

11827

11827

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline(Photogrammetric)

Field No. Office No. T-11827

LOCALITY

State Hawaii

General locality Molokai

Locality Kikipua Point

19⁶¹-1968

CHIEF OF PARTY

Allen L. Powell, Director, AMC

LIBRARY & ARCHIVES

DATE

DESCRIPTIVE REPORT - DATA RECORD

T-11827

PROJECT NO. (II):

PH-6201

FIELD OFFICE (II):

Honolulu, Hawaii

CHIEF OF PARTY

H. J. Seaborg

PHOTOGRAMMETRIC OFFICE (III):

Atlantic Marine Center

OFFICER-IN-CHARGE

Allen L. Powell, Director, AMC

INSTRUCTIONS DATED (II) (III):

Field	April 25, 1962
Office Compilation	May 31, 1962
Office Compilation, Amend. I	December 14, 1962
Office Compilation, Amend. II	February 20, 1963
Office Compilation, Amend. III	January 8, 1964
Office Compilation, Amend. IV	April 24, 1967

METHOD OF COMPILATION (III):

Wild B-8 and Graphic

MANUSCRIPT SCALE (III):

1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:15,000 Pantographed to 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 (IV):

~~MEAN SEA LEVEL~~ MEAN HIGH WATER 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):

KIKIPUA 2, 1962 ✓

LAT.:

LONG.:

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

Y = 306,880.5 ft. ✓ X = 452, 117.6 ft. ✓

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.

DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (II):		DATE:
L. F. Van Scoy		August 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):		
Wild B-8 Plotter		October 2, 1962
Graphic Plotter		January 19, 1962
PROJECTION AND GRIDS RULED BY (IV):		DATE
A. E. Roundtree		7/11/62
PROJECTION AND GRIDS CHECKED BY (IV):		DATE
L. F. Beugnet		7/11/62
CONTROL PLOTTED BY (III):		DATE
Portland Photo Office		1965
CONTROL CHECKED BY (III):		DATE
Portland Photo Office		1965
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):		DATE
H. P. Eichert		December 1964
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY	DATE
	A. L. Shands	9/20/67
	CONTOURS	DATE
	Inapplicable	
MANUSCRIPT DELINEATED BY (III):		DATE
A. L. Shands		9/24/67
SCRIBING BY (III):		DATE
B. L. Barge		12/1/69
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):		DATE
Compilation: C.H. Bishop		10/9/67
Field Edit: R.J. Pate		10/24/69
Scribing & Stick up: B. Wilson		12/22/69
REMARKS:		
Field Edit by: R. L. Newsom		December 1968

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

Wild RC-8 "W"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
62 W 1853 thru 1857	2 Oct.1962	0845	1:25,000	0.8 Ft. above MLLW
62 W 1933 thru 1947	19 Jan.1962	1207	1:15,000	0.5 Ft. above MLLW

TIDE (III) PREDICTED

DIURNAL

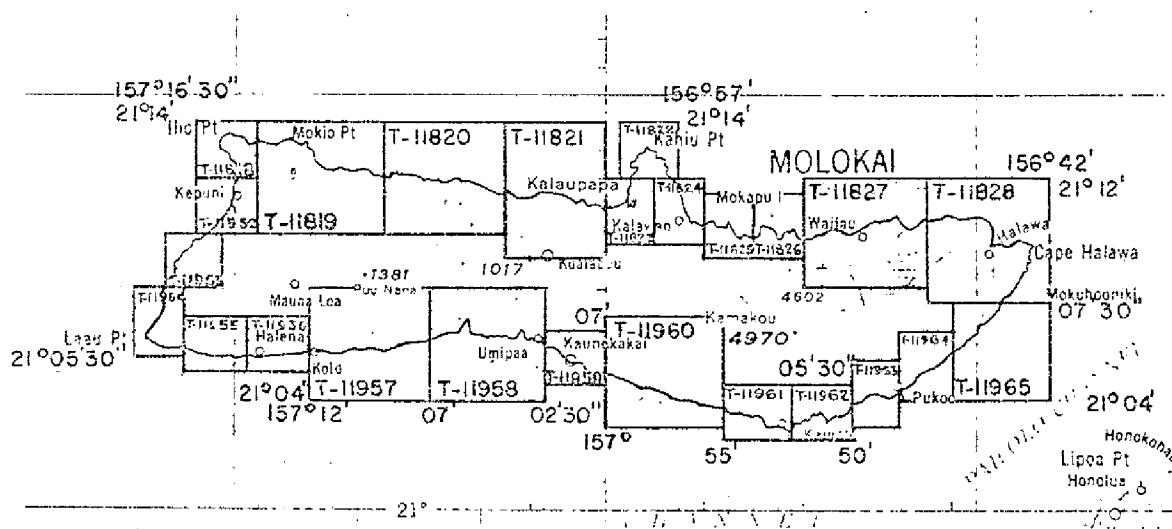
T-11827

COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore area for hydro	October 1967	Superseded
Field edit applied compilation complete	June 1969	

PROJECT PH-6201

SHORELINE MAPPING

1:5,000 AND 1:10,000 SCALES
MOLOKAI ISLAND HAWAII



Official Mileage for Cost Accounts

Sheet No.	Shoreline Lin. Mi.	Area Sq. Mi.	Sheet No.	Shoreline Lin. Mi.	Area Sq. Mi.
11818	4	4	11952	3	3
11819	6	6	11953	3	3
11820	6	6	11954	2	2
11821	4	4	11955	3	3
11822	3	3	11956	3	3
11823	1	1	11957	6	6
11824	3	3	11958	5	5
11825	3	3	11959	3	3
11826	3	3	11960	6	6
11827	6	6	11961	3	3
11828	9	9	11962	4	4
			11963	3	3
			11964	3	3
			11965	3	3
Total			98	98	

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11827

Shoreline survey T-11827 is one of twenty-five similar surveys in Project PH-6201. These maps cover the entire shoreline of Molokai Island. This survey covers that part of the north shore from Halekou to Hakaaana. See page 5 of the Descriptive Report for the area within the project.

Field work preceding compilation consisted of identification of horizontal control, shoreline and field inspection, and selection of photo-hydro signal sites.

Compilation was at 1:10,000 scale, using the photography of January 19 and October 2, 1962. Cronaflex copies of the manuscript, along with ozalid copies and specially prepared photographs, were subsequently provided for transfer of the shoreline to the boat sheet, location of photo-hydro signals, and field edit use.

The manuscript was a vinylite sheet 4 minutes in latitude by 5 minutes in longitude. The survey was field edited in December 1968. After application of field edit data, the manuscript was scribed and reproduced on cronaflex. Final review was in the Atlantic Marine Center in September 1970. One cronaflex copy and a negative of the final reviewed survey are forwarded for record and registry.

FIELD INSPECTION REPORT

Map Manuscripts
T-11952 thru 11965
T-11818 thru 11828

Project PH-6201

January - October 1962

2. AERIAL FIELD INSPECTION

The area covered by this report encompasses the whole of the island of Molokai. This is the fifth largest of the group of islands that form the State of Hawaii. The island was originally formed by the eruption of two volcanos. One was located somewhere near the east end of the island and the other somewhere near the west end. Following these eruptions the numerous deep drainages were created by stream erosion and the ocean on

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Located on the Mākanalua Peninsula is the small settlement of Kalau-papa. The settlement is maintained by the State of Hawaii, Department of Health for the treatment of Hansen's Disease (Leprosy). Special permission must be obtained from the state before visiting this area. No facilities for serving the public are permitted on the peninsula. The U.S. Coast Guard maintains an isolated light station at the northern tip of the peninsula. The area is served by limited airplane service and supplies are brought in by barge at infrequent intervals. A small wharf protected by a short break-water is located at the settlement. This area is isolated from the remainder of the island except for a foot trail that leads down the steep rocky cliffs from the top of the pali southwest of the settlement.

Shoreline around the island vary from the almost vertical rock cliffs along most of the north and east coast, to the narrow and relatively flat coastal areas along the south coast. Most of the south coast is protected by an offshore reef. A few sandy beaches are located along the south and west coasts. Most of the north coast is accessible only by boat and any landings there should be attempted with extreme caution.

Photography was adequate for the identification of horizontal control and shoreline inspection for most of the island. A few sections of the shoreline along the northeast coast of the island were in complete shadow from the most vertical cliffs.

The shoreline for the entire island was visually inspected at the mean high water noted on the field photographs. The shoreline along the north coast except for the Mākanalua Peninsula was inspected by cruising offshore in a small boat. The work was difficult due to the small size of the boat, the rough seas, and strong winds. A few landings were made on the more prominent points along the northeast coast. The remainder of the island was inspected by walking the shoreline in the more accessible areas, and by observations from vantage points along bluffs and cliffs where the shoreline could not be otherwise visited. Scattered sections of the shoreline along the south coast were obscured by overhanging Keawe trees and dense growths of Mangrove trees.

3. HORIZONTAL CONTROL

(a) The following described intersection stations were located by traverse or triangulation as nautical aids, aeronautical aids, and landmarks.

- Molokai Lighthouse
- Molokai Airport Beacon
- Waihuna, Aero Beacon Red Light
- Kaulapuu, Aero Beacon Red Light

Molokai VOR (12K)
 Puu Apalu, Tank
 Ilio Pt., Coast Guard Loran Mast
 Waiahewahewa, Aero Beacon Red Light
 Laau Pt. Light
 Kaunakakai Harbor, Entrance Range, Front Light
 Kaunakakai Harbor, Entrance Range, Rear Light

(b) No datum adjustments were made by the field party.

(c) WAIHELI 2, 1945 was the only control station identified that was not established by the Coast and Geodetic Survey. This station was established by the Territory of Hawaii and can be considered as third order accuracy. The station was destroyed before it could be tied to the 1962 work. HELENA, 1962 which is located about a half mile west of this station was later identified. All other control stations identified were established by the Coast and Geodetic Survey or tied to by the geodetic party during the 1962 season. Many of the old stations could not be recovered and new stations had to be established to meet the control requirements.

(d) Control stations were positively identified in all areas indicated on the control diagram.

(e) All control stations within the limits of the project except for a few along the inaccessible northeast coast of the island were searched for. Part of this recovery was performed by the geodetic party located on the island. All station searched for were listed on Form 526 which was submitted to the Honolulu District Officer. A complete list of all stations reported lost on Form 526 would have to be obtained from the Honolulu District Officer or the Division of Geodesy. No stations that were listed as lost were identified for use in the plot.

(g) The quality of identification of each station or substitute station has been indicated on the control station identification card. None of the identification was considered to be sub-standard.

4. VERTICAL CONTROL

The only vertical control requirement was the recovery of all tidal bench marks in the project area and identification of one mark in each of the groups.

All tidal bench marks listed at Pukoo, Kamalo, Kaunakakai, and Kolo were searched for. A total of 18 bench marks were searched for. All marks were listed on Form 685 which was submitted to the Honolulu District Officer.

A total of 13 U. S. Geological Survey bench marks were searched for. These marks were used in conjunction with the tellurometer traverse work on the island and for use in determining the elevation of landmarks. All marks were listed on Form 685 which was submitted to the Honolulu District Officer.

5. CONTOURS AND DRAINAGE

Contours not applicable

Drainage is self evident on the photographs. All streams except for a few in the larger valleys of the northeast coast and near the east end of the south coast are intermittent. During the wet season there are dozens of waterfalls cascading from the tops of the cliffs and rims of the valleys of the northeast coast. Marsh areas have been indicated on the field photographs.

6. WOODLAND COVER

The mountainous areas of the northeast part of the island is covered with a dense growth of native ferns and hardwoods. A large stand of planted softwoods is located along the top of the pali in the north central part of the island. Keawe trees which were introduced to the island about 100 years ago cover most of the remainder of the island except for the cultivated areas. Along the mud flats of the south coast there are scattered stands of introduced Mangrove trees.

7. SHORELINE AND ALONGSHORE FEATURES

(a) The mean high water line was indicated on the photographs. Along some sections of the northeast coast the shoreline was obscured due to the shadows created on the photographs from the almost vertical cliffs. In some areas of the south coast the shoreline was partially obscured by low overhanging Kiawe trees. In most cases this overhang was less than 10 meters and the approximate correct location was indicated on the photographs. Also along the south coast there are scattered stands of Mangrove trees. In these areas the mean high water line was indicated as apparent shoreline.

The shoreline along the north, east, and small areas of the west and southwest coast contain many areas of alongshore rocks, projecting reefs and ledges, and almost vertical bluffs. These features combined with a normally heavy surf breaking along the shore tend to confuse the location of the mean high water line on the photographs.

Where possible especially along the beach areas and the more accessible sections of the coast the location of the mean high water line was determined by measurements to near by objects.

(b) The low water line was not indicated on the photographs.

(c) Where possible the character of the foreshore was indicated on the photographs.

(d) The north, east, and sections of the west and southwest coast is bordered by rocky cliffs. In some cases these cliffs are over 2000 feet high. Along most of the south coast, sections of the west coast, and the Moomomi area the land has a more gradual slope with a small relatively flat area adjacent to the coast.

(e) The only unnatural features to be found in the project area were located at Kalaupapa, Kamalo, Kaunakakai, Kolo, and Haleolono. All information regarding these features was indicated on the field photographs.

(f) Not applicable

(g) Along the south shore there are the remains of many fishponds. The stone walls for some of these have been completely leveled and for most of the others large sections of the walls have been leveled. The location of these fishponds is apparent on the photographs.

8. OFFSHORE FEATURES

Offshore rocks are located along many areas of the north, east, and sections of the west and southwest coast. Most of these rocks that are visible on the photographs are adjacent to the shore. In these areas it is probable that there are many rocks that are not visible on the photographs but are close enough to the surface of the water to consider the foreshore as being foul with submerged rocks. The height of many of the rocks along the shore was estimated at the time the shoreline was indicated.

(c) The geographic positions for the following charted aeronautical aids was determined by traverse or triangulation during the 1962 field season.

Molokai, Airport Beacon
 Waiahewahewa, Aero Beacon Red Light
 Waihuna, Aero Beacon, Red Light
 Kualapuu, Aero Beacon, Red Light

The geographic position of one new aeronautical aid selected for charting was determined during the 1962 field season.

Molokai VOR (MKK)

All aeronautical aids to be charted were listed on Form 567 and the elevation for each aid was determined by the field party.

(d) The geographic positions of the following list of aids to navigation was determined by the field party during the 1962 season.

Molokai Lighthouse
 Laau Pt. Light
 Ilio Pt., Coast Guard Loren Mast
 Kaunakakai Harbor, Entrance Range, Front Light
 Kaunakakai Harbor, Entrance Range, Rear Light

All nautical aids to be charted were listed on Form 567 and the elevation for each aid was determined by the field party.

(e) Not applicable

10. BOUNDARIES, MONUMENTS, AND LINES

Not applicable

11. OTHER CONTROL

No recoverable topographic stations were established.

In all areas where identifiable objects could be found photo hydro sites were selected. In some cases it will be necessary to locate a more suitable location for the hydrographic signals from the selected photo hydro sites .

12. OTHER INTERIOR FEATURES

All roads in the project area were classified on the field photographs in compliance with the project instructions.

All public buildings with their function was indicated on the field photographs.

The main airport serving the island is located south of the Hoolehua Homestead area in the central section of the island. A small airport for use by small aircraft is located on the Makanalua Peninsula. A small private airstrip is located at Haleolon near the southwest end of the island.

No bridges or overhead cable crossings over navigable water are located in the project area. There are no submerged cables connecting the island with other areas.

13. GEOGRAPHIC NAMES

Not Applicable

Approved:

OCT 30 1962

H. J. Seaborg
H. J. Seaborg
Capt., C & G S
Honolulu District Officer

Respectfully submitted:

Leonard F. Van Scoy
Leonard F. Van Scoy
Supervisory Survey Technician
Unit Chief, C & G S

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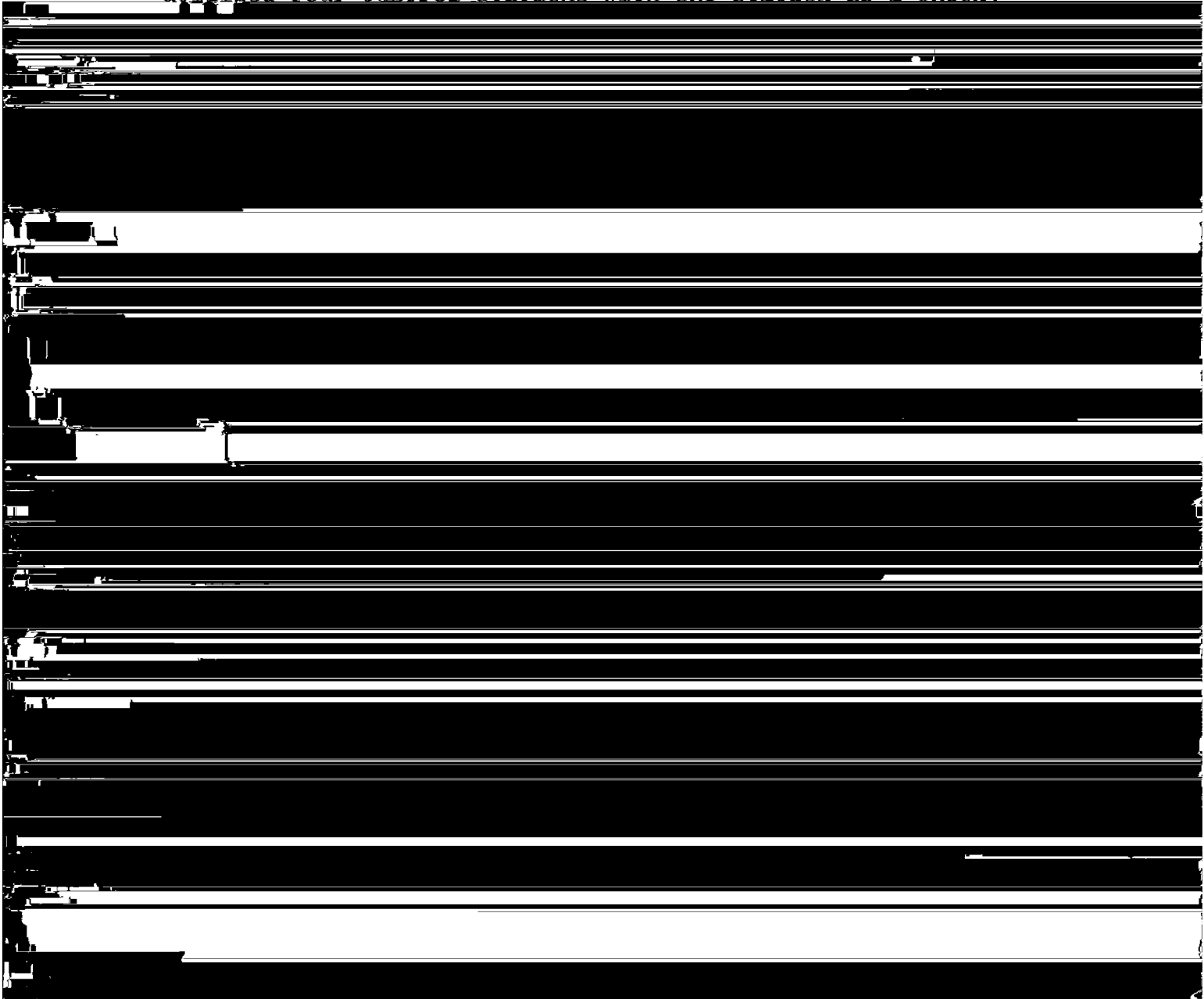
Aerotriangulation Report
PH-6201
Molokai, Hawaii
Strip 4

21. Area Covered

This report covers T-sheets 11821 and 11823 through 11828 along the Northeastern shore of Molokai Island.

22. Method

A horizontal bridge was run on the C-8 stereoplanigraph to provide control for compilation using photographs 62-W-1850 through 1865. The adjustment on the IBM 650 utilized four control stations with one station as a check.



26. In attempting to drop pass points for control of flight 62-W-1850 through 1865 it was found that due to shadows and extreme elevations only a few common points could be provided and these were along the shoreline. Since these points are insufficient to allow detailing by machine methods the shoreline must be delineated by graphic methods and additional points must be pricked by the hydro party.

Submitted by,

John D. Perrow, Jr.
John D. Perrow, Jr.
Cartographer

Approved by,

Henry P. Eichert
Henry P. Eichert
Chief, Aerotriangulation
Section

PH-6201
Molokai, Hawaii
Strip 4

NOTES TO COMPILER

This strip was recomputed on the adjusted control which is now available. The points in the northeastern area moved only 2-3 feet and the junction with Strip #1 showed no appreciable change. The new adjusted positions should be used in preference to those provided earlier.

DESCRIPTIVE REPORT CONTROL RECORD

MAP T- 11827 PROJECT NO. PH-6201 SCALE OF MAP 1:10,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 Ft. = 3048006 meter)	
				FORWARD	(BACK)
HUMU	G.P. page 70	Old Hawaiian	21 10 14.66	✓	
KAUHI AHUA	"	"	156 48 32.13	✓	
KAUNUPAHU	"	"	21 10 01.14	✓	
KIKIPUA	G.P. page 71	"	156 47 02.38	✓	
OLOKUI FLAG	"	"	21 09 45.73	✓	
KIKIPUA 2, 1962	W.O. Form 164	"	156 47 38.36	✓	
WALEHU	G.P. page 71	"	21 10 41.567	✓	
AUWOALA	(No Position Found)	"	156 48 25.256	✓	
			21 08 07.69	✓	
			156 51 08.57	✓	
			306 880.5	✓	1 880.5 (3 119.5)
			452 117.6	✓	2 117.6 (2 882.4)
			21 10 11.242	✓	
			156 50 44.967	✓	
COMPUTED BY CHB	DATE 9/22/67	CHECKED BY R.E.S.	DATE 1-19-70		17

COMPILATION REPORT
MAP MANUSCRIPT T-11827
PROJECT PH-6201

31. DELINEATION:

Shoreline was compiled with the B-8 Plotter using the 1:25,000 scale bridging photography. Because the elevation of several of the aerotriangulation points in the land areas of the models exceeded the vertical range of the B-8 instrument, the models could not be set properly. However, the models were set holding to the aerotriangulation points that could be reached, and points common to the bridging photography and the hydrographic support photography were dropped.

This flight line was flown south of the shoreline between 0830 and 0900 hours. Consequently, much of the mean high water line was in deep shadow and partly obscured by overhanging bluffs. Identification of the mean high water line on this photography was extremely difficult.

The hydrographic support photographs were taken around noon and the flight line was along the shoreline. These centers were located by resection and these photographs were used to revise the shoreline. Photohydro points were located by graphic methods.

32. CONTROL:

See Photogrammetric Plot Report by H.P. Eichert dated Dec. 1964.

33. SUPPLEMENTAL DATA:

None

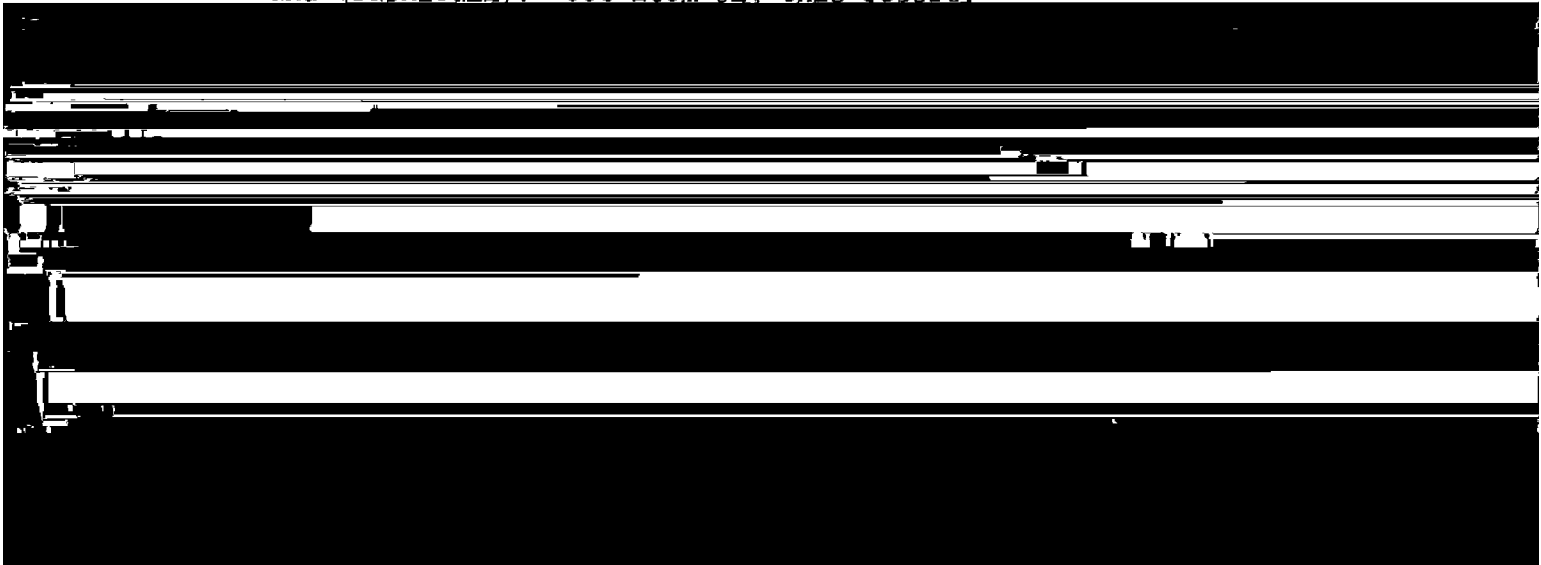
34. CONTOURS AND DRAINAGE:

Contours are not applicable.

One stream was delineated for a short distance back from the shoreline.

35. SHORELINE AND ALONGSHORE DETAILS:

Shoreline and alongshore details were compiled by wild B-8 Plotter and graphically. See Item 31, this report.



1970

38. CONTROL FOR FUTURE SURVEYS:

None

39. JUNCTIONS:

Satisfactory junctions were made with T-11826 to the west and T-11828 to the east. There are no contemporary surveys to the north and south.

40. HORIZONTAL AND VERTICAL ACCURACY:

No statement.

46. COMPARISON WITH EXISTING MAPS:

Comparison was made with USGS Quadrangle KAMALO, HAWAII, ISLAND OF MOLOKAI, Scale 1:24,000, dated 1952.

47. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Nautical Chart 4116, scale 1:250,000, 12th edition, dated August 17, 1964.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None

ITEMS TO BE CARRIED FORWARD:

None

Approved by:

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

Submitted by:

Charles H. Bishop

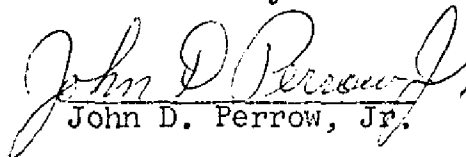
Charles H. Bishop
Cartographer
1 November 1967

Job PH-6201
Molokai Island, Hawaii
Supplement to Compilation Report

Because of the extreme elevations encountered in models along the northeast shore of Molokai, it was impossible to compile the shoreline by normal methods on the B-8 plotters. The methods used are described in the Compilation Reports for PH-6201, T-11825, T-11826, and T-11827.

In order to verify this work, three models (62-W-1853-1854), (62-W-1855-1856), and (62-W-1856-1857) were set on the C-8 Stereoplanigraph, and scaled to the original bridge points. Shoreline detail, offshore rocks, etc. were checked and found to be of National Map Accuracy Standards. Only in model 62-W-1853-1854 was it necessary to hold only the four points nearer the shoreline. The two interior points were an extreme elevation, and were disregarded as probably in error, because the aerotriangulation adjustment used at that time did not include a simultaneous vertical adjustment.

Submitted by:


John D. Perrow, Jr.

Approved by:


Henry P. Eichert
Chief, Aerotriangulation Section

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6201

T-11827

HAKAAANA

HALEKOU

HAWAII (title)

KAHAWAIIKI STREAM

KAHIWA FALLS

KAHIWA GULCH

KAWAINUI STREAM

KEANAPUKA

KEANAPUKA CAVE

KIKIPUA POINT

KUKUIPALAOA

LEPAU POINT

MILO POINT

MOLOKAI

OLOUPENA

PACIFIC OCEAN

POHAKULOA GULCH

WAIHOOKALO GULCH

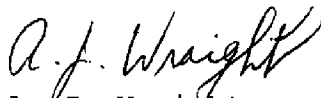
WAIEHU POINT

WAILAU

WAILAU STREAM

WAIOKALA

Approved by:

A. J. Wraight
Chief Geographer

Prepared by:

Frank W. Pickett
Cartographic Technician

49. NOTES FOR THE HYDROGRAPHER:

See notes on the *FIELD EDIT OZALID*.

The following photo-hydro points which are shown on the manuscript and cronapaque ratio prints were selected by the field inspector in 1962 and are listed for your use, if they still exist:

<u>Point</u>	<u>Description</u>
2701	East end of log.
2702	8 ft. pointed boulder.
2703	7 ft. pointd rock at storm HWL.
2704	10' X 8' X 6' rock.
2705	8' X 6' X 6' boulder.
2706	Base of low bluff.
2707	10' X 6' X 4' rock.
2708	Lone lahalla tree.
2709	10 ft. round lahalla tree.
2710	10 ft. black rock.

FORM C&GS-1002 (9-66)		U.S. DEPARTMENT OF COMMERCE ESSA COAST AND GEODETIC SURVEY	
PHOTOGRAMMETRIC OFFICE REVIEW T. 20363 11827			
1. PROJECTION AND GRIDS	2. TITLE	3. MANUSCRIPT NUMBERS	4. MANUSCRIPT SIZE
CHB	CHB	CHB	CHB
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)		7. PHOTO HYDRO STATIONS
CHB	X		CHB
8. BENCH MARKS	9. PLOTTING OF SEXTANT FIXES	10. PHOTOGRAMMETRIC PLOT REPORT	11. DETAIL POINTS
X	X	Bridge W.O.	X
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE	13. LOW-WATER LINE	14. ROCKS, SHOALS, ETC.	15. BRIDGES
CHB	CHB	CHB	X
16. AIDS TO NAVIGATION	17. LANDMARKS	18. OTHER ALONGSHORE PHYSICAL FEATURES	19. OTHER ALONGSHORE CULTURAL FEATURES
X	X	X	X
PHYSICAL FEATURES			
20. WATER FEATURES		21. NATURAL GROUND COVER	22. PLANETABLE CONTOURS
CHB		CHB	X
23. STEREOSCOPIC INSTRUMENT CONTOURS	24. CONTOURS IN GENERAL	25. SPOT ELEVATIONS	26. OTHER PHYSICAL FEATURES
X	X	X	X
CULTURAL FEATURES			
27. ROADS	28. BUILDINGS	29. RAILROADS	30. OTHER CULTURAL FEATURES
X	X	X	X
BOUNDARIES			
31. BOUNDARY LINES		32. PUBLIC LAND LINES	
X		X	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES		34. JUNCTIONS	35. LEGIBILITY OF THE MANUSCRIPT
CHB		CHB	CHB
36. DISCREPANCY OVERLAY	37. DESCRIPTIVE REPORT	38. FIELD INSPECTION PHOTOGRAPHS	39. FORMS
CHB	CHB	CHB	CHB
40. REVIEWER Charles H. Bishop C.H. Bishop		SUPERVISOR, REVIEW SECTION OR UNIT Albert C. Rauck, Jr. Albert C. Rauck, Jr.	
41. REMARKS (See attached sheet)		10/9/67	
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 A. L. Shands		SUPERVISOR Albert C. Rauck, Jr.	

Field Edit Report
To Accompany T 11827

USC&GSS McARTHUR

Ronald L. Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Field edit on manuscript T 11827 was accomplished in conjunction with hydrography on boatsheet AR 20-4-68, H 8995. Shore inspection was done from launches and skiffs. High swells made it impossible to verify ledge limits and MLLW line. Field edit information was shown on two photos #62W1945 and 62W1935 in violet ink and indexed on field edit ozalid T 11827. Other field edit information was shown on the field edit ozalid in violet ink.

52 ADEQUACY

Manuscript T 11827 was completely adequate for a hydrographic survey.

54 RECOMMENDATIONS

None

REVIEW REPORT T-11827

SHORELINE

SEPTEMBER 21, 1970

61. GENERAL STATEMENT

See Summary, which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

There was no registered topographic survey available for comparison purposes at the time of final review.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with U.S.G.S. KAMALO and HALAWA, HAWAII, quadrangles. These are 1:24,000 scale surveys, editions of 1952.

Several rocks shown on the U.S.G.S. quadrangles are not visible on photography of the area. These and the difference in the mean high water line of the surveys have been noted on the comparison print in brown.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with a copy of boat sheet H-8995 (AR-20-4-68, sheet "gg"). The shoreline of the surveys is in good agreement.

A rock on the boat sheet at latitude 21°09'59", longitude 156°51'38" is not visible on the photographs because of shadows. There are five rocks on the shoreline survey that are not shown on the hydrographic survey. These and all other differences between the surveys have been noted on the comparison print in purple.

65. COMPARISON WITH NAUTICAL CHARTS

A visual comparison was made with Chart 4130, 6th edition, revised February 10, 1969. The two surveys are in good general agreement.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

Please refer to item 31 of the Compilation Report and to the Supplement to Compilation Report which is page 20 of the Descriptive Report.

Reviewed by:

Leo F. Beugnet
Leo F. Beugnet
Cartographer

Approved by:

Allen L. Powell
Allen L. Powell, RADM, NOAA
Director, Atlantic Marine Center

Approved by:

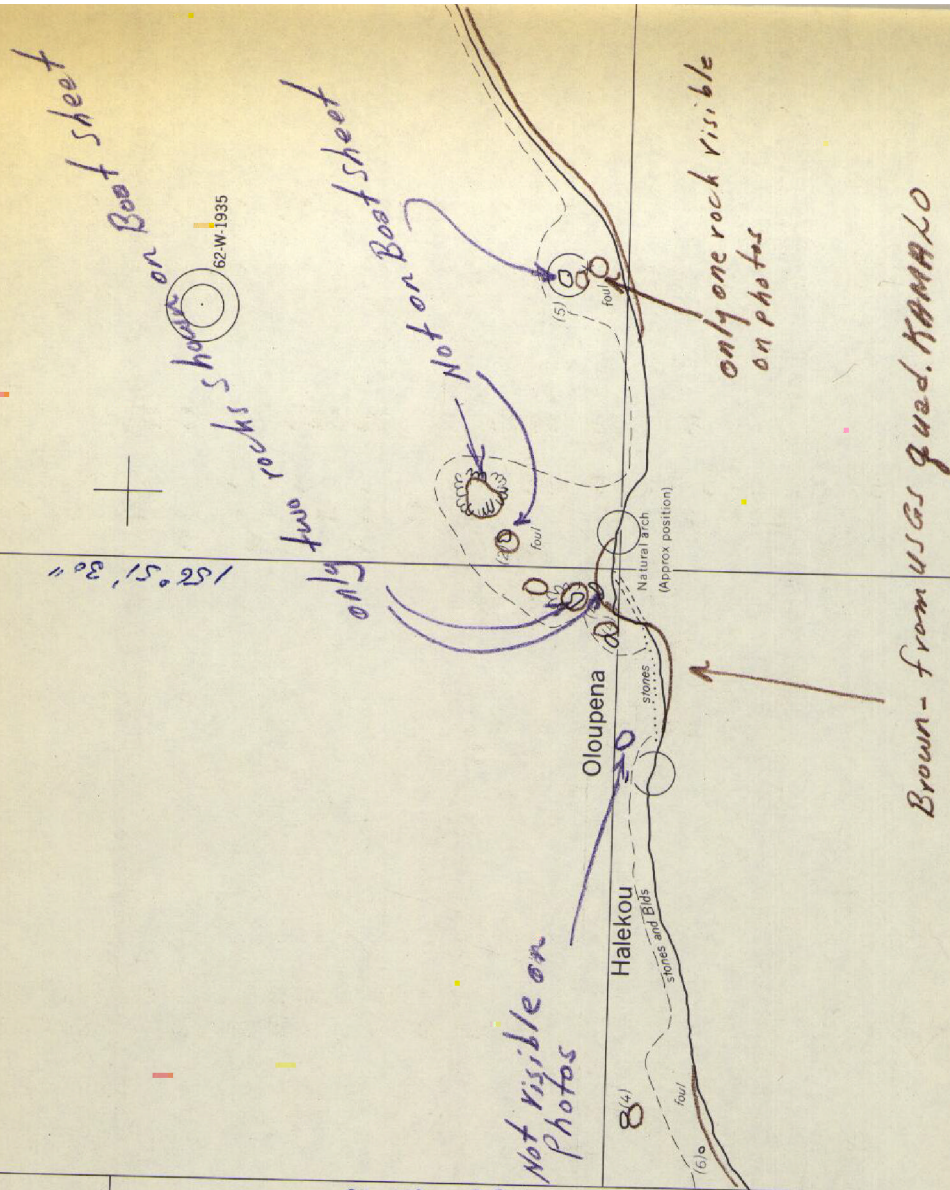
Franko Turner *Jack E. Luth*
Chief, Photogrammetric Branch, Chief, Photogrammetry Division

24° 10' 30"

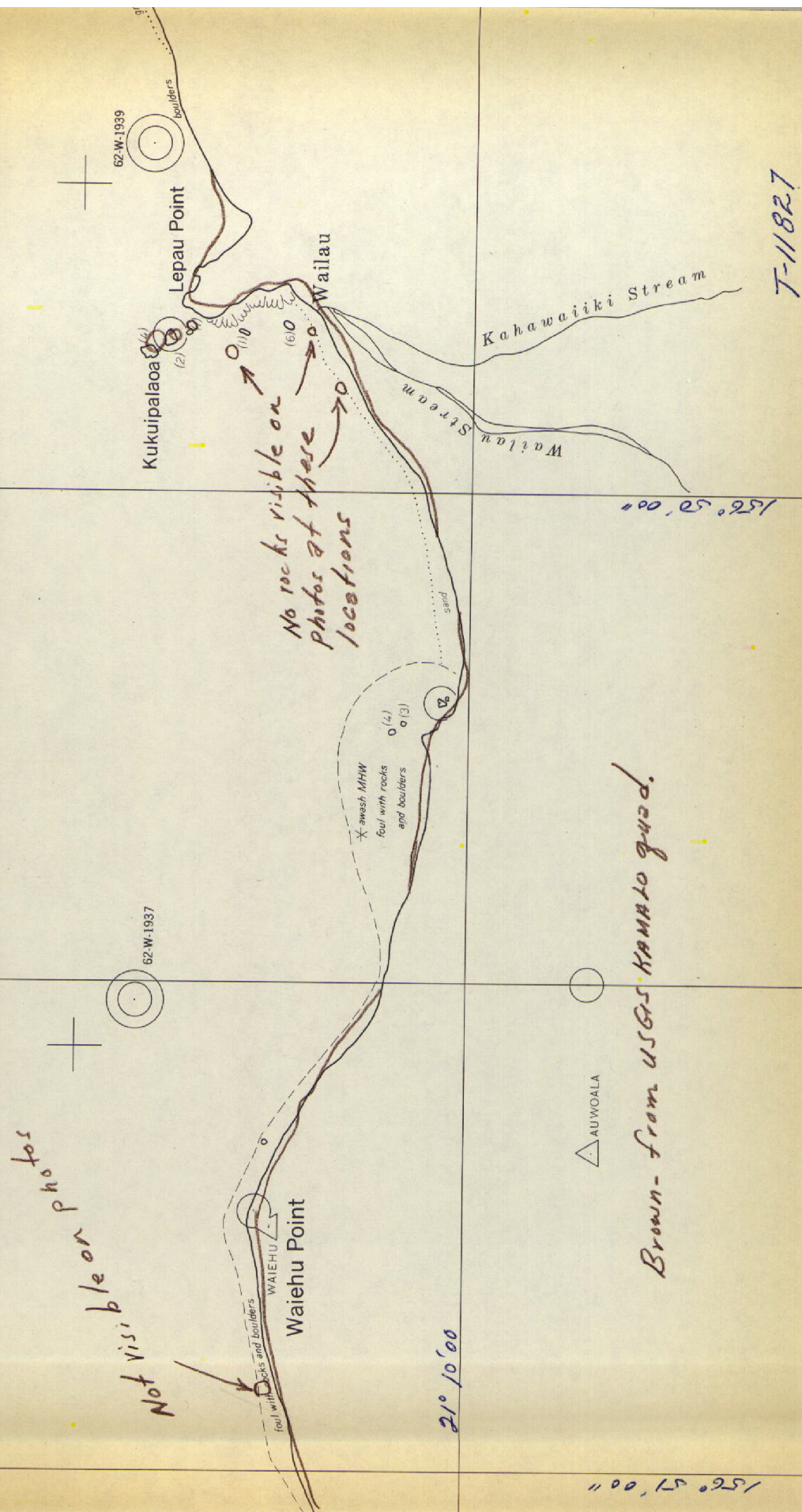
M = 305,000 FT.

156° 05' 00"

21° 10'



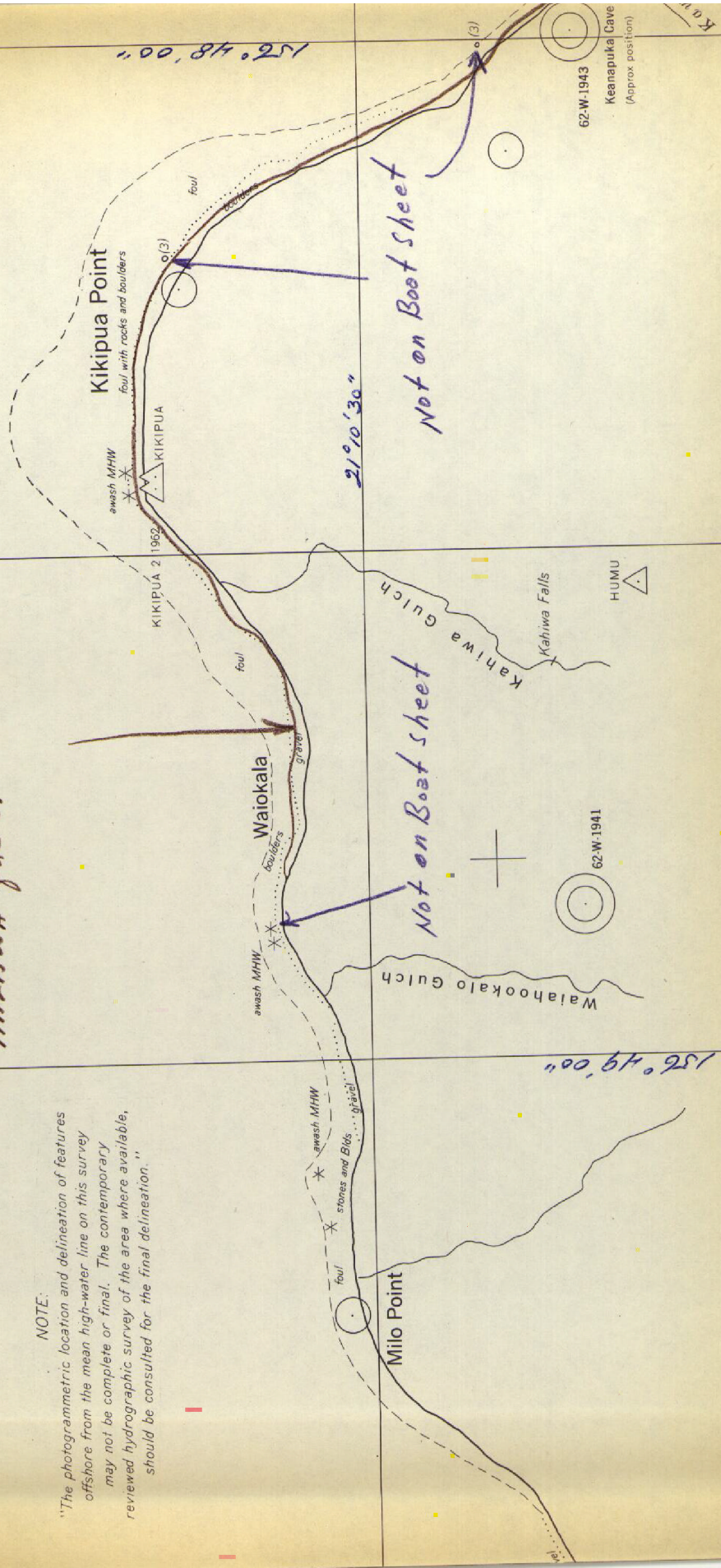
T-11827



21°11'00"

Shoreline in brown from USGS
HAWAII 740 d.

NOTE:
"The photogrammetric location and delineation of features offshore from the mean high-water line on this survey may not be complete or final. The contemporary reviewed hydrographic survey of the area where available, should be consulted for the final delineation."



T-11827

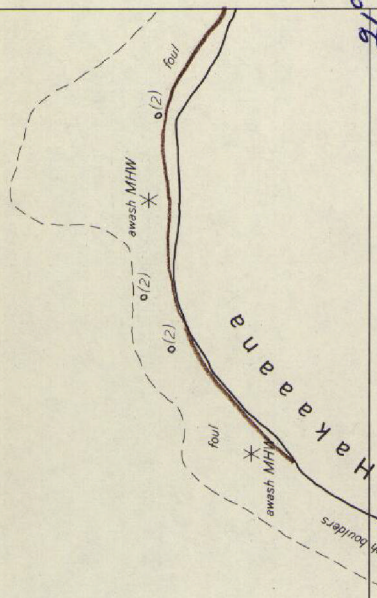
21° 11' 00"

21° 10' 30"

y = 305,000 FT.

10'

KAUHAHUA



Foul line not on Boat Sheet

Shoreline on Boat Sheet

Keanapuka

62-W-1945

Pohakuloa Gulch

Natural arch
(Approx position)
15M wide 3M high

foul with boulders

Shoreline in brown from
USGS HAWAII quad.

15° 47' 00"

15° 47' 30"