

11952

ORIGINAL

11952

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-11952
LOCALITY	
State	Hawaii
General locality	Molokai
Locality	Papohaku Beach
1960-1967	
CHIEF OF PARTY H. J. Seaborg P. A. Stark, Photogrammetric Office	
LIBRARY & ARCHIVES	
DATE	

USCOMM-DC 37022-P66

DESCRIPTIVE REPORT - DATA RECORD
T - 11952

PROJECT NO. (II): 21044 PH-6201		
FIELD OFFICE (II): HONOLULU, HAWAII		CHIEF OF PARTY H. J. SEABORG UNIT CHIEF L. F. VAN SCOY
PHOTOGRAMMETRIC OFFICE (III): PORTLAND, OREGON		OFFICER-IN-CHARGE P. A. STARK
INSTRUCTIONS DATED (II) (III): APRIL 25, 1962 II MAY 31, 1962 III AMENDMENT I: DECEMBER 14, 1962 III AMENDMENT II: FEBRUARY 20, 1963 III AMENDMENT III: JANUARY 8, 1964 III		
METHOD OF COMPILATION (III): KELSH INSTRUMENT		
MANUSCRIPT SCALE (III): 1:5000		STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:3000 PANTOGRAPH SCALE: 1:5000
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): <i>High Water</i> MEAN SEA LEVEL EXCEPT AS FOLLOWS: X 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): PUU O KAIKA, 1925		
LAT.: 21° 11' 03.903"	LONG.: 157° 15' 13.588"	<input checked="" type="checkbox"/> ADJUSTED <input type="checkbox"/> UNADJUSTED
PLANE COORDINATES (IV): Y = 309,487.31 X = 299,979.87		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): L. F. VAN SCOY		DATE: JANUARY - OCTOBER 1962
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): SEPTEMBER 28, 1962 BY FIELD INSPECTION. COMPILATION BY KELSH INSTRUMENT.		
PROJECTION AND GRIDS RULED BY (IV): A. E. ROUNDTREE		DATE 1-7-64
PROJECTION AND GRIDS CHECKED BY (IV): P. SILVERMAN		DATE 1-7-64
CONTROL PLOTTED BY (III): D. N. WILLIAMS		DATE 2-6-64
CONTROL CHECKED BY (III): R. H. MEYER		DATE 2-6-64
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): NONE RECEIVED.		DATE
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY R. H. MEYER	DATE 2-28-64
	CONTOURS NONE	DATE
MANUSCRIPT DELINEATED BY (III): SMOOTH DRAFT: J. L. HARRIS		DATE 3-23-64
SCRIBING BY (III): STICK-UP: D. N. WILLIAMS		DATE 5-19-64
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): ROUGH DRAFT: J. L. HARRIS ADVANCE: J. L. HARRIS		DATE 3-6-64 6-2-64
REMARKS:		

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

C&GS SINGLE LENS "W"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
61 W 1239 THRU 1243	9-27-61	08:55	1:15,000	0.8' ABOVE M.L.L.W.
RATIO PRINTS OF ABOVE AT 1:5000				
60 W 2190 THRU 2192	10-2-60	10:00	1:25,000	0.4' " "
60 W 2557 THRU 2564 (COLOR)	10-10-60	08:23	1:10,000	1.6' " "
COMPUTED FROM PRE-DICTED TIDE TABLES.				

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	DIURNAL RANGE
REFERENCE STATION: HONOLULU, HAWAII		1.2	1.9
COORDINATE STATION: WAIMANALO, HAWAII		1.1	1.8
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV):

Leo F. Beugnot, Atlantic Marine Center

DATE:

Oct. 1970

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

9

RECOVERED:

3

IDENTIFIED:

2

NUMBER OF BM(S) SEARCHED FOR (II):

NONE

RECOVERED:

IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III): NONE

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III): NONE

REMARKS:

COMPILED RECORD

COMPLETION DATE

REMARKS

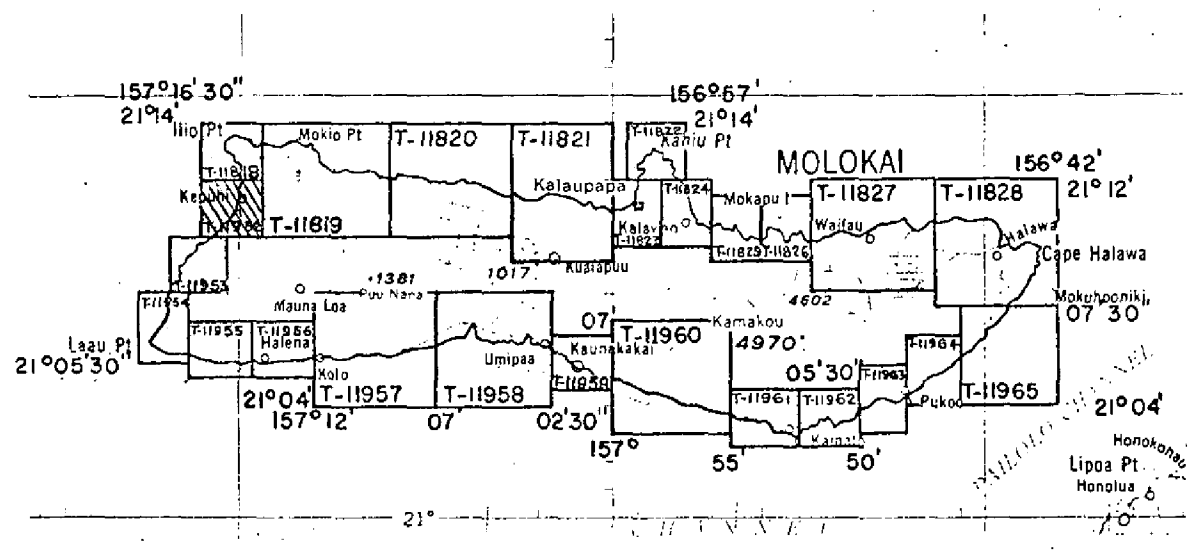
Along shore for hydro	May 1964	
Final Review	October 1970	

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-11952

Shoreline survey T-11952 is one of twenty-five similar surveys in Project PH-6201. The maps in this project cover the entire shoreline of Molokai. This map covers a part of the west coast extending from Papohaku Beach northward to Pohakumauliuli. See page 5 for the area within the project.

Field work preceding compilation consisted of identification of horizontal control and shoreline and field inspection.

Compilation was at 1:5,000 scale by Kelsh instrument, using the photography of October 2, 1960, and September 27, 1961. Cronaflex copies of the map manuscript, along with ozalids and specially prepared photographs were 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 2 minutes in latitude by 2 minutes 30 seconds in longitude. After field edit, which was accomplished during the 1967 field season, the manuscript was scribed and reproduced on cronaflex. Final review was in the Atlantic Marine Center in September 1970. One cronaflex positive 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. AREAL 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 created the great cliffs along the north coast. A later eruption formed the Maianalua Peninsula on the north central coast. The Kauhako Crater remains as evidence of this eruption. The highest peak is Kanakou which is 4958 feet above sea level.

The climate of the island varies considerably depending on the elevation and location in relation to the prevailing trade winds. The mean annual temperature at sea level is about 74 degrees. The temperature seldom varies more than 10 degrees except at the higher elevations. The yearly rainfall varies from about 7 inches around Kaunakakai to over 150 inches in the high mountain sections of the northeast.

The only port in use on the island is located at Kaunakakai. A small wharf connected to the shore by a long mole is used to load and unload barges, and serve small commercial and private boats. At one time a railroad connected the wharf to the area now known as Hoolehua Homesteads. It was abandoned soon after completion as the sugar plantation it was constructed to serve was a failure. The economy of the island is almost wholly dependant on the growing of pineapple and cattle ranching.

The wharf located at Kolo was used for a time to load pineapple from the Maunaloa area. It was later abandoned and since that time has been partially destroyed by fire. The wharf located at Kamalo is now in poor condition and seldom used except by an occasional small fishing or pleasure boat. The wharf located at Pukoo is no longer in evidence. Located at Haleolon is a small harbor protected by a breakwater. This is a private harbor and is used to load sand and cinder barges for shipment to Oahu. A small private airstrip is located along the easterly breakwater.

Located on the Makanalua 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 on the mean high water noted on the field photographs. The shoreline along the north coast except for the Makanalua 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

2 7

Molokai VOR (MEK)
Puu Apalu, Tank
Ilio Pt., Coast Guard Loran Mast
Waiahewa, Aero Beacon Red Light
Laa 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) WAIELI 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 stations 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.

2. 11
- (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 boardered 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 were estimated at the time the shoreline was inspected.

A reef about 0.5 to 1.0 mile offshore is located along most of the south coast. Between the reef and the shore there are scattered areas of sand and many coral heads that project at low water.

9. LANDMARKS AND AIDS

(a) All charted landmarks were investigated by the field party. A total of 13 old landmarks were deleted from the charts and four old landmarks were retained. A total of 11 new landmarks were selected for charting. The old landmarks which were to be deleted were indicated on the sections of the charts on which they appeared. These sections of the charts will be submitted with the field records. All old landmarks that were retained and the new landmarks selected for charting were listed on Form 567, and the elevation for each landmark was determined by the field party.

(b) No interior landmarks were selected for charting.

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

Molokai, Airport Beacon
 Waiahewaheva, 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 Loran 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:

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

OCT 30 1962

Respectfully submitted:

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

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Photogrammetric Plot Report
Molokai, Hawaii
Project 21044
August 1963

21. Area Covered

This report covers T-Sheets 11818, 11819, 11952 thru 11954, along the western shore of the Island of Molokai, Hawaii.

22. Method

A fourteen model bridge was run on the C-8 to provide control for compilation, using photographs 61-W-1236 thru 61-W-1250. The adjustment on the IBM-650 utilized five control stations with their companion stations as checks.

23. Adequacy of Control

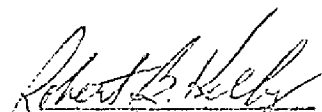
The horizontal control provided complied with the project instructions and was adequate. Closures to control are shown on attached aerotriangulation sketch.


24. Photography

Adequate as to coverage, overlap and definition.

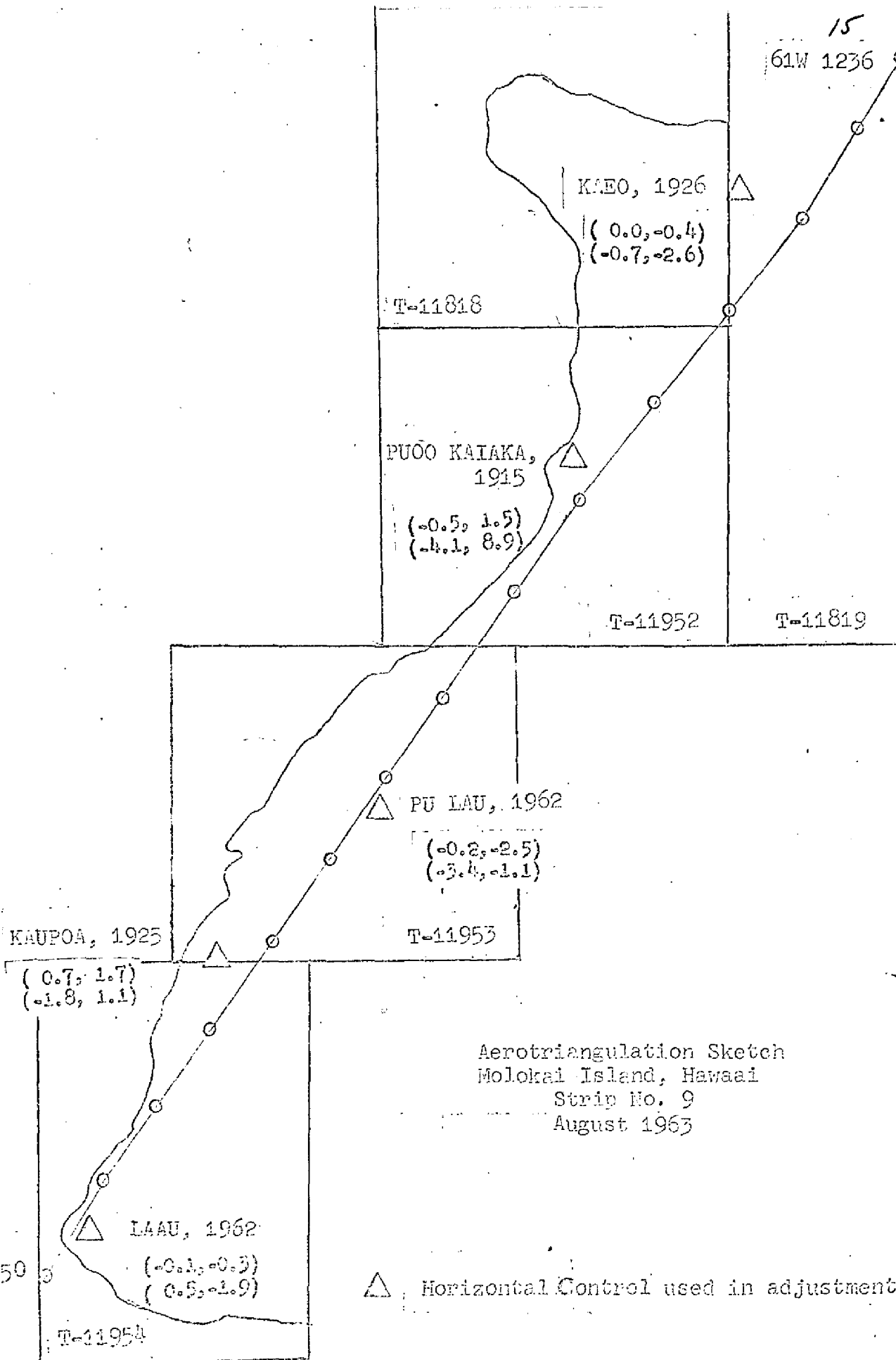
Report submitted by

Affirmed and forwarded by


Robert B. Kelly


Henry P. Eichert
Chief, Aerotriangulation Section

15
61W 1236



Aerotriangulation Sketch
Molokai Island, Hawaai
Strip No. 9
August 1963

△ Horizontal Control used in adjustment

DESCRIPTIVE REPORT CONTROL RECORD

[illegible]

COMPILATION REPORT

MAP MANUSCRIPT T-11952

PROJECT ^{PH-6201}
2104431. DELINEATION:

PLANIMETRY WAS COMPILED BY THE KELSH INSTRUMENT AS FIELD INSPECTED.

32. CONTROL:

ADEQUATE SUPPLEMENTARY CONTROL, BASED ON IDENTIFIED HORIZONTAL CONTROL, WAS ESTABLISHED BY AEROTRIANGULATION.

33. SUPPLEMENTAL DATA:

NONE.

34. CONTOURS AND DRAINAGE:

CONTOURS ARE NOT APPLICABLE.

THE DRAINAGE WAS COMPILED BY THE KELSH OPERATOR AFTER COMPARISON WITH THE U.S.G.S. QUADRANGLE OF THE AREA.

35. SHORELINE AND ALONGSHORE DETAILS:

DATA FURNISHED BY THE FIELD UNIT WAS ADEQUATE FOR THE COMPILATION OF THE MEAN HIGH WATER LINE. THE CHARACTER OF THE FORESHORE AREA HAS BEEN INDICATED, BUT NO LOW WATER LINE WAS FIELD INSPECTED OR DELINEATED.

36. OFFSHORE DETAILS:

NONE.

37. LANDMARKS AND AIDS:

NONE.

38. CONTROL FOR FUTURE SURVEYS:

NONE.

39. JUNCTIONS:

SATISFACTORY JUNCTION WAS MADE WITH T-11953 TO THE SOUTH. ¹⁵ THE PACIFIC OCEAN IS ON THE WEST. THERE ARE NO CONTEMPORARY SURVEYS TO ~~THE NORTH OR TO~~ THE EAST. *and T-11818 to the North.*

40. HORIZONTAL AND VERTICAL ACCURACY:

46. COMPARISON WITH EXISTING MAPS:

COMPARISON WAS MADE WITH THE U.S.G.S. 7½ MINUTE, ILIO POINT, HAWAII, QUADRANGLE, SCALE 1:24,000, EDITION 1952.

47. COMPARISON WITH NAUTICAL CHARTS:

COMPARISON WAS MADE WITH THE FOLLOWING NAUTICAL CHARTS:

NAUTICAL CHART 4121, SCALE 1:5000, SEPT. 17, 1951

NAUTICAL CHART 4120, SCALE 1:80,000 AT LAT. 21° 01', 1ST EDITION, REVISED FEB. 4, 1963.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

NONE.

ITEMS TO BE CARRIED FORWARD:

NONE.

APPROVED:

P. A. Stark
P. A. STARK, CDR, C&GS
PORTLAND FIELD OFFICER

SUBMITTED:

James L. Harris
JAMES L. HARRIS
CARTOGRAPHER

JLB

September 11, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6201 (Molokai Island, Hawaii)

T-11952

Kakaako Gulch

Kepuhi (Village)

Pacific Ocean

Papohaku (Village)

Papohaku Beach

Papohaku Gulch

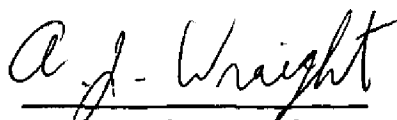
Papohaku Roadstead

Pohakumauliuli

Pohalumauliuli Gulch

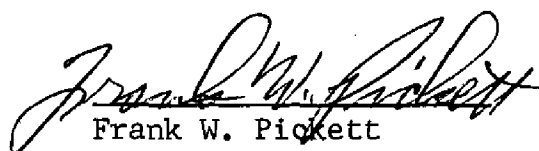
Puu o Kaiaka

Approved by:



A. Joseph Wraight
Chief Geographer

Prepared by:



Frank W. Pickett
Cartographic Technician

49. NOTES FOR THE HYDROGRAPHER:

None.

C&GS FORM 1002
(11-13-61)U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

T-~~3223~~ ~~11952~~ 11952

1. PROJECTION AND GRIDS ✓	2. TITLE ✓	3. MANUSCRIPT NUMBERS ✓	4. MANUSCRIPT SIZE ✓
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY ✓	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) None		7. PHOTO HYDRO STATIONS None
8. BENCH MARKS None	9. PLOTTING OF SEXTANT FIXES None	10. PHOTOGRAMMETRIC PLOT REPORT None	11. DETAIL POINTS None
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE ✓	13. LOW-WATER LINE None	14. ROCKS, SHOALS, ETC. ✓	15. BRIDGES None
16. AIDS TO NAVIGATION None	17. LANDMARKS None	18. OTHER ALONGSHORE PHYSICAL FEATURES ✓	19. OTHER ALONGSHORE CULTURAL FEATURES ✓
PHYSICAL FEATURES			
20. WATER FEATURES ✓		21. NATURAL GROUND COVER ✓	22. PLANETABLE CONTOURS Not Applicable
23. STEREOSCOPIC INSTRUMENT CONTOURS Not Applicable	24. CONTOURS IN GENERAL Not Applicable	25. SPOT ELEVATIONS None	26. OTHER PHYSICAL FEATURES ✓
CULTURAL FEATURES			
27. ROADS ✓	28. BUILDINGS ✓	29. RAILROADS None	30. OTHER CULTURAL FEATURES ✓
BOUNDARIES			
31. BOUNDARY LINES None		32. PUBLIC LAND LINES None	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES ✓		34. JUNCTIONS ✓	35. LEGIBILITY OF THE MANUSCRIPT ✓
36. DISCREPANCY OVERLAY None	37. DESCRIPTIVE REPORT ✓	38. FIELD INSPECTION PHOTOGRAPHS ✓	39. FORMS ✓
40. REVIEWER James L. Harris		SUPERVISOR, REVIEW SECTION OR UNIT Leo F. Beugnet	
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 J. L. Harris		SUPERVISOR Leo F. Beugnet	
43. REMARKS			

Field Edit Report
To Accompany T 11952

USC&GSS McARTHUR

Ronald L. Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Advanced manuscript T 11952 was field edited by personnel aboard the USC&GSS McARTHUR in conjunction with hydrography on boatsheet AR 5-4-67 H 8972. The shoreline was inspected from Launches and Skiffs. Constant heavy swell made it impossible to determine the MLLW line.

Field edit information was shown on one (1) field



REVIEW REPORT T-11952

SHORELINE

SEPTEMBER 29, 1970

61. GENERAL STATEMENT

See Summary, which is page 5 of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

The area south of latitude 21°10'30" was compared with Survey No. 3526, 1:20,000 scale, dated 1915. The two surveys were in good general agreement. No prior registered survey was available for comparison purposes at the time of final review to the north.

Shoreline survey T-11952 supersedes the older survey for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with U.S.G.S. ILIO POINT, HAWAII, 8.5 x 7.5 minute quadrangle, 1:24,000 scale, edition of 1952. Because of the difference in scale, only a visual comparison was feasible. The two surveys appear to be in good general agreement with the following exception: The rocks in the area of Puu O Kaiaka and Kepuhi are not visible on the photographs of the area.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with a copy of boat sheet H-8972 (AR-5-4-67 "bb"). The two surveys are in good agreement; there are no conflicts.

65. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Charts 4120, 3rd edition, dated October 14, 1968, and 4121, 6th edition, dated September 30, 1968. The surveys appear to be in good general agreement. The rocks shown on Chart 4121 between latitudes 21°11'00" and 21°11'30" are not visible on the photographs as individual rocks. The areas appear only as foul areas mixed with rocks and ledges and have been delineated as such.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Reviewed by:

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dstead

foul with rocks and ledges

foul with rocks and ledges

157° 15' 15"

Papohaku Gulch

Papohaku

Puu O Kaiaka

PUU O KAIKA 1925
Stone wall

Ruins

Kepuhi

21° 11' 30"

21° 11' 00"

157° 15' 00"

61 W 1241

T-119 ⁵²