11113 11114
11115 11116

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11115 11116

[redacted]

Diag Cht 4116

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-79 *Office No.* T-11113 thru T-11116

LOCALITY

State Hawaii

General locality Oahu

Locality Lualualei

19~~X~~ 53

CHIEF OF PARTY

Div of Photogrammetry, Washington, D.C.

LIBRARY & ARCHIVES

DATE April 26, 1955

8-1870-1 (1)

DECLASSIFIED
AUTHORITY Memo, Photogrammetry, 4-3-64
DATE 4-7-64 BY DRB

DATA RECORD

T - 11113 thru T-11116

Project No. (II): Ph-79 Quadrangle Name (IV): LUALUALEI, OAHU, HAWAII

Field Office (II): Chief of Party: L. Reed

Photogrammetric Office (III): Washington,D.C. Officer-in-Charge:

Instructions dated (II) (III): Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Stereo Instruments

Manuscript Scale (III): 1:6,000 Stereoscopic Plotting Instrument Scale (III): 1:4800 (low Alt.) 1:15,000 (high Altitude)

Scale Factor (III):

Date received in Washington Office (IV): Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV):

Publication Scale (IV): 1:6,000 Publication date (IV):

Geographic Datum (III): Old Hawaiian Vertical Datum (III): M.S.L.

Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III):

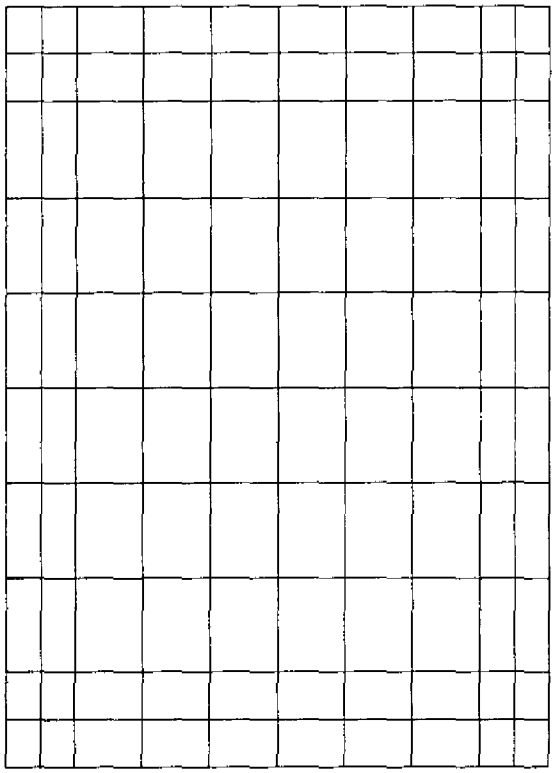
Lat.: Long.: Adjusted / Unadjusted

Plane Coordinates (IV): State: Zone:

Y= X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.



Areas contoured by various personnel
(Show name within area)
(II) (III)

Contouring for entire Area by Morton Keller.

M-2618-12(4)

DATA RECORD

Field Inspection by (II): None Date:

Planetable contouring by (II): None Date:

Completion Surveys by (II): Date:

Mean High Water Location (III) (State date and method of location):

Not Applicable

Projection and Grids ruled by (IV): Jack Allen Date: 1-27-53

Projection and Grids checked by (IV): H. Wolfe Date: 1-28-53

Control plotted by (III): I. Jarrett Date: 2-27-53

Control checked by (III): S. W. Trow Date: 2-28-53

~~Radial Plot~~ or Stereoscopic
Control extension by (III): Morton Keller Date: 3-3-53

Stereoscopic Instrument compilation (III):
Planimetry Morton Keller Date: 4-24-53
Contours Morton Keller Date: 4-24-53

Manuscript delineated by (III): Henri Lucas Date: 5-1-53

Photogrammetric Office Review by (III): B. J. Colner Date: 6-26-53

Elevations on Manuscript checked by (II) (III): Louis J. Reed Date: 4-27-53

Camera (kind or source) (III):

PHOTOGRAPHS (III)

Number	Date	~~Kind~~	Scale	Stage of Tide
1-1 thru 3-1	1/15/52	U.S.Navy	1:31,400	Not Applicable
1-2 " 5-2	"	"	"	
1-1 " 12-1	"	"	1:9200	
1-2 " 14-2	"	"	"	
1-3 " 17-3	"	"	"	
1-4 " 12-4	"	"	"	
1-5 " 11-5	"	"	"	
1-6 " 9-6	"	"	"	

Tide (III)

Ratio of Ranges	Mean Range	Spring Range

Reference Station: Not Applicable
Subordinate Station:
Subordinate Station:

Washington Office Review by (IV): B. J. Colner Date: 6-16-53

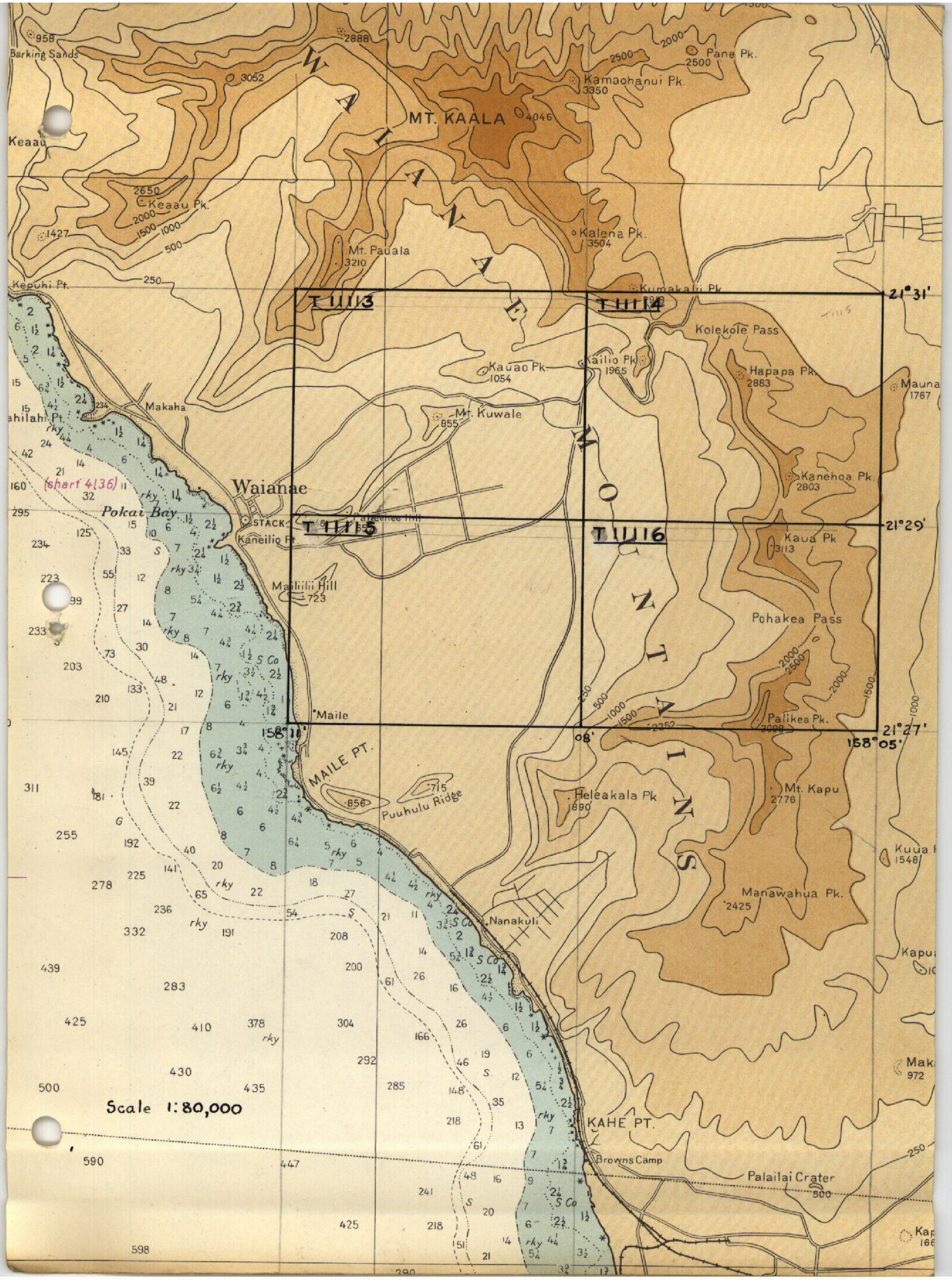
Final Drafting by (IV): Date:

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III):
Shoreline (More than 200 meters to opposite shore) (III):
Shoreline (Less than 200 meters to opposite shore) (III):
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): Recovered: Identified:
Number of BMs searched for (II): Recovered: Identified:
Number of Recoverable Photo Stations established (III):
Number of Temporary Photo Hydro Stations established (III):

Remarks: These maps were made on reimbursable basis for the Navy. They are being registered so as to have a permanent record.
Bgg



Barking Sands
Keaau
Keaau Pk.
MT. KAALA
WAIANAE MOUNTAINS
Pane Pk.
Kamaohanui Pk.
Kalena Pk.
Mt. Pauala
Kepuhi Pt.
Kumakalii Pk.
T 11113
T 11114
T 11115
T 11116
21°31'
21°29'
21°27'
158°11'
158°05'
Kolekole Pass
Kailio Pk.
Kauao Pk.
Hapapa Pk.
Mauna
Makaha
Mt. Kuwale
Kanehoa Pk.
Waianae
Pokai Bay
STACK
Kaneilio Pt.
Kaua Pk
Mailiilii Hill
Pohakea Pass
Maile
Palikea Pk.
MAILE PT.
Puuhulu Ridge
Heleakala Pk
Mt. Kapu
Kuua
Manawahua Pk.
Nanakuli
Kapu
Scale 1:80,000
KAHE PT.
Browns Camp
Palailai Crater

COMPILATION REPORT

Topographic Manuscripts
T-11113, T-11114, T-11115, T-11116

1. Authority:

This compilation has been completed by the U.S.Coast & Geodetic Survey as Project Ph-79. The work has been done for the 14th Naval District in accordance with correspondence initiated by that Headquarters dated 28 Feb 51, serial 2489.

2. Area Covered:

The mapped area is located at Lualualei, Oahu, Territory of Hawaii. The approximate center of the area is at 21°27'N by 158°08'W, and it covers, generally, the Naval Installation and the area to the eastward to the ridge, in accordance with graphic outline of the area as furnished by the 14th Naval District. The entire area requested has not been mapped; portions on the north and south limits of the 100ft contour zone were omitted because of lack of photo cover, and portions near the crest of the ridge were omitted because of cloud and shadow cover. they were obscured by clouds and shadows.

3. Data and Materials: to whom? from whom?

All of the following items were available for this compilation and are being returned, to Navy except the instrument diapositives and instrument worksheets which are of no further use and are being destroyed.

a. Film: One roll, 6", metrogon, emulsion no. 57-209-4
Taken 15 January 1952 by U.S. Navy.

b. Photographs, Contacts:

High Alt.: 1/1 thru 3/1, and 1/2 thru 5/2
Low Alti.: 1/1 " 12/1, 1/2 thru 14/2, 1/3 thru 17/3,
1/4 " 12/4, 1/5 " 11/5, and 1/6 thru 9/6.

c. Photographs, Glass Diapositives:

High Alt: 1/1, 2/1, and 3/1
low Alt.: 7/2-10/2, 5/3-12/3, 2/4-10/4, and 2/5-7/5.

d. Photo-Indexes: Photographic copies of stapled mosaics, one copy of high altitude and two copies of low.

e. Control Station Identification Cards: 14 with attached Position of Substitute Station computation cards.

f. Field Books: Three, as received.

g. Field Computations: One set, unbound, as received.

h. Control Computation Sheets: Five, form M-2388-12

3. Data and Materials: Contd

i. Layout Sketch: Two copies, 14th Naval District, Public Works Dep, Topographic Map, Laulaulei, Oahu, T.H., 1:6000 scale, Outline of Aerial Survey.

j. Manuscripts: Four, vinylite, with polyconic projection and U.T.M.grid.

k. Worksheets: Eight, vinylite, with instrument delineation work in colored pencil.

4. Method:

All compilation work was performed on the Stereoplanigraph, model C-5, No. 61639, located in the Division of Photogrammetry, Commerce Building, Washington, D.C. The general plan followed was to contour the 5ft and 10ft interval areas with the low altitude photography, and to work the balance with the high altitude photography. Accordingly, the project was started by ordering glass plate diapositives of the photographs to be used, by ruling projections and grids on vinylite manuscripts on the Reading Ruling machine, and by plotting and checking control on the manuscripts. Instrument work began on 11 Feb 1953 with control being extended thruout every model of the low altitude photography(Para 3c), directly on the manuscripts. When this was completed, each model was reoriented in the instrument and all culture and contours delineated on separate vinylite worksheets to which control had been transferred from the manuscripts. The two high altitude models were then delineated, and data on the individual worksheets were transferred to the manuscripts by matching similar control points on each. This phase was completed and the manuscripts forwarded for reproduction 30 April 53.

5. Results:

All cultural and topographic data have been compiled on the four manuscripts, using, for the most part, colors and symbols in standard use for USC&GS compilations. Permanent plastic inks were used. In a few cases, symbols have been developed to best show features, the exact nature of which, was uncertain to the instrument operator. Three separate classifications for woods cover have been used; Timber(T), Scrub(S), and, Timber and Scrub mixed (T&S). Contours in certain heavily wooded areas have been shown dashed to indicate questionable accuracy. Photograph centers, with numbers, and secondary control established by the control extension procedure, are inked in permanent plastic ink on the reverse sides of the manuscripts for convenience. The secondary points are identified on a set of contact pictures with descriptions written on the reverse sides. Both horizontal and vertical control were adequate for this project. One substation (9-A) was not positively identified and was not used as a part of the control for this compilation.

6. Recommendations:

It is recommended that a thorough field check be made of this compilation to verify or correct doubtful contours and details of questionable identity. Otherwise, these maps are considered to be accurate within the limits specified by National Standards of map accuracy.

Louis J. Reed, Chief
Stereoscopic Mapping Branch
Photogrammetric Engineer

PARTIAL REDRAFTING ON VINYLITE

Anna P. Berry — T-11113 6/5/53
M. R. Taylor — T-11116 6/5/53
Micheal Jones — T-11114 6/5/53
Martha C. Wetherby — T-11115 6/8/53

Review Report
Topographic Maps
T-11113 to 11116, Incl.
June 19, 1953

61. General Statement.-The specifications for this project were contained in correspondence initiated by the 14th Naval District dated February 28, 1951. The entire requested area was not mapped because of lack of photographic coverage and the obscuring of detail by clouds and shadows. An ozalid was provided by the Navy delineating the areas to be mapped at 5 ft., 10 ft., 20 ft., 50 ft., and 100 ft. contour interval. The Navy also provided the photography and control, both horizontal and vertical. The bridging and compilation were done with the Zeiss Stereoplanigraph.

66. Adequacy of Results.-Contours in heavily wooded and brush covered areas are of questionable accuracy because the stereoscopic instrument operator was not able to see the ground; these contours are shown with dash lines and their accuracy can only be determined by a field test. Except for the dash line contours, the maps are believed to conform to the usual standards of accuracy, that is, 90% of well defined details are within 1/50 inch of correct geographic position and 90% of the elevations interpolated from the maps will be correct within 1/2 contour interval. (exclusive of dash contours). This estimate of accuracy is made without benefit of field test. A field check has been made since the review. The tests show that the contours are well within ½ contour interval. L.C.L. 20 Dec 1954

Reviewed by:

B.J.C.

B. J. Colner

APPROVED:

S. V. Griffith

Chief, Review Branch,
Div. of Photogrammetry

Approved by:

S. V. Griffin
Chief, Review Branch

H. E. Edmonston
Chief, Nautical Chart Branch,
Division of Charts

Max G. Ricketts
Chief, Division of
Photogrammetry

Earl O. Heaton
Chief, Division of Coastal
Surveys

GEOGRAPHIC NAMES

Survey No. T-11,113-
T-11,116

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Title (general)										1
Territory of Hawaii										2
Oahu										3
Waianae District		(This is political subdivision in which area lies; believed to be preferable to Lualualei which is a minor land division)								4
										5
										6
										7
T-11,113:										8
~~W~~ Lualualei Homesteads		(Available maps use this name for area shown.								9
										10
T-11,114:										11
Kolekole Pass										12
Puu Hapapa										13
Puu Kailio										14
										15
T-11,115:										16
Puu Malidii		(not found on any available map)								17
Lualualei Homesteads										18
										19
T-11,116:										20
Pohakea Pass										21
										22
					Names approved 5-18-53					23
										24
										25
										26
										27

M 234

I Jarret 1-27
S.W. Tow Dwg.

Photogrammetry 758

MAP T. T-11115 PROJECT NO. Ph-79 SCALE OF MAP 1:6,000 SCALE FACTOR Page 1 of 2

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM ~~GRID IN FEET~~ ~~OR~~ PROJECTION LINE IN METERS FORWARD	(BACK)	1 MIN. ~~DATUM CORRECTION~~	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
△ 1			21-25-16.107	495.4	1349.9	1845.3	✓			
			158-09 39.219	1129.5	598.4	1727.9	✓			
△ 2			21 25 58.182	1789.4	55.9	1845.3	✓			
			158 10 35.348	1017.9	709.9	1727.8	✓			
△ 3A			21 26 21.486	660.8	1184.5	1845.3	✓			
			158 09 48.660	1401.4	326.3	1727.7	✓			
△ 5			21 26 41.675	1281.7	563.6	1845.3	✓			
			158 09 02.685	77.3	1650.4	1727.7	✓			
△ 6			21 25 14.662	450.9	1394.4	1845.3	✓			
			158 08 47.935	1380.5	347.5	1728.0	✓			
△ 7			21 25 29.831	917.5	927.8	1845.3	✓			
			158 08 05.645	162.6	1565.3	1727.9	✓			
△ 8-B			21 26 25.440	782.4	1062.9	1845.3	✓			
			158 08 12.854	370.1	1357.6	1727.7	✓			
△ 9-B			21 26 56.707	1744.0	101.3	1845.3	✓			
			158 08 19.534	562.5	1165.1	1727.6	✓			

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: DATE CHECKED BY: DATE

Photogrammetry

MAP T- T-11115 PROJECT NO. PR-79 SCALE OF MAP 1:6,000 SCALE FACTOR Page 2 of 2

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM ~~GRID INTERSECT.~~ ~~OR~~ PROJECTION LINE IN METERS FORWARD	(BACK)	1 MIN. ~~DATUM CORRECTION~~	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
SS △ 1-A			21 25	466.71	1378.6	1845.3	✓			
			158 09	1128.02	599.9	1727.9	✓			
SS △ 2d			21 26	06.2	1839.1	1845.3	✓			
			158 10	1077.2	650.6	1727.8	✓			
SS △ 3-B			21 26	576.2	1269.1	1845.3	✓			
			158 09	1508.4	219.3	1727.7	✓			
SS △ 5B-1			21 26	1280.7	564.6	1845.3	✓			
			158 09	134.6	1593.1	1727.7	✓			
SS △ 6-B			21 25	×434.9	1410.4	1845.3	✓			
			158 08	1370.0	358.0	1728.0	✓			
SS △ 7c			21 25	914.7	930.6	1845.3	✓			
			158 08	131.0	1596.9	1727.9	✓			
SS △ 8-C			21 26	804.6	1040.7	1845.3	✓			
			158 08	396.0	1331.7	1727.7	✓			
SS △ 9-A			21 26	1749.9	95.4	1845.3	✓			
			158 08	613.1	1114.5	1727.6	✓			

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: DATE CHECKED BY: DATE

Photogrammetry

MAP T- T-11114 PROJECT NO. PR-79 SCALE OF MAP 1:6,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM ~~GRID~~ OR PROJECTION LINE IN METERS FORWARD	(BACK)	1 MIN. ~~DATUM CORRECTION~~	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
△ 11-A			21-27 40.422	1243.2	602.1	1845.3	✓			
			158-07 40.741	1173.0	554.5	17275	✓			
.55 11a (air Vent)			21-27	1230.0	615.3	1845.3	✓			
			158-07	1145.0	582.5	1727.5	✓			
△ 14			21-27 51.663	1588.9	256.4	1845.3	✓			
			158-06 23.040	663.3	1064.1	1727.4	✓			

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: DATE CHECKED BY: DATE

Photogrammetry

MAP T- T-11116 PROJECT NO. OR-79 SCALE OF MAP 1:6,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM ~~GRID LINE~~ OR PROJECTION LINE IN METERS FORWARD	(BACK)	MIN. ~~DATUM CORRECTION~~	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
△ 12-A			21 - 26 35.458	1090.5	754.8	1845.3 ✓				
			158 - 07 33.069	952.2	775.5	1727.7 ✓				
SS 12d (air mark)			21-26	1085.8	759.5	1845.3 ✓				
			158-07	952.0	775.7	1727.7 ✓				
△ 13 Auger			21-25 59.804	1839.3	06.0	1845.3 ✓				
			158-05 36.897	1062.5	665.3	1727.8 ✓				
SS 13B			21-25	1836.7	08.6	1845.3 ✓				
			158-05	1064.7	663.1	1727.8 ✓				

1 FT. = .3048006 METER

M-2388.12

COMPUTED BY: DATE CHECKED BY: DATE

Photogrammetry

MAP T- T-11113 PROJECT NO. OR-79 SCALE OF MAP 1:6,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM ~~GRID~~ PROJECTION LINE IN METERS FORWARD	(BACK)	1 MIN. ~~DATUM CORRECTION~~	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
△ 4-A			21-27-05.343	164.3	1681.0	1845.3 ✓				
			158-09-10.513	302.7	1424.9	1727.6 ✓				
SS 4-C			21-27·	171.8	1673.5	1845.3 ✓				
			158-09	332.6	1395.0	1727.6 ✓				
△ 10A			21-27-41.822	1286.2	559.1	1845.3 ✓				
			158-08-19.395	558.4	1169.1	1727.5 ✓				
SS 10a(air vert)			21-27	1301.1	544.2	1845.3 ✓				
			158-08	551.0	1176.5	1727.5 ✓				

1 FT.=.3048006 METER

COMPUTED BY: DATE CHECKED BY: DATE

PUBLIC WORKS OFFICE
COMMANDANT 14TH NAVAL DISTRICT
Navy No. 128 c/o F. P. O.
San Francisco, California

80:DB-350:jw
J12
9444
NOV 26 1954

From the elevations recorded on the attached prints we can be proud of this work. Most of the points of elevation are interpolated within a couple of feet of the surveyed elevations.

From: District Public Works Officer, Fourteenth Naval District
To: Director, U. S. Coast and Geodetic Survey, Department of Commerce, Washington 25, D. C.

Subj: Aerial Survey, Naval Ammunition Depot and Naval Radio Station, Lualualei, Oahu, T. H. (PH-79)

Ref: (a) DIR USCOGEODSURV ltr No. 78-aal of 2 Jun 1954
(b) DPWO 14ND ltr 80:DB-350 J12 Ser 5289 of 30 Jun 1954

Encl: (1) 3 prints USC&GS Topographic Maps T-11113, T-11114 and T-11115, Lualualei, Oahu, T. H.

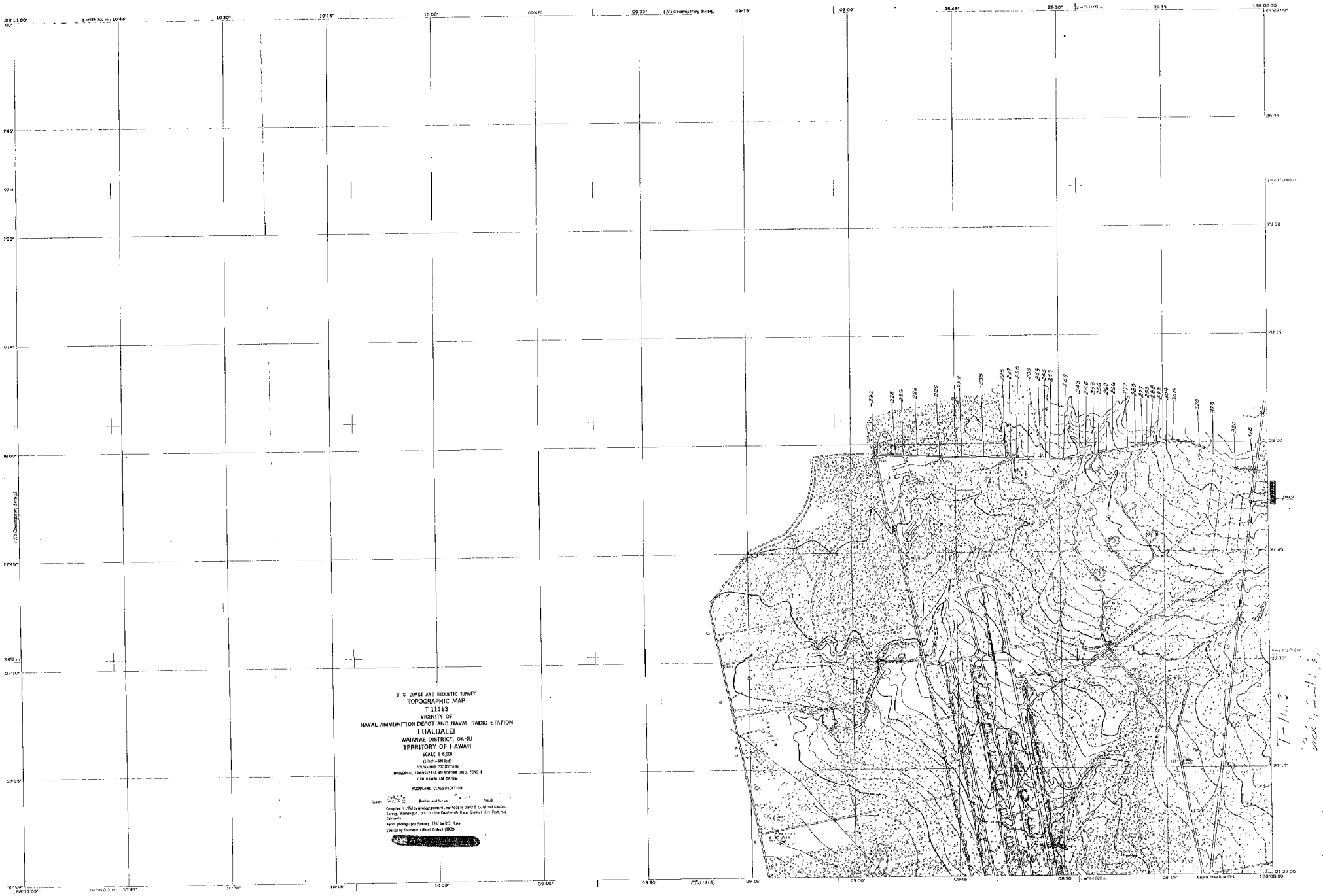
1. Reference (a) requested information on the results of any field surveys made which would be of assistance in determining the accuracy of the topographic maps. Reference (b) advised that certain survey work was being planned in Lualualei, and that data obtained from the surveys would be furnished your office.

2. Revisions in the work schedule caused by changes in priority of work items have resulted in the above surveys being completed at a much later date than was originally expected. The survey work performed, which could be utilized as a check on the topographic maps available, consisted mainly of a few traverse lines along which profiles were run. These traverse lines have been plotted upon the prints forwarded as enclosure (1), together with elevations obtained at specific points. While these profile elevations were obtained to the nearest 0.1 foot, they have been shown on the enclosed prints only to the nearest foot to facilitate comparison.

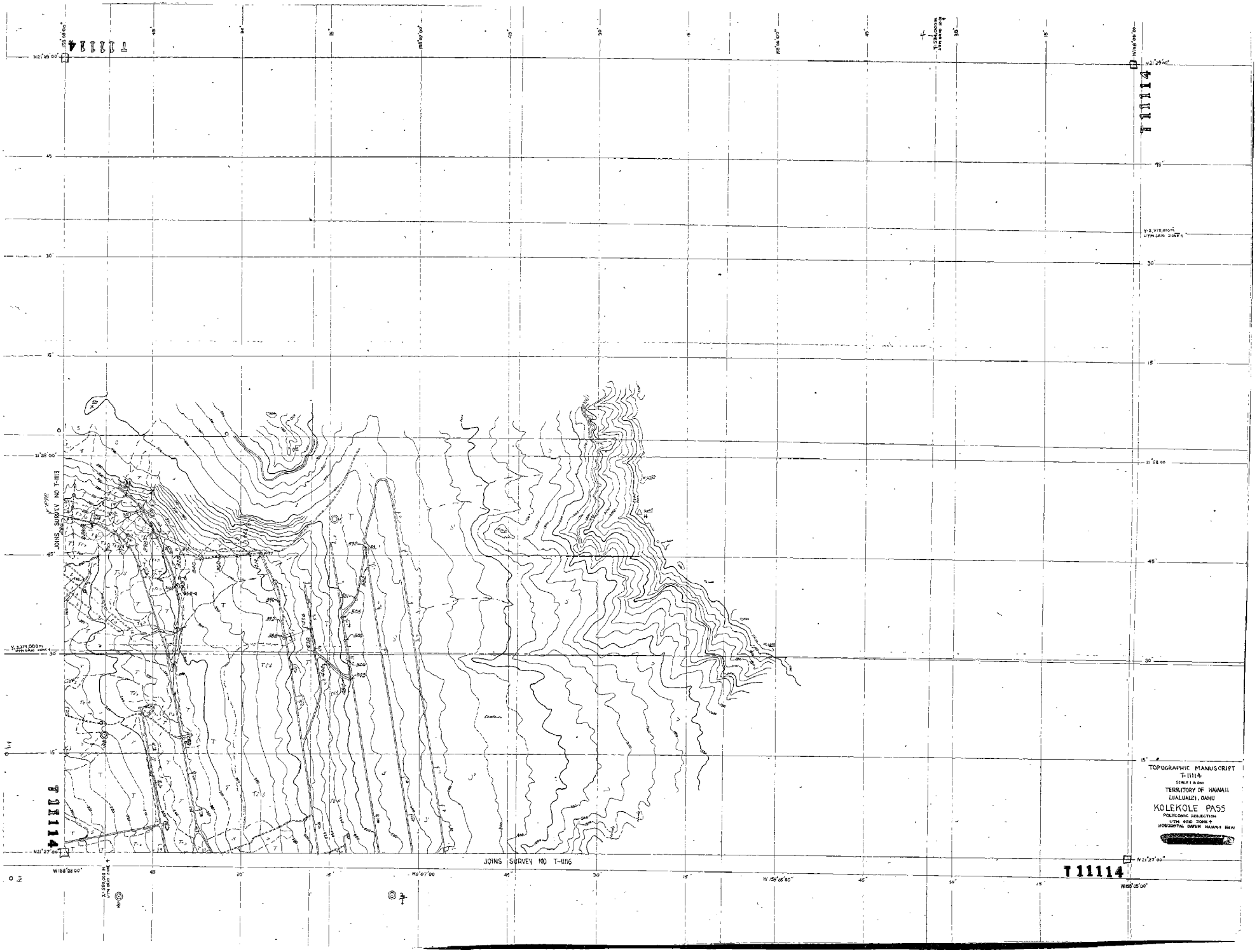
3. The cooperation which you have given in this matter is greatly appreciated and it is hoped that the field information being furnished will prove to be of some assistance to you.

W. J. Williams
W.J. WILLIAMS
By direction

Copy to:
CO NAD Oahu
OIC NRS Lualualei


U S COAST AND GEODETIC SURVEY
TOPOGRAPHIC MAP
T 11113
VICINITY OF
NAVAL AMMUNITION DEPOT AND NAVAL RADIO STATION
LUALUALEI
WAIANAE DISTRICT, OAHU
TERRITORY OF HAWAII
SCALE 1:6,000
(1 inch = 500 feet)
POLYCONIC PROJECTION
UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 4
OLD HAWAIIAN DATUM
WOODLAND CLASSIFICATION
Timber
Timber and Scrub
Scrub
Compiled in 1953 by photogrammetric methods by the U.S. Coast and Geodetic Survey, Washington, D.C. for the Fourteenth Naval District, San Francisco California
Aerial photography January 1952 by U.S. Navy
Control by Fourteenth Naval District (1952)
(No Contemporary Survey)
(T-11113)
T-11113

T 11113


T 11114
JOHNS SURVEY NO T-11113
JOHNS SURVEY NO T-11116
TOPOGRAPHIC MANUSCRIPT
T-11114
SCALE 1:6000
TERRITORY OF HAWAII
LAULAULEI, OAHU
KOLEKOLE PASS
POLYCONIC PROJECTION
UTM GRID ZONE 4
HORIZONTAL DATUM HAWAII 1965
T 11114

T 11115
JOINS SURVEY NO T-11113
JOINS SURVEY NO T-11116
TOPOGRAPHIC MANUSCRIPT
T-11115
TERRITORY OF HAWAII
LUALUALEI, OAHU
PUU MAILIILII
POLYCONIC PROJECTION
UTM GRID - ZONE 4
HORIZONTAL DATUM OLD HAWAIIAN
[redacted]
Encl. (Sheet 2 of 3)