

11938

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-11938
LOCALITY	
State Hawaii	
General locality Maui Island	
Locality Kepio Point - Maulili Bay	
1962 1960-1963	
CHIEF OF PARTY	
H. J. Seaborg, Honolulu District Office	
W. E. Randall, Baltimore District Office	
LIBRARY & ARCHIVES	
DATE	1967

USCGM-DC 5087

10/5/60 - 7/9/68

11938

DESCRIPTIVE REPORT - DATA RECORD

T-11938

PROJECT NO. (II):

PH-6012
(21034)

FIELD OFFICE (III):

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):

1:10,000

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):

~~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):

MOKUIA 2, 1950

LAT.:

20° 38' 42.522"

LONG.:

156° 05' 53.670"

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

Y = 113,587.48'

X = 694,348.72'

Hawaii

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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): J. C. Lajoie		DATE: Jan. 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): By Kelsh Plotter from 1962 photography and annotations on Field Photographs.		
PROJECTION AND GRIDS RULED BY (IV): R.A.C.		DATE 12/1/60
PROJECTION AND GRIDS CHECKED BY (IV): J.D.C.		DATE 12/1/60
CONTROL PLOTTED BY (III): L. A. Senasack		DATE 2/28/62
CONTROL CHECKED BY (III): L. O. Neterer		DATE 2/28/62
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): R. E. Fuechsel		DATE 2/62
STEREOSCOPIC INSTRUMENT COMPILATION (III): E. L. Rolle	PLANIMETRY	DATE
	E. L. Rolle	4/62
	CONTOURS	DATE
Inapplicable		
MANUSCRIPT DELINEATED BY (III): C. A. Lipscomb		DATE 1/62
SCRIBING BY (III):		DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): D. M. Brant		DATE 4/62
REMARKS: FIELD EDIT - REFER TO PAGE 14 OF THIS REPORT AND THE FINAL REVIEW REPORT, PAGE 15, HEADING 64		

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

"W" Camera

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
60 W 2382	5 Oct. 1960	1024	1:25,000	0.5 Ft. above MLLW
60 W 2468 thru 2470	8 Oct. 1960	0912	1:25,000	1.2 " " "
61 W 1049, 1050, 1052, 1053	25 Sept. 1961	0902	1:15,000	0.2 " " "
61 W(C) 1083 thru 1089	25 Sept. 1961	0945	1:10,000	0.2 " " "
62 W(C) 2283 thru 2288	26 Jan. 1962	0947	1:10,000	1.0 " " "
62 W(C) 2496 thru 2502	1 Feb. 1962	1651	1:10,000	0.1 below MLLW
The above stages of tides computed from Predicted Tide Tables.				

TIDE (III)

Diurnal

		RATIO OF RANGES	MEAN RANGE	SEMI- 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 <i>Atlantic Marine Center</i>		DATE: <i>Mar. 6</i> Sept. 1965		
PROOF EDIT BY (IV):		DATE:		
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): 1	RECOVERED: 1	IDENTIFIED: 0		
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): 8				

REMARKS:

COMPILATION RECORD

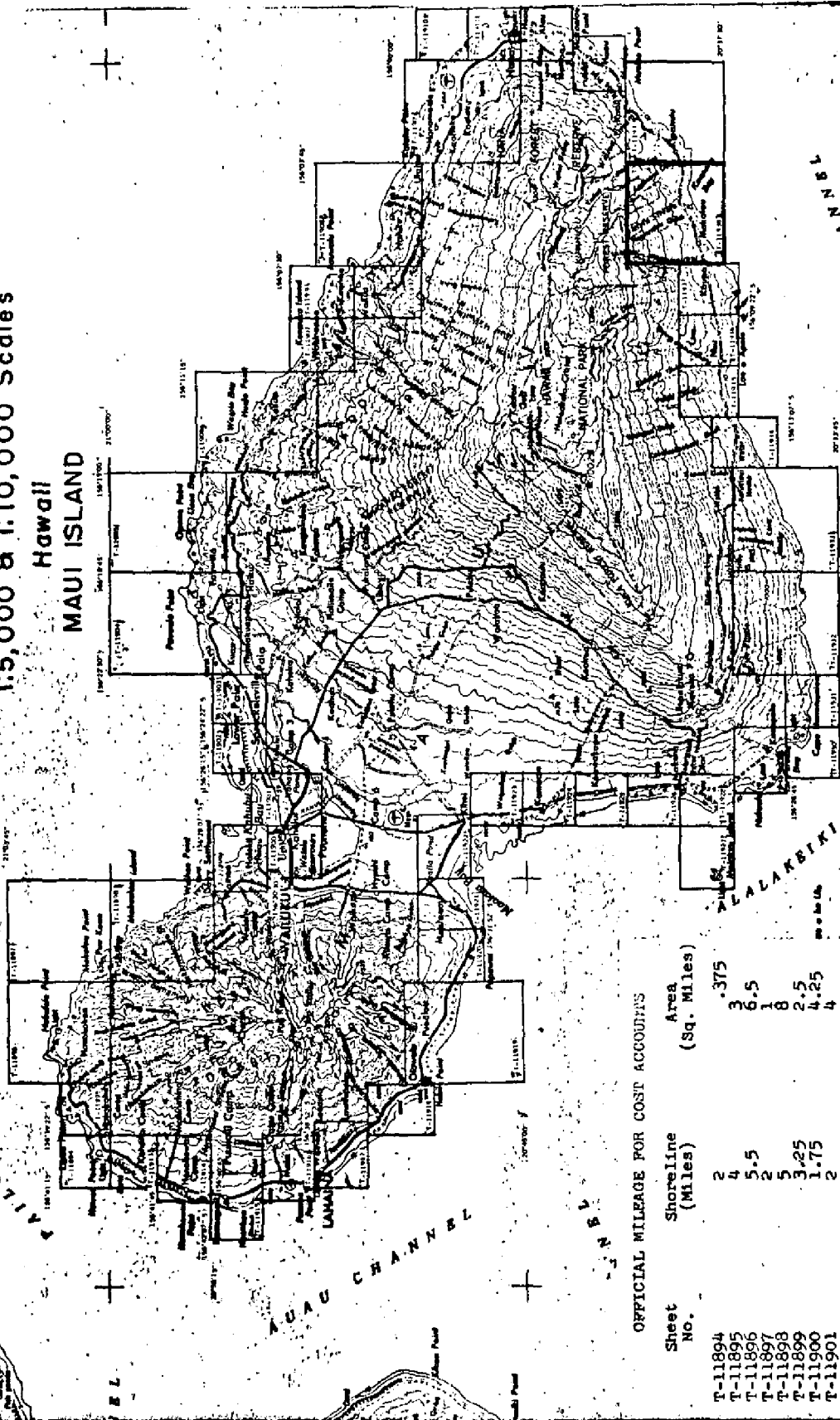
COMPLETION DATE

REMARKS

Alongshore area for hydro	April, 1962	Superseded
Smooth drafting Compilation completed	Jan. 1964	

ANIMETRIC 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	16
T-11909	4.7	.25
T-11910	4	2
T-11911	.75	3
T-11912	2.7	3
T-11913	27.2	4.5
T-11914	2.2	2.2
T-11915	2.5	4
T-11916	2.5	4
T-11917	27	2.6
T-11918	3	4
T-11919	3	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
T-11930	1.5	.25

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	6
T-11938	5	4
T-11939	4.5	3
T-11940	2.5	2

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11938

Shoreline manuscript T-11938, compiled at 1:10,000 scale, covers a part of the southeast coast of Maui Island, Hawaii. This is one of forty-nine similar maps in the project compiled primarily to provide shoreline for nautical charts and to provide photo-hydro support data for hydrographic surveys in the same area.

Field work preceding compilation included recovery and identification of horizontal control, field inspection and the selection of photo-hydro signal sites.

The manuscript was compiled by Kelsh methods using control established by aerotriangulation and the panchromatic photography taken on the 5th and 8th of October 1960 at 1:25,000 scale and on the 25th of September 1961 at 1:15,000 scale.

A cronaflex copy of the map manuscript showing shoreline, alongshore detail and pass points was provided for preparation of the boat sheet. 1:5,000 scale ratio prints were provided for the location of hydrographic signals by photogrammetric methods.

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-11938

Please refer to the Field Inspection Report for Maui
Island, Hawaii bound with the Descriptive Report for T-11894.

SCALE FACTOR1.000.

1 FT. = 3048006 METER	1 FT. = 3048006 METER	DATE	26 June 1962	DATE	26 June 1962	COMM-DC-57843
COMPUTED BY D. M. Brant				CHECKED BY R. F. C.		

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 MAKAAALAE, 1950-SUB. B; Δ PUUHINAI 2, 1950-SUB PTS. 1, 2, and 3. They are to be disregarded in compilation. The problem with

- 2 -

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 MAKAAALAE-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-11938

ITEMS 31 THRU 36

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

37. LANDMARKS AND AIDS

There are no landmarks or nonfloating aids to navigation within the limits of this map.

38. CONTROL FOR FUTURE SURVEYS

There was no supplemental control located for use in future surveys.

39. JUNCTIONS

Satisfactory junctions were made with T-11937 on the west and T-11939 on the east. There is no contemporary survey on the north; Alenuihaha Channel is on the south.

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 and Kipahulu, Hawaii quadrangles, scale 1:24,000, edition of 1957.

47. COMPARISON WITH NAUTICAL CHARTS

Nautical Chart 4116, scale 1:250,000, 11th edition, April 16, 1941, Revised January 9, 1961.

There are no items to be applied to charts immediately nor any items to be carried forward.

Respectfully submitted;

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

Approved:

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

T-11938

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, and Kipahulu, Hawaii 7½ minute quadrangle, 1:24,000 scale, edition of 1957.

Alelele Stream
Alenuihaha Channel
Elialii Gulch
Halekii Point
Kaapahu Bay
Kakanoni Point
Kalepa Gulch
Kalepa Point
Kamilo Point
Kepio Point
Koukouai Gulch
Kukuiula Gulch
Lelekea Stream
Maalo Gulch
Maulili Bay
Mikimiki Gulch
Mokua Point
Mokulau
Mokulau Landing
Nuanualoa Gulch
Pacific Ocean
Piilani Papa
Opelu Gulch
Punahoa Spring
Waihi Spring

ALL NAMES CHECKED BY
GEOGRAPHIC NAMES SECTION
UNLESS OTHERWISE MARKED.

A. J. Wright

Ph-6012
Maui Island, Hawaii
(T-11938 & T-11939)

49. NOTES FOR THE HYDROGRAPHER

A set of ratio photographs has been prepared for use during photo-hydro support. The photography was taken during 1960 and 1962.

Color photography was used as an aid in interpreting offshore details and foul lines.

The positions of the following hydrographic signal sites, identified on field photographs, have been established photogrammetrically for the following surveys:

Signal No.	T-11938 Description	Photo No.
3801	Flag at corner of wall	2299
3802	East gable of old church	2299
3803	High point of small point n.m.	2385
3804	West point of "U" shaped point n.m.	2384
3805	End of point n.m.	2384
3806	Flag on telephone pole	2384
3807	Offshore, north corner of large rock	2384
3808	Offshore gable, shack	2384

	T-11939	
3901	Point of rock n.m.	2382
3902	Center of offshore tree n.m.	2382
3903	High point at inshore end of rock n.m.	2380

PHOTOGRAMMETRIC OFFICE REVIEW
T-11928U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

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1. PROJECTION AND GRIDS DMB		2. TITLE DMB		3. MANUSCRIPT NUMBERS DMB		4. MANUSCRIPT SIZE DMB		
CONTROL STATIONS	5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY DMB			6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (TOPOGRAPHIC STATIONS) NONE				
	7. PHOTO HYDRO STATIONS DMB		8. BENCH MARKS NONE		9. PLOTTING OF SEXTANT FIXES NONE		10. PHOTOGRAMMETRIC PLOT REPORT DMB	
	11. DETAIL POINTS DMB							
ALONGSHORE AREAS (Nautical Chart Data)	12. SHORELINE DMB		13. LOW-WATER LINE NONE		14. ROCKS, SHOALS, ETC. DMB		15. BRIDGES NONE	
	16. AIDS TO NAVIGATION NONE		17. LANDMARKS NONE			18. OTHER ALONGSHORE PHYSICAL FEATURES DMB		
	19. OTHER ALONGSHORE CULTURAL FEATURES DMB							
PHYSICAL FEATURES	20. WATER FEATURES DMB			21. NATURAL GROUND COVER DMB				
	22. PLANETABLE CONTOURS NONE			23. STEREOSCOPIC INSTRUMENT CONTOURS NONE				
	24. CONTOURS IN GENERAL NONE			25. SPOT ELEVATIONS NONE				
	26. OTHER PHYSICAL FEATURES DMB							
CULTURAL FEATURES	27. ROADS DMB		28. BUILDINGS DMB		29. RAILROADS NONE			
	30. OTHER CULTURAL FEATURES DMB							
BOUNDARIES	31. BOUNDARY LINES NONE			32. PUBLIC LAND LINES NONE				
MISCEL- LANEOUS	33. GEOGRAPHIC NAMES DMB				34. JUNCTIONS DMB			
	35. LEGIBILITY OF THE MANUSCRIPT DMB		36. DISCREPANCY OVERLAY DMB		37. DESCRIPTIVE REPORT DMB			
	38. FIELD INSPECTION PHOTOGRAPHS DMB			39. FORMS DMB				
	SIGNATURE OF REVIEWER For: Donald M. Brant			SIGNATURE OF SUPERVISOR, REVIEW SECTION OR UNIT Joseph Steinberg				
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				

USE REVERSE SIDE FOR REMARKS

USCGM-DC 20253-P61

14.

FIELD EDIT REPORT
T-11938

No formal field edit report was received for this manuscript. Records received indicate that it was field edited in July 1963.

The record referred to is a part of an informal report, dated 12 July 1965 (included with the Descriptive Report for T-11936). The subject record indicates that there were no corrections to apply.

Refer to the Final Review Report (page 15 - heading 64) concerning changes made during final review.

S6B

REVIEW REPORT T-11938
SHORELINE
April 5, 1966

61. GENERAL STATEMENT

See summary accompanying Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Comparison was made with Registered Planetable Survey No. 3275, 1:20,000 scale, made in 1912 and approved June 4th 1914. This survey and manuscript T-11938 are in fairly good agreement although the later survey shows the shoreline and alongshore features in greater detail.

Map manuscript T-11938 supersedes the prior survey and should be used for nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with U.S.G.S. quadrangles Kaupo and Kipahula, Hawaii, editions of 1957 at 1:24,000 scale. The quadrangles do not show all of the offshore rocks and alongshore detail. The general shape of the MHWL on the quadrangles and the manuscript are in good general agreement.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with copies of boat sheets H-8825 (PF-10-6-63) and H-8826 (PF-10-7-63). The shoreline on the boat sheets was obtained from a copy of the map manuscript before field edit. The hydrographer investigated the rocks shown on the manuscript and found many of them to be non-existent or submerged. The data was recorded on the boat sheet. Color photography of the area was examined during Final Review and where it was clearly evident that the hydrographers data was correct the rocks were removed or the correct symbol applied on the final manuscript from which the registry copy will be obtained.

65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with nautical chart 4116, 1:250,000 scale, 12th edition August 17, 1964. This is the only chart that covers the area of this manuscript and because of the differences in scales only a visual comparison was possible.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

No items requiring investigation by future surveys in the area were noted during final review.

Reviewed by:

Leo F. Beugnet
Leo F. Beugnet

Approved by:

J. Bull
J. Bull
Director, Atlantic Marine Center

Approved by:

Charles Hemmer
Chief, Cartographic Branch
Photogrammetric MB

L. F. Woodward
Chief, Photogrammetry Division

Chief, Chart Division

Chief, Operations Division

