11937

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-6012 Office No. T-11937

LOCALITY

State Hawaii

General locality Maui Island

Locality Mamalu Bay - Waiuha Bay

1960 - 1963

CHIEF OF PARTY

H.J.Seaborg, Honolulu Dist. Office
Wm.E.Randall, Baltimore Dist. Office

LIBRARY & ARCHIVES

DATE 1967

USCOMM-DC 5087

11937

10/60 - 7/63

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

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T-11937

PROJECT NO. (II): PH-6012 (21034)	
FIELD OFFICE (II): Honolulu, Hawaii	CHIEF OF PARTY: H. J. Seaborg
PHOTOGRAMMETRIC OFFICE (III): Baltimore, Maryland	OFFICER-IN-CHARGE: W. E. Randall
INSTRUCTIONS DATED (II) (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): MHW ~~MEAN SEA LEVEL EXCEPT AS FOLLOWS:~~ *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): KA LAE O KA ILIO (HGS), 1885, 1950	
LAT.: 20° 37' 17.943"	LONG.: 156° 08' 34.026" / [X] ADJUSTED / [ ] UNADJUSTED
PLANE COORDINATES (IV): Y = 105,002.98' X = 679,146.18'	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.

2.

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

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (II): J. C. Lajoye	DATE: Jan. 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): Kelsh plotter from annotations on 1960 photography and office interpretation of 1961 photography.	
PROJECTION AND GRIDS RULED BY (IV): R.A.C.	DATE 12/7/60
PROJECTION AND GRIDS CHECKED BY (IV): J.D.C.	DATE 12/7/60
CONTROL PLOTTED BY (III): E. L. Williams	DATE 3/30/62
CONTROL CHECKED BY (III): H.P.	DATE 3/30/62
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):	DATE
STEREOSCOPIC INSTRUMENT COMPILATION (III): E. L. Williams — PLANIMETRY: E. L. Williams	DATE April 1962
CONTOURS: Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III): C. A. Lipscomb	DATE Jan. 1964
SCRIBING BY (III):	DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): D. M. Brant	DATE Jan. 1964

REMARKS:

FIELD EDIT 1963

USCOMM-DC 16276B-P61

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

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):
"W" Camera

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
60 W 2466 & 2467	8 Oct. 1960	0912	1:25,000	1.2Ft. Above MLLW
61 W 1047 thru 1050	25 Sept.1961	0902	1:15,000	0.2 " " "
60 W 2296	2 Oct. 1960	1141	Ratio	0.4 " " MHW
61 W 1080 thru 1084	25 Sept.1961	0944	1:10,000	0.2 " " MLLW
1090 thru 1094	"	0948	1:10,000	0.2 " " "
1136 thru 1140	"	1010	1:10,000	0.3 " " "
62 W 2494 & 2495	1 Feb. 1962	1650	1:10,000	0.1 " Below "

The above stage of tide computed from predicted Tide Tables.

TIDE (III)

Diurnal

	RATIO OF RANGES	MEAN RANGE	~~SPRING~~ RANGE
REFERENCE STATION: Honolulu, Hawaii		1.2	1.9
SUBORDINATE STATION: Hana, Hawaii		1.8	2.5
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV): Leo F. Beugnet, ~~Norfolk Regional Office~~ Atlantic Marine Center — DATE: ~~Sept.~~ Nov. 1965

PROOF EDIT BY (IV): — DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): None — RECOVERED: None — IDENTIFIED: None

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

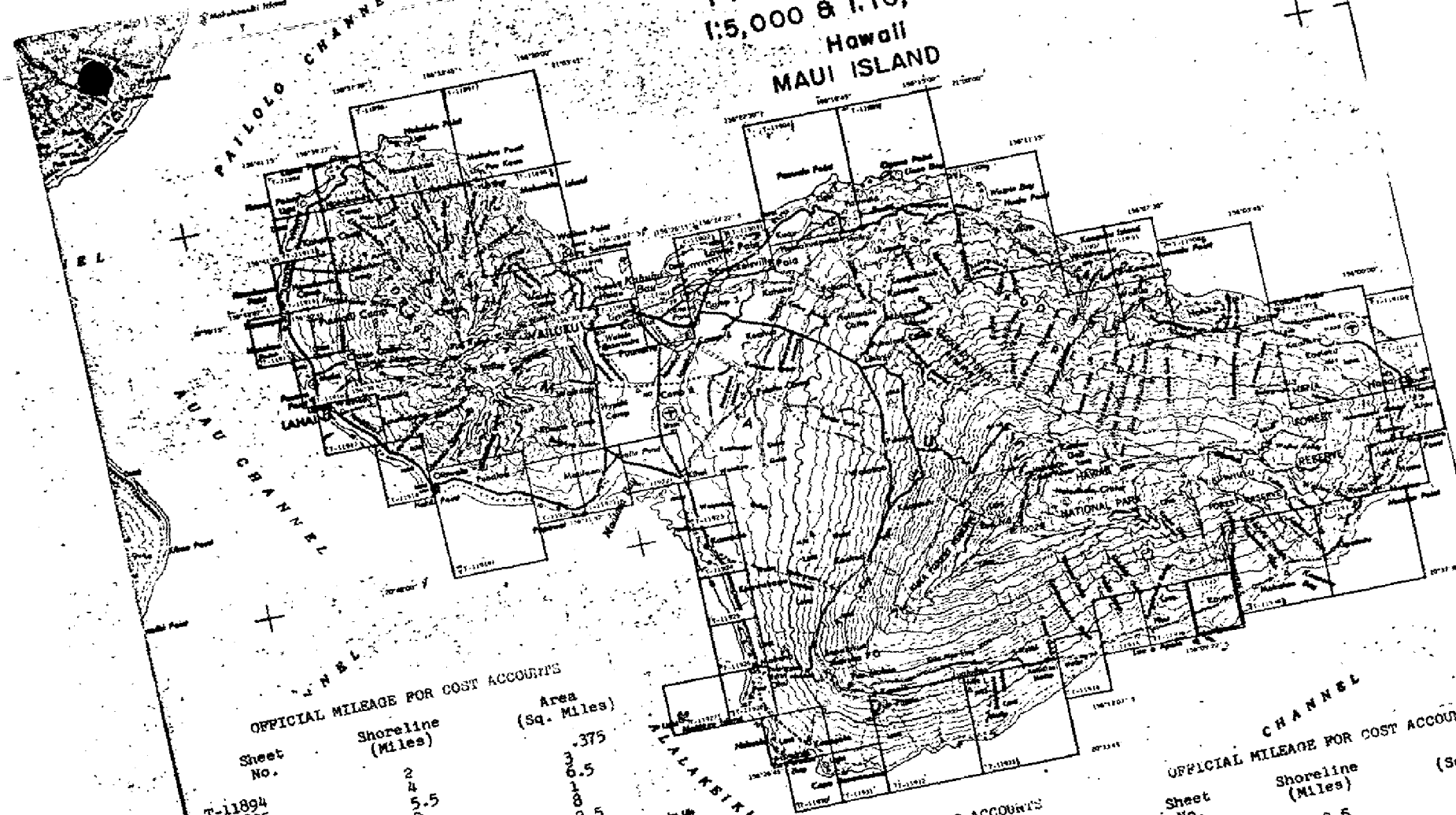
NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III): None

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III): None

REMARKS:

COMPILATION RECORD	COMPLETION DATE	REMARKS
Shoreline furnished for hydro	April, 1962	superseded
Final Compilation Completed	Jan. 1964	

PROJECT PH-6012
Planimetric Mapping
1:5,000 & 1:10,000 Scales
Hawaii
MAUI ISLAND



OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Shoreline (Miles)	Area (Sq. Miles)
T-11894	2	.375
T-11895	4	3
T-11896	5.5	6.5
T-11897	2	1
T-11898	5	8
T-11899	3.25	2.5
T-11900	1.75	4.25
T-11901	2	4
T-11902	2.5	1
T-11903	2	2
T-11904	5	6
T-11905	4.5	4
T-11906	6.5	10
T-11907	7	7.8
T-11908	5	6
T-11909	4.7	16
T-11910	.75	.25
T-11911	2.7	2
	27	3
	2.2	4.5
		2.2
		4

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Shoreline (Miles)	Area (Sq. Miles)
T-11922	3	3
T-11923	2	3
T-11924	2.5	2.5
T-11925	2.5	1.5
T-11926	2.5	1
T-11927	1	.04
T-11928	3	1.5
T-11929	4.5	3

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Shoreline (Miles)	Area (Sq. Miles)
T-11931	2.5	1.5
T-11932	4.5	12
T-11933	5	8
T-11934	2.7	3
T-11935	2.5	4
T-11936	5	4
T-11937	5	4
T-11938	5	6

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11937

Shoreline manuscript T-11937 covers a part of the coastline of Maui Island, Hawaii. This is one of forty-nine similar maps compiled by Kelsh methods primarily to obtain new shoreline for nautical chart purposes and to provide photo-hydro support data for hydrographic surveys to be made in the area.

Field operations preceding compilation included the recovery and identification of horizontal control and field inspection. No photo-hydro signal sites were selected.

Kelsh compilation was at 1:5,000 scale from 1:25,000 and 1:15,000 scale panchromatic photography obtained 8 October 1960 and 25 September 1961 respectively. A cronaflex copy of the manuscript was provided for preparation of the boat sheet along with 1:5,000 scale ratio prints for the location of hydrographic signals.

The manuscript is a vinylite sheet 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
Map Manuscript T-11937

Please refer to the Field Inspection report bound with the Descriptive Report for T-11894.

FORM 164
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORT

COAST AND GEODETIC SURVEY
CONTROL RECORD

MAP T-11937 PROJECT NO. PH 6012 SCALE OF MAP 1:5,000 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)
KA LAE O KA ILIO (HGS), 1885, 1950	G. 9311 P. 43	Old Hawaiian	20	37	17.943							
			156	08	34.026							
KAUPO, CATHOLIC CHURCH, SPIRE, 1950	G. 9311 P. 56	Old Hawaiian	20	38	13.477							
			156	.08	30.159							

1 FT. = .3048006 METER

COMPUTED BY: E. L. Williams DATE 8-30-62

Listing CHECKED BY: H. R. Rudolph DATE 7/17/62

COMM-DC-57843

PHOTOGRAMMETRIC PLOT REPORT
ISLAND OF MAUI (EAST HALF)
HAWAII

Project PH-6212
February 1962

21. AREA COVERED

T-11905 through T-11911; T-11929 through T-11939; T-11989 through T-11992

22. METHOD

Six stereoplanigraph bridges, designated as strips #8 through #13, were run in order to provide pass points for use in Kelsh compilation of the project. Additional points along the shoreline were provided, for possible use in conjunction with hydrographic surveys in the area.

This project covers the entire eastern half of the island of Maui, and adjoins a similar project of March 1961, which covers the western half of the island. On that earlier phase, the numbers assigned to the stereoplanigraph bridges were #1 through #7.

Strip #13 was adjusted on a linear basis. All other strips in this project (eastern half of the island) were adjusted by a least-squares solution on the IBM 650 computer. Numerous ties between strips were used as checks on adjustments. A pass point from strip #9 was used in the adjustment of strip #11. Where strip #11 duplicates the coverage of strip #9, the former should be used in compilation.

Satisfactory ties with the project of March 1961, were made on both the north and the south coasts. Also, satisfactory adjustments were obtained for all strips in this part of the Maui Island project.

23. ADEQUACY OF CONTROL

The horizontal control provided complied with project instructions, and was adequate. The following control failed to hold in bridging: Δ PUHILELE, 1950-SUB. A; Δ MAKAALAE, 1950-SUB. B; Δ PUUHINAI 2, 1950-SUB PTS. 1, 2, and 3. They are to be disregarded in compilation. The problem with

PUHILELE-SUB A is entirely one of interpretation. In strip #8, two different possible positions for the point were read, one of which held in bridging, and the other failed to hold. In strip #9, the single position read for the point failed to hold. The number and geographical location of other control in this area is such that this station may be disregarded.

No specific cause has been found for the failure of MAKAALAE-SUB B to hold. Its companion sub. pt. held, and therefore, SUB B may be disregarded.

The sub. pts. of PUUHINAI 2 had a questionable starting azimuth due to the lack of agreement among several solar azimuth observations. The sub. points did not hold in the adjustment.

24. SUPPLEMENTAL DATA

None

25. PHOTOGRAPHY

The photography used in bridging was adequate in all respects.

Submitted by

Robert E. Fuechsel

Robert E. Fuechsel

Approved

Everett H. Ramey

Everett H. Ramey, Chief
Aerotriangulation Section

COMPILATION REPORT Map Manuscript T-11937

ITEMS 31 THRU 36

Please refer to the Compilation Report bound with the Descriptive Report for map manuscript T-11934.

37. LANDMARKS AND AIDS

There are mo landmarks or non-floating aids to navigation within the limits of this map.

38.. CONTROL FOR FUTURE SURVEYS

No supplemental control was established for control of future surveys.

39. JUNCTIONS

Satisfactory junctions were made with T-11936 on the west and T-11938 on the east. Alenuihaha Channel is on the south, there is no contemporary survey on the north.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report bound with the Report for T-11894.

46. COMPARISON WITH EXISTING MAPS

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

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Nautical Chart 4116, scale 1:250,000, 11th edition published April 16, 1941 and revised January 9, 1961.

ITEMS TO BE APPLIED TO CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Respectfully submitted:

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

Approved:

for J. Hollis
J. Bull
Capt. C&GS
Norfolk Regional Officer

T-11937

48. Geographic Names List:

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

Alenuihaha Channel
Kailio Point
Kalama Bay
Kamanawa Bay
Kamanawa Point
Kaupo
Makaakini Point
Mamalu Bay
Pacific Ocean
Pukaauhuhu
Waiuha Bay

ALL NA[illegible] BY
GEOGRA[illegible] NAMES SECTION
UNLESS OTHERWISE MARKED.

A. J. Wright

49. NOTES TO THE HYDROGRAPHER

No photo-hydro signal sites were selected by the field inspection party.

14.

FORM 182
(3-61)

PHOTOGRAMMETRIC OFFICE REVIEW

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

50

T- 11937

1. PROJECTION AND COORDINATES	2. TITLE	3. MANUSCRIPT NUMBERS	4. MANUSCRIPT SIZE
DMB	DMB	DMB	DMB

CONTROL STATIONS

5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (TOPOGRAPHIC STATIONS)
DMB	NONE

7. PHOTO HYDRO STATIONS	8. BENCH MARKS	9. PLOTTING OF SEXTANT FIXES	10. PHOTOGRAMMETRIC PLOT REPORT
DMB	NONE	NONE	DMB

11. DETAIL POINTS
DMB

ALONGSHORE AREAS (Nautical Chart Data)

12. SHORELINE	13. LOW-WATER LINE	14. ROCKS, SHOALS, ETC.	15. BRIDGES
DMB	NONE	DMB	NONE

16. AIDS TO NAVIGATION	17. LANDMARKS	18. OTHER ALONGSHORE PHYSICAL FEATURES
NONE	NONE	DMB

19. OTHER ALONGSHORE CULTURAL FEATURES
DMB

PHYSICAL FEATURES

20. WATER FEATURES	21. NATURAL GROUND COVER
DMB	DMB

22. PLANETABLE CONTOURS	23. STEREOSCOPIC INSTRUMENT CONTOURS
NONE	NONE

24. CONTOURS IN GENERAL	25. SPOT ELEVATIONS
NONE	NONE

26. OTHER PHYSICAL FEATURES
DMB

CULTURAL FEATURES

27. ROADS	28. BUILDINGS	29. RAILROADS
DMB	DMB	NONE

30. OTHER CULTURAL FEATURES
DMB

BOUNDARIES

31. BOUNDARY LINES	32. PUBLIC LAND LINES
NONE	NONE

MISCELLANEOUS

33. GEOGRAPHIC NAMES	34. JUNCTIONS
DMB	DMB

35. LEGIBILITY OF THE MANUSCRIPT	36. DISCREPANCY OVERLAY	37. DESCRIPTIVE REPORT
DMB	DMB	DMB

38. FIELD INSPECTION PHOTOGRAPHS	39. FORMS
DMB	DMB

SIGNATURE OF REVIEWER	SIGNATURE OF SUPERVISOR, REVIEW SECTION OR UNIT
For: D. M. Brant Joseph Steinberg	Joseph Steinberg

40. 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
	Joseph Steinberg

USE REVERSE SIDE FOR REMARKS

USCOMM-DC 28383-P61

Field Edit Report
T-11937

No formal field edit report was received. Please refer to the attached letter which is the following page of this report.

16

Form CD-121

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TO : The Director
Coast and Geodetic Survey
U.S.Department of Commerce
Washington 25, D.C.

DATE: 8 July 1963

FROM : Commanding Officer
USC&GS Pathfinder
705 Federal Office Building
Seattle, Washington

SUBJECT: Field Edit Report - GTR-419

During the first half of the 1963 field season, Pathfinder personnel field edited the manuscripts listed below for accuracy and completeness. All recommended changes have been noted on the blueline impressions in red and green ink. In general, the manuscripts were found to be very reliable with only minor descrepancies being noted.

Four manuscripts with noted changes are being forwarded to the Washington Office on July 9. These manuscripts with no recommended changes have been noted below. The remaining manuscripts will be forwarded as soon as we have had an opportunity to compare them with the best charts now in Washington for photographing.

T-11965	Edited - No changes
T-11966	Edited - Will be forwarded later
T-11967	Edited - Will be forwarded later
T-11968	Edited - Will be forwarded later
T-11969	Edited - Will be forwarded later
T-11970	Edited - Will be forwarded later
T-11971	Edited - Will be forwarded later
T-11980	Forwarded 9 July
T-11981	Edited - No recommended changes
T-11982	Edited - No recommended changes
T-11983	Edited - No recommended changes
T-11985	Forwarded 9 July
T-11986	Forwarded 9 July
T-11987	Forwarded 9 July
T-11991	Edited - Will be forwarded later
T-11992	Edited - Will be forwarded later

It is requested that these manuscripts be returned to the Ship as soon as is practical as they will be needed for smooth plotting.

H.J. Seaberg
Captain, USC&GS

REVIEW REPORT
SHORELINE
March 25, 1966

61. GENERAL STATEMENT

See summary accompanying Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

A comparison was made with Registered Planetable Survey No. 3275, 1:20,000 scale made in 1912 and approved June 4, 1914.

Because of the larger scale of this manuscript the MHWL and alongshore features are shown in greater detail. Rocks and foul areas which do not appear on the planetable survey have been noted on the comparison print. Map Manuscript T-11937 supersedes the old 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. quadrangle Kaupo, Hawaii, 1:24,000 scale, edition of 1957. The shoreline and alongshore details on the U.S.G.S. quadrangle have been generalized. The shoreline on Map Manuscript T-11937 is more depictive of the coastline.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with a copy of boat sheet H-8825 (PF-10-6-63). The MHWL on the boat sheet was evidently taken from a reduction of the manuscript, however, the foul lines shown on the boat sheet and manuscript are not in agreement. These differences have been noted on the comparison print.

Some data for reducing rock heights to sounding datum was provided on the boat sheet by the hydrographer. Data was not provided for all of the rocks shown on the map manuscript.

65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Chart 4116, 1:250,000 scale. This is the only chart that covers the area and is at too small a scale to show all of the rocks and other alongshore detail.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Future surveys in the area should provide the necessary data for the reduction of rock heights to sounding datum.

Reviewed by:

Leo F. Beugnet

Leo F. Beugnet

Approved by:

J. Hollis

J. Bull, CAPT.,USESSA
Director, Atlantic Marine Center

Approved by:

Charles Thomas

Chief, ~~Cartographic~~ Photogrammetric Branch

L. F. Woodcock

Chief, Photogrammetry Division

Chief, Chart Division

Chief, Operations Division

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

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-11937

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
			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
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