

11906

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-11906

LOCALITY

State Hawaii

General locality Maui Island

Locality Oopuola Point - Honopou Point

1960-1963

CHIEF OF PARTY

H. J. Seaborg, Honolulu District Office

W. E. Randall, Baltimore District Office

LIBRARY & ARCHIVES

DATE _____

USCOMM-DC 5087

11906

DESCRIPTIVE REPORT - DATA RECORD
T-11906PROJECT 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 pantograph 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): ~~MSS~~ 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):

HUELO 2 (HTS), 1950

LAT.:

20° 54' 53.095"

LONG.:

156° 13' 18.810"

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

211,379.15 FT.

x = 651,801.44 FT.

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:
J. C. Lajoie		Feb. 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):		
The Mean high water line was located by Kelsh Plotter using the 1960 and 1961 panchromatic photography supplemented by field inspection notes and color photography.		
PROJECTION AND GRIDS RULED BY (IV):		DATE
R.A.C.		11-23-60
PROJECTION AND GRIDS CHECKED BY (IV):		DATE
J.D.C.		12-6-60
CONTROL PLOTTED BY (III):		DATE
H.R.R.		3-28-62
CONTROL CHECKED BY (III):		DATE
L. O. Neterer		3-28-62
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):		DATE
Aerotriangulation - Washington Office		1961
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY	DATE
	D. M. Brant	4-62
D. M. Brant	CONTOURS	DATE
	Inapplicable	
MANUSCRIPT DELINEATED BY (III):		DATE
D. M. Brant		4-62
SCRIBING BY (III):		DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):		DATE
J. D. Mc Evoy		4-62
REMARKS:		
Field Edit - 1963 USC & GSS PATH FINDER		
FIELD EDIT SHEET SUBMITTED		

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

"W" Camera

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
60 W 2507 thru 2510	9 Oct. 1960	0954	1:25,000	1.4 Ft. above MLLW
61 W 832 thru 837	24 Sept. 1961	0903	1:15,000	0.2 Ft. above MLLW
61 W 1208 & 1210	26 Sept. 1961	0910	1:15,000	0.5 Ft. above MLLW
60 W(C) 3109 thru 3117	19 Oct. 1960	0753	1:10,000	0.3 Ft. above MLLW
Tides 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		DATE: May 1966 Oct. 1965		
PROOF EDIT BY (IV):		DATE:		
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): 1	RECOVERED: 1	IDENTIFIED: 1		
NUMBER OF BM(S) SEARCHED FOR (II): None	RECOVERED: 0	IDENTIFIED: 0		
NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):		0		
NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):		7		

REMARKS:

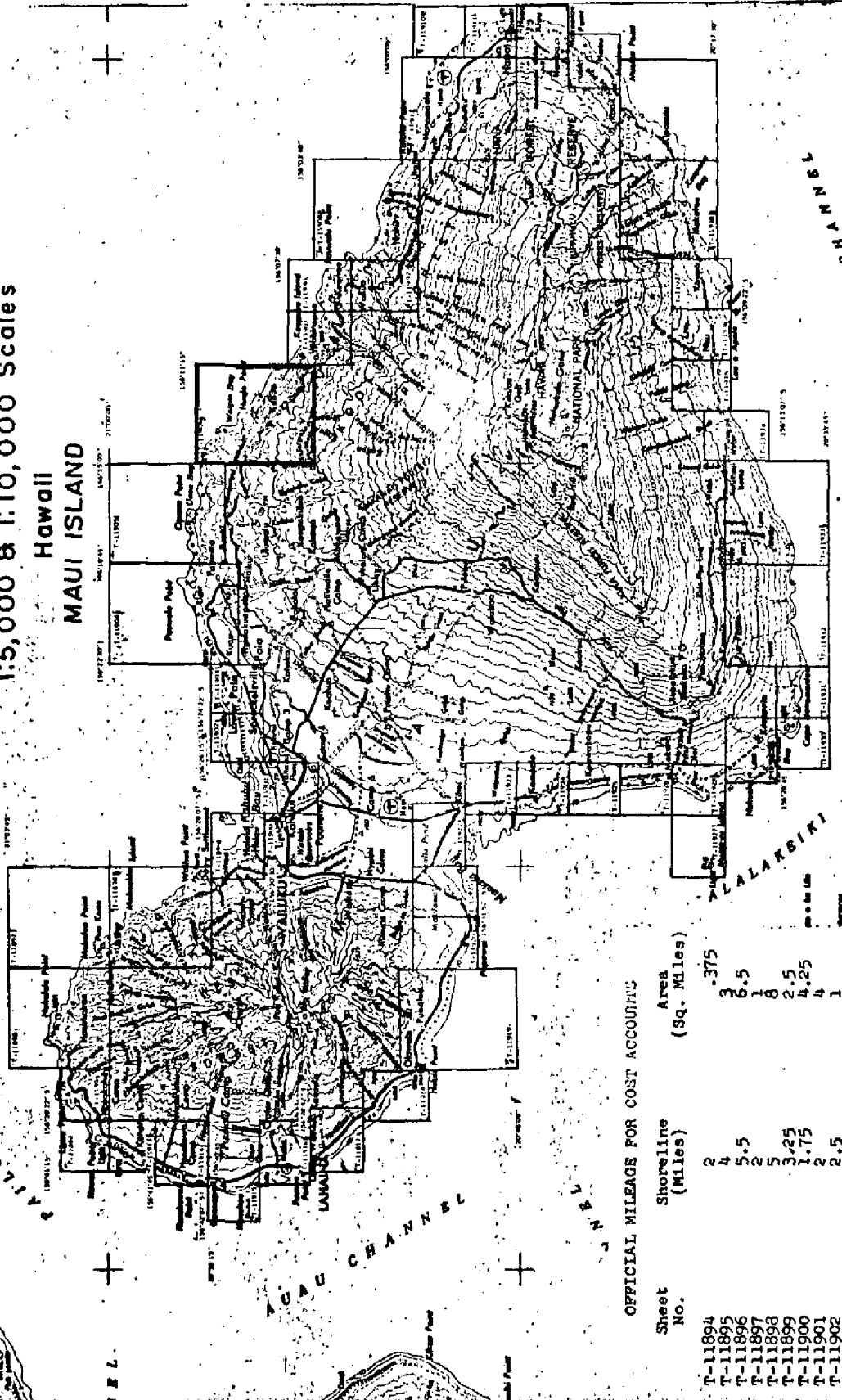
COMPILATION RECORD	COMPLETION DATE	REMARKS
Shoreline furnished for hydro	April 1962	Superseded
Final Compilation Completed	May 1964	

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	3.375
T-11895	4	3
T-11896	5.5	3.5
T-11897	2	1
T-11898	3.25	8
T-11899	1.75	2.5
T-11900	2	4.25
T-11901	2.5	1
T-11902	2	2
T-11903	5	1
T-11904	4.5	2
T-11905	6.5	6
T-11906	7	4
T-11907	4.7	10
T-11908	.75	7.8
T-11909	2.7	16
T-11910	27	.25
T-11911	2.2	3
T-11912	2.5	3
T-11913	2.5	4.5
T-11914	2.5	2.2
T-11915	2.5	4
T-11916	27	2.6

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Shoreline (Miles)	Area (Sq. Miles)
T-11931	2.5	3
T-11932	4.5	3
T-11933	5	2.5
T-11934	2.7	1.5
T-11935	2.5	1
T-11936	5	1.04
T-11937	5	1.5
T-11938	5	3
T-11939	5	3
T-11940	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	6
T-11938	5	6
T-11939	5	3
T-11940	5	3

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11906

Shoreline survey T-11906 covers a part of the coast of Maui Island in the vicinity of Huelo Point. The map was compiled at 1:10,000 scale by Kelsh Instrument methods. The primary purpose of the survey was to furnish new shoreline for nautical charts and provide photo-hydro support data for hydrographic surveys in the same area.

Field operations preceding compilation included recovery and identification of horizontal control, field inspection, and pre-selection of photo-hydro stations.

Kelsh instrument compilation was accomplished using the 1:25,000 scale panchromatic photography of October 2nd 1960 and the supplemental control established by aerotriangulation. Cronaflex copies of the map manuscript along with specially prepared ratio photographs were provided for preparation of the boat sheet, field edit and photo-hydro support purposes.

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
T-11906

Please refer to the Field Inspection Report bound with the
Descriptive Report for T-11896.

PROJECT NO. PH 6012

SCALE OF MAP 1:10,000

SCALE FACTOR

[illegible]1 FT. = .3048006 METER
COMPUTED BY:.....

J.C.R.

COMPUTED BY:

10 July 1962

DATE _____

Brant

CHECKED BY

L
 H
 C
 D

13 July 1962

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 MAKALAE, 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

11.

COMPILATION REPORT T-11906

For additional data pertaining to this survey please refer to the Field Inspection Report for Maui Island bound with T-11896.

ITEMS 31 THRU 36

Please refer to the Compilation Report bound with T-11896.

37. LANDMARKS AND AIDS

There are no landmarks, aids to navigation or aeronautical aids within the compilation limits of this manuscript.

38. CONTROL FOR FUTURE SURVEYS

No control for future surveys was established during compilation.

39. JUNCTIONS

Satisfactory junctions were made with T-11905 on the west and with T-11907 on the east. There is no contemporary survey on the south; the Pacific Ocean is on the north.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U.S.G.S. HAIKU and KEANAE quadrangles, 1:24,000 scales, 1957 editions.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with nautical chart 4116, 1:250,000 scale, 12th edition, August 17, 1964.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Respectfully submitted:

Joseph H. Hamburg
For Donald M. Brant
Carto. (Photo)

Approved:

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

GEOGRAPHIC NAMES
Ph 6012

T-11906

Aluea Rocks
East Wailuaiki Stream
Hahaha Bay
Haipuaena Falls
* Hanawana Point
* Hanawana Stream
* Hanehoi Point
* Hanehoi Stream
* Hoalua Bay
* Hoalua Stream
* Honokala Gulch
* Honokala Point
Honomanu Bay
Honomanu Stream
* Hoolawe^a Bay
* Hoolawe^a Point
* Hoolawe^a Stream
* Huelo Point
* Huelo Stream
* Kaaiea Gulch
* Kahalau
Kalaloe Point
* Kailua Stream
* Kapukaamaui Point
Kapapa Point
Kauwalu
Kawee Point
Keahae
Keanai Point
Keopuka Rock
Kolea Reservoir
* Kolea Stream

Kopiliula Stream
* Makaiwa Bay
Makoloaka Island
Manahoa Rock
Moiki Point
Moku Hala
Moku Holua
Moku Mana
* Moku o Kau
* Mokupapa Gulch
* Mokupapa Point
* Nailiilihaele Stream
Nuaaailua Bay
Nuaaailua Stream
Ohia Stream
* Oopuola Point
* Oopuola Stream
Paepaemoana Point
Palauhulu Stream
Papiha Point
Pauwalu Point
Piinaau Stream
* Puehu Stream
Punalau Stream
* Punaluu Gulch
Puohokamoa Falls
Puu Okohola
Wahinepee Stream
Waikamoi Stream
Wailua
Wailuaiki Bay
* Puu Kukai

Continued from T-11906

Wailuanui Bay

Wailuanui Stream

Waiokamilo Stream

Waiohilo Falls

* Waipio Bay

West Wailuaiki Stream

* Honopou Stream

* Honopou Point

* Waipio Stream

Frank W. Rickett
All Names Approved
by Office of Geography

Approved:

1-20-66

A. J. Wright

** Only these names appear on this manuscript.*

49. NOTES FOR THE HYDROGRAPHER

The following photo-hydro signal sites, identified by the field inspection party, were located during compilation.

0601	End of rock point	60 W 2509
0602	Hawaiian Church Steeple	60 W 2509
0603	Corner of corral	60 W 2507
0604	Rag at fence corner	60 W 2507
0605	Concrete pier - off shore of two	60 W 2507
0606	Flag at point of grass	60 W 2507
0607	Flag at end of brush (near monument)	60 W 2507

PHOTOGRAMMETRIC OFFICE REVIEW

T-10363 T-11906

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 DMB		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			
MISCELLANEOUS							
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	
40. REVIEWER For: <i>Joseph Steinberg</i> D. M. Brant				SUPERVISOR, REVIEW SECTION OR UNIT <i>Joseph Steinberg</i>			
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 * Field edit applied - refer to page 20 of this report							

FIELD EDIT REPORT
T-11906

No formal field edit report was received. Please refer to the memorandum on the next page of this report concerning field edit. Refer to page 20 of this report.

UNITED STATES GOVERNMENT
Memorandum

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

24 17

DATE: 8 July 1963

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

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

SUBJECT: Field Edit Report - OPR-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 blackline impressions in red and green ink. In general, the manuscripts were found to be very reliable with only minor discrepancies being noted.

Four manuscripts with noted changes are being forwarded to the Washington Office on July 9. Those 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 sheets now in Washington for photography.

T-11905	Edited - No changes
T-11906	Edited - Will be forwarded later
T-11907	Edited - Will be forwarded later
T-11908	Edited - Will be forwarded later
T-11909	Edited - Will be forwarded later
T-11910	Edited - Will be forwarded later
T-11911	Edited - Will be forwarded later
T-11930	Forwarded 9 July
T-11931	Edited - No recommended changes
T-11932	Edited - No recommended changes
T-11933	Edited - No recommended changes
T-11935	Forwarded 9 July
T-11936	Forwarded 9 July
T-11937	Forwarded 9 July
T-11991	Edited - Will be forwarded later
T-11992	Edited - Will be forwarded later

A FIELD EDIT SHEET WAS
SUBMITTED
(Refer to page 20 of
this report)

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 T-11906
SHORELINE
May 17, 1966

61. GENERAL STATEMENT

See summary accompanying Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Comparison was made with copies of Registered Planetable surveys No. 3272 and 3273, both 1:20,000 scale surveys made in 1912 and approved March 30, 1914. A submerged rock at approximate latitude $20^{\circ} 56.4'$ longitude $156^{\circ} 14.3'$ is not visible on photographs of the area.

Survey T-11906 supersedes the planetable surveys and should be used for future nautical chart construction purposes in the area mapped.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with 1:24,000 scale U.S.G.S. quadrangles Haiku and Keane, Hawaii, editions of 1957.

The rock mentioned in item 62 also appears on the Haiku quadrangle.

This survey and the U.S.G.S. quadrangles are in good general agreement. No major discrepancies were noted.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made a copy of boat sheet PF-10-5-62 (sheet B).

The shoreline for the boat sheet was obtained from a cronaflex copy of the map manuscript and no discrepancies were noted.

NOTE: A "Notes To Verifier" page was submitted to the Hydro Branch, 8/2/66.
Refer to page 20 of this report.

65. COMPARISON WITH NAUTICAL CHARTS

Nautical chart 4116, 1:250,000 scale, is the only chart coverage of the area. Because of the differences in scale only a visual comparison was made. No major discrepancies were noted.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Reviewed by:

Leo F. Beugnet
Leo F. Beugnet

Approved by:

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

Approved by:

Charles L. Lunn
Chief, Cartographic Branch

L. F. Woodward
Chief, Photogrammetry Division

Charles P. Boyer 2/21/68
Chief, Chart Division
Marine

Chief, Operations Division

NOTES TO THE VERIFIER
H-8717 (PF-10-5-62)
PH-6012 (Survey T-11906)
Maui, Hawaii

The final review report for T-11906 (side heading 64) mentions comparison with boat sheet PF-10-5-62 (sheet B). No discrepancies were noted.

Prior to registration, the final manuscript was compared with bromide copies (A, B, and C) of the subject boat sheet. A number of discrepancies exist. Data examined in an attempt to resolve the discrepancies consisted only of the Field Edit Sheet - no field edit report was submitted by the field party; and, the existence of field edit photographs is not indicated by transmittal record.

Discrepancies noted on the field edit sheet have been accounted for on the final copy of the shoreline survey. A change in foul line - the only item noted by the edit party requiring a change in boat sheet information - is not reflected on the bromide copies examined.

Numerous rocks shown on T-11906 are not shown on the subject bromide copies.

Two nonexistent, large, bare rocks are depicted on the boat sheet copies. These "rocks" are actually zeros in five digit hydro signal numbers shown on the shoreline survey. The symbols are located at 20° 54.2' latitude and 156° 12.44' longitude; and 20° 55.06' latitude and 156° 13.6' longitude.

SS Alan Kuntz
W.O. Review Unit

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-11906

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.

[illegible]