11975

DVG

Diag. Cht. No. 4116.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey SHORELINE (PHOTOGRAMMETRIC)

Field No. PH-21045 *Office No.* T-11975

LOCALITY

State HAWAII

General locality LANAI ISLAND

Locality KAUNOLU BAY

1960-1962

CHIEF OF PARTY

WILBUR R. PORTER, CHIEF OF PARTY
FRED NATELLA, PHOTOGRAMMETRIC UNIT

LIBRARY & ARCHIVES

DATE September 1964

USCOMM-DC 5087

11975

FORM C&GS-181a
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T - 11975

PROJECT NO. (II):
21045

FIELD OFFICE (II):
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):
1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:5000
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 (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):
KAHOLO, 1927, 1962

LAT.: 20° 45' 27.33"

LONG.: 156° 58' 52.87"

☐ ADJUSTED
☒ UNADJUSTED

PLANE COORDINATES (IV):
Y = 154,192.97 X = 392,486.71

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.

USCOMM-DC 16276A-P61

FORM C&GS-181b
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

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 BY FIELD INSPECTION. COMPILATION BY KELSH INSTRUMENT.	
PROJECTION AND GRIDS RULED BY (IV): A.R.	DATE 6-25-63
PROJECTION AND GRIDS CHECKED BY (IV): R.G.	DATE 6-26-63
CONTROL PLOTTED BY (III): L.L. GRAVES	DATE 8-27-63
CONTROL CHECKED BY (III): R.H. MEYER	DATE 8-27-63
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): HENRY P. EICHERT	DATE AUG. 1963
STEREOSCOPIC INSTRUMENT COMPILATION (III): PLANIMETRY L.L. GRAVES	DATE 9-9-63
CONTOURS NONE	DATE
MANUSCRIPT DELINEATED BY (III): SMOOTH DRAFT: C. C. HARRIS	DATE 9-16-63
SCRIBING BY (III): STICK-UP: C. C. HARRIS	DATE 9-27-63
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): ROUGH DRAFT: D. N. WILLIAMS ADVANCE: J. E. DEAL	DATE 9-10-63 9-30-63
REMARKS:	

FORM C&GS-181c
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

C&GS SINGLE LENS "W"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
60 W 2400 THRU 2405	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 1257 THRU 1260	9-27-61	09:10	1:15,000	1.5' " "
	RATIO PRINTS OF ABOVE AT 1:10,000			
62 W 2469 THRU 2471	2-1-62	08:55	1:25,000	0.2' " "
61 W 1164 THRU 1170	9-26-61	08:45	1:15,000	1.0' " "
61 W 1188 THRU 1190	"	08:50	"	" " "
COLOR PHOTOGRAPHS				
60 W 2748 THRU 2749	10-12-60	08:50	1:10,000	2.0' " "
60 W 7230 THRU 2735	"	08:45	"	" " "
60 W 2697 THRU 2699B	10-11-60	08:35	"	" " "
				COMPUTED FROM PREDICTED TIDE TABLES.

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	DIURNAL ~~SPRING~~ 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: 2

NUMBER OF BM(S) SEARCHED FOR (II): NONE RECOVERED: IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III): NONE

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III): 16

REMARKS:

FIELD INSPECTION REPORT

MAP MANUSCRIPT T-11975

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-11975

PROJECT 21045

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

FORM 164
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT
CONTROL RECORD

MAP T- 11975 PROJECT NO. 21045 SCALE OF MAP 1:10,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
KAHOLO 1927, 1962	UNADJ. FIELD COMP.	OLD HAWAIIAN 2	154,192.97 392,486.71				
PALAOA POINT LIGHT, 1962	"	"	146,160.22 397,148.66				
KAEA, 1914 (U.S.L.H.S.)	"	"	146,330.08 397,536.25				

1 FT. = .3048006 METER

COMPUTED BY: D.N.W. DATE 8-2-63 CHECKED BY: R.H.M. DATE 8-26-63

COMM-DC-57843

COMPILATION REPORT

MAP MANUSCRIPT T-11975

PROJECT 21045

ITEMS 31 THRU 34:

REFER TO THE COMPILATION REPORT FOR T-11972.

35. SHORELINE AND ALONGSHORE DETAILS:

COMPILATION OF THE MEAN HIGH WATER LINE WAS ACCOMPLISHED BY MODIFYING THE SPOT LOCATION FURNISHED BY THE FIELD UNIT TO CONFORM WITH THE SHORELINE APPARENT ON THE HIGH-WATER COLOR PHOTOGRAPHY. IN THE VICINITY OF 156° 55' 30" LONGITUDE WHERE SHADOWS OBSCURED THE SHORELINE, COLOR PHOTOGRAPHY WAS USED TO COMPILE THE MEAN HIGH WATER LINE. EXTENSIVE USE OF THE COLOR PHOTOGRAPHS WAS MADE IN DETERMINING THE LIMITS OF LEDGES AND REEFS AS WELL AS THE AREAS ENCLOSED WITH A DASHED LINE AND LABELED "FOUL". LOCATIONS OF ROCKS SHOWING ELEVATIONS WERE OBTAINED FROM DATA FURNISHED BY THE FIELD PARTY, THE HEIGHTS BEING ADJUSTED TO THE MANUSCRIPT DATUM. ALL ROCKS WHICH DO NOT SHOW BARING DATA WERE DELINEATED DURING KELSH COMPILATION AND FROM STEREOSCOPIC EXAMINATION OF THE COLOR PHOTOGRAPHY. THESE SHOULD BE INVESTIGATED OR CONFIRMED BY THE HYDROGRAPHER.

PHOTOGRAPHY DID NOT PERMIT COMPILATION OF A MEAN LOWER LOW WATER LINE.

NO BUILDINGS COULD BE DETERMINED IN THE VICINITY OF A SETTLEMENT NAMED MAMAKI EAST OF PALAOA POINT.

36. OFFSHORE DETAILS:

NONE.

37. LANDMARKS AND AIDS:

ONE FIXED AID TO NAVIGATION WAS LOCATED BY TRIANGULATION AND IS SHOWN ON THIS MANUSCRIPT.

FORM 567 IS SUBMITTED.

38. CONTROLS FOR FUTURE SURVEYS:

SIXTEEN 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-11974 ON THE NORTH AND WITH T-11976 TO THE EAST.

KEALAIKAHIKI CHANNEL IS ON THE SOUTH AND THE PACIFIC OCEAN IS ON THE WEST.

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 4-26-62.

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-11975

THE FIELD INSPECTOR REQUESTED THE HYDROGRAPHER TO INVESTIGATE ROCKS OFFSHORE AS INDICATED BY NOTE ON OVERLAY.

FORESHORE AREAS WERE DELINEATED FROM COLOR PHOTOGRAPHY BY USE OF STEREOSCOPE AND VERTICAL PROJECTOR. 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 SHORE.

WHEN USING SHORELINE PASS POINTS ON A SINGLE PHOTOGRAPH TO LOCATE ADDITIONAL PHOTO-HYDRO SIGNALS THE PHOTOGRAPHS SHOULD BE EXAMINED BY USE OF A STEREOSCOPE SO THAT IT MAY BE DETERMINED WHICH POINTS OF THE SAME ELEVATION AS THAT OF A POINT TO BE LOCATED MAY BE USED.

ROCKS FOR WHICH BARING DATA IS NOT SHOWN WERE DELINEATED BY THE COMPILER AND LOCATED BY KELSH INSTRUMENT. THESE SHOULD BE VERIFIED BY THE HYDROGRAPHER.

PHOTO-HYDRO POINTS SELECTED BY THE FIELD INSPECTOR WERE LOCATED BY KELSH INSTRUMENT AS IDENTIFIED. THEY ARE:

No.	DESCRIPTION	FIELD PHOTO
7501	ROCK	62 W 2470
7502	ROCK	"
7503	POINT LOW BLUFF	"
7504	SMALL BUSH BY TREE	"
7505	LARGE BUSH	"
7506	SMALL LONE TREE	"
7507	POINT OF BLUFF	
7508	SMALL TREE ON POINT OF BLUFF	"
7509	SMALL TREE	"
7510	EDGE OF BLUFF	61 W 1189
7511	SMALL TREE	"
7512	HIGH POINT OF POO POO ISLAND	"
7513	SMALL TREE	"
7514	SMALL TREE ON BLUFF	"
7515	SMALL TREE ON BLUFF	"
7516	SMALL TREE ON BLUFF	"

C&GS FORM 1002
(11-13-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

T-~~10268~~ 11975

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)*	7. PHOTO HYDRO STATIONS
✓	None	✓

8. BENCH MARKS	9. PLOTTING OF SEXTANT FIXES	10. PHOTOGRAMMETRIC PLOT REPORT	11. DETAIL POINTS
None	None	✓	None

ALONGSHORE AREAS *(Nautical Chart Data)*

12. SHORELINE	13. LOW-WATER LINE	14. ROCKS, SHOALS, ETC.	15. BRIDGES
✓	None	✓	None

16. AIDS TO NAVIGATION	17. LANDMARKS	18. OTHER ALONGSHORE PHYSICAL FEATURES	19. OTHER ALONGSHORE CULTURAL FEATURES
✓	None	✓	✓

PHYSICAL FEATURES

20. WATER FEATURES	21. NATURAL GROUND COVER	22. PLANETABLE CONTOURS
✓	✓	None

23. STEREOSCOPIC INSTRUMENT CONTOURS	24. CONTOURS IN GENERAL	25. SPOT ELEVATIONS	26. OTHER PHYSICAL FEATURES
None	None	None	✓

CULTURAL FEATURES

27. ROADS	28. BUILDINGS	29. RAILROADS	30. OTHER CULTURAL FEATURES
None	None	None	✓

BOUNDARIES

31. BOUNDARY LINES	32. PUBLIC LAND LINES
None	None

MISCELLANEOUS

33. GEOGRAPHIC NAMES	34. JUNCTIONS	35. LEGIBILITY OF THE MANUSCRIPT
✓	✓	✓

36. DISCREPANCY OVERLAY	37. DESCRIPTIVE REPORT	38. FIELD INSPECTION PHOTOGRAPHS	39. FORMS
None	✓	✓	✓

40. REVIEWER	SUPERVISOR, REVIEW SECTION OR UNIT
D.N. Williams	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

USCOMM-DC 16252-P61

48. Geographic Names List

Anapuka Cove
Huawai Bay
Kaunolu Bay
Kealaikahiki Channel
Kolokolo Cave
Kuahulua Bay
Lanai Island
Mamaki
Moku Naio Island
Pacific Ocean
Palaoa Point
Pali Kaholo
Poopoo Island

George M. Bell
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 Topgographic 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

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:

Chief, Photogrammetric Branch

Chief, Nautical Chart Division

M E Natte

Chief, Photogrammetry Division

Acting

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-11975

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.

CHART	DATE	CARTOGRAPHER	REMARKS
4120	11/3/65	J. McMillan	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No. Critical Corr. only
4130	2/16/65	G. R. Johnson	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975

USCOMM-DC 8558-P63