Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

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<th>Type of Survey</th>
<th>Topographic</th>
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<td>Ph-79</td>
</tr>
<tr>
<td>Office No.</td>
<td>T-11113 thru</td>
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LOCALITY

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<td>Oahu</td>
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<tr>
<td>Locality</td>
<td>Lualualei</td>
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1953

CHIEF OF PARTY

Div. of Photogrammetry, Washington, D.C.

LIBRARY & ARCHIVES

DATE  April 26, 1955

DEClassified

AUTHORITY  Memo, Photogrammetry, 4-29-54

DATE  4-29-54  BY  SDE
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.)

Scale Factor (III): 1:15,000 (high Altitude)

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 \( \text{(} \) refer to mean high water
Elevations shown as \( \text{(} \) 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.
DATA RECORD

Field Inspection by (II): None

Planetable contouring by (II): None

Completion Surveys by (II):

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

Not Applicable

Projection and Grids ruled by (IV): Jack Allen
Projective and Grids checked by (IV): H. Wolfe
Control plotted by (III): I. Jarrett
Control checked by (III): S. W. Trow

Stereoscopic
Control extension by (III): Morton Keller

Stereoscopic Instrument compilation (III):

Planimetry Morton Keller
Contours Morton Keller

Manuscript delineated by (III): Henri Lucas

Photogrammetric Office Review by (III): B. J. Colner

Elevations on Manuscript checked by (II) (III):
Louis J. Reed

Date:

Date:

Date:

Date:

Date:

Date:

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Date:

Date:

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Date:

Date:
PHOTOGRAPHS (III)

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Tide (III)

Reference Station: Not Applicable
Subordinate Station:

Washington Office Review by (IV): B. J. Colner

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

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):
Number of BMs searched for (II):
Number of Recoverable Photo Stations established (III):
Number of Temporary Photo Hydro Stations established (III):

Remarks:

This work was made on several different bases for the navy. They are being registered as to have a permanent record.

Form T-Page 4
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 26 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.

3. Data and Materials:

All of the following items were available for this compilation and are being returned, 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

b. Photographs, Contacts:

High Alt.: 1/1 thru 3/1, and 1/2 thru 5/2
Low Alt.: 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 5/6.

c. Photographs, Glass Diapositives:

High Alt: 1/1, 2/1, and 3/1
Low Alt: 7/2-19/2, 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

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


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 throughout 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 USGS 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 applied to 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 Reed
Chief
Stereoscopic Mapping Branch
Photogrammetric Engineer

Partial Redrafting on Vinylite

Anga P. Berry — T-11113 6/5/53

M. R. Tyo — T-11116 6/5/53

Micheal Jones — T-11114 6/8/53

Martha C. Welker — T-11115 6/8/53
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**.

Reviewed by: **B. J. Collier**

Approved: **L. V. Gifford**

Chief, Review Branch, Div. of Photogrammetry
Approved by:

S. V. Griffin
Chief, Review Branch

Herndon
Chief, Nautical Chart Branch,
Division of Charts

May Stickett
Chief, Division of
Photogrammetry

Earl O. Hudson
Chief, Division of Coastal
Surveys
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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 USCGOEDSURV 1tr No. 78-aa of 2 Jun 1954
(b) DFWO 11ND 1tr 80;DB-350 J12 Ser 5289 of 30 Jun 1954

Encl: (1) 3 prints USCG&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.

Copy to:
CO NAD Oahu
OIC NRS Lualualei

W. J. WILLIAMS

By direction