# Descriptive Report

**Type of Survey**: Shoreline (Photogrammetric)

**Field No.**: 270745  **Office No.**: T-11966

## Locality

**State**: Hawaii

**General Locality**: Lanai Island

**Locality**: Keanapapa Point

**Date**: Jan 11, 1966

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**Chief of Party**

Wilbur R. Porter, Chief of Party

Fred Natella, Photogrammetric Office

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**Library & Archives**

Date: Jan 11, 1966

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**Form 504**

U. S. Department of Commerce

Coast and Geodetic Survey

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DESCRIPTIVE REPORT - DATA RECORD
T - 11966

PROJECT NO. (III):
21045

FIELD OFFICE (III):
HONOLULU, HAWAII

CHIEF OF PARTY
Wilbur R. Porter

UNIT CHIEF L. F. Van Scoy

PHOTOGRAMMETRIC OFFICE (III):
PORTLAND, OREGON

OFFICER-IN-CHARGE
Fred Natella

INSTRUCTIONS DATED (III) (III):
July 31, 1962
December 18, 1962

AMENDMENT I:
May 23, 1963

AMENDMENT II:
June 24, 1963

AMENDMENT III:
July 9, 1963

AMENDMENT IV:
Sept. 30, 1963

METHOD OF COMPILATION (III):
Kelsh Instrument

MANUSCRIPT SCALE (III):
1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): T: 5000

PANTOGRAPH SCALE:
1:10,000

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):
MEAN SEA LEVEL EXCEPT AS FOLLOWS: X
Elevations shown as (2) refer to mean high water
Elevations shown as (2) refer to sounding datum
i.e., mean low water or mean lower low water

REFERENCE STATION (III):
POLIHUA, 1962

LAT.:
20° 55' 17.74"

LONG.:
157° 02' 33.78"

X: 213,805.70
Y: 371,660.46

STATE:
HAWAII

ZONE:
2

PLANE COORDINATES (IV):

ADJUSTED
X
UNADJUSTED

ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (I) 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.

USCGPS-1810
(12-61)
U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

2-
# Descriptive Report - Data Record

**Field Inspection by (iii):**

L. F. Van Scoy  
**Date:** Oct.-Dec. 1962

**Mean High Water Location (iii) (State Date and Method of Location):**

October - December, 1962 by field inspection.  
Compilation by Kelvin Instrument.

**Projection and Grids Ruled by (iv):**

A. R.  
**Date:** 6-24-63

**Projection and Grids Checked by (iv):**

R. G.  
**Date:** 8-25-63

**Control Plotted by (iii):**

D. N. Williams  
**Date:** 7-30-63

**Control Checked by (iii):**

L. L. Graves  
**Date:** 7-30-63

**Radial Plot or Stereoscopic Control Extension by (iii):**

Henry P. Eichert  
**Date:** August 1963

**Stereoscopic Instrument Compilation (iii):**

<table>
<thead>
<tr>
<th>Planimetry</th>
<th>Contours</th>
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</thead>
<tbody>
<tr>
<td>L.L.G.</td>
<td>None</td>
</tr>
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</table>

**Date:**

8-5-63

**Manuscript Delineated by (iii):**

**Smooth Draft**

J. L. Harrrib  
**Date:** 8-23-63

**Scribing by (iii):**

C. C. Harris  
**Date:** 10-3-63

**Stick-up: Rough Draft**

D. N. Williams  
**Date:** 8-7-63

**Advance**

J. E. Deal  
**Date:** 10-4-63

**Remarks:**
DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):
C&GS SINGLE LENS "W"

PHOTOGRAPHS (III)

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<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 2210 THRU 2212</td>
<td>Oct. 2, 1960</td>
<td>10:25</td>
<td>1:25,000</td>
<td>0.8' ABOVE M.L.L.W.</td>
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<td>RATIO PRINTS OF ABOVE AT 1:10,000</td>
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<tr>
<td>62 W 2479 THRU 2481</td>
<td>Feb. 1, 1962</td>
<td>08:00</td>
<td>1:25,000</td>
<td>0.9' &quot; &quot;</td>
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<tr>
<td></td>
<td>RATIO PRINTS OF ABOVE AT 1:10,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62 W 2455 AND 2456</td>
<td>Feb. 1, 1962</td>
<td>08:20</td>
<td>1:25,000</td>
<td>0.9' &quot; &quot;</td>
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<tr>
<td></td>
<td>COLOR PHOTOGRAPHS</td>
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<tr>
<td>60 W 3316 THRU 3320</td>
<td>Oct. 24, 1960</td>
<td>07:55</td>
<td>1:10,000</td>
<td>2.4' &quot; &quot;</td>
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COMPUTED FROM PREDICTED TIDE TABLES.

TIDE (III)

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<tr>
<th>REFERENCE STATION:</th>
<th>HONOLULU</th>
<th>RATIO OF RANGES</th>
<th>MEAN RANGE</th>
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<tr>
<td>SUBORDINATE STATION:</td>
<td>KAUNAKAKI, MOLOKAI</td>
<td>1.4</td>
<td>2.1</td>
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WASHINGTON OFFICE REVIEW BY (IV):

PROOF EDIT BY (IV):

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):
5
RECOVERED: 5
IDENTIFIED: 3

NUMBER OF BM(5) SEARCHED FOR (II):
None
RECOVERED: IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):
None

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):
11

REMARKS:

...
FIELD INSPECTION REPORT

MAP MANUSCRIPT T-11966

PROJECT 21045

REFER TO THE FIELD INSPECTION REPORT FOR THE ENTIRE PROJECT
INCLUDED WITH THE DESCRIPTIVE REPORT FOR T-11972.
PHOTOGRAMMETRIC PLOT REPORT

Map Manuscript T-11966

Project 21045

Refer to the Photogrammetric Plot Report by Henry P. Eichert, August 1963 and included with the Descriptive Report for T-11972.
<table>
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<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>
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</thead>
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<td>368,671.34</td>
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<td>KAALA, 1962</td>
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<td>&quot;</td>
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<td>POLIHUA, 1962</td>
<td>&quot;</td>
<td>&quot;</td>
<td>213,805.70</td>
<td>8,805.70</td>
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<td>371,860.46</td>
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<td>KAENA, 1914</td>
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<td>&quot;</td>
<td>215,434.96</td>
<td>10,434.96</td>
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<td>378,369.46</td>
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<td>NOB, 1931</td>
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<td>&quot;</td>
<td>203,641.55</td>
<td>1,358.43</td>
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<td>364,572.56</td>
<td>9,572.56</td>
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</tbody>
</table>

1 ft. = 0.3048005 meter

COMPUTED BY: L.G. 
DATE: 7-17-63 
CHECKED BY: D.N.W. 
DATE: 7-25-63
ITEMS 31 THRU 37:

REFER TO THE COMPILATION REPORT FOR T-11972.

38. CONTROLS FOR FUTURE SURVEYS:

ELEVEN PHOTO-HYDRO STATIONS WERE IDENTIFIED BY THE FIELD PARTY AND LOCATED DURING KELSH INSTRUMENT COMPILATION. THEIR NUMBERS AND DESCRIPTIONS ARE LISTED IN PARAGRAPH 49, NOTES FOR THE HYDROGRAPHER.

39. JUNCTIONS:

SATISFACTORY JUNCTIONS WERE MADE WITH T-11967 TO THE EAST AND WITH T-11972 TO THE SOUTH. THE PACIFIC OCEAN IS ON THE WEST AND KALOMI CHANNEL IS TO THE NORTH.

40. HORIZONTAL AND VERTICAL ACCURACY:

REFER TO THE COMPILATION REPORT FOR T-11972.

46. COMPARISON WITH EXISTING MAPS:

REFER TO THE COMPILATION REPORT FOR T-11972.

47. COMPARISON WITH NAUTICAL CHARTS:

COMPARISON WAS MADE WITH NAUTICAL CHART 4130, SCALE 1:80,000 AT LAT. 20° 51', 3RD EDITION, DEC. 30, 1936, REVISED 4-26-82.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

NONE.

ITEMS TO BE CARRIED FORWARD:

NONE.

APPROVED:

FRED NATELLA, CAPT, C&GS
PORTLAND DISTRICT OFFICER

RESPECTFULLY SUBMITTED:

JAMES L. HARRIS
CARTOGRAPHER

FRED NATELLA, CAPT, C&GS
PORTLAND DISTRICT OFFICER

JAMES L. HARRIS
CARTOGRAPHER
**Notes for the Hydrographer:**

Eleven photo-hydro stations are shown on this manuscript and listed below. They were identified by the field party and located by the Kelsh operator during compilation.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Field Photo No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6601</td>
<td>Small bush on knoll</td>
<td>60 W 2212</td>
</tr>
<tr>
<td>6602</td>
<td>Point low 10 ft. bluff</td>
<td></td>
</tr>
<tr>
<td>6603</td>
<td>E. end clump brush</td>
<td>60 W 2211</td>
</tr>
<tr>
<td>6604</td>
<td>E. end small bush</td>
<td></td>
</tr>
<tr>
<td>6605</td>
<td>W. end low small bush</td>
<td></td>
</tr>
<tr>
<td>6606</td>
<td>Point low bluff</td>
<td>60 W 2210</td>
</tr>
<tr>
<td>6607</td>
<td>Corner low bluff</td>
<td></td>
</tr>
<tr>
<td>6608</td>
<td>Point of low bluff</td>
<td></td>
</tr>
<tr>
<td>6609</td>
<td>Point low bluff</td>
<td>62 W 2455</td>
</tr>
<tr>
<td>6610</td>
<td>Point low bluff</td>
<td></td>
</tr>
<tr>
<td>6611</td>
<td>Point low bluff</td>
<td></td>
</tr>
</tbody>
</table>

None of the limit lines shown are intended to represent approximate lower low-water lines, but are shown to assist the hydrographer when navigating close to the shore.

When using shoreline pass points on a single photograph to locate additional photo-hydro signals, the photographs should be examined by use of the stereoscope so that it may be determined which points of the same elevation as that of a point to be located may be used.
# PHOTOGRAMMETRIC OFFICE REVIEW

**C&GS FORM 1002 (11-13-81)**

**U.S. DEPARTMENT OF COMMERCE**

**COAST AND GEODETIC SURVEY**

1. **PROJECTION AND GRIDS**

2. **TITLE**

3. **MANUSCRIPT NUMBERS**

4. **MANUSCRIPT SIZE**

**CONTROL STATIONS**

5. **HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY**

6. **RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY**

7. **PHOTO HYDRO STATIONS**

8. **BENCH MARKS**

9. **PLOTTING OF Sextant Fixes**

10. **PHOTOGRAMMETRIC PLOT REPORT**

11. **DETAIL POINTS**

**ALONGSHORE AREAS (Nautical Chart Date)**

12. **SHORELINE**

13. **LOW-WATER LINE**

14. **ROCKS, SHOALS, ETC.**

15. **BRIDGES**

16. **AIDS TO NAVIGATION**

17. **LANDMARKS**

18. **OTHER ALONGSHORE PHYSICAL FEATURES**

19. **OTHER ALONGSHORE CULTURAL FEATURES**

**PHYSICAL FEATURES**

20. **WATER FEATURES**

21. **NATURAL GROUND COVER**

22. **PLANETABLE CONTOURS**

23. **STEREOSCOPIC INSTRUMENT CONTOURS**

24. **CONTOURS IN GENERAL**

25. **SPOT ELEVATIONS**

26. **OTHER PHYSICAL FEATURES**

**CULTURAL FEATURES**

27. **ROADS**

28. **BUILDINGS**

29. **RAILROADS**

30. **OTHER CULTURAL FEATURES**

**BOUNDARIES**

31. **BOUNDARY LINES**

32. **PUBLIC LAND LINES**

**MISCELLANEOUS**

33. **GEOGRAPHIC NAMES**

34. **JUNCTIONS**

35. **LEGIBILITY OF THE MANUSCRIPT**

36. **DISCREPANCY OVERLAY**

37. **DESCRIPTIVE REPORT**

38. **FIELD INSPECTION PHOTOGRAPHS**

39. **FORMS**

40. **REVIEWER**

   D. N. Williams

41. **REMARKS (See attached sheet)**

**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**

**SUPERVISOR**

43. **REMARKS**
48. Geographic Names List

Haleolono Point
Kaena Point
Kanaiki Point
Kalohi Channel
Keanapapa Point
Lanai Island
Pacific Ocean
Palahinu Point
Palolo Point
Polihua Beach

Geographic Names Section
February 1964
61. **General Statement**

These shoreline maps of Project PH-6202 Lanai, Hawaii were prepared to furnish hydro support-data and base maps for our nautical and aeronautical charting programs.

62. **Comparison with Registered Topographic Surveys**

<table>
<thead>
<tr>
<th>T-3435</th>
<th>1:20,000</th>
<th>1914</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-4304</td>
<td>1:5,000</td>
<td>1927</td>
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<td>T-4304a</td>
<td>1:2,500</td>
<td>1928</td>
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<td>T-4745</td>
<td>1:20,000</td>
<td>1932</td>
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<tr>
<td>T-4780</td>
<td>1:5,000</td>
<td>1931</td>
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</table>

Differences exist between these surveys - generally in the main shoreline and the shapes of some of the islands. The subject surveys are to supersede the above listed maps of common areas for nautical charting purposes.

63. **Comparison with Maps of Other Agencies**

Island of Lanai 1:62,500 1923

Because of the scale difference only a visual comparison can be made. The subject surveys are more complete and supersede the above survey for common area.

64. **Comparison with Contemporary Hydrographic Surveys**

None

65. **Comparison with Nautical Charts**

| 4120 | 1:80,000 | Edition 1942 | Revised Feb. 1963 |
| 4130 | 1:80,000 | Edition 1936 | Revised Apr. 1962 |
| 4122 | 1:2,500  | Edition 1929 | Revised Apr. 1951 |

Differences exist. However, there are no items to be applied immediately.
66. Adequacy of Results and Future Surveys

These surveys were prepared according to project instructions and are within the required accuracy for Nautical Charting.

Reviewed by:

L. C. Lande

Approved by:

Charles Emanuel
Chief, Photogrammetric Branch
Chief, Nautical Chart Division

[Signature]

Chief, Photogrammetry Division

[Signature] 11/45
# 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>
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<tbody>
<tr>
<td>4120</td>
<td>11/1/66</td>
<td>J. H. Miller</td>
<td>Full Part Before After Verification Review Inspection Signed Via Drawing No. Critical Correction Only</td>
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</tbody>
</table>
Field Edit Report
To Accompany T 11966

USCGS McARTHUR

Ronald L. Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Manuscript T 11966 was field edited by personnel aboard the USCGS McARTHUR in conjunction with hydrography on boatsheet AR 10-5-68 (H 8999). Acquisition of field edit material was accomplished from Launch AR-1 and Skiff #2. Rocky shoreline and extensive areas of coral heads and reefs along with considerable surf made delineation of the MLLW line impossible. Additions to the manuscript have been noted on the field ozalid that was used for T 11966 field edit work, and then cross referenced and noted in violet ink on photo #60W2211. No deletions or corrections on the ozalid of T 11966 were necessary.

52 ADEQUACY OF COMPILATION

Manuscript T 11966 is complete and adequate for use in conjunction with this hydrographic survey. The area of this manuscript from the shoreline seaward was field edited.

54 RECOMMENDATIONS

None

NOTE: This report and field edit photograph 60W2211 were forwarded to the Rockville office by the Norfolk Office on March 18, 1971. The field edit (ozalid) mentioned above was not forwarded, and is apparently lost. There is no data on the photo requiring application to the photogrammetric manuscript. The photo will be filed with other PH-6202 data in the Federal Records Center.