**Form 804**

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

Type of Survey  **SHORELINE (PHOTOGRAHMERIC)**

Field No.  Ph-6012  Office No.  T-11903

**LOCALITY**

State  Hawaii

General locality  Maui Island

Locality  Paia Bay

1960 - 1961 *

**CHIEF OF PARTY**

H. J. Seaborg, Honolulu District Office
W. E. Randall, Baltimore District Office

**LIBRARY & ARCHIVES**

**DATE**

* Refer to page 2 (Remarks Sections)
# DESCRIPTIVE REPORT - DATA RECORD

**PROJECT NO. (III):**

PH 6012  
(21034)

**FIELD OFFICE (II):**

Honolulu, Hawaii

**CHIEF OF PARTY**

H. J. Seaborg

**PHOTOMETERIC OFFICE (III):**

Baltimore, Maryland

**OFFICER-IN-CHARGE**

W. E. Randall

**INSTRUCTIONS DATED (III III):**

14 November 1960  
28 November 1960  
13 June 1961  
16 January 1962

**METHOD OF COMPILATION (III):**

Kelsh Plotter

**MANUSCRIPT SCALE (III):**

1:5,000

**STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):**

1:5,000

**DATE RECEIVED IN WASHINGTON OFFICE (IV):**

N/A

**DATE REPORTED TO NAUTICAL CHART BRANCH (IV):**

N/A

**APPLIED TO CHART NO.:**

N/A

**DATE:**

N/A

**DATE REGISTERED (IV):**

N/A

**GEOGRAPHIC DATUM (III):**

Old Hawaiian

**VERTICAL DATUM (III):**

N/A

Mean sea level except as follows:

- Elevations shown as (FH) refer to mean high water
- Elevations shown as (FL) refer to sounding datum
  i.e., mean low water or mean lower low water

**REFERENCE STATION (III):**

PUU NENE 2, 1950

**LAT.:**

20° 54' 06.562"

**LONG.:**

156° 23' 56.104"

**STATE:**

Hawaii

**ZONE:**

2

**PLAN COORDINATES (IV):**

x = 206,550.21  
= 591,389.92

**ADJUSTED**

N/A

**UNADJUSTED**

N/A

### Roman Numerals

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

**When entering names of personnel on this record, give the surname and initials, not initials only.**
### DESCRIPTIVE REPORT - DATA RECORD

**FIELD INSPECTION BY (III):**

| J. C. Lajouye | DATE: | Feb. 1961 |

**MEAN HIGH WATER LOCATION (III) [STATE DATE AND METHOD OF LOCATION]:**

MHW Located by Kelsh Plotter from October 1960 Photography and field inspection photography.

**PROJECTION AND GRIDS RULED BY (IV):**

| R.A.C. | DATE | 11-18-60 |

**PROJECTION AND GRIDS CHECKED BY (IV):**

| J.D.C. | DATE | 11-22-60 |

**CONTROL PLOTTED BY (III):**

| D. M. Brant | DATE | 1-24-61 |

**CONTROL CHECKED BY (III):**

| H. P. Eichert | DATE | 1-24-61 |

**RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (II):**

| Aerotriangulation - Washington Office | DATE | 1961 |

**STEREOSCOPIC INSTRUMENT COMPILATION (III):**

| PLANIMETRY | DATE | J. D. Mc Evoy | 7-61 |

| CONTOURS | DATE | Inapplicable |

**MANUSCRIPT DELINEATED BY (III):**

| J. D. Mc Evoy | DATE | 8-61 |

**SCRIBING BY (III):**

| D. M. Brant | DATE | 8-61 |

**PHOTOGRAMMETRIC OFFICE REVIEW BY (III):**

**REMARKS:** Field edit - the field edit report for this map is a part of a combined report, dated August 1962, bound with the Descriptive Report for T-11894. The legend note for the subject survey (T-11903) indicates a field edit date of May 1961. No natural or cultural changes were reported by the field editor.
### DESCRPTIVE REPORT - DATA RECORD

**CAMERA (KIND OR SOURCE) (III):**

**Photographs (III):**

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>DATE</th>
<th>TIME</th>
<th>SCALE</th>
<th>STAGE OF TIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 W 2308</td>
<td>Oct. 2, 1960</td>
<td>0912</td>
<td>1:25,000</td>
<td>1.0 ft. above MLLW</td>
</tr>
</tbody>
</table>

Tide computed from Predicted Tide Tables.

**Tide (III):**

<table>
<thead>
<tr>
<th>REFERENCE STATION</th>
<th>Diurnal</th>
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</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td></td>
</tr>
</tbody>
</table>

**Subordinate Station:**

<table>
<thead>
<tr>
<th>Hawaii</th>
</tr>
</thead>
</table>

**Washington Office Review by (IV):**

Leo F. Beugnet, Norfolk Regional Office

**Proof Edit by (IV):**

**Date:** May 1966

**Number of Triangulation Stations Searched for (ii):** None

**Number of BM(5) Searched for (ii):** None

**Number of Recoverable Photo Stations Established (iii):** None

**Number of Temporary Photo Hydro Stations Established (iii):** 8

**Remarks:**

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Logos removed for clarity.
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alongshore area for hydro</td>
<td>July 1961</td>
<td>Superseded</td>
</tr>
<tr>
<td>Compilation completed</td>
<td>Sept. 1963</td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11903

Shoreline survey T-11903, compiled at 1:5,000 scale, covers a part of the coastline of Maui Island in the vicinity of Paia Bay. The primary purpose of the survey was to furnish new shoreline for nautical charts and to provide photo-hydro support data for hydrographic surveys to be made in the same area.

Field work preceding compilation included recovery and identification of horizontal control, field inspection and the selection of photo-hydro stations.

Compilation was by Kelsh Instrument methods using the panchromatic photography of October 2nd 1960 and the control established by aerotriangulation. A cronaflex copy of the manuscript along with specially prepared ratio photographs with specially prepared ratio photographs were furnished for preparation of the boat sheet and for the location of hydro signals by photogrammetric methods.

The manuscript is a vinylite sheet which was smooth drafted and reproduced. One cronar positive and one cronar negative are provided for record and registry.
FIELD INSPECTION REPORT
T-11903

Please refer to the Field Inspection Report bound with the Descriptive Report for T-11896.
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>LATITUDE OR y-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE FORWARD (BACK)</th>
<th>DATUM CORRECTION</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE FORWARD (BACK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAIA, PUMPING</td>
<td>P.C. 20</td>
<td>210,845.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PLANT STACK, 1929</td>
<td>Hawaiian</td>
<td>595,677.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 ft. = 0.048006 meter

COMPUTED BY: J.C.R.  DATE: 10 July 1961
CHECKED BY: Brant  DATE: 13 July 1961
PHOTOGRAMMETRIC PLOT REPORT
T-11903

Please refer to the Photogrammetric Plot Report for the Western part of Maui Island which is bound with the Descriptive Report for T-11894.
COMPILATION REPORT T-11903

For additional data pertaining to this survey please refer to the Field Inspection Report bound with T-11896 and the Photogrammetric Plot Report bound with T-11894.

ITEMS 31 THRU 36

Please refer to the Compilation Report Bound with T-11896

37. LANDMARKS AND AIDS

The stack on chart 14124 at latitude 20° 54.8', longitude 156° 23.2' is shown on this survey as PAIA PUMPING PLANT STACK, 1929. It is not visible on the photographs of October 1960.

38. CONTROL FOR FUTURE SURVEYS

No control for future surveys was established during compilation.

39. JUNCTIONS

Satisfactory junctions were made with T-11902 to the west and with T-11904 to the east. There is no contemporary survey to the south; the Pacific Ocean is to the north.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U.S.G.S. Paia, Hawaii quadrangle, 1:24,000 scale, edition of 1954.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with the following charts:
11116 - 1:250,000 scale - 12th edition, August 17, 1964
11124 - 1:30,000 scale - 3rd edition, May 3, 1965
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Respectfully submitted:

[Signature]

For:

[Signature] (Photo)

Approved:

[Signature]

J. Bull, CAPT., USESSA
Director, Atlantic Marine Center
48. Geographic Names List

Kapukaulua Point
Lower Paia
Paia Bay

*KAILUA GULCH

[Signature]
Geographic Names Section
5 February 1964

*Appears on Final Name Sheet
The following photo-hydro stations, identified by the field inspection party, were located during compilation.

<table>
<thead>
<tr>
<th>Station</th>
<th>Description</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>0301</td>
<td>East end of brush</td>
<td>60 W 2307</td>
</tr>
<tr>
<td>0302</td>
<td>Dead tree at HWL</td>
<td>60 W 2307</td>
</tr>
<tr>
<td>0303</td>
<td>W. gable small shed at top of conveyor</td>
<td>60 W 2308</td>
</tr>
<tr>
<td>0304</td>
<td>Offshore corner of small pillbox</td>
<td>60 W 2308</td>
</tr>
<tr>
<td>0305</td>
<td>New stack at Paia Sugar Mill (C&amp;H)</td>
<td>60 W 2308</td>
</tr>
<tr>
<td>0306</td>
<td>North gable red roofed house</td>
<td>60 W 2308</td>
</tr>
<tr>
<td>0307</td>
<td>White church steeple</td>
<td>60 W 2308</td>
</tr>
<tr>
<td>0308</td>
<td>E. gable pink roofed shed</td>
<td>60 W 2308</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Code</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1.</td>
<td>Projection and Grids</td>
<td>DMB</td>
</tr>
<tr>
<td>2.</td>
<td>Title</td>
<td>DMB</td>
</tr>
<tr>
<td>3.</td>
<td>Manuscript Numbers</td>
<td>DMB</td>
</tr>
<tr>
<td>4.</td>
<td>Manuscript Size</td>
<td>DMB</td>
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<tr>
<td>5.</td>
<td>Control Stations</td>
<td>DMB</td>
</tr>
<tr>
<td>6.</td>
<td>Horizontal Control Stations of Third-Order or Higher Accuracy</td>
<td>NONE</td>
</tr>
<tr>
<td>7.</td>
<td>Recoverable Horizontal Stations of Less Than Third-Order Accuracy (Topographic stations)</td>
<td>NONE</td>
</tr>
<tr>
<td>8.</td>
<td>Bench Marks</td>
<td>NONE</td>
</tr>
<tr>
<td>9.</td>
<td>Plotting of Sesquile Fixes</td>
<td>NONE</td>
</tr>
<tr>
<td>10.</td>
<td>Photogrammetric Plot Report</td>
<td>DMB</td>
</tr>
<tr>
<td>11.</td>
<td>Delineations Points</td>
<td>DMB</td>
</tr>
<tr>
<td>12.</td>
<td>Shoreline</td>
<td>DMB</td>
</tr>
<tr>
<td>13.</td>
<td>Low-Water Line</td>
<td>DMB</td>
</tr>
<tr>
<td>14.</td>
<td>Rocks, Shoals, Etc.</td>
<td>NONE</td>
</tr>
<tr>
<td>15.</td>
<td>Bridges</td>
<td>NONE</td>
</tr>
<tr>
<td>16.</td>
<td>Aids to Navigation</td>
<td>DMB</td>
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<tr>
<td>17.</td>
<td>Landmarks</td>
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<tr>
<td>18.</td>
<td>Other Alongshore Physical Features</td>
<td>NONE</td>
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<tr>
<td>19.</td>
<td>Other Alongshore Cultural Features</td>
<td>DMB</td>
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<tr>
<td>20.</td>
<td>Water Features</td>
<td>DMB</td>
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<tr>
<td>21.</td>
<td>Natural Ground Cover</td>
<td>DMB</td>
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<tr>
<td>22.</td>
<td>Planetary Contours</td>
<td>NONE</td>
</tr>
<tr>
<td>23.</td>
<td>Stereoscopic Instrument Contours</td>
<td>NONE</td>
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<tr>
<td>24.</td>
<td>Contours in General</td>
<td>NONE</td>
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<tr>
<td>25.</td>
<td>Spot Elevations</td>
<td>DMB</td>
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<tr>
<td>26.</td>
<td>Other Physical Features</td>
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<tr>
<td>27.</td>
<td>Roads</td>
<td>DMB</td>
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<tr>
<td>28.</td>
<td>Buildings</td>
<td>DMB</td>
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<tr>
<td>29.</td>
<td>Railroads</td>
<td>NONE</td>
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<td>30.</td>
<td>Other Cultural Features</td>
<td>DMB</td>
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<tr>
<td>31.</td>
<td>Boundaries</td>
<td>DMB</td>
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<tr>
<td>32.</td>
<td>Boundary Lines</td>
<td>NONE</td>
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<tr>
<td>33.</td>
<td>Public Land Lines</td>
<td>DMB</td>
</tr>
<tr>
<td>34.</td>
<td>Miscellaneous</td>
<td>DMB</td>
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<td>35.</td>
<td>Geographic Names</td>
<td>DMB</td>
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<tr>
<td>36.</td>
<td>Juncions</td>
<td>DMB</td>
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<tr>
<td>37.</td>
<td>Legibility of the Manuscript</td>
<td>DMB</td>
</tr>
<tr>
<td>38.</td>
<td>Discrepancy Overlay</td>
<td>DMB</td>
</tr>
<tr>
<td>39.</td>
<td>Descriptive Report</td>
<td>DMB</td>
</tr>
<tr>
<td>40.</td>
<td>Field Inspection Photographs</td>
<td>DMB</td>
</tr>
</tbody>
</table>

**Reviewers:**
- Eri D. M. Brann
- Joseph Sternberg

**Supervisor:** Joseph Sternberg

**Remarks:**
Field completion additions and corrections to the manuscript. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

**Compiler:** Joseph Sternberg

**Supervisor:** Joseph Sternberg
FIELD EDIT REPORT
T-11903

Please refer to the Field Edit Report for Maui Island, Hawaii, strips 1 through 7, which is bound with the Descriptive Report for T-11894.
61. **GENERAL STATEMENT**

See summary accompanying Descriptive Report.

62. **COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS**

Comparison was made with a copy of Registered Planetable survey No. 3270, 1:20,000 scale, made in 1911-1912 and approved March 30, 1914. The shoreline of survey T-11903 is more depictive of the area, the shoreline on the planetable survey being more generalized because of scale.

The rocks that appear on the planetable survey but do not appear on the manuscript have been noted on the comparison print.

Map manuscript T-11903 supersedes the prior planetable survey for chart construction purposes.

63. **COMPARISON WITH MAPS OF OTHER AGENCIES**

Comparison was made with U.S.G.S. quadrangle Paia, Hawaii, 1:24,000 scale, edition of 1954. The shoreline of the two surveys are in good agreement with the exception of the offshore rocks. Some of the rocks shown on the quadrangle fall within the limits delineated as reefs on the manuscript while others are within the area designated as breakers and is actually a part of Spartan Reef.

64. **COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS**

Comparison was made with a copy of boat sheet PF-10-3-62 (Sheet A). The shoreline for the boat sheet was evidently taken from a reduced copy of an Incomplete Manuscript. The rocks and small reef areas close inshore delineated on the Advance Manuscript are not shown on the boat sheet.

65. **COMPARISON WITH NAUTICAL CHARTS**

Comparison was made with nautical chart 4124, 1:30,000 scale, 3rd edition, May 3, 1965. A large reef extends one-half to three-fourths of a mile seaward from the MEWL throughout the width of the manuscript. Breakers along the outer fringe of the reef, at the time of photography, prevent accurate delineation of all rocks in the area. The breaker limits have been delineated on the manuscript.
66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This survey complies with project instructions and meets the National Standard of Map Accuracy.

Reviewed by:
Leo F. Beugnet
Leo F. Beugnet

Approved by:
J. Hall, CAPT., USESMA
Director, Atlantic Marine Center

Approved by:
Charles Swan
Chief, Cartographic Branch

J. L. Woodcock
Chief, Photogrammetry Division

John C. Royer
Chief, Chart Division

Chief, Operations Division
## INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In “Remarks” column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under “Comparison with Charts” in the Review.

<table>
<thead>
<tr>
<th>CHART</th>
<th>DATE</th>
<th>CARTOGRAPHER</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4124</td>
<td>7-6-68</td>
<td>D. McMillan</td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No. 16</td>
</tr>
<tr>
<td>1934</td>
<td>9-15-79</td>
<td>E. Stomps</td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No. 19</td>
</tr>
<tr>
<td>(4124)</td>
<td></td>
<td></td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No.</td>
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<tr>
<td></td>
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FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.