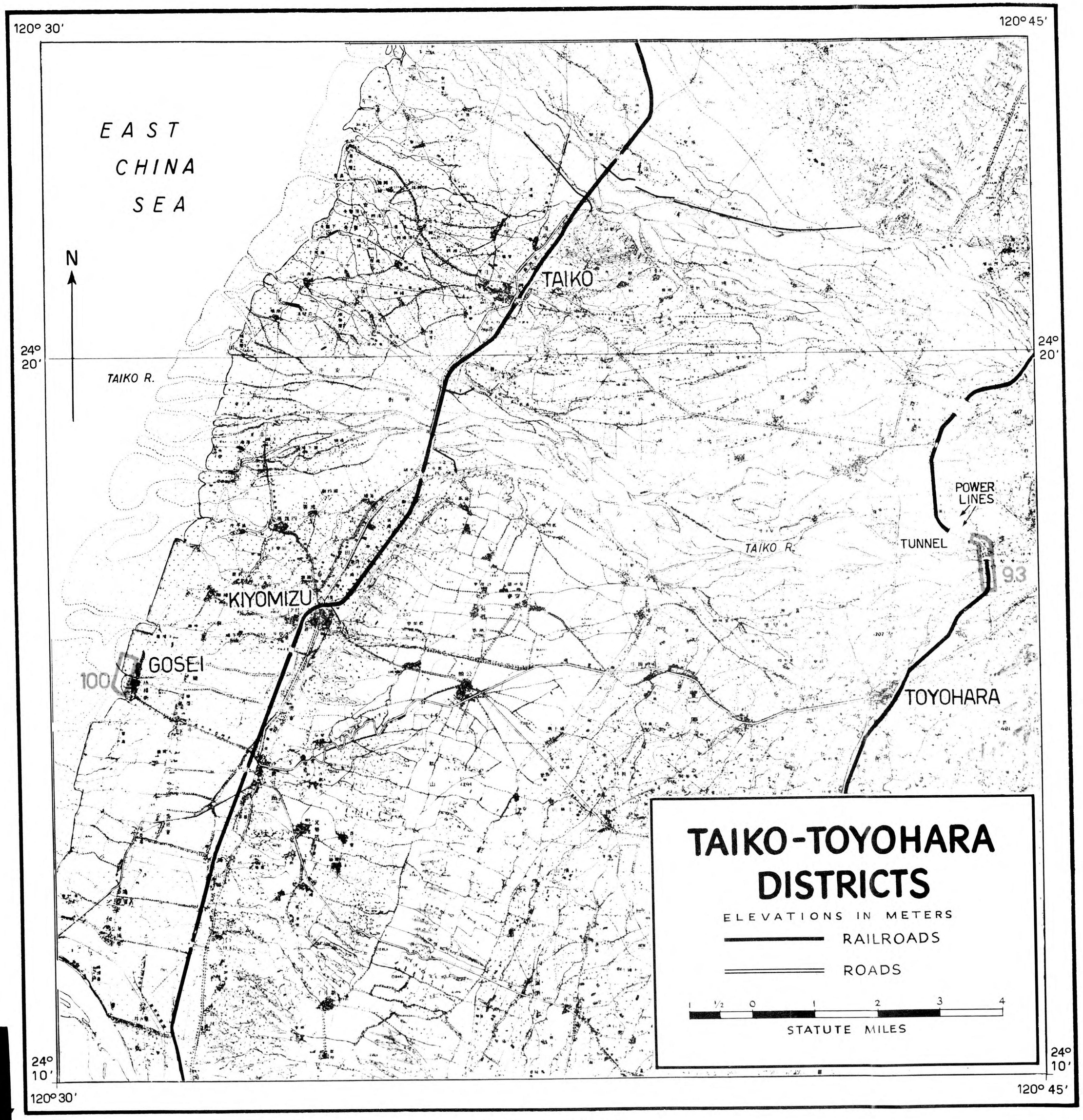


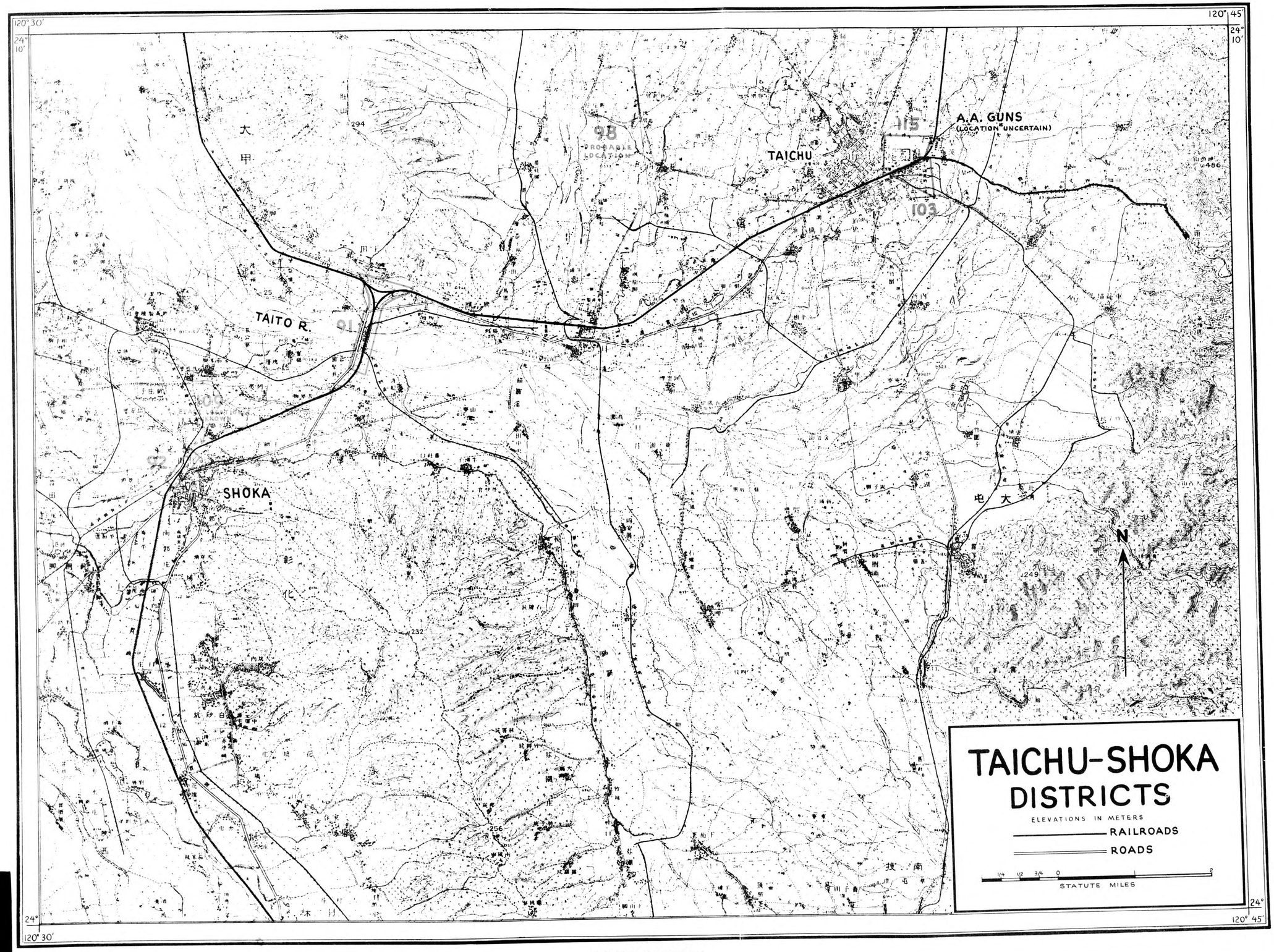
3526M—M-4—Taihoku, Taiwan, Takao


121°30'
25°
25°
TAIHOKU
SHINTEN RIVER
SHINTEN
POWER
TRANSMISSION
LINE
198
726
781
915
981
N
SHINTEN DISTRICT
RAILROAD
ELEVATIONS IN METERS
1 3/4 1/2 1/4 0 1 2
STATUTE MILES
24°
50'
24°
50'
121°30'

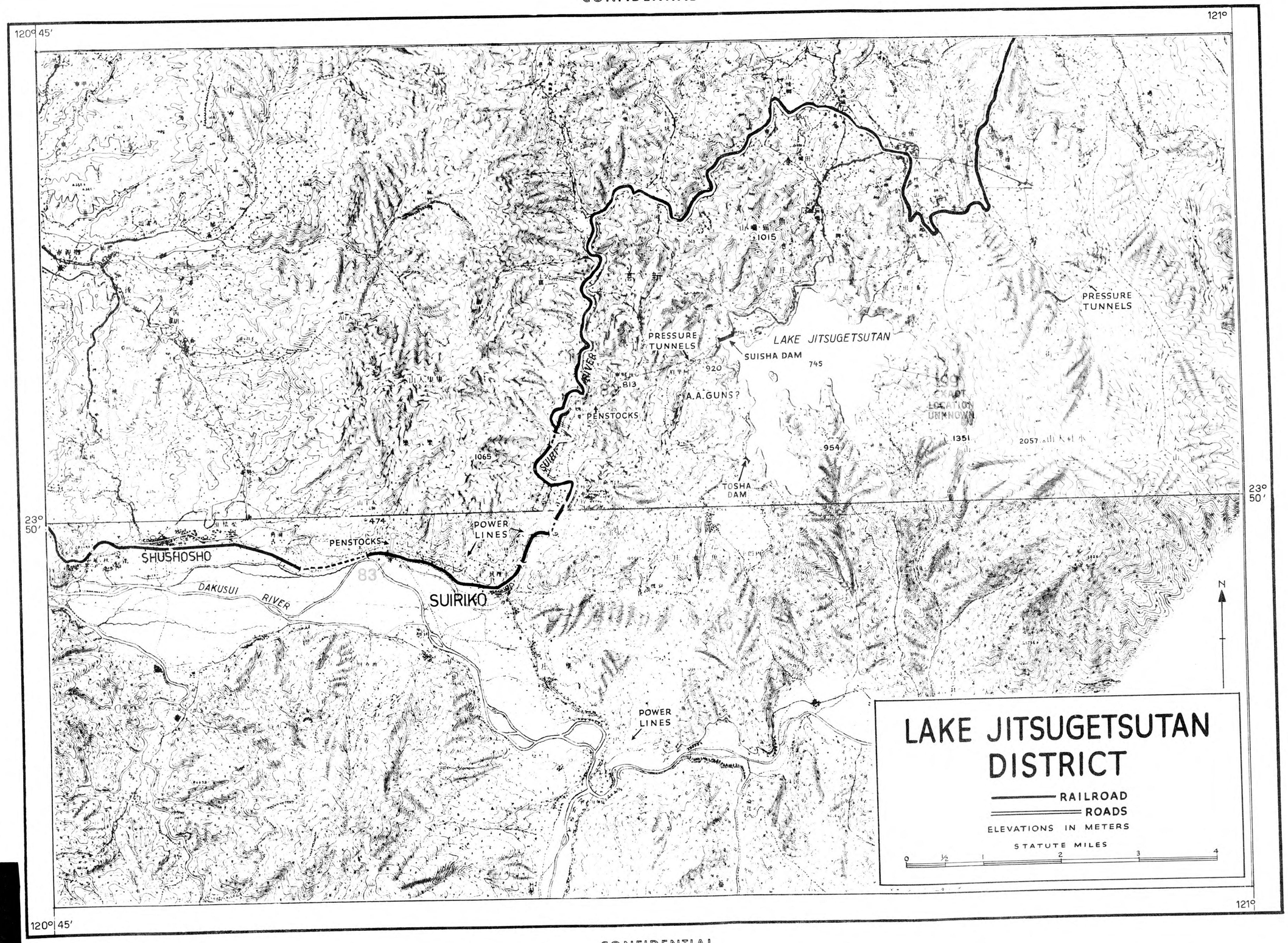

121°45'
121°
N
EAST CHINA SEA
CHIKUNAN
95
24° 40'
24° 40'
A.A. GUNS PROBABLY LOCATED HERE
OIL WELLS
86
87
88
BYORITSU
85
120°45'
121°
CHIKUNAN-BYORITSU DISTRICTS
RAILROADS
ROADS
0 1 2 3 4 5
STATUTE MILES
ELEVATIONS IN METERS

TAIWAN WEST

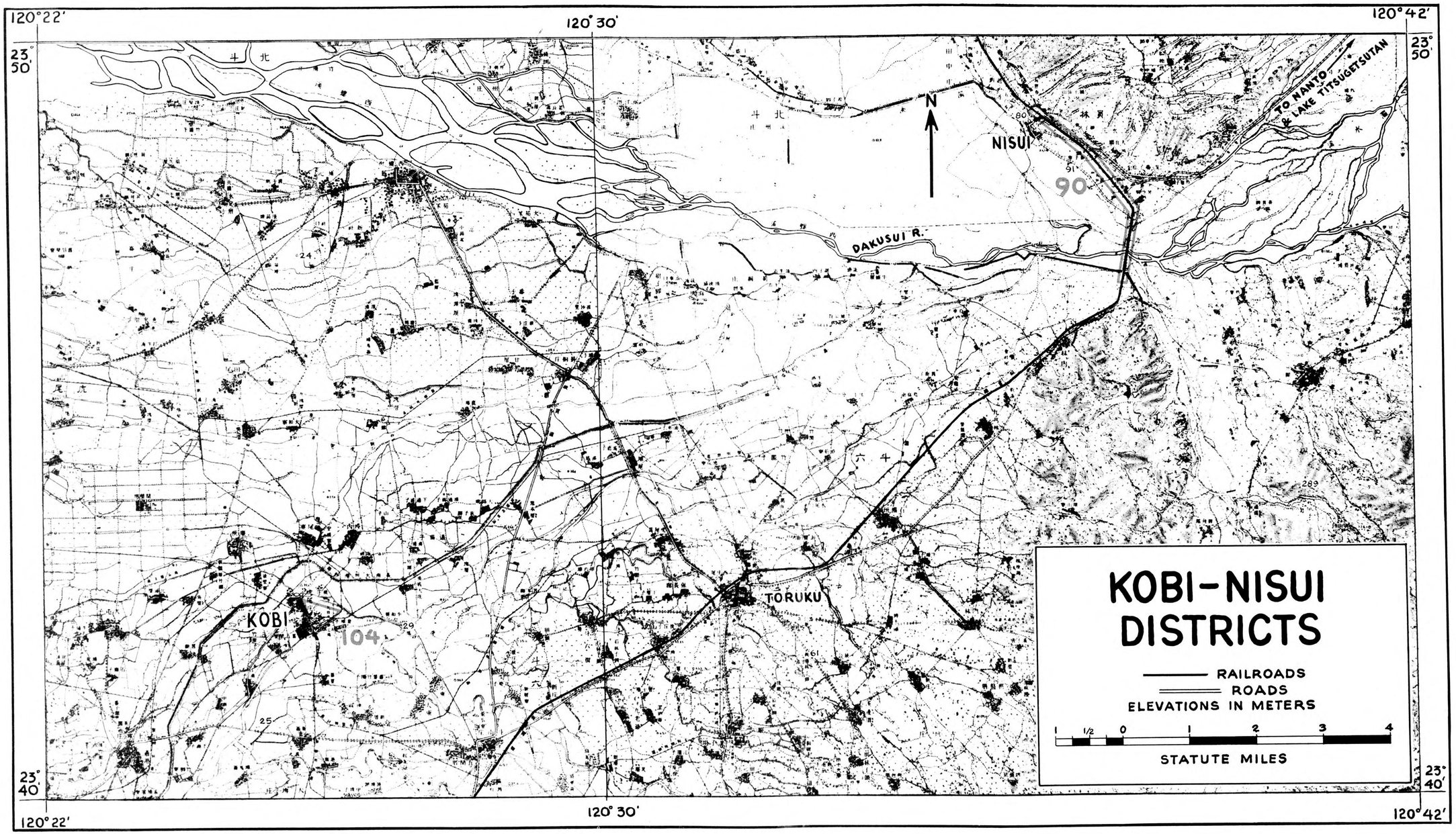

120° 30'
120° 45'
EAST
CHINA
SEA
N
24° 20'
TAIKO R.
TAIKO
POWER LINES
TUNNEL
TAIKO R.
93
KIYOMIZU
GOSEI
100
TOYOHARA
TAIKO-TOYOHARA DISTRICTS
ELEVATIONS IN METERS
RAILROADS
ROADS
1 1/2 0 1 2 3 4
STATUTE MILES
24° 10'
120° 30'
24° 10'
120° 45'



3576M — M 8 — Taihoku, Taiwan, Takao

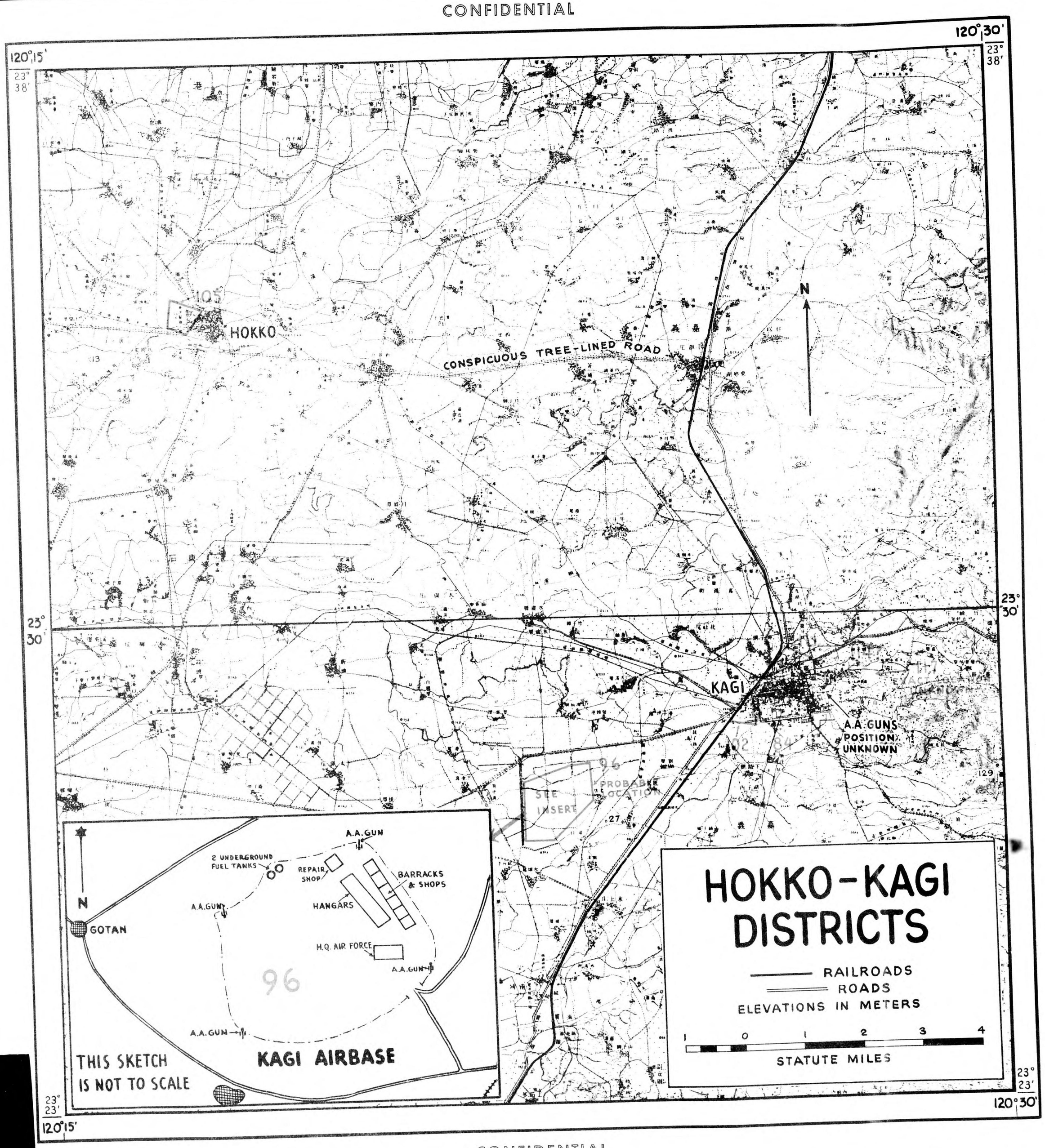


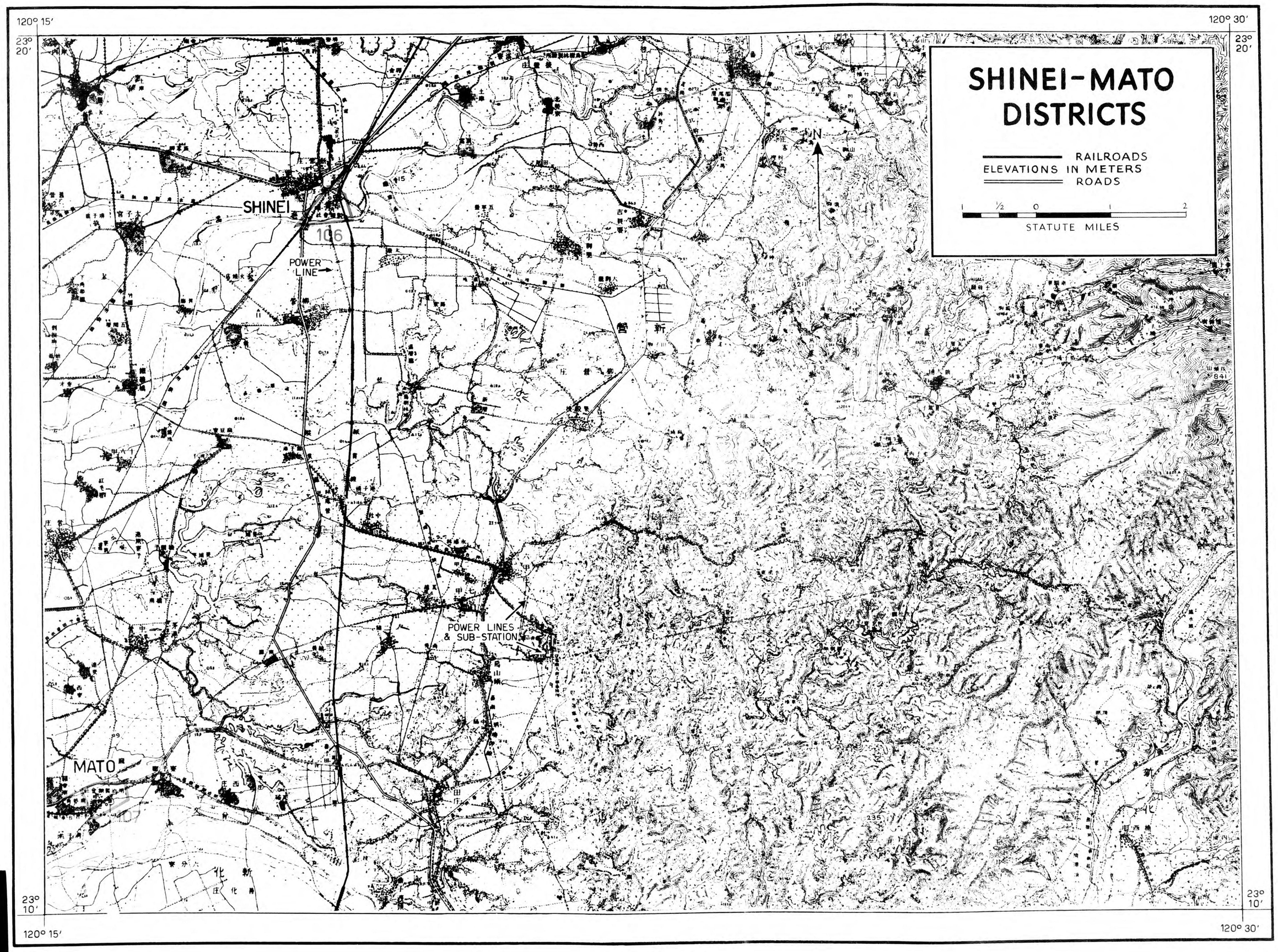
3526M—M-9—Taihoku, Taiwan, Takao

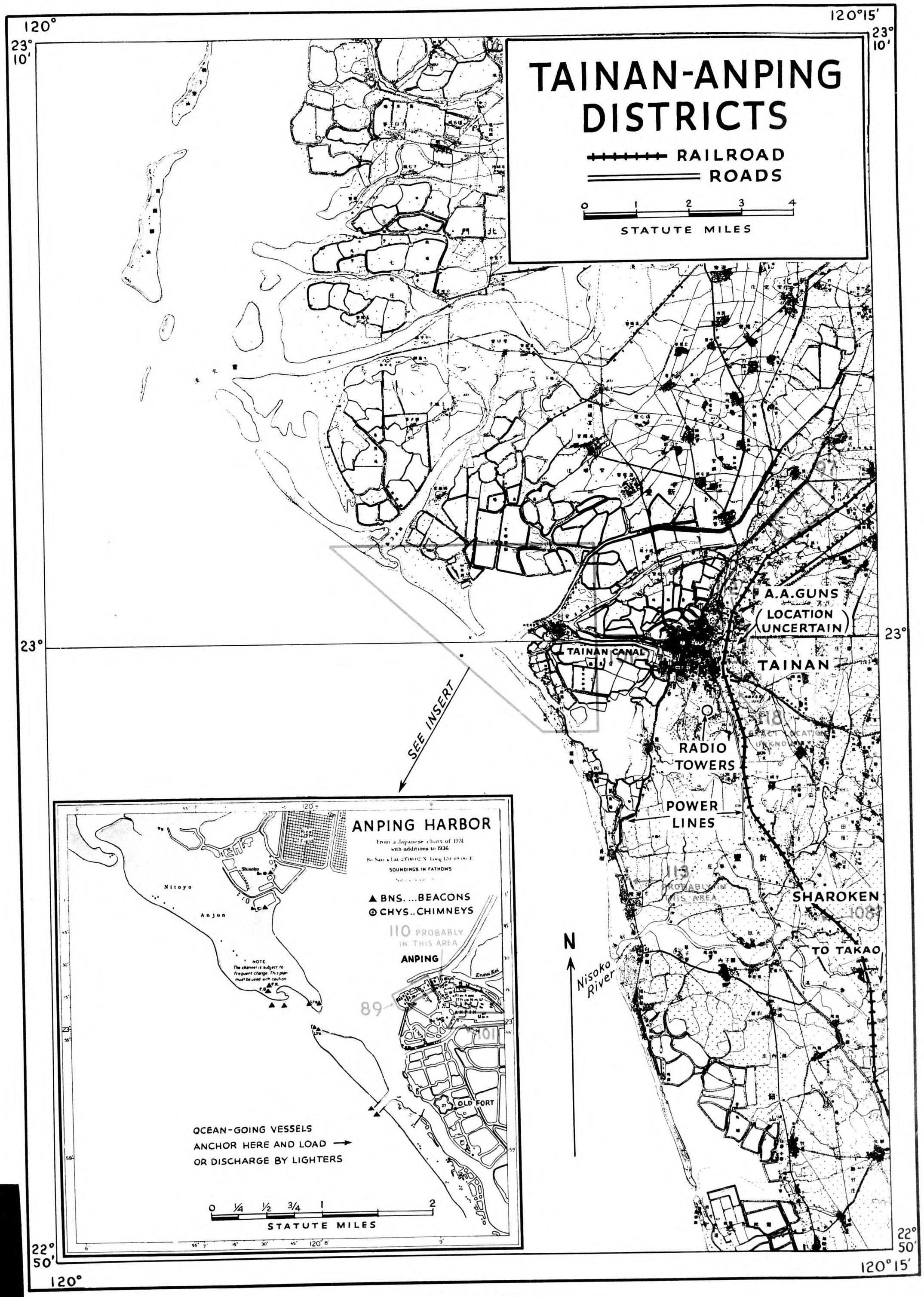


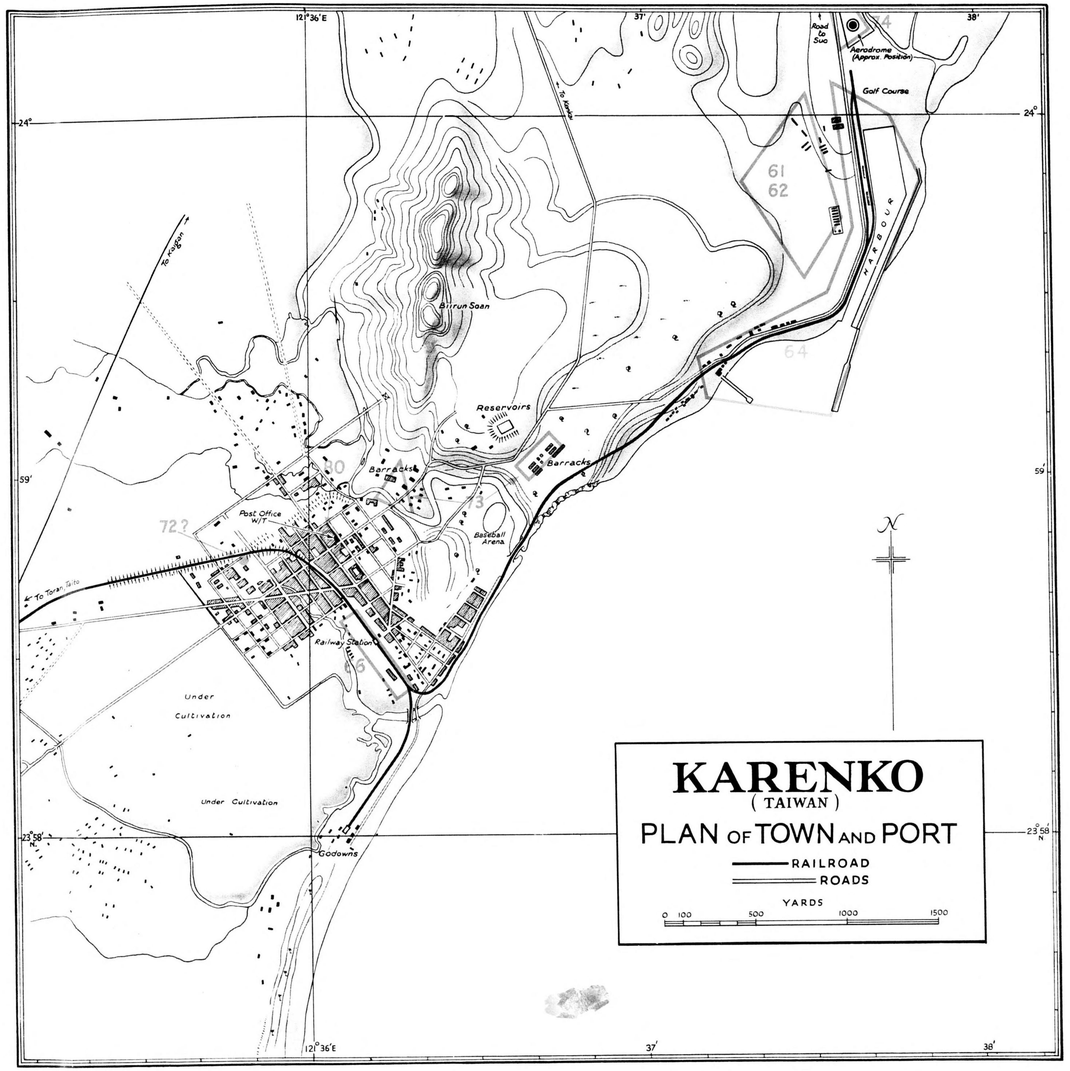
3526M—M-10—Taihoku, Taiwan, Takao

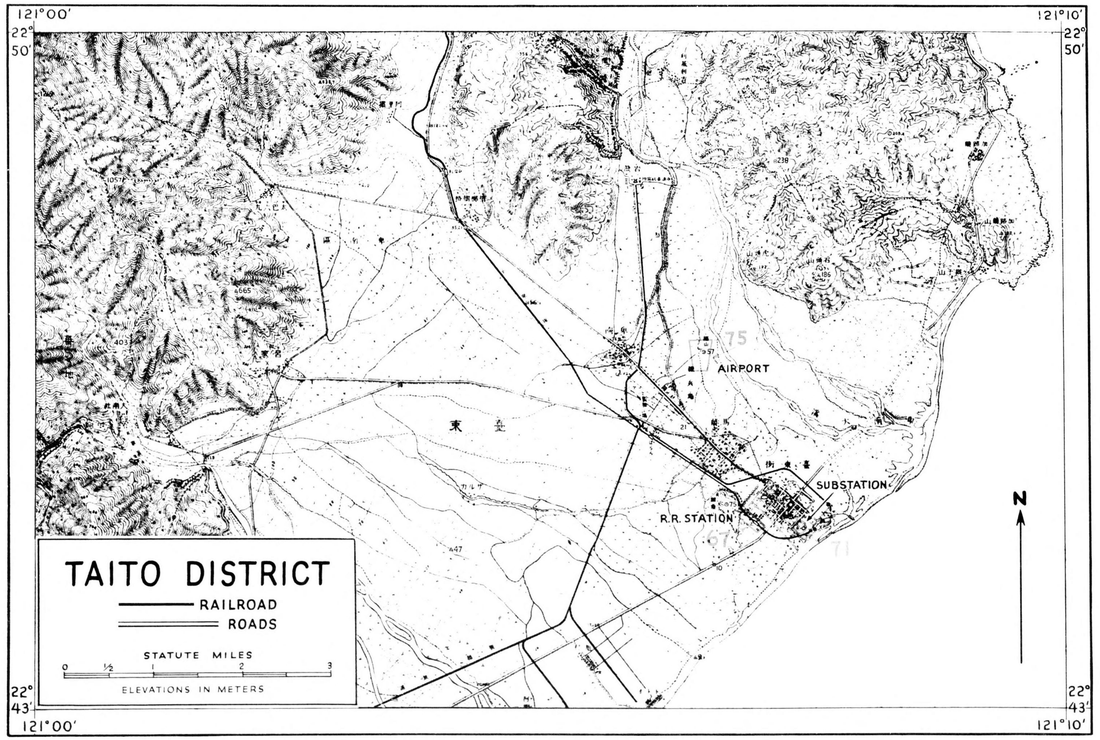
By ... NARA, Date ...


120°15'
23° 38'
120°30'
23° 38'
HOKKO
CONSPICUOUS TREE-LINED ROAD
N
23° 30'
KAGI
A.A. GUNS POSITION UNKNOWN
PROBABLE LOCATION
SEE INSERT
A.A. GUN
2 UNDERGROUND FUEL TANKS
REPAIR SHOP
BARRACKS & SHOPS
HANGARS
A.A. GUN
GOTAN
H.Q. AIR FORCE
A.A. GUN
A.A. GUN
THIS SKETCH IS NOT TO SCALE
KAGI AIRBASE
HOKKO-KAGI DISTRICTS
RAILROADS
ROADS
ELEVATIONS IN METERS
1 0 1 2 3 4
STATUTE MILES
23° 23'
120°30'
23° 23'
120°15'


SHINEI-MATO DISTRICTS
RAILROADS
ELEVATIONS IN METERS
ROADS
1 ½ 0 1 2
STATUTE MILES
120° 15′
120° 30′
23° 20′
23° 10′
SHINEI
MATO
POWER LINE
POWER LINES & SUB-STATION
N
106
841
235

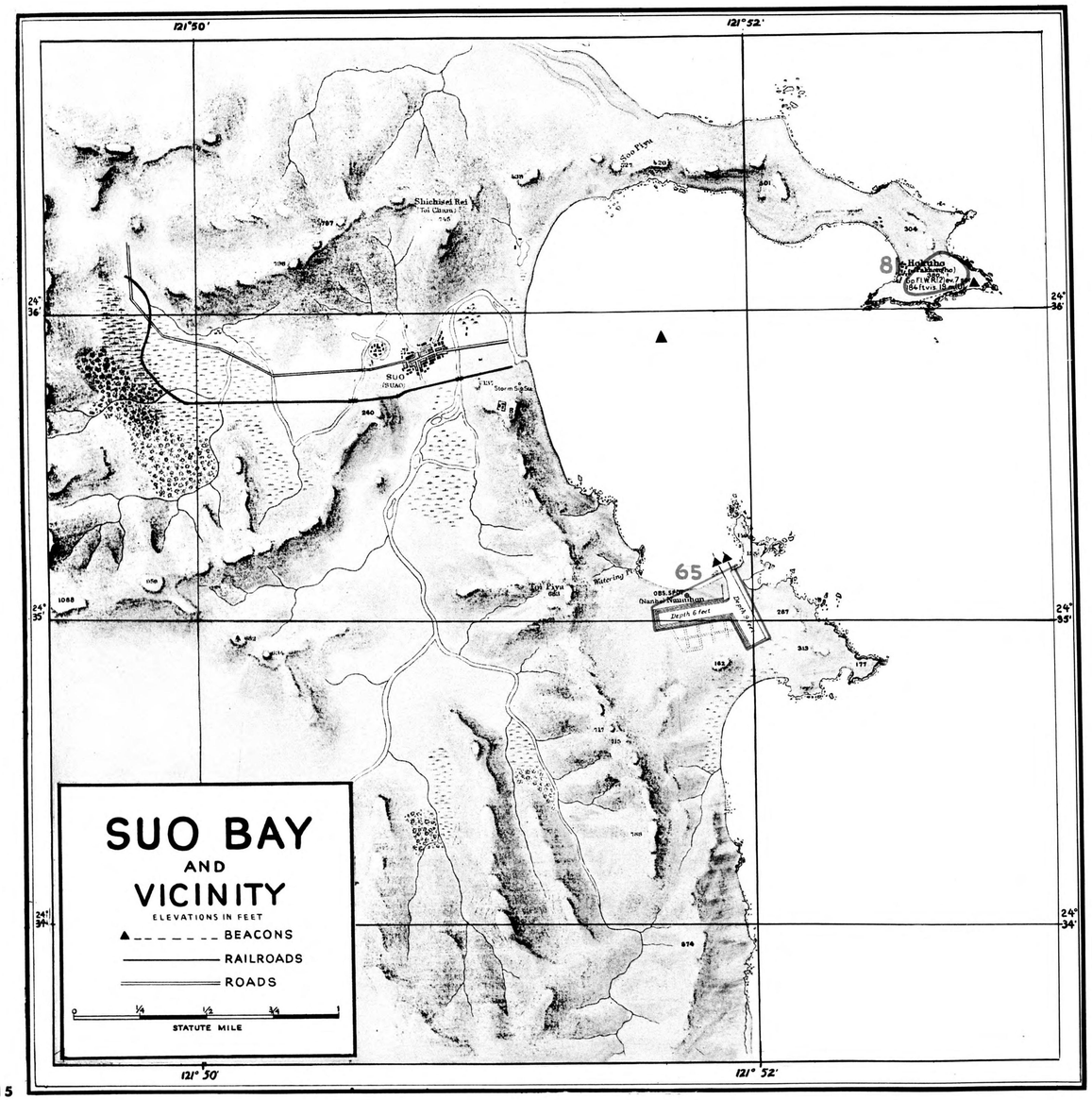

TAINAN-ANPING DISTRICTS
RAILROAD
ROADS
0 1 2 3 4
STATUTE MILES
120°
23° 10'
120°15'
23° 10'
23°
23°
A.A.GUNS
(LOCATION UNCERTAIN)
TAINAN CANAL
TAINAN
RADIO TOWERS
POWER LINES
SHAROKEN
TO TAKAO
N
Nisoko River
SEE INSERT
ANPING HARBOR
From a Japanese chart of 1931 with additions to 1936
SOUNDINGS IN FATHOMS
▲ BNS. ...BEACONS
⊙ CHYS..CHIMNEYS
110 PROBABLY IN THIS AREA
ANPING
OLD FORT
Nitoyo
Anjun
NOTE
The channel is subject to frequent change. This plan must be used with caution
OCEAN-GOING VESSELS ANCHOR HERE AND LOAD → OR DISCHARGE BY LIGHTERS
0 ¼ ½ ¾ 1 2
STATUTE MILES
22° 50'
120°
22° 50'
120°15'

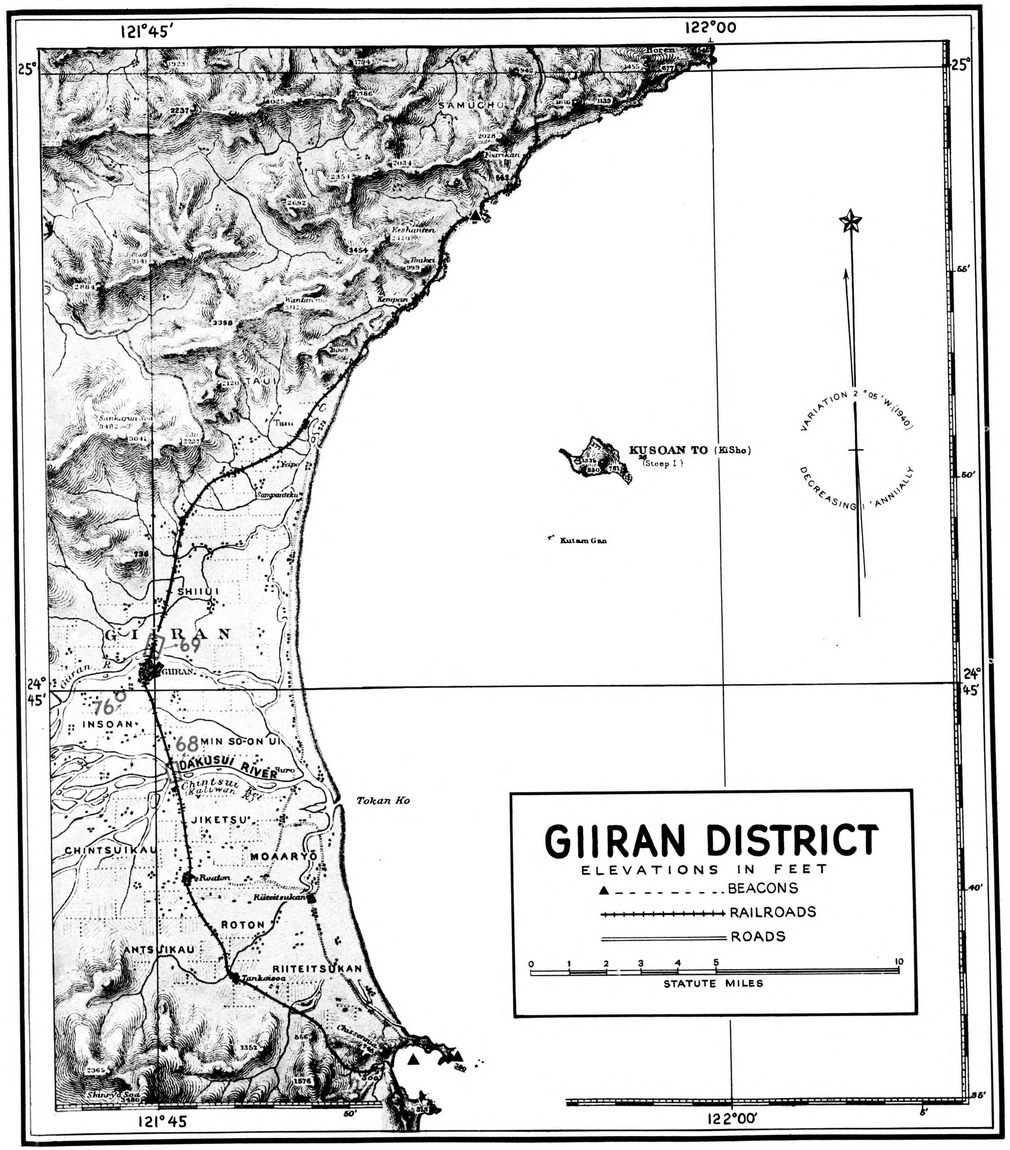




TAIWAN EAST

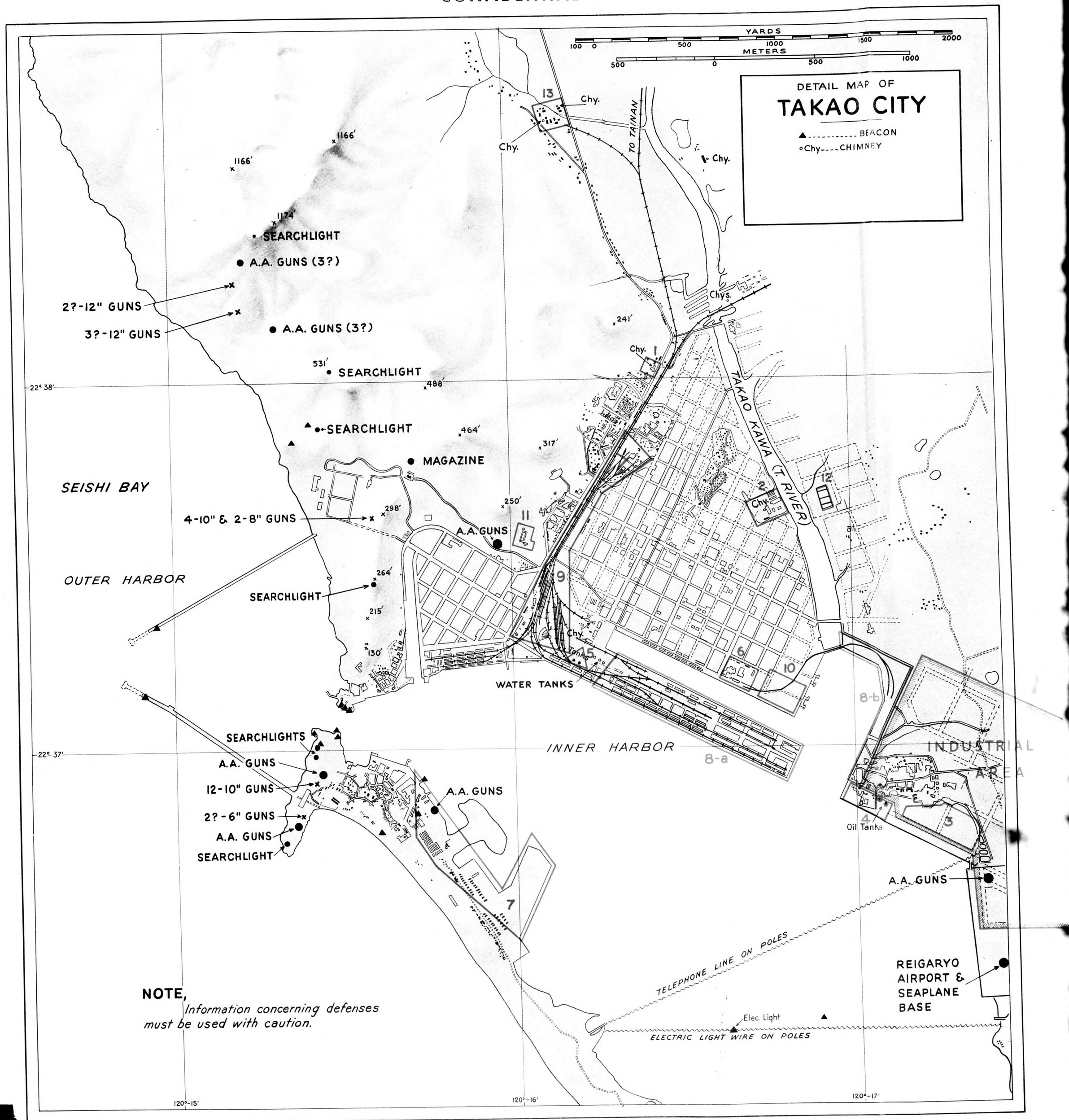
35264M—M-14—Taihoku, Taiwan, Taiwan





CONFIDENTIAL

3526M—M-15—Taihoku, Taiwan, Takao


DETAIL MAP OF
TAKAO CITY
BEACON
Chy. CHIMNEY
YARDS
METERS
SEISHI BAY
OUTER HARBOR
INNER HARBOR
TAKAO KAWA (T. RIVER)
TO TAINAN
SEARCHLIGHT
A.A. GUNS (3?)
2?-12" GUNS
3?-12" GUNS
4-10" & 2-8" GUNS
MAGAZINE
A.A. GUNS
WATER TANKS
Tanks
Chys.
Chy.
1166'
1174'
531'
488'
464'
317'
298'
250'
264'
215'
130'
241'
22° 38'
22° 37'
120°-15'
120°-16'
120°-17'
SEARCHLIGHTS
12-10" GUNS
2?-6" GUNS
Oil Tanks
INDUSTRIAL AREA
TELEPHONE LINE ON POLES
ELECTRIC LIGHT WIRE ON POLES
Elec. Light
REIGARYO AIRPORT & SEAPLANE BASE
NOTE,
Information concerning defenses must be used with caution.

TAKAO

M-16