

T-11896

T-11896

T-11896

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	SHORELINE (Photogrammetric)
Field No.	Office No. T-11896
LOCALITY	
State	HAWAII
General locality	MAUI ISLAND
Locality	HONOKOHAU BAY - MOKOLEA POINT
1960 - 1962	
CHIEF OF PARTY	
H. J. Seaborg - Honolulu District Office	
Wm. E. Randall - Baltimore District Office	
LIBRARY & ARCHIVES	
DATE	

DESCRIPTIVE REPORT - DATA RECORD

T-11896

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 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):

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

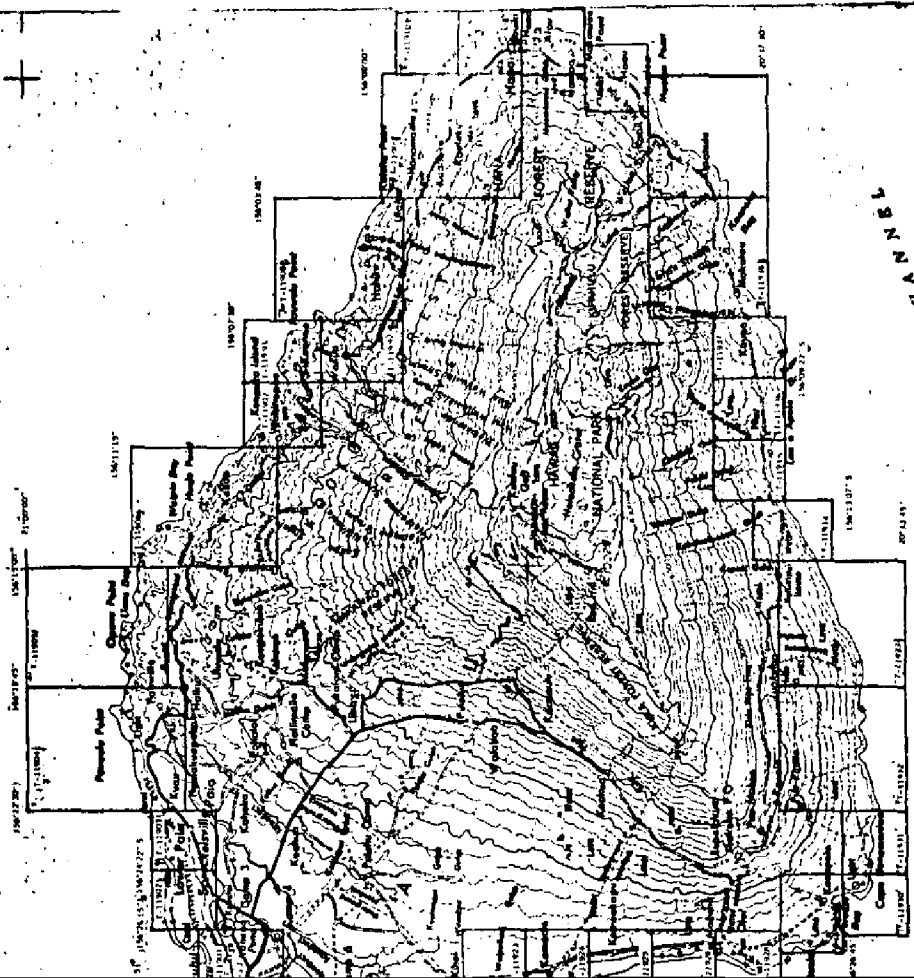
DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (II): J. C. Lajoie		DATE: March 1961
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): Kelsh Plotter from 1960 Photography and field inspection notes.		
PROJECTION AND GRIDS RULED BY (IV): R.A.C.		DATE 9 Nov. 1960
PROJECTION AND GRIDS CHECKED BY (IV): J.D.C.		DATE 22 Nov. 1960
CONTROL PLOTTED BY (III): D. M. Brant		DATE 6 Feb. 1961
CONTROL CHECKED BY (III): H. P. Eichert		DATE 6 Feb. 1961
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): Washington Office		DATE
STEREOSCOPIC INSTRUMENT COMPILATION (III): J. D. Mc Evoy	PLANIMETRY J. D. Mc Evoy	DATE 6/61
	CONTOURS Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III): Donald M. Brant		DATE 7/61
SCRIBING BY (III):		DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): E. L. Williams		DATE 7/61
REMARKS:		

COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore area for hydro	Aug. 1961	Superseded
Smooth drafting Compilation Completed	Sept. 1963	

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

Hawaii
MAUI ISLAND



OFFICIAL MILEAGE FOR COST ACCOUNTS			
Shoreline (Miles)	Area (Sq. Miles)	Sheet No.	Shoreline (Miles)
3	3	T-11931	2.5
2.5	3	T-11932	4.5
2.5	2.5	T-11933	5
2.5	1.5	T-11934	2.7
1	1.5	T-11935	2.5
3	.04	T-11936	5
4.5	1.5	T-11937	5
	3	T-11938	2.5
		T-11939	8.5
			1.5
			12
			3
			4
			4
			6
			3

6

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11896

Map manuscript T-11896, 1:10,000 scale, is one of forty-nine similar maps in this project. The primary purpose of the project was to provide new shoreline for nautical charts and to provide data for the photogrammetric location of hydrographic signals for hydrographic surveys to be made in the area.

Field work preceding compilation included recovery and identification of horizontal control, field inspection and selection of photo-hydro stations to be located during compilation.

The manuscript was compiled by Kelsh methods using control established by aerotriangulation and the panchromatic photography obtained 10 October 1960. A cronaflex copy of the manuscript was furnished to provide the shoreline and alongshore features for the boat sheet. 1:10,000 scale ratio prints, with shoreline pass points thereon, were provided for the location of hydrographic signals and for field edit purposes.

The manuscript was compiled and smooth drafted on vinylite. One cronar positive and one cronar negative are provided for record and registry.

FIELD INSPECTION REPORT
PROJECT PH-6012
MAUI ISLAND, HAWAII

2. AREAL FIELD INSPECTION:

The area covered by this report encompasses the whole of the Island of Maui, second largest of the Hawaiian Islands. It is formed by two mountains with a fertile valley ^{/between,} devoted to the cultivation of sugar cane and pineapple. The island is shaped like a Shinto priest in prayer with the head at the western end formed by the West Maui range of mountains and the body at the eastern end formed by Mt. Haleakala which rises over 10,000 feet above sea level.

The climate varies from the tropical rain forest at the eastern end of the island near Hana, to the barren lava fields along the south slopes of Mt. Haleakala. Rain seldom falls on the south coasts and thus the disintegration of the lava is a slow process.

Shoreline conditions vary from the stark lava bluffs around Mt. Haleakala and on the east side of the West Maui Range, to the sandy beaches along the valley between the mountains and on the western or lee shores of the island.

The area is cooled by trade winds from the north and east accentuated by the Venturi effect caused by the valley between the mountains and , in the exposed areas, waves beat continuously on the rocky cliffs. On the western shores around Lahaina and on Maalaea Bay, only a "kona" or southerly storm infrequently disturbs this peaceful area.

Kahului is the principal port on the island. It is protected by a breakwater and serves as a port of call for large ocean going

vessels which bring in freight and load out processed pineapple and raw sugar. It is also the port of call for tug and barge service from Honolulu.

Photography was adequate for the identification of control and for field and shoreline inspection. In some areas which were cloud covered in the 1960 photography, 1962 reflight photographs which were furnished to the hydrographic party were secured and the shoreline and interior inspected and inked on those photos.

Also to be added to findings
Shoreline inspection along the lava fields at the south side of the east portion of the island is somewhat sketchy. Areas that were impassable due to broken lava, large crevases, or lack of trails, were left to be inspected from a launch when one becomes available. The shoreline may be delineated at the edge of the lava but additional hydrographic signal sites must be selected from the seaward side.

Shoreline inspection in the beach areas was accomplished by walking along the high waterline, and delineating the waterline supported by measurements from prominent objects. Where it was possible, as in the case of low bluffs, the shoreline was inspected from the top of the bank. In the areas of high rocky bluffs and cliffs, it was not possible to get anywhere near the shoreline and inspection was carried out by leaning over the precipitous bluffs, which descend almost vertically to the high water line. In every area except the sandy beaches mentioned, and even in the lava fields at the south portion of the island, the high waterline lies at the base of bluff and is confused by along shore rocks and breaking surf, and off-shore reefs.

2/

3. HORIZONTAL CONTROL

(a) The following marked or recoverable intersection stations

[illegible]

4/

RED	Hydro Sig. 2401	HAY
PAR	ABE	VON
BEG	CAR	NAHUA 2
DAN	FAR	EVE
JOE	HAM	GOO

- (b) There were no datum adjustments made by the field party.
- (c) All control was either established by the Coast and Geodetic Survey or was tied to Coast Survey control by previous surveys.
- (d) All stations required by the project diagram were recovered and identified except where specific permission was received from

the Washington Office to substitute one station for another.

(e) Control adjacent to the shoreline and that within the area of photogrammetric coverage was searched for and Form 526 has been submitted for all stations. Stations outside the area covered by the photographs were not searched for due to heavy brush and undergrowth in the interior of the island.

(f) Control station identification cards were submitted for all stations required by the project diagrams.

4. VERTICAL CONTROL

Tidal bench marks at Kanului, Lanaina, Mala wharf, Aihei, and Makana were searched for and recovered.

Tidal bench marks at Maa were searched for but due to changes in the area, they were not recovered.

No vertical points were required for stereoscopic mapping.

5. CONTOURS AND DRAINAGE

The area below the 15 foot contour on sheet T-11900 was contoured as required by the project instructions. The area was contoured using the photograph, a Wild T-2, and topo rod. Elevations for the contouring were established by closed loops from the tidal bench marks at Kahului Harbor.

Drainage is all intermittent. Natural drainage patterns have been interrupted by various drainage canals, reservoirs, and catch basins to supplement the irrigation systems of the various plantations. Only overflow water runs occasionally in the natural drainage gulches.

6. WOODLAND COVER

The woodland cover over the major part of the island is low brush although in the dry areas, koa trees are clumped along the shore. Monkey pod, an ornamental tree, line the roads occasionally.

In the area covered by sheet T-11906 and easterly to sheet T-11939, which is in the rainy portion of the island, trees grow profusely. Types are eucalyptus, kukui, koa, mango, coconut and kamane with a heavy tropical undergrowth of guava and other brush.

7. SHORFLINE AND ALONGSHORE FEATURES

(a) The mean high waterline was delineated on the photographs where it was possible to visit it. In areas of high bluff, inspection was done by viewing the area from the top of bluff. As in most cliff areas, there are many along shore rocks and high surf.

(b) The low waterline was not inspected

(c) The foreshore in the bluff areas is confused due to many along shore rocks. The continuous surf along the north, east and south sides of the islands served to confuse the high waterline on the photographs. In the sandy areas of the western and northern shore, the beach is protected by a coral reef which was found by the hydrographer, and which is visible on the photograph. In the Kihei area, offshore rock piles, the remains of old fish pond walls, are visible on the photographs. Offshore rocky reefs are found in some areas and, where seen, were noted on the field photographs.

(d) Bluffs and cliffs form the largest portion of the shoreline, although Maui is represented as having more beach area than any other of the Hawaiian Islands. From a few miles north of Kahului to Honolulu Bay the shore is composed of high cliffs and low rocky bluffs. From Honolulu Bay, through Lahaina and slightly south of Olowalu the shore is low with sandy beaches between rocky headlands. From the beginning of the cliffs at the south end of the West Maui Range to Mc Gregor Point, the shore is again rocky and precipitous. At Maalaea, and continuing south past Makena to about a mile south of Puu Olai, the shore is protected and sandy with a few rocky projections which act as groins to hold the sand.

From the recent lava flow south of Puu Olai and continuing south and east toward Hana, the shoreline is rocky with bluffs ranging from 10 to 150 feet. In the area near Kaupo, Kipahulu, and Puuiki



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NAVY DEPARTMENT
NAVY DEPARTMENT
NAVY DEPARTMENT

From Hana west to Kuau, or into sheet T-11903 the vertical cliffs range from 50 to 200 feet in height and there are no beach areas and no place to approach the high waterline from the beach side except at Keanae or Mahiku except by descending the vertical bluffs by ropes.

(e) Kahului Harbor, as mentioned in the Areal Description, is the principal and only commercial port in the island. It has recently been dredged, is well jettied and has wharfage and facilities for ocean going vessels.

Hana Harbor is partially protected by natural rock projections but is open to some trade directions. It was used as a step for interisland steamer traffic, and prior to World War 2, when the sugar plantation at Hana was under cultivation, cargo was loaded out of this port. Since the discontinuing of steamer traffic between the islands, only an occasional fuel barge or fishing boat use the large concrete pier located here.

Mala Wharf, located a few miles north of Lahaina, was used to load sugar and pineapple during the days of steamer traffic but the large concrete wharf is in poor repair and has been closed by the Board of Harbor Commissioners.

Lahaina, once the seat of the Hawaiian kings, and the oldest town in the island, is the site of a protected small boat harbor. Fuel, food, and housing are available here.

Maalaea is the site of a small boat harbor used mainly by fishing boats. It is well jettied and fuel and supplies are available.

In the olden days, when steamers made the rounds of the island

and water transportation was at its height, there were other places where cargo was unloaded by boom and where whaleboat landings were made. Principal among these were Nuu Landing, Kaupo, and Nahiku. These have now been abandoned and only the remains of the old concrete foundations and the old mooring bolts remain.

(f) There are no overhead or submarine cables in the area covered by the project.

(g) There are no other shoreline structures.

8. OFFSHORE FEATURES

No offshore rocks were actually visited by the photogrammetric party. It was noted on the field photographs that the hydrographic party be asked to determine the heights of offshore rocks. Where heights were indicated on the photographs, they were estimated from shore.

9. LANDMARKS AND AIDS.

Landmarks, nautical and aeronautical aids in Strips 1 to 7 were listed on Form 567 and forwarded with the field inspection photos. Other landmarks should be reported by the hydrographic party.

10. BOUNDARIES, MONUMENTS and LINES.

Investigation of boundaries, monuments and lines were not included in the instructions for the project.

11. OTHER CONTROL

No recoverable topographic stations were established. Where hydrographic or photogrammetric control by geodetic methods was required, only temporarily marked stations were used.

In areas which were inaccessible to the field party, hydro signal sites were not selected. It was requested that the hydrographic

party make a launch available to the photogrammetrist for the inspection of shoreline and the selection of hydro signal sites in these areas.

12. OTHER INTERIOR FEATURES

Roads within the area adjacent to the shoreline were classified as dfl, ddl and sdl. Class 1 structures were not noted. Class 2 structures, churches and public buildings were noted.

The principal airport, Kahului Airport, is located about 3 miles east of Kahului Harbor. There is a paved airstrip at Hana used by D C 3 and small private aircraft. A small dirt strip is located at Kaanapali, about 6 miles north of Lahaina and is used by small private aircraft. The abandoned Naval Airstrip at Puu Wene is not used.

There are no bridges or cables over navigable waters. No trace was found of the shore ends of any submarine cables.

13. GEOGRAPHIC NAMES

No geographic names investigation was required by the project instructions.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

There were no special reports, or supplemental data.

Respectfully submitted

John C. Lajoie
John C. Lajoie
Super. Sur. Tech.

8 September 1962

PHOTOGRAMMETRIC PLOT REPORT
T-11896

Please refer to the Photogrammetric Plot Report for the western half of Maui Island which is bound with the Descriptive Report for T-11894.

COMPILATION REPORT T-11896

31. DELINEATION

Planimetry was by Kelsh Instrument using the annotations on the field inspection photographs.

32. CONTROL

The supplemental control, established by Aerotriangulation, was adequate in placement and density for control of the manuscript.

33. SUPPLEMENTAL DATA

No supplemental surveys were used to delineate the manuscript although the drainage pattern was checked against U.S.G.S. quadrangles in the area.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Drainage was delineated by the Kelsh operator.

35. SHORELINE AND ALONGSHORE DETAILS

The mean high-water line was delineated by the Kelsh operator using the field inspection photographs.

36. OFFSHORE DETAILS

No offshore details were noted or delineated during compilation.

37. LANDMARKS AND AIDS

There are no landmarks within the limits of compilation. Form 567 has been submitted for the aid to navigation on this manuscript.

38. CONTROL FOR FUTURE SURVEYS

No topographic stations were established. Five temporary photo-hydro stations were established for control of hydrography.

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39. JUNCTIONS

Satisfactory junctions were made with T-11895 on the east and with T-11898 on the west. There is no contemporary survey on the south; the Pacific Ocean is on the north.

40. HORIZONTAL AND VERTICAL ACCURACY

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

46. COMPARISON WITH EXISTING SURVEYS

Comparison was made with U.S.G.S. quadrangles, Honolua and Kahakuloa, 1:24,000 scales, editions of 1956 and 1955 respectively.

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

Approved:

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

GEOGRAPHIC NAMES

Ph-6012

T-11896

Alaeloa Point
 * Alapapa Gulch
 * Anakaluahine Gulch
 Fleming Beach
 Haukoe Point
 Hawea Point
 * Honanana Gulch
 Honokeana Bay
 * Honokohau
 * Honokohau Bay
 * Honokohau Stream
 Honolua
 Honolua Bay
 Honolua Stream
 Kaea Point
 Kaelekii Point
 Kahana
 Kahana Point
 Kahana Stream
 Kahanaiki Gulch
 Kahauiki Gulch
 Kaia Point
 Kaopala
 Kaopala Gulch
 Kapalua
 * Kanounou Point
 Kaukini Ridge
 * Keawalua
 Lipoa Point
 Mahinanui
 Makaluapuna Point

Makuleia Bay
 Maluhia Camp
 * Mokolea Point
 Mokupea Gulch
 * Nakalele Point
 Namalu Bay
 Napili Bay
 * Owaluhi Gulch
 * Pacific Ocean
 * Papanalahoa Point
 Papau
 Papau Gulch
 Poelua
 * Poelua Bay
 * Poelua Gulch
 Pohakupule Gulch
 * Punaha Gulch
 Punalau Point
 * Puu Haunake
 * Waikeakua Gulch
 + * Puu Kaeo
 + * Papanahoa Gulch

Frank W. Pickett
 All Names Approved
 by Office of Geography

Approved:
 A. J. Wright
 1-20-66

* Names appear on this manuscript
 + Names underlined & approved on original Geographic Names Sheet

49. NOTES TO THE HYDROGRAPHER

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

9601	West corner of house	60 W 2611
9602	Pinnacle rock	60 W 2611
9603	Northwest corner of shed	60 W 2611
9604	Lone rock	60 W 2611
9605	Whitewashed rock, center of target	60 W 2611

PHOTOGRAMMETRIC OFFICE REVIEW

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

T-11896

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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 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		
	SIGNATURE OF REVIEWER For: Donald M. Brant <i>Joseph Steinberg</i>				SIGNATURE OF SUPERVISOR, REVIEW SECTION OR UNIT <i>Joseph Steinberg</i>		
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 <i>Joseph Steinberg</i>			

USE REVERSE SIDE FOR REMARKS

USCGM-OC 25253-P&T

FIELD EDIT REPORT
T-11896

Please refer to the Field Edit Report for Maui Island,
Hawaii, strips 1 through 7, which is bound with the Descriptive
Report for T-11894.

REVIEW REPORT T-11896
SHORELINE
12 April 1966

61. GENERAL STATEMENT

See summary accompanying Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Comparison was made with a copy of Registered Planetable Survey No. 3269, 1:20,000 scale made in 1912 and approved March 30, 1914. The shape of the shoreline and the position of the offshore rocks on the two surveys are in good general agreement.

Map manuscript T-11896 supersedes the prior planetable survey and should be used for future nautical chart construction.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with U.S.G.S. quadrangle Honolulu, 1:24,000 scale, edition of 1955. The manuscript is in good agreement with the U.S.G.S. quadrangles except for the offshore rocks. Many of the rocks shown on the quadrangles are not visible on the photography of the area.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with copies of boat sheets PF-10-4-62A and PF-10-4-62B. The shoreline of the two surveys are not in agreement at Makalele Point, latitude 21° 02' 03" longitude 156° 35' 30." N

Two rocks and a coral reef which do not appear on the boat sheet have been noted on the comparison print.

65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Nautical Charts 4130, 1:80,000 scale, 4th edition, August 31, 1964 and with Chart 4124, 1:30,000 scale, 3rd edition, May 3, 1965.

Several rocks shown on the charts are not visible on photography of the area. These have been noted on the comparison print.

* A "NOTES TO VERIFIER" page concerning this information was furnished the Hydro Branch
SCA

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

STRIKE OUT TWO

Kihei, Maui, Hawaii

4 Jan. 1967

I recommend that the following objects which have *(have not)* been inspected from seaward to determine their value as landmarks be charted on *(deleted from)* the charts indicated.

The positions given have been checked after listing by

For: ~~Donald~~ Brant

Joseph Steinberg
Joseph Steinberg Chief

Joseph Steinberg / Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 6-36, Fig. 79. Positions of charted landmarks and non-floating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

NOTES TO VERIFIER
PF-10-4-62A and PF-10-4-62B
(Comparison with T-11896)

T-11896 was field edited in conjunction with the building of hydro signals. No discrepancies requiring correction or addition to the survey were noted.

Copies of the subject boat sheet were compared with T-11896 during final review of the shoreline survey. Those differences between the surveys noted in the final review report follow: (1) the shoreline of the two surveys are not in agreement at Makalele, latitude $21^{\circ}02'03''$ and longitude $156^{\circ}35'30''$, (2) two rocks and a coral reef which do not appear on the boat sheet are located at latitude $21^{\circ}01.96'$ and longitude $156^{\circ}35.58'$; latitude $21^{\circ}01.7'$ and longitude $156^{\circ}37.12'$; latitude $21^{\circ}01.7'$ and longitude $156^{\circ}37.25'$, respectively.

The Photogrammetry Division should be notified in the event the above change and apparent deletions of shoreline survey information constitute a field edit.

*2513
was review*

