U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey: SHORELINE (Photogrammetric)
Field No.: T-11919

LOCALITY
State: Hawaii
General locality: Maui Island
Locality: Hekili Point

1960 1962

CHIEF OF PARTY
H. J. Seaborg - Honolulu District Office
Miller J. Tonkel - Baltimore District Office

LIBRARY & ARCHIVES

DATE

USCNI-OC 5067
### DESCRIPTIVE REPORT - DATA RECORD

**T-11919**

**PROJECT NO.**

PH 6012

**FIELD OFFICE:**

Honolulu, Hawaii

**CHIEF OF PARTY:**

H. J. Seaborg

**PHOTOGRAMMETRIC OFFICE:**

Baltimore, Maryland

**OFFICER-IN-CHARGE:**

William E. Randall

**INSTRUCTIONS DATED:**

11 November 1960
28 November 1960
13 June 1961
27 December 1961
16 January 1962
1 April 1963

**METHOD OF COMPILATION:**

Kelsh Plotter

**MANUSCRIPT SCALE:**

1:10,000

**STEREOSCOPIC PLOTTING INSTRUMENT SCALE:**

1:5,000

**DATE RECEIVED IN WASHINGTON OFFICE:**

**DATE REPORTED TO NAUTICAL CHART BRANCH:**

**APPLIED TO CHART NO.:**

**DATE:**

**DATE REGISTERED:**

**GEOGRAPHIC DATUM:**

Old Hawaiian

**REFERENCE STATION:**

Heckii (HGS) 1879

**LAT.:** 20° 48' 40.199”

**LONG.:** 156° 37' 15.708”

**PLANE COORDINATES:**

y = 173,549.13

x = 515,546.32

**STATE:** Hawaii

**ZONE:** 2

**VERTICAL DATUM:** Mean Higher Water (MHW)

Elevations shown as (M) refer to mean high water
Elevations shown as (L) refer to soundings datum
i.e., mean low water or mean lower low water

**ADJUSTED**

**UNADJUSTED**

**ROMAN NUMERALS** indicate whether the item is to be entered by (I) FIELD PARTY, (II) PHOTOGRAMMETRIC OFFICE, or (IV) WASHINGTON OFFICE.

WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.
FIELD INSPECTION BY (III):

J. C. Lajoye

DATE: Feb. 1961

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

Mean high water line located by Kelsh Plotter from field inspection photographs.

PROJECTION AND GRIDS RULED BY (IV):

RAC

DATE: 18 Nov. 1960

PROJECTION AND GRIDS CHECKED BY (IV):

JDC

DATE: 18 Nov. 1960

CONTROL PLOTTED BY (III):

D. M. Brant

DATE: 7 March 1961

CONTROL CHECKED BY (III):

H. P. Eichert

DATE: 7 March 1961

RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):

Aerotriangulation - Washington Office

DATE: January 1961

STEREOSCOPIC INSTRUMENT COMPILATION (III):

PLANIMETRY

E. L. Rolle

DATE: June 1961

CONTOURS

D. M. Brant

DATE: Inapplicable

November 1961

MANUSCRIPT DELINEATED BY (III):

L. A. Senasack

DATE

scribing by (III):

C. A. Lipscomb

DATE: July 1963

PHOTOGRAHMETRIC OFFICE REVIEW BY (III):

DATE

D. M. Brant

DATE: July 1963

REMARKS:

FIELD EDIT 1962
## DESCRIPTIVE 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>
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</thead>
<tbody>
<tr>
<td>60 W 23h9 &amp; 2350</td>
<td>5 Oct. 1960</td>
<td>09h2</td>
<td>1:25,000</td>
<td>0.3 ft. above MHW</td>
</tr>
<tr>
<td>60 W 2366 thru 2368</td>
<td>5 Oct. 1960</td>
<td>0950</td>
<td>1:25,000</td>
<td>0.3 ft. above MHW</td>
</tr>
</tbody>
</table>

### From Predicted Tides

<table>
<thead>
<tr>
<th>TIDE (III)</th>
<th>DIURNAL</th>
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<tr>
<td>REFERENCE STATION: Honolul, Hawaii</td>
<td>1.2</td>
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<tr>
<td>SUBORDINATE STATION: Kehei Maalaea Bay</td>
<td>1.6</td>
</tr>
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### Washington Office Review by (IV):

**Leo F. Beugnet - Atlantic Marine Center**  Feb. 1966

**Remarks:**

11
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Shoreline furnished for hydro</td>
<td>Dec. 5, 1961</td>
<td>superseded</td>
</tr>
<tr>
<td>Final Compilation</td>
<td>July, 1963</td>
<td></td>
</tr>
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</table>
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11919

Shoreline survey T-11919 (1:10,000 scale) is one of 49 similar maps in this project. It covers a part of the coastline of Maui Island from the town of Olowalu southeastward to longitude 156° 33' 45".

This was a stereoscopic instrument project in advance of hydrographic surveys to be made in the same area. Field operations preceding compilation included recovery and identification of horizontal control, field inspection and identification of photo-hydro signals.

The Stereoplanigraph was used for control extension. An adequate number of pass points were located for control of the models for Kelsh Plotter compilation methods. Compilation was at 1:10,000 scale and included the delineation of the mean high water line, alongshore detail, and the selection and identification of photo-hydro signals and pass points. A cronaflex copy was provided the hydrographer for preparation of the boat sheet. 1:10,000 ratio prints of the photography was subsequently provided for hydro-support purposes.

The manuscript is a vinylite sheet 4' 15" in latitude by 3' 45" in longitude. One cronar positive and one cronar negative are provided for record and registry.
FIELD INSPECTION REPORT
T-11919

Please refer to the Field Inspection Report for Maui Island, Hawaii bound with the Descriptive Report for T-11894.
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR x-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEKILI (HGS), P.C.OLD</td>
<td>1879</td>
<td>Hawaiian</td>
<td>515,586.32</td>
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</table>

1 FT. = 0.3048006 METER

COMPUTED BY: J.C.R. DATE 12 July, 1962
CHECKED BY: D. BRANT DATE 17 July, 1962
PHOTOGRAMMETRIC PLOT REPORT
T-11919

31. **DELINEATION**

Stereoscopic instrument methods (Kelsh Plotter with 1960 photographs) were used for delineation. The 1960 compilation was revised with 1961 photography where there were changes of importance. The color photography (where available) was used as an aid in compiling details alongshore.

Survey T-11927 (Molokini Island) is an exception to the others in this group. Molokini Island is a small crescent-shaped island about 0.3 mile long located 5.5 miles northwestward from Cape Hanamanica. This survey was not covered by the photogrammetric bridge. The island was compiled from color photography (61 WC 899 thru 901) with the Kelsh Plotter. The models were controlled by three triangulation stations identified on the color prints. The high-water line and alongshore details were delineated from the color photography. There was no field inspection for this survey other than the identification of horizontal control.

32. **CONTROL**

The identification, density and placement of horizontal control was adequate.

The positions for triangulation stations TOWER, 1931, and MC GRECOR POINT LIGHT, 1950 are approximately the same. The name TOWER, 1931 is not shown on survey T-11921.

33. **SUPPLEMENTAL DATA**

None

34. **CONTOURS AND DRAINAGE**

Contours - Inapplicable

The intermittent drainage is shown with a solid line.
35. SHORELINE AND ALONGSHORE DETAILS

Field inspection was adequate for the delineation of the high-water line. Alongshore details were compiled with the aid of field inspection and color photography. The color photography was utilized in the verification of the alongshore details.

The high-water line was delineated using the reference distances from prominent objects where they were recorded on the field inspection photographs. The date of these measurements was not noted.

36. OFFSHORE DETAILS

Details offshore were delineated from office interpretation of the photographs and are subject to verification by the hydrographer.

37. LANDMARKS AND AIDS

There is one non-floating aid on Survey T-11930 which is recommended to be charted. Form 567 has been submitted. A copy of Form 567 is bound with this report.

Mc GREGOR POINT LIGHT, 1950 (Survey T-11921) reported on Form 526 is identical with TOWER, 1931 and listed as Mc Gregor Point Daybeacon in the Light List.

38. CONTROL FOR FUTURE SURVEYS

There are no Recoverable Topographic Stations on these surveys.

An incomplete copy of these surveys showing the shoreline along with a set of ratio photographs with pass points and field identified photo-hydro signals was prepared and submitted for the use of the hydrographic party. These signals were removed from the final survey.
39. JUNCTIONS

The junctions for surveys T-11919 thru T-11930 are in agreement with adjoining surveys. Refer to the project layout bound in this report.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to Photogrammetric Plot Report bound with the Descriptive Report for surveys T-11894 and T-11895.

41. thru 45 Inapplicable

46. COMPARISON WITH EXISTING MAPS

Surveys T-11919 thru T-11930 were compared with the following U.S.G.S. Quadrangles:

<table>
<thead>
<tr>
<th>Quadrangle</th>
<th>Scale</th>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>OLOWAII, HAWAII</td>
<td>1:24,000</td>
<td>1955</td>
</tr>
<tr>
<td>MAALAE, HAWAII</td>
<td></td>
<td>1954</td>
</tr>
<tr>
<td>FUU O KALI, HAWAII</td>
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<td></td>
</tr>
<tr>
<td>MAKENA, HAWAII</td>
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47. COMPARISON WITH NAUTICAL CHARTS

Chart Number 4104, 1:10,000 scale, published June 1934 (3rd edition) Dec. 31, 1951.

Chart Number 4115, 1:250,000 scale.

Chart Number 4116, 1:250,000 scale.

Chart Number 4130, 1:250,000 scale.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None

ITEMS TO BE CARRIED FORWARD:

None

Approved and Forwarded

Respectfully submitted
6 November 1963

Joseph Steinberg

For: Donald M. Brant
Carto. (Photo.)

Miller J. Tonkel
CDR C&GS
Baltimore District Officer
48. Geographic Names List

   Hanaula Gulch *
   Hekili Point
   Manawaipueo Gulch
   Mopua
   Olowalu
   Papalua Gulch
   Ukumehame Gulch

* Feature not delineated on this manuscript.
49. **NOTES TO THE HYDROGRAPHER**

The following photo-hydro stations, identified by the field inspection party, were located during compilation.

1902  Southeast end of guardrail  60 W 2349
1903  Northwest corner of guardrail  60 W 2349
1904  North rock of 3, 10 m. outside HWL  60 W 2349
1905  Stake at point of grass  60 W 2349
1906  Stake at corner of road  60 W 2349
1907  Lone monkeypod tree on north side of road  60 W 2351
1908  East end concrete seawall  60 W 2351
1909  Offshore Palm tree  60 W 2351
1910  Northwest end of guardrail  60 W 2366
1911  Offshore palm  60 W 2366
1912  Southwest gable metal roof shed  60 W 2366
<table>
<thead>
<tr>
<th>1. PROJECTION AND GRIDS</th>
<th>2. TITLE</th>
<th>3. MANUSCRIPT NUMBERS</th>
<th>4. MANUSCRIPT SIZE</th>
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**CONTROL STATIONS**

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<tr>
<th>5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY</th>
<th>6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (TOPOGRAPHIC STATIONS)</th>
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<tr>
<th>7. PHOT HYDRO STATIONS</th>
<th>8. BENCH MARKS</th>
<th>9. PLOTTING OF SEXTANT FIXES</th>
<th>10. PHOTOGRAMMETRIC PLOT REPORT</th>
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**ALONGSHORE AREAS (Nautical Chart Data)**

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<th>20. WATER FEATURES</th>
<th>21. NATURAL GROUND COVER</th>
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**PHYSICAL FEATURES**

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<tr>
<th>22. PLANETABLE CONTOURS</th>
<th>23. STEREOSCOPIC INSTRUMENT CONTOURS</th>
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<tr>
<td>NONE</td>
<td>Inapplicable</td>
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<tr>
<th>24. CONTOURS IN GENERAL</th>
<th>25. SPOT ELEVATIONS</th>
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<tr>
<th>26. OTHER PHYSICAL FEATURES</th>
<th>27. ROADS</th>
<th>28. BUILDINGS</th>
<th>29. RAILROADS</th>
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**CULTURAL FEATURES**

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<tr>
<th>30. OTHER CULTURAL FEATURES</th>
<th>31. BOUNDARY LINES</th>
<th>32. PUBLIC LAND LINES</th>
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**BOUNDARIES**

<table>
<thead>
<tr>
<th>33. GEOGRAPHIC NAMES</th>
<th>34. JUNCTIONS</th>
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<table>
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<tr>
<th>35. LEGIBILITY OF THE MANUSCRIPT</th>
<th>36. DISCREPANCY OVERLAY</th>
<th>37. DESCRIPTIVE REPORT</th>
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<thead>
<tr>
<th>38. FIELD INSPECTION PHOTOGRAPHS</th>
<th>39. FORMS</th>
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<tbody>
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</tbody>
</table>

**SIGNATURE OF REVIEWER**

For: D. M. Brant
Joseph Steinberg

**SIGNATURE OF SUPERVISOR, REVIEW SECTION OR UNIT**

Joseph Steinberg

**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 in remarks on reverse side.

**SIGNATURE OF COMPLETER**

Joseph Steinberg

**SIGNATURE OF SUPERVISOR**

Joseph Steinberg

USE REVERSE SIDE FOR REMARKS
FIELD EDIT REPORT
T-11919

Please refer to the Field Edit Report for Maui Island, Hawaii (strips 1 through 7) dated 17 August 1962 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 Registered Planetable survey No. 3268, 1:20,000 scale, made in 1912 and registered March 30, 1914. Shoreline survey T-11919 supersedes this prior survey and should be used for all future nautical chart construction.

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

Comparison was made with U.S.G.S. quadrangles Olowalu and Maalaea, Hawaii, 1:24,000 scale editions of 1955 and 1954 respectively. These quadrangles show numerous submerged rocks offshore of the mean high water line which are not visible on photography of the area, nor are any shown on the boat sheets.

64. **COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS**

Comparison was made with a copy of boat sheet H-8580 (SU-10-5-61) 1:10,000 scale. The shoreline of the boat sheet and the manuscript are identical.

65. **COMPARISON WITH NAUTICAL CHARTS**

Comparison was made with chart 1130, 1:80,000 scale, 4th edition dated August 31, 1964. This chart shows numerous submerged rocks just offshore of the outer limits of the coral reef between longitudes 156° 36' 18" and 156° 37' 30". These are in the same area as those referred to in item 63.

A thorough inspection of the photography failed to find any submerged rocks in this area.
66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Future surveys should check for submerged rocks in the area mentioned in item 65.

Reviewed by:

Leo F. Beugent

Approved by:

J. Bull
Director, Atlantic Marine Center

Approved by:

L. F. Woodcock
Chief, Chart Division

Chief, Photogrammetry Division

Chief, Cartographic Branch

Chief, Operations 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>
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<td>Full Part Before After Verification Review Inspection Signed Via Drawing No.</td>
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