

# 11976

orig

Diag. Cht. No. 4116.

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey <u>SHORELINE (PHOTOGRAMMETRIC)</u>	
Field No. <u>Ph-21045</u>	Office No. <u>T-11976</u>
LOCALITY	
State <u>HAWAII</u>	
General locality <u>LANAI ISLAND</u>	
Locality <u>MANELE BAY</u>	
<u>1960 - 1962</u>	
CHIEF OF PARTY	
WIBLUR R. PORTER, CHIEF OF PARTY	
FRED NATELLA, PHOTOGRAMMETRIC UNIT	
LIBRARY & ARCHIVES	
DATE <u>September 1964</u>	

USCOMM-DC 5087

11976

## DESCRIPTIVE REPORT - DATA RECORD

T - 11976

PROJECT NO. (II):

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 (II) (III): JULY 31, 1962 II  
 DEC. 18, 1962 III  
 AMENDMENT I: MAY 23, 1963 III  
 AMENDMENT II: JUNE 24, 1963 III  
 AMENDMENT III: JULY 9, 1963 III  
 AMENDMENT IV: SEPT. 30, 1963 III

METHOD OF COMPILATION (III):

KELSH INSTRUMENT

MANUSCRIPT SCALE (III):

1:5000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

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

VERTICAL DATUM (III):

MEAN SEA LEVEL EXCEPT AS FOLLOWS: X  
 Elevations shown as (25) refer to mean high water  
 Elevations shown as (5) refer to sounding datum  
 i.e., mean low water or mean lower low water

REFERENCE STATION (III):

PUU PEHE, 1914, 1962

LAT.:

20° 44' 20.46"

LONG.:

156° 53' 36.22"

☐ ADJUSTED☒ UNADJUSTED

PLANE COORDINATES (IV):

Y = 147,396.11

X = 422,528.57

STATE

HAWAII

ZONE

2

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

FIELD INSPECTION BY (II):		DATE:
L. F. VAN SCOY		OCT-DEC. 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):		
OCTOBER-DECEMBER 1962 BY FIELD INSPECTION. COMPILATION BY KELBH INSTRUMENT.		
PROJECTION AND GRIDS RULED BY (IV):		DATE
A.R.		7-18-63
PROJECTION AND GRIDS CHECKED BY (IV):		DATE
R.G.		7-19-63
CONTROL PLOTTED BY (III):		DATE
L.L. GRAVES		8-27-63
CONTROL CHECKED BY (III):		DATE
R.H. MEYER		8-28-63
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):		DATE
HENRY P. EICHERT		AUG. 1963
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY	DATE
	R.H. MEYER	9-10-63
	CONTOURS	DATE
MANUSCRIPT DELINEATED BY (III):		DATE
SMOOTH DRAFT	J.L. HARRIS	9-16-63
SCRIBING BY (III):		DATE
STICK-UP	J.L. HARRIS	10-1-63
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):		DATE
ROUGH DRAFT	J.L. HARRIS	9-13-63
ADVANCE	J.E. DEAL	10-2-63
REMARKS:		

## DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

C&amp;GS SINGLE LENS "W"

## PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
60 W 2406 THRU 2407	10-6-60	08:50	1:25,000	1.0' ABOVE M.L.L.W.
	RATIO PRINTS OF ABOVE AT 1:10,000			
61 W 1185 THRU 1187	9-26-61	08:50	1:15,000	1.0' " "
	RATIO PRINTS OF ABOVE AT 1:5000			
61 W 1171 THRU 1173	9-26-61	08:45	1:15,000	1.0' " "
COLOR PHOTOGRAPHS				
60 W 2700 THRU 2702	10-11-60	08:25	1:10,000	2.0' " "
60 W 2727 THRU 2729	10-12-60	08:45	"	2.0' " "
				COMPUTED FROM PRE- DICTED TIDE TABLES.

## TIDE (III)

	RATIO OF RANGES	MEAN RANGE	DAILY RANGE
REFERENCE STATION: HONOLULU		1.2	1.9
SUBORDINATE STATION: LAHAINA, MAUI		1.3	2.0
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV):

DATE:

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): 3

RECOVERED: 3

IDENTIFIED: 1

NUMBER OF BM(S) SEARCHED FOR (II): 1

RECOVERED: 1

IDENTIFIED: 1

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III): NONE

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III): 8

REMARKS:

FIELD INSPECTION REPORT

MAP MANUSCRIPT T-11976

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-11976

PROJECT 21045

REFER TO THE PHOTOGRAMMETRIC PLOT REPORT BY HENRY P. EICHERT,  
AUGUST, 1963 AND INCLUDED WITH THE DESCRIPTIVE REPORT FOR T-11972.

SCALE FACTOR

1 FT. = 3048006 METER	1 FT. = 3048006 METER	1 FT. = 3048006 METER	1 FT. = 3048006 METER
COMPUTED BY: D.N.W.	COMPUTED BY: D.N.W.	COMPUTED BY: D.N.W.	COMPUTED BY: D.N.W.
DATE 8-26-63	DATE 8-26-63	DATE 8-26-63	DATE 8-26-63
CHECKED BY: L.L.G.	CHECKED BY: L.L.G.	CHECKED BY: L.L.G.	CHECKED BY: L.L.G.
COMM-DC-57843	COMM-DC-57843	COMM-DC-57843	COMM-DC-57843

COMPILATION REPORT  
MAP MANUSCRIPT T-11976  
PROJECT 21045

ITEMS 31 THRU 34:

REFER TO THE COMPILATION REPORT FOR T-11972.

35. SHORELINE AND ALONGSHORE DETAILS:

REFER TO THE COMPILATION REPORT FOR T-11972. THE SHORELINE EAST OF KALAEOKAHANO POINT AND IN THE VICINITY OF PUUPEHE ROCK WAS OBSCURED ON THE COMPILATION PHOTOGRAPHS BY BLUFFS. THE MEAN HIGH WATER LINE IN THESE AREAS WAS DELINEATED BY THE USE OF COLOR PHOTOGRAPHS IN THE REFLECTING PROJECTOR.

THE MANELE BAY BOAT HARBOR WAS DELINEATED FROM AZIMUTH AND DISTANCE DATA FURNISHED BY THE FIELD PARTY AND MEASURED FROM IDENTIFIED PHOTO POINTS LOCATED BY THE KELSH INSTRUMENT.

36. OFFSHORE DETAILS:

NONE.

37. LANDMARKS AND AIDS:

NO LANDMARKS OR AIDS HAVE BEEN SHOWN ON THIS MAP.

38. CONTROLS FOR FUTURE SURVEYS:

EIGHT PHOTO-HYDRO STATIONS WERE IDENTIFIED BY THE FIELD UNIT 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-11971 TO THE EAST AND WITH T-11975 TO THE WEST. KEALAIKAHIKI CHANNEL IS ON THE SOUTH. THERE IS NO CONTEMPORARY SURVEY ON THE NORTH.

40. HORIZONTAL AND VERTICAL ACCURACY:

REFER TO THE COMPILATION REPORT FOR T-11972.

46. COMPARISON WITH EXISTING MAPS:

COMPARISON WAS MADE WITH THE U.S.G.S. TOPOGRAPHIC MAP OF THE ISLAND OF LANAI, MAUI ISLAND, HAWAII, SURVEYED IN 1923.

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 4-26-62.

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

49. NOTES TO THE HYDROGRAPHER - T-11976

THE FIELD INSPECTOR REQUESTED THAT THE HYDROGRAPHER CHECK FOR ROCKS IN THE N.E. CORNER OF MANELE BAY AS INDICATED ON THE MANUSCRIPT.

THE FOUL LINE RUNNING PARALLEL TO THE MEAN HIGH-WATER LINE AND ALSO MOST OF THE FORESHORE FEATURES WERE OBTAINED FROM THE COLOR PHOTOGRAPHY. THIS FOUL LINE DOES NOT REPRESENT AN APPROXIMATE LOWER LOW-WATER LINE AND IT HAS BEEN SHOWN TO ASSIST THE HYDROGRAPHER WHEN NAVIGATING CLOSE TO THE SHORE. THESE FEATURES WERE DELINEATED IN THE PHOTO OFFICE BY USE OF THE STEREOSCOPE AND VERTICAL PROJECTOR AND THEIR HORIZONTAL ACCURACY IS PROBABLY LESS THAN THE FEATURES SHOWN INSHORE FROM THE MEAN HIGH-WATER LINE.

SEVERAL PHOTO-HYDRO STATIONS WERE SELECTED BY THE FIELD INSPECTOR AND THESE WERE LOCATED BY KELSH INSTRUMENT AS IDENTIFIED ON THE FIELD PHOTOGRAPHS. THEY ARE:

No.	DESCRIPTION	FIELD PHOTO
7601	POINT LOW BLUFF	61 W 1187
7602	POINT OF BLUFF	"
7603	POINT OF BLUFF	61 W 1186'
7604	S.E. CORNER OF ISLAND	"
7605	END LOADING RAMP	"
7606	POINT OF BLUFF	61 W 1185
7607	EDGE OF BLUFF	"
7608	END LOW LEDGE	"

RATIO PRINTS SHOWING ALL THESE POINTS AND OTHER PHOTOGRAMMETRIC POINTS HAVE BEEN PREPARED FOR USE OF THE HYDROGRAPHER. WHEN LOCATING POINTS AT MEAN HIGH-WATER LINE ELEVATION FROM A SINGLE PHOTOGRAPH USE ONLY POINTS SHOWN AT THAT ELEVATION. FOR LOCATING POINTS ON TOP OF BLUFF USE POINTS AT BLUFF ELEVATION.

## PHOTOGRAMMETRIC OFFICE REVIEW

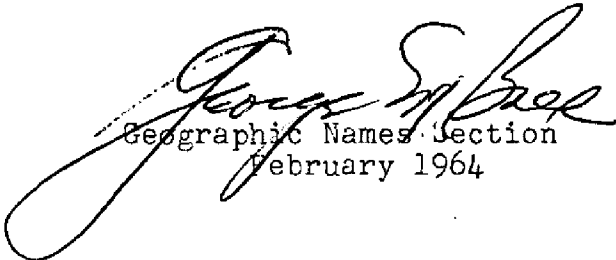
T-10383- 11976

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 (Topographic stations) None		7. PHOTO HYDRO STATIONS ✓
8. BENCH MARKS ✓	9. PLOTTING OF SEXTANT FIXES ✓	10. PHOTOGRAMMETRIC PLOT REPORT ✓	11. DETAIL POINTS None
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE ✓	13. LOW-WATER LINE None	14. ROCKS, SHOALS, ETC. ✓	15. BRIDGES None
16. AIDS TO NAVIGATION None	17. LANDMARKS None	18. OTHER ALONGSHORE PHYSICAL FEATURES ✓	19. OTHER ALONGSHORE CULTURAL FEATURES ✓
PHYSICAL FEATURES			
20. WATER FEATURES ✓		21. NATURAL GROUND COVER ✓	22. PLANETABLE CONTOURS None
23. STEREOSCOPIC INSTRUMENT CONTOURS None	24. CONTOURS IN GENERAL None	25. SPOT ELEVATIONS None	26. OTHER PHYSICAL FEATURES ✓
CULTURAL FEATURES			
27. ROADS ✓	28. BUILDINGS ✓	29. RAILROADS None	30. OTHER CULTURAL FEATURES ✓
BOUNDARIES			
31. BOUNDARY LINES None		32. PUBLIC LAND LINES None	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES ✓		34. JUNCTIONS ✓	35. LEGIBILITY OF THE MANUSCRIPT ✓
36. DISCREPANCY OVERLAY None	37. DESCRIPTIVE REPORT ✓	38. FIELD INSPECTION PHOTOGRAPHS ✓	39. FORMS ✓
40. REVIEWER James L. Harris		SUPERVISOR, REVIEW SECTION OR UNIT J. Edward Deal	
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			

T-11976

48. Geographic Names List

Hulopoe Bay  
Kalaeokahano Point  
Kapihāa Bay  
Kealaikahiki Channel  
Lanai Island  
Leinohaunui Pali  
Manele Bay  
Puupehe Rock

  
Geographic Names Section  
February 1964

## Review Report

### Shoreline Maps

T-11966 through T-11976

July 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

T-3435	1:20,000	1914
T-4304	1: 5,000	1927
T-4304a	1: 2,500	1928
T-4745	1:20,000	1932
T-4780	1: 5,000	1931

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
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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  
L. C. Lande

Approved by:

Charles Henson  
Chief, Photogrammetric Branch

Chief, Nautical Chart Division

M. C. Math  
Chief, Photogrammetry Division  
Acting

