**11954**

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**Form 504**

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

Type of Survey  **SHORELINE (PHOTOGRAMMETRIC)**

Field No. 

Office No. **T-11954**

---

**LOCALITY**

State **HAWAII**

General locality **MOLOKAI**

Locality **LAAU POINT**

---

**1962-1965**

CHIEF OF PARTY
H. J. S. EBORG, CHIEF OF PARTY
P. A. STARK, PHOTOGRAMMETRIC OFFICE

---

**LIBRARY & ARCHIVES**

DATE 

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USCGC-DC 9087
**DESCRIPTIVE REPORT - DATA RECORD**

**T - 11954**

**PROJECT NO. (I):**

PH 6201

**FIELD OFFICE (II):**

Honolulu, Hawaii

**CHIEF OF PARTY:**

H. J. Seaborg

**UNIT CHIEF:**

L. F. Van Scoy

**PHOTограмMETRIC OFFICE (III):**

Portland, Oregon

**OFFICER-IN-CHARGE:**

S. P. A. Stark

**INSTRUCTIONS DATED (III):**

April 25, 1962

May 31, 1962

Dec. 14, 1962

Feb. 20, 1963

Jan. 8, 1964

**AMENDMENT I:**

**AMENDMENT II:**

**AMENDMENT III:**

**METHOD OF COMPILATION (III):**

Kelsh Instrument

**MANUSCRIPT SCALE (III):**

1:5000

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

1:3000

**PANTOGRAPH SCALE:**

1:5000

**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

**REFERENCE STATION (III):**

LAAU, 1962

**LAT.:**

21° 06' 18.752"

**LONG.:**

157° 18' 41.722"

**X ADJUSTED**

**UNADJUSTED**

**PLANE COORDINATES (IV):**

y = 280,792.24  x = 280,165.63

**STATE:**

Hawaii

**ZONE:**

2

**VERTICAL DATUM (III):**

Mean Sea Level Except as Follows: X

Elevations shown as (23) refer to mean high water
Elevations shown as (3) refer to sounding datum
i.e., mean low water or mean lower low water

**ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTограмMETRIC 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

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<th>DATE:</th>
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<tr>
<td>L. F. Van Scoy</td>
<td>JANUARY - OCTOBER 1962</td>
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**MEAN HIGH WATER LOCATION (III) [STATE DATE AND METHOD OF LOCATION]:**

*September 1962 by field inspection. Compilation by Kelsh Instrument.*

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

*None Received*

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<td>Advance:</td>
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**REMARKS:**
**DESCRIPTIVE REPORT - DATA RECORD**

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

C&GS SINGLE LENS "WF" PHOTOS (III)

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<td>9-27-61</td>
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<td>0.8' ABOVE MSL, L.W.</td>
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<td>1:25,000</td>
<td>1.2' &quot;</td>
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<td>10-2-60</td>
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<td>1:15,000</td>
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**TIDE (III)**

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SUBORDINATE STATION: WAIMANALO

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SUBORDINATE STATION: Kolo

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**REMARKS:**
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<td>Along shore area for hydro</td>
<td>June 1964</td>
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**PROJECT PH-6201**

**SHORELINE MAPPING**

**1:5,000 AND 1:10,000 SCALES**

**MOLOKAI ISLAND HAWAII**

---

**Official Mileage for Cost Accounts**

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**Total** 98 93
SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORT T-11954

Shoreline survey T-11954 is one of twenty-five similar surveys in project PH-6201. The maps in this project cover the entire coast of Molokai. This map covers the area of Lahu Point at the southwest tip of the island. See page 5 of the Descriptive Report for the area within the project.

Field work preceding compilation consisted of identification of horizontal control, field inspection, shoreline inspection and identification of fixed aids to navigation.

Compilation was at 1:5,000 scale by Kelsh Instrument using the photography obtained in October 1960, September 1961, and January 1962. Cronaflex copies of the map manuscript along with specially prepared photographs and ozalids were subsequently provided for transfer of the shoreline to the boat sheets, photo-hydro support, and field edit use.

Field edit was done in conjunction with hydrography on boat sheets H-8994 (AR-10-3-68) and H-8974 (AR-10-1-68).

The manuscript was a vinylite sheet 2 minutes 30 seconds in latitude by 2 minutes in longitude. After application of field edit data the manuscript was scribed and reproduced on cronaflex. Final review was in the Atlantic Marine Center in October 1970. One cronaflex positive and a negative of the final reviewed survey are forwarded for record and registry.
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☐ Classified Material - Authorization: This is to certify that the above named employee is authorized to use the classified material listed hereon.

SIGNATURE OF AUTHORIZED OFFICIAL

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Received for Delivery ..........  
Signature of Requester ..........  
Received for Return to Vault .....

NOAA FORM 42-3  
(8-72)  
PRESCRIBED BY NOS  
OFFICE CIRCULAR 63-1

VAULT MATERIAL RECEIPT  
U.S. DEPARTMENT OF COMMERCE  
NOAA-NATIONAL OCEAN SURVEY

(See Instructions on Reverse)
FIELD INSPECTION REPORT

Hap Manuscripts
T-11952 thru 11965
T-11318 thru 11828

Project FH-6201

January - October 1962

2. AREAL FIELD INSPECTION

The area covered by this report encompasses the whole of the island of Molokai. This is the fifth largest of the group of islands that form the State of Hawaii. The island was originally formed by the eruption of two volcanoes. One was located somewhere near the east end of the island and the other somewhere near the west end. Following these eruptions the numerous deep drainages were created by stream erosion and the ocean created the great cliffs along the north coast. A later eruption formed the Malanalua Peninsula on the north central coast. The Kauhako Crater remains as evidence of this eruption. The highest peak is Kaakou which is 4953 feet above sea level.

The climate of the island varies considerably depending on the elevation and location in relation to the prevailing trade winds. The mean annual temperature at sea level is about 74 degrees. The temperature seldom varies more than 10 degrees except at the higher elevations. The yearly rainfall varies from about 7 inches around Kaunakakai to over 150 inches in the high mountain sections of the northeast.

The only port in use on the island is located at Kaunakakai. A small wharf connected to the shore by a long mole is used to load and unload barges, and serve small commercial and private boats. At one time a railroad connected the wharf to the area now known as Hoolehua Homesteads. It was abandoned soon after completion as the sugar plantation it was constructed to serve was a failure. The economy of the island is almost wholly dependent on the growing of pineapple and cattle ranching.

The wharf located at Kolo was used for a time to load pineapple from the Kaunaloa area. It was later abandoned and since that time has been partially destroyed by fire. The wharf located at Kanao is now in poor condition and seldom used except by an occasional small fishing or pleasure boat. The wharf located at Pukoo is no longer in evidence. Located at Haoleolon is a small harbor protected by a breakwater. This is a private harbor and is used to load sand and cinder barges for shipment to Oahu. A small private airstrip is located along the easterly breakwater.
Located on the Hakalau Peninsula is the small settlement of Kalaupapa. The settlement is maintained by the State of Hawaii, Department of Health for the treatment of Hansen's Disease (Leprosy). Special permission must be obtained from the state before visiting this area. No facilities for serving the public are permitted on the peninsula. The U.S. Coast Guard maintains an isolated light station at the northern tip of the peninsula. The area is served by limited airplane service and supplies are brought in by barge at infrequent intervals. A small wharf protected by a short breakwater is located at the settlement. This area is isolated from the remainder of the island except for a foot trail that leads down the steep rocky cliffs from the top of the pali southwest of the settlement.

Shoreline around the island vary from the almost vertical rock cliffs along most of the north and east coast, to the narrow and relatively flat coastal areas along the south coast. Most of the south coast is protected by an offshore reef. A few sandy beaches are located along the south and west coasts. Most of the north coast is accessible only by boat and any landings there should be attempted with extreme caution.

Photography was adequate for the identification of horizontal control and shoreline inspection for most of the island. A few sections of the shoreline along the northeast coast of the island were in complete shadow from the most vertical cliffs.

The shoreline for the entire island was visually inspected on the Mean High Water noted on the field photographs. The shoreline along the north coast except for the Hakalau Peninsula was inspected by cruising offshore in a small boat. The work was difficult due to the small size of the boat, the rough seas, and strong winds. A few landings were made on the more prominent points along the northeast coast. The remainder of the island was inspected by walking the shoreline in the more accessible areas, and by observations from vantage points along cliffs and cliffs where the shoreline could not be otherwise visited. Scattered sections of the shoreline along the south coast were obscured by overhanging Kauai trees and dense growths of mangrove trees.

3. HORIZONTAL CONTROL

(a) The following described intersection stations were located by traverse or triangulation as nautical aids, aeronautical aids, and landmarks.

Molokai Lighthouse
Molokai Airport Beacon
Maliau, Aero Beacon Red Light
Kaulapuu, Aero Beacon Red Light
Kolokai VOR (335)
Puu Apalu, Tank
Ilio Pt., Coast Guard Loran Mast
Waiahoehe, Aero Beacon Red Light
Leau Pt. Light
Kaumakalai Harbor, Entrance Range, Front Light
Kaumakalai Harbor, Entrance Range, Rear Light

(b) No datum adjustments were made by the field party.

(c) WATELI 2, 1945 was the only control station identified that was not established by the Coast and Geodetic Survey. This station was established by the Territory of Hawaii and can be considered as third order accuracy. The station was destroyed before it could be tied to the 1962 work. HALEA, 1962 which is located about a half mile west of this station was later identified. All other control stations identified were established by the Coast and Geodetic Survey or tied to by the geodetic party during the 1962 season. Many of the old stations could not be recovered and new stations had to be established to meet the control requirements.

(d) Control stations were positively identified in all areas indicated on the control diagram.

(e) All control stations within the limits of the project except for a few along the inaccessible northeast coast of the island were searched for. Part of this recovery was performed by the geodetic party located on the island. All station searched for were listed on Form 526 which was submitted to the Honolulu District Officer. A complete list of all stations reported lost on Form 526 would have to be obtained from the Honolulu District Officer or the Division of Geodesy. No stations that were listed as lost were identified for use in the plot.

(g) The quality of identification of each station or substitute station has been indicated on the control station identification card. None of the identification was considered to be sub-standard.

4. VERTICAL CONTROL

The only vertical control requirement was the recovery of all tidal bench marks in the project area and identification of one mark in each of the groups.

All tidal bench marks listed at Pukoo, Kamalo, Kaumakalai, and Kolo were searched for. A total of 18 bench marks were searched for. All marks were listed on Form 685 which was submitted to the Honolulu District Officer.
A total of 13 U. S. Geological Survey bench marks were searched for. These marks were used in conjunction with the tellurometer traverse work on the island and for use in determining the elevation of landmarks. All marks were listed on Form 685 which was submitted to the Honolulu District Officer.

5. CONTOURS AND DRAINAGE

Contours not applicable

Drainage is self evident on the photographs. All streams except for a few in the larger valleys of the northeast coast and near the east end of the south coast are intermittent. During the wet season there are dozens of waterfalls cascading from the tops of the cliffs and rims of the valleys of the northeast coast. Marsh areas have been indicated on the field photographs.

6. WOODLAND COVER

The mountainous areas of the northeast part of the island is covered with a dense growth of native ferns and hardwoods. A large stand of planted softwoods is located along the top of the pali in the north central part of the island. Koa trees which were introduced to the island about 100 years ago cover most of the remainder of the island except for the cultivated areas. Along the mud flats of the south coast there are scattered stands of introduced Mangrove trees.

7. SHORELINE AND ALONGSHORE FEATURES

(a) The mean high water line was indicated on the photographs. Along some sections of the northeast coast the shoreline was obscured due to the shadows created on the photographs from the almost vertical cliffs. In some areas of the south coast the shoreline was partially obscured by low overhanging Koa trees. In most cases this overhang was less than 10 meters and the approximate correct location was indicated on the photographs. Also along the south coast there are scattered stands of Mangrove trees. In these areas the mean high water line was indicated as apparent shoreline.

The shoreline along the north, east, and small areas of the west and southwest coast contain many areas of alongshore rocks, projecting reefs and ledges, and almost vertical bluffs. These features combined with a normally heavy surf breaking along the shore tend to confuse the location of the mean high water line on the photographs.

Where possible especially along the beach areas and the more accessible sections of the coast the location of the mean high water line was determined by measurements to near by objects.
(b) The low water line was not indicated on the photographs.

(c) Where possible the character of the foreshore was indicated on the photographs.

(d) The north, east, and sections of the west and southwest coast is bordered by rocky cliffs. In some cases these cliffs are over 2000 feet high. Along most of the south coast, sections of the west coast, and the Kaimonu area the land has a more gradual slope with a small relatively flat area adjacent to the coast.

(e) The only unnatural features to be found in the project area were located at Kalaupapa, Kalaolo, Kaunakakai, Kolo, and Haleolono. All information regarding these features was indicated on the field photographs.

(f) Not applicable

(g) Along the south shore there are the remains of many fishponds. The stone walls for some of these have been completely leveled and for most of the others large sections of the walls have been leveled. The location of these fishponds is apparent on the photographs.

8. OFFSHORE FEATURES

Offshore rocks are located along many areas of the north, east, and sections of the west and southwest coast. Most of these rocks that are visible on the photographs are adjacent to the shore. In these areas it is probable that there are many rocks that are not visible on the photographs but are close enough to the surface of the water to consider the foreshore as being foul with submerged rocks. The height of many of the rocks along the shore were estimated at the time the shoreline was inspected.

A reef about 0.5 to 1.0 mile offshore is located along most of the south coast. Between the reef and the shore there are scattered areas of sand and many coral heads that project at low water.

9. LANDMARKS AND AIDS

(a) All charted landmarks were investigated by the field party. A total of 13 old landmarks were deleted from the charts and four old landmarks were retained. A total of 11 new landmarks were selected for charting. The old landmarks which were to be deleted were indicated on the sections of the charts on which they appeared. These sections of the charts will be submitted with the field records. All old landmarks that were retained and the new landmarks selected for charting were listed on Form 507, and the elevation for each landmark was determined by the field party.

(b) No interior landmarks were selected for charting.
(c) The geographic positions for the following charted aeronautical aids was determined by traverse or triangulation during the 1962 field season.

- Molokai, Airport Beacon
- Waimehahena, Aero Beacon Red Light
- Waikuna, Aero Beacon, Red Light
- Kualapuu, Aero Beacon, Red Light

The geographic position of one new aeronautical aid selected for charting was determined during the 1962 field season.

- Molokai VOR (MMK)

All aeronautical aids to be charted were listed on Form 567 and the elevation for each aid was determined by the field party.

(d) The geographic positions of the following list of aids to navigation was determined by the field party during the 1962 season.

- Molokai Lighthouse
- Lelu Pt. Light
- Ilio Pt., Coast Guard Loran Mast
- Kaunakakai Harbor, Entrance Range, Front Light
- Kaunakakai Harbor, Entrance Range, Rear Light

All nautical aids to be charted were listed on Form 567 and the elevation for each aid was determined by the field party.

(e) Not applicable

10. BOUNDARIES, MONUMENTS, AND LINES

Not applicable

11. OTHER CONTROL

No recoverable topographic stations were established.

In all areas where identifiable objects could be found photo hydro sites were selected. In some cases it will be necessary to locate a more suitable location for the hydrographic signals from the selected photo hydro sites.

12. OTHER INTERIOR FEATURES

All roads in the project area were classified on the field photographs in compliance with the project instructions.
All public buildings with their function was indicated on the field photographs.

The main airport serving the island is located south of the Hoolula Homestead area in the central section of the island. A small airport for use by small aircraft is located on the Makanalu Peninsula. A small private airstrip is located at Haleolono near the southwest end of the island.

No bridges or overhead cable crossings over navigable water are located in the project area. There are no submerged cables connecting the island with other areas.

13. GEOGRAPHIC LIMITS

Not Applicable

Approved: OCT 30 1962

H.J. Seaborg
Capt., C & G S
Honolulu District Officer

Respectfully submitted:

Leonard F. Van Scoy
Supervisory Survey Technician
Unit Chief, C & G S
21. Area Covered

The bridging furnishes control for the compilation of five shoreline surveys on the southwest shore of Molokai Island. They are T-11954 through T-11956 at a scale of 1:5,000 and T-11957 and T-11958 at a scale of 1:10,000.

22. Method

Two strips, 10 and 11, were bridged analytically at a scale of 1:25,000. Strip 10 using photographs 61-W-695 through 710 was adjusted on four horizontal control points. Strip 11 was adjusted as a straight line using photographs 60-W-2427 through 2430 but this was adequate since only three models were involved.

23. Adequacy of Control

Control complied with project instructions. It was well distributed and was adequate. Closures to control and tie points for the two strips are shown on the attached aeroetriangulation sketch.

24. Supplemental Data

None

25. Photography

Photography was adequate as to coverage, overlap and definition.

Respectfully submitted,

Henry P. Eichert, Acting Chief, Aerotriangulation Section
AEROTRIANGULATION SKETCH
MOLOKAI ISLAND HAWAII
STrips 10 & 11
21044
AUGUST 1963

△ Control used in adjustment
△ Control used as check
□ Tie points

Strip 9 10
1 (-18 -9.3)
2 (-55 -1.2) 5 (-45 -2.9)
3 (+01 +0.7) 6 (-68 +0.1)

Strip 10 & 11
7 (+0.2 +4.1) 10 (-0.9 -0.6)
8 (+6 +2.6) 11 (+5.1 +2.9)
9 (-2.6 +2.7)

Strip 11 & 2
12 (+95 -7.8) 14 (+5.0 -6.6)
13 (-2.2 +5.0) 15 (-2.5 +2.2)
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<td>LAAU, 1962</td>
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COMPUTED BY L.L.G. DATE 2-4-64
CHECKED BY D:NW. DATE 2-5-64
COMPILATION REPORT

Map Manuscript T-11954

Project 21044

Items 31 thru 36:

Refer to the Compilation Report for T-11954.

37. Landmarks and Aids:

One non-floating aid is shown on this manuscript. Form 567 is submitted.

38. Control for Future Surveys:

None.

39. Junctions:

Satisfactory junctions were made with T-11953 to the north and with T-11955 to the east. The Pacific Ocean is on the west and south.

40. Horizontal and Vertical Accuracy:

46. Comparison with Existing Maps:

Comparison was made with the U.S.G.S. 7 1/2 minute, Ilio Point, Hawaii, quadrangle, scale 1:24,000, edition 1952.
47. **Comparison with Nautical Charts**

Comparison was made with Nautical Chart 4120, scale 1:80,000 at Lat. 21° 01', 1st edition, revised Feb. 4, 1963.

**Items to be Applied to Nautical Charts Immediately:**

None.

**Items to be Carried Forward:**

None.

---

**Approved:**

P. A. Stark, CDR, C&GS
PORTLAND FIELD OFFICER

---

**Submitted:**

James L. Harris
CARTOGRAPHER
September 11, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6201 (Molokai Island, Hawaii)

T-11954

Kahaiawa
Kahalepohaku
Kaheu Gulch
Kamakaipo (village)
Kamakaipo Gulch
Keawakalani
Laau Point
Pacific Ocean
Molokai

Approved by:

[Signature]
A. Joseph Wraight
Chief Geographer

Prepared by:

[Signature]
Frank W. Pickett
Cartographic Technician
49. **Notes for the Hydrographer:**

None.
**PHOTOGRAMMETRIC OFFICE REVIEW**

<table>
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<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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<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>
<th>7. PHOTO HYDRO STATIONS</th>
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<th>8. BENCH MARKS</th>
<th>9. PLOTTING OF Sextant Pixels</th>
<th>10. PHOTOGRAMMETRIC PLOT REPORT</th>
<th>11. DETAIL POINTS</th>
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**ALONGSHORE AREAS (Nautical Chart Data)**

<table>
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<tr>
<th>12. SHORELINE</th>
<th>13. LOW-WATER LINE</th>
<th>14. ROCKS, SHOALS, ETC.</th>
<th>15. BRIDGES</th>
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<th>16. AIDS TO NAVIGATION</th>
<th>17. LANDMARKS</th>
<th>18. OTHER ALONGSHORE PHYSICAL FEATURES</th>
<th>19. OTHER ALONGSHORE CULTURAL FEATURES</th>
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**PHYSICAL FEATURES**

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<tr>
<th>20. WATER FEATURES</th>
<th>21. NATURAL GROUND COVER</th>
<th>22. PLANETABLE CONTOURS</th>
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<th>23. STEREOSCOPIC INSTRUMENT CONTOURS</th>
<th>24. CONTOURS IN GENERAL</th>
<th>25. SPOT ELEVATIONS</th>
<th>26. OTHER PHYSICAL FEATURES</th>
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**CULTURAL FEATURES**

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<tr>
<th>27. ROADS</th>
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<th>29. RAILROADS</th>
<th>30. OTHER CULTURAL FEATURES</th>
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**BOUNDARIES**

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**MISCELLANEOUS**

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

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<tr>
<th>REVIEWER</th>
<th>SUPERVISOR, REVIEW SECTION OR UNIT</th>
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<tbody>
<tr>
<td>L. L. Graves</td>
<td>Leo F. Beugnet</td>
</tr>
</tbody>
</table>

**REMARKS**

**FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT**

42. 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**

<table>
<thead>
<tr>
<th>COMPILER</th>
<th>SUPERVISOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. L. Harris</td>
<td>Leo F. Beugnet</td>
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</table>

**REMARKS**
Field Edit Report
To Accompany T 11954

USC\&GSS McARTHUR

Ronald L. Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Manuscript T 11954 was field edited by personnel aboard the USC\&GSS McARTHUR in conjunction with hydrography on boatsheets AR 10-3-68, H 8994, and AR 10-1-68, H 8974. The shoreline was inspected from Launches and Skiffs. Constant heavy swell made it impossible to determine the MLLW line.

Field edit information was shown in violet ink on four (4) contact prints, 61W1247, 61W1248, 61W709 and 61W710 and indexed on the discrepancy ozalid copy of T 11954 in violet ink.

52 ADEQUACY OF COMPILATION

Manuscript T 11954 was completely adequate for a hydrographic survey.

54 RECOMMENDATIONS

None

56 MISCELLANEOUS

There is a strong current with eddies flowing in a general westerly direction off Laau Point on the south west corner of Molokai. This is apparently a littoral drift current and the sediment laden waters of this current can be identified in photos 61W710, 61W1249 and 61W1250.

This oceanographic feature may be worth further investigation at some future time.
REVIEW REPORT T-11954

SHORELINE

OCTOBER 27, 1970

61. GENERAL STATEMENT:

See Summary, which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

A visual comparison was made with a copy of registered survey No. 3526, 1:20,000 scale dated 1915. Survey No. 3526 is somewhat generalized because of its scale. No major conflicts were noted.

Registered survey No. 3526 is superseded by T-11954 for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A visual comparison was made with U.S.G.S. ILI0 POINT, HAWAII, 8.5 by 7.5 minute quadrangle, 1:24,000 scale edition of 1952. The two surveys are in good general agreement.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with copies of boat sheets H-8974 (AR-10-1-68 "Y") and H-8994 (AR-10-3-68"Z"). The shoreline of the boat sheets is in good agreement with that of T-11954. Rocks shown on the shoreline survey that are not on the boat sheets have been indicated on the comparison print in purple.

65. COMPARISON WITH NAUTICAL CHARTS:

A visual comparison was made with chart 4120, 3rd edition, October 14, 1968. The two surveys are in good general agreement.
66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

Reviewed by:

Leo F. Beugnet
Cartographer

Approved by:

Allen L. Powell, RADM, NOAA
Director, Atlantic Marine Center

Approved by:

Chief, Photogrammetric Branch  Chief, Photogrammetry Division
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by J. L. Harris

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<tr>
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<tr>
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<td>DESCRIPTION</td>
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<tr>
<td>LAAU POINT LIGHT, 1962</td>
<td>LL 2958</td>
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</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS