**FORM C&GS-504**

**U.S. DEPARTMENT OF COMMERCE**
**ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION**
**COAST AND GEODETIC SURVEY**

**DESCRIPTIVE REPORT**

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>Shoreline (Photogrammetric)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td>Ph-6012</td>
</tr>
<tr>
<td>Office No.</td>
<td>T-11989</td>
</tr>
</tbody>
</table>

**LOCALITY**

<table>
<thead>
<tr>
<th>State</th>
<th>Hawaii</th>
</tr>
</thead>
<tbody>
<tr>
<td>General locality</td>
<td>Maui Island</td>
</tr>
<tr>
<td>Locality</td>
<td>Homon</td>
</tr>
</tbody>
</table>

**1960-63**

**CHIEF OF PARTY**

H.J. Seaborg, Honolulu District Off.  

**LIBRARY & ARCHIVES**

<table>
<thead>
<tr>
<th>DATE</th>
<th>1967</th>
</tr>
</thead>
</table>

11989
**PROJECT NO. (III):**

PH 6012

**FIELD OFFICE (II):**

Honolulu, Hawaii

**CHIEF OF PARTY**

H. J. Seaborg

**PHOTOGRAMMETRIC 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):**

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

**APPLIED TO CHART NO.:**

**DATE:**

**DATE REGISTERED (IV):**

**GEOGRAPHIC DATUM (III):**

Old Hawaiian

**VERTICAL DATUM (III):**

MSL

**MEAN SEA LEVEL EXCEPT AS FOLLOWS:**

Elevations shown as (2) refer to mean high water
Elevations shown as (4) refer to sounding datum
i.e., mean low water or mean lower low water

**REFERENCE STATION (III):**

**KRAKAUMUNA 2, 1950**

**LAT.:**

20° 43' 46.303"

156° 00' 37.279"

**LONG.:**

**X ADJUSTED**

**UNADJUSTED**

**PLANE COORDINATES (IV):**

$x = 137,943.79$

$x = 730,605.51$

**STATE**

Hawaii

**ZONE**

2

**ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (III) 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.**
### DESCRIPTIVE REPORT - DATA RECORD

<table>
<thead>
<tr>
<th>Field Inspection by (II):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. C. Lejoye</td>
<td>Feb. 1962</td>
</tr>
</tbody>
</table>

Mean High Water Location (III) (State Date and Method of Location):
Mean high water line located by Kelsh Plotter from photography of October 1960 supplemented by 1962 color photography

<table>
<thead>
<tr>
<th>Projection and Grids Ruled by (IV):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. Roundtree</td>
<td>3-19-62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Projection and Grids Checked by (IV):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. Roundtree</td>
<td>3-20-62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Plotted by (III):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. A. Senasack</td>
<td>3-11-62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Checked by (III):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. O. Neterer</td>
<td>3-11-62</td>
</tr>
</tbody>
</table>

Radial Plot or Stereoscopic Control Extension by (III):
Aerotriangulation - Washington Office
Feb. 1962

<table>
<thead>
<tr>
<th>Stereoscopic Instrument Compilation (III):</th>
<th>Planimetry</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. F. Carr</td>
<td></td>
<td>6-62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contours (III):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inapplicable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manuscript Delineated by (III):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. D. McEvoy</td>
<td>6-62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scribing by (III):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. D. McEvoy</td>
<td>6-62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photogrammetric Office Review by (III):</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. M. Brant</td>
<td>6-62</td>
</tr>
</tbody>
</table>

Remarks:
Field Edit - Refer to page 13 of this report
# Descriptive Report - Data Record

**Camera (Kind or Source) (iii):**

**W& Camera**

<table>
<thead>
<tr>
<th>Photographs (iii)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td><strong>Date</strong></td>
<td><strong>Time</strong></td>
<td><strong>Scale</strong></td>
<td><strong>Stage of Tide</strong></td>
</tr>
<tr>
<td>60 W 2377 &amp; 2378</td>
<td>5 Oct. 1960</td>
<td>1023</td>
<td>1:15,000</td>
<td>0.5 Ft above MLLW</td>
</tr>
<tr>
<td>60 W 2255 &amp; 2256</td>
<td>26 Jan. 1962</td>
<td>0931</td>
<td>1:15,000</td>
<td>1.1 Ft <strong>N</strong></td>
</tr>
<tr>
<td>62 W(C) 2264 thru 2266</td>
<td>26 Jan. 1962</td>
<td>0942</td>
<td>1:10,000</td>
<td>1.0 Ft <strong>N</strong></td>
</tr>
<tr>
<td>62 W(C) 2292 thru 2294</td>
<td>26 Jan. 1962</td>
<td>0950</td>
<td>1:10,000</td>
<td>1.0 Ft <strong>N</strong></td>
</tr>
</tbody>
</table>

Tides computed from Predicted Tide Tables.

### Tide (iii)

<table>
<thead>
<tr>
<th></th>
<th>Diurnal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ratio of Ranges</strong></td>
<td><strong>Mean Range</strong></td>
</tr>
<tr>
<td>Reference Station:</td>
<td>Honolulu, Hawaii</td>
</tr>
<tr>
<td>Subordinate Station:</td>
<td>Hana, Hawaii</td>
</tr>
</tbody>
</table>

**Final Washington Office Review** (iv):

- **Leo P. Beugnet, Norfolk Regional Office**
- **Date:** Nov. 1965

**Proof Edit by (iv):**

- **Date:** Dec. 1965

**Number of Triangulation Stations Searched For (ii):**

- **Recovered:** 0
- **Identified:** 0

**Number of BM(s) Searched For (ii):**

- **Recovered:** 0
- **Identified:** 0

**Number of Recoverable Photo Stations Established (iii):**

- 0

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

- 6

**Remarks:**
<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>June 1962</td>
<td>Superseded</td>
</tr>
<tr>
<td>Final Compilation</td>
<td>March 1964</td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11989

Shoreline manuscript T-11989 is one of forty-nine similar maps in this project and covers a part of the coastline of Maui Island. This was a Kelsh project in advance of hydrographic surveys in the area. The field operations preceding compilation included recovery and identification of horizontal control and field inspection. The Kelsh compilation was at 1:5,000 scale from 1:25,000 scale photography obtained in October 1960. A cronaflex positive showing shoreline, alongshore features and shoreline pass points was furnished for the preparation of the hydrographer's boat sheet along with 1:5,000 scale ratio prints for the location of hydro signals and for field edit purposes.

The compilation manuscript is a vinylite sheet 1 minute 55 seconds in latitude by 2 minutes 50 seconds in longitude from which the smooth sheet was drafted and reproduced on cronaflex. One cronar positive and one cronar negative are provided for record and registry.
FIELD INSPECTION REPORT
T-11989

Please refer to the Field Inspection Report for Maui Island, Hawaii bound with the Descriptive Report for T-11991.
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR y-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>ALAU FLAG</td>
<td>P.C.</td>
<td>Old Hawaiian</td>
<td>145°061.47</td>
<td>734,430.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2, 1950</td>
<td>Page 19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KEAKAAAMANU</td>
<td>P.C.</td>
<td></td>
<td>144°350.42</td>
<td>724,274.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2, 1950</td>
<td>Page 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
COMPILATION REPORT T-11989

For additional data pertaining to this survey please refer to the Field Inspection Report for Maui Island bound with T-11991 and the Photogrammetric Plot Report bound with T-11987.

ITEMS 31 THRU 36

Please refer to the Compilation Report bound with T-11896.

37. LANDMARKS AND AIDS

There are no landmarks, fixed aids to navigation or aeronautical aids within the compilation limits of this survey.

38. CONTROL FOR FUTURE SURVEYS

No control for future surveys was located during compilation.

39. JUNCTIONS

Satisfactory junctions were made with T-11911 on the north and with T-11990 on the south. There is no contemporary survey on the west; the Pacific Ocean is on the east.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U.S.G.S. Hana, Hawaii quadrangle, 1:24,000 scale, edition of 1957.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with nautical chart 4116, 1:250,000 scale, 12th edition, August 17, 1964.
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Respectfully submitted:

[Signature]

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

Approved:

[Signature]

J. Bull
Capt. C&GS
Norfolk Regional Office
48. Geographic Names List:

The Geographic names listed below were furnished by the Washington Office on U.S.G.S. Hana, Hawaii 7½ minute quadrangle, 1:24,000 scale, edition of 1957.

- Alenuihaha Channel*
- Alau Island
- Hamoa
- Haneoo Gulch
- Kokuula Point
- Ka Iwi O Pele
- Lehoula Beach
- Mokae
- Mokae Cove
- Mokae Landing
- Moomooiki Gulch
- Moomoonui Gulch
- Pacific Ocean
- Puu Hele
- WaiPauma Point

A. J. Wright

ALL NAMES APPROVED BY GEOGRAPHIC NAMES SECTION UNLESS OTHERWISE MARKED.

*Name not used on this sheet
NOTES FOR THE HYDROGRAPHER

A set of ratio photographs (taken in 1962) has been prepared for use during photo-hydro support.

Color photography was used as an aid in interpreting offshore details and foul lines.

The positions of the following hydrographic signal sites, identified on field inspection photographs, have been established photogrammetrically for the following surveys:

<table>
<thead>
<tr>
<th>Signal No.</th>
<th>Description</th>
<th>Photo. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>T-11989</strong></td>
<td></td>
</tr>
<tr>
<td>8901</td>
<td>Rag on palm</td>
<td>2377</td>
</tr>
<tr>
<td>8902</td>
<td>Rag on lauhala tree</td>
<td>2377</td>
</tr>
<tr>
<td>8903</td>
<td>Rag on small kamane tree</td>
<td>2377</td>
</tr>
<tr>
<td>8904</td>
<td>Rag on bush, W. side of path</td>
<td>2377</td>
</tr>
<tr>
<td>8905</td>
<td>Rag on iron wood tree</td>
<td>2377</td>
</tr>
<tr>
<td>8906</td>
<td>Rag on lone lauhala tree</td>
<td>2377</td>
</tr>
<tr>
<td></td>
<td><strong>T-11990</strong></td>
<td></td>
</tr>
<tr>
<td>9001</td>
<td>West gable, aluminum roof cottage</td>
<td>2378</td>
</tr>
<tr>
<td>9002</td>
<td>Flag, S. E. corner of rock pile</td>
<td>2378</td>
</tr>
<tr>
<td>9003</td>
<td>S. E. Corner GAY house</td>
<td>2378</td>
</tr>
<tr>
<td>9004</td>
<td>Center of round rock</td>
<td>2377</td>
</tr>
<tr>
<td>3904</td>
<td>West gable, small brown, green roof house</td>
<td>2380</td>
</tr>
<tr>
<td>1. PROJECTION AND GRID</td>
<td>2. TITLE</td>
<td>3. MANUSCRIPT NUMBERS</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------</td>
<td>------------------------</td>
</tr>
<tr>
<td></td>
<td>LFB</td>
<td></td>
</tr>
</tbody>
</table>

### CONTROL STATIONS
- 5. Horizontal Control Stations of Third-Order or Higher Accuracy: LFB
- 7. Photo Hydro Stations: None
- 8. Bench Marks: None
- 11. Detail Points: LFB

### ALONGSHORE AREAS
(Nautical Chart Data)
- 12. Shoreline: LFB
- 13. Low-Water Line: LFB
- 14. Rocks, Shoals, etc.: LFB
- 15. Bridges: None
- 16. Aids to Navigation: None
- 17. Landmarks: None
- 18. Other Alongshore Physical Features: LFB
- 19. Other Alongshore Cultural Features: LFB

### PHYSICAL FEATURES
- 20. Water Features: LFB
- 21. Natural Ground Cover: LFB
- 22. Planetary Contours: None
- 23. Stereoscopic Instrument Contours: None
- 24. Contours in General: None
- 25. Spot Elevations: None
- 26. Other Physical Features: LFB

### CULTURAL FEATURES
- 27. Roads: LFB
- 29. Railroads: None
- 30. Other Cultural Features: LFB

### BOUNDARIES
- 31. Boundary Lines: None
- 32. Public Land Lines: None

### MISCELLANEOUS
- 33. Geographic Names: LFB
- 36. Discrepancy Overlay: LFB
- 37. Descriptive Report: LFB
- 38. Field Inspection Photographs: LFB
- 39. Forms: LFB

### 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 Compiler:**

**Signature of Supervisor:**

*Refer to page 13 USE REVERSE SIDE FOR REMARKS*
FIELD EDIT REPORT
T-11989

No formal Field Edit Report was received.
other maps in the project were field edited in 1963

NO FIELD EDIT SHEET WAS SUBMITTED
61. GENERAL STATEMENT

See summary accompanying Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

A visual comparison was made with Registered Planetable survey No. 3274, 1:20,000 scale dated March 30, 1914.

Shoreline manuscript T-11989 supersedes the planetable survey and should be used for nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with U.S.G.S. Hana, Hawaii quadrangle, 1:24,000 scale, edition of 1957.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with a copy of boat sheet H-8719-PF-10-2-63 sheet CC. The differences in the high water line of the boat sheet and manuscript are shown on the Comparison Print.

65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with nautical chart 4116, 1:250,000 scale, August 17, 1964.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Note: A "Notes To Verifier" page was submitted to the Hydro Branch, 8/2/64. Refer to page 16 of this report.
Reviewed by:

Lee F. Benguet

Approved by:

J. Bull, Director, Atlantic Marine Center

Approved by:

Chief, Cartographic Branch

Chief, Photogrammetry Division

Chief, Chart Division

Chief, Operations Branch
NOTES TO VERIFIER
H-8719
PH-6012 (T-11989)
Maui Island, Hawaii

Survey
Project H-8719 (PF 10-2-63) was compared with T-11989 during final review of the shoreline survey. Local datum differences (up to 4.0 mm as measured on the manuscript) exist between the surveys in shoreline and alongshore rocks. Boat sheet shoreline has been traced, by the final reviewer, on the Comparison Print for T-11989.

The Descriptive Report for T-11989 contains no information indicating that changes of the magnitude described in the preceding paragraph were applied to the shoreline survey subsequent to furnishing a copy of the preliminary map for use in hydro support application of field data.

Application of field edit changes is accounted for in the Photogrammetric Office Review Report; however, no formal field edit report was submitted.
## 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>4115</td>
<td>11/6/66</td>
<td>TAW / JMR</td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No. Previous application adequate</td>
</tr>
</tbody>
</table>

**FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-1989**