

11939

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-11939

LOCALITY

State Hawaii

General locality Maui Island

Locality Kaapipa Point - Muolea Point

1960 - 1963

CHIEF OF PARTY

H.J. Seaborg, Honolulu Dist. Office

Wm. E. Randall, Baltimore Dist. Office

LIBRARY & ARCHIVES

DATE 1967

USCOMM-DC 5087

11939

7/5 5 20 - 7/15/63

DESCRIPTIVE REPORT - DATA RECORD

T-11939

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):

1:10,000

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:~~ *MHW*

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):

OHEO, 1950

LAT.:

LONG.:

20° 46' 53.280" 156° 03' 17.691"

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

Y = 126,833.85'

X = 709,113.41'

Hawaii

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.

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. Lajoie		DATE: Jan. 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): Located by Kelsh Plotter from 1960 photography supplemented by 1962 photography.		
PROJECTION AND GRIDS RULED BY (IV): R.A.C.		DATE 12/6/60
PROJECTION AND GRIDS CHECKED BY (IV): S.D.C.		DATE 12/6/60
CONTROL PLOTTED BY (III): L. A. Senasack		DATE 2/26/62
CONTROL CHECKED BY (III): L. O. Neterer		DATE 2/26/62
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): R. E. Fuechsel		DATE 2/62
STEREOSCOPIC INSTRUMENT COMPILATION (III): E. L. Rolle	PLANIMETRY E. L. Rolle	DATE 6/62
	CONTOURS	DATE
MANUSCRIPT DELINEATED BY (III): C. A. Lipscomb		DATE 6/62
SCRIBING BY (III):		DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): D. M. Brant		DATE 6/62
REMARKS: FIELD EDIT 1963		

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

"W" Camera

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
60 W 2381	5 Oct. 1960	1024	1:25,000	0.5 Ft. above MLLW
60 W 2471 & 2472	8 Oct. 1960	0913	1:25,000	1.2 Ft. " "
62 W 2252	26 Jan. 1962	0925	1:25,000	1.1 Ft. " "
62 W(C) 2272 thru 2275	26 Jan. 1962	0943	1:10,000	1.0 Ft. " "
62 W(C) 2279 thru 2282	26 Jan. 1962	0946	1:10,000	1.0 Ft. " "
62 W(C) 2502 thru 2505	1 Feb. 1962	1652	1:10,000	0.1 Ft Below MLLW
The above stages of tide computed from Predicted Tide Tables.				

TIDE (III)

Diurnal

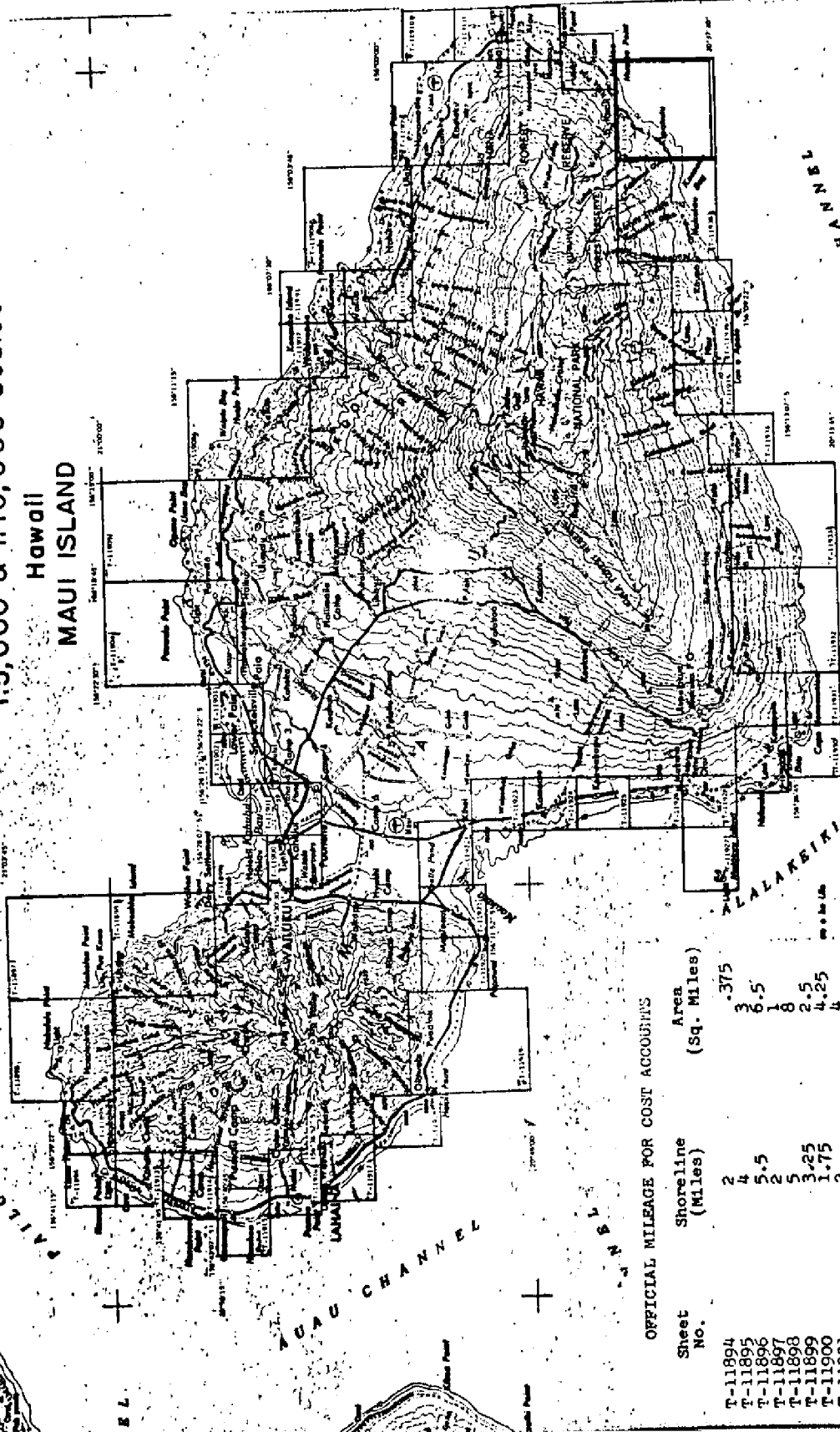
		RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Honolulu, Hawaii			1.2	1.9
SUBORDINATE STATION: Hana, Hawaii			1.8	2.5
SUBORDINATE STATION:				
WASHINGTON OFFICE REVIEW BY (IV): <i>Atlantic Marine Center</i> Leo F. Beugnet, Norfolk Regional Office		DATE: <i>Apr. 1966</i> Sept. 1965		
PROOF EDIT BY (IV):		DATE:		
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): 7	RECOVERED: 6	IDENTIFIED: 3		
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): 3				

REMARKS:

COMPILATION RECORD	COMPLETION DATE	REMARKS
Shoreline furnished for hydro	May 1962	Superseded
Final Compilation Completed	Feb. 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	3.5
T-11896	5.5	1.8
T-11897	2	2.5
T-11898	3.25	4.25
T-11899	1.75	4
T-11900	2	1
T-11901	2.5	2
T-11902	2	6
T-11903	3	4
T-11904	4.5	10
T-11905	6.5	7.8
T-11906	7	6
T-11907	5	16
T-11908	4.7	.25
T-11909	.75	2
T-11910	2.7	3
T-11911	27	4.5
T-11912	2.2	2.2
T-11913	2.5	2.5
T-11914		
T-11915		

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Shoreline (Miles)	Area (Sq. Miles)
T-11922	3	3
T-11923	2	2.5
T-11924	2.5	1.5
T-11925	1.5	1
T-11926	2.5	.04
T-11927	1	.5
T-11928		

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

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11939

Shoreline manuscript T-11939, 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 26th of January 1962 at 1:25,000 scale. A cronaflex copy of the map manuscript showing shoreline, alongshore detail and pass points was provided for preparation of the boat sheet. 1:10,000 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-11939

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

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-11939

ITEMS 31 THRU 36

Please refer to the Descriptive Report for T-11934.

37. LANDMARKS AND AIDS

There are no landmarks or non-floating aids to navigation within the limits of this map:

38. CONTROL FOR FUTURE SURVEYS

None established.

39. JUNCTIONS

Satisfactory junctions were made with T-11938 on the west and with T-11990 on the north. Alenuihaha Channel is to the south and east.

40. HORIZONTAL AND VERTICAL ACCURACY

Please refer to the Photogrammetric Plot Report bound with T-11894.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U.S.G.S. Kipahulu, Hawaii 7½ minute quadrangle, scale 1:24,000, edition of 1957.

47. COMPARISON WITH NAUTICAL CHARTS

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

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Approved:

D. Hollis
J. Bull

Capt. C&GS

Norfolk Regional Officer

Respectfully submitted:

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

T-11939

48. Geographic Names List:

The Geographic names listed below were furnished by the Washington Office on U.S.G.S. Kipahulu, Hawaii 7 $\frac{1}{2}$ minute quadrangle, scale 1:24,000, edition of 1957.

~~Aloama~~

Ahole Rock
 Awapaewaa Bay
 Hahalawe Gulch
 Honolewa Stream
 Kaapipa Point
 Kauakio Bay
 Kauakiu Point
 Ka-U-Bay
 Kalena Stream
 Kakiweka Gulch
 Kipahulu
 Koali
 Kukui Bay
 Kuloa Point
 Makaaikuloa Point
 Maluhianaiwi Gulch
 Moku Papa
 Muolea
 Muolea Point
 Ohai Point
 Ohoe Gulch
 Pacific Ocean
 Paihi Gulch
 Pailoa Point
 Papaloa Bay
 Pepeiaolepo Bay

Puaaluu Gulch
 Puhilele Point
 Waiaama Bay
 Waieli Gulch
 Wailua Cove
 Wailua Stream

ALL NAMES ARE GIVEN 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. 11939

50

13

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 DMB		14. ROCKS, SHOALS, ETC. DMB		15. BRIDGES NONE	
	16. AIDS TO NAVIGATION NONE		17. LANDMARKS DMB			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 D. M. Brant <i>Joseph Steinberg</i>			SIGNATURE OF SUPERVISOR, REVIEW SECTION OR UNIT <i>Joseph Steinberg</i>				
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				

USE REVERSE SIDE FOR REMARKS

USCGM-DC 30553-P61

UNITED STATES GOVERNMENT

Memorandum

Received in
Nautical Chart Division
Office of Cartography
JUL 23 1965

Date

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

(1965)

PAO.
CAB
WKS

TO : The Director

DATE: 12 July, 1965

Through: Seattle Regional Office

FROM : Commanding Officer,
USC & GSS PATHFINDER

SUBJECT: Field Edit Report, Project OPR-419, Maui, Molokai,
Lanai and Kahoolawe Islands, Hawaii

No field edit corrections for processing smooth sheets
are required on the following manuscripts:

T-11936 through T-11939
T-11989 through T-11990
T-11828
T-11959 through T-11966
T-11971 through T-11972
T-11974 through T-11976

Minor corrections exist on manuscripts T-11939 (Maui),
T-11975 (Lanai), and T-11976 (Lanai), which are
contained in the hydrographic records. In order that
photogrammetric and hydrographic records may agree,
the following details are furnished:

T-11939 (Maui)

A rock awash at latitude $20^{\circ} 38' 57''$ N, longitude
 $156^{\circ} 03' 26''$ W was searched for during hydrography
and not found. It should be deleted.

Rock deleted during
final review - accounted
for on "Comparison Print".
SSB

T-11975 (Lanai)

A rock awash at latitude $20^{\circ} 45' 25''$ N, longitude
 $156^{\circ} 51' 48''$ W., was searched for and not found
during hydrography. It should be deleted.

A rock awash at latitude $20^{\circ} 44' 16''$ N., longitude
 $156^{\circ} 55' 42''$ W., is not detached but is an extension
of the reef. See enclosed sketch traced from boat
sheet.

Chart
4116
4130
4120

4000
4102
4119
4180
4001
scale too small

Acknowledged by form letter dtd. AUG 5 1965

1172

T-11975 (Lanai)

Two rocks awash at latitude $20^{\circ} 44' 14''$ N., longitude $156^{\circ} 56' 20''$ W., are not detached but are an extension of the reef. See the enclosed sketch traced from the boat sheet.

T-11976 (Lanai)

A newly constructed groin in Manele Bay was located by planetable on a paper copy of the manuscript, then transferred to our cronaflex positive which has become a hydrographic record. A tracing of this record showing the groin is enclosed.

L. F. Woodcock
L. F. Woodcock

REVIEW REPORT T-11939
SHORELINE
April 11, 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 4, 1914. The shoreline and alongshore features compiled by photogrammetric methods on map manuscript T-11939 are more depictive of the area than the planetable survey.

Survey T-11939 supersedes the Planetable survey and should be used for future nautical chart construction in this area.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with U.S.G.S. quadrangle Kipahulu, Hawaii, 1:24,000 scale, edition of 1957. The two surveys are in good general agreement.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with copies of boat sheet H-8826. The shoreline and alongshore detail was obtained from a cronaflex copy of the manuscript before it was field edited. During hydrography it was found that the foul line was in error and this was corrected on the boat sheet by the hydrographer.

The foul line was corrected on the final manuscript, from which the registry manuscript will be obtained, during final review.

65. COMPARISON WITH NAUTICAL CHARTS

Nautical chart 4116 at 1:250,000 scale is the only chart that covers the area of the manuscript. Because of the small scale of the chart the shoreline and alongshore features are generalized and only a visual comparison was made during final review.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

There are no items that require investigation by future surveys in the area.

Reviewed by:

Leo F. Beugnet
Leo F. Beugnet

Approved by:

J. Bull
J. Bull
Director, Atlantic Marine Center

Approved by:

Charles L. ...
Chief, Cartographic Branch
Photogrammetric

L. F. Woodward
Chief, Photogrammetry Division

Chief, Chart Division

Chief, Operations Division

