ORIGINAL

11962

11962

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-11962

LOCALITY

State Hawaii

General locality Molokai

Locality KALAELOA HARBOR

1960-62

CHIEF OF PARTY

H. J. Seaborg, Honolulu District Office
M. J. Tonkel, Baltimore District Office

LIBRARY & ARCHIVES

DATE .....

USCOMM-DC 37022-P66

FORM C&GS-181a
(3-66)

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

DESCRIPTIVE REPORT - DATA RECORD

T-11962

PROJECT NO. (II):

PH-6201

FIELD OFFICE (II):	CHIEF OF PARTY
Honolulu District Office	H. J. Seaborg
PHOTOGRAMMETRIC OFFICE (III):	**OFFICER-IN-CHARGE**
Baltimore District Office	Miller J. Tonkel

INSTRUCTIONS DATED (II) (III):

II April 25, 1962
III May 31, 1962
III December 14, 1962 Amendment 1

METHOD OF COMPILATION (III):

Kelsh Plotter

MANUSCRIPT SCALE (III):	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):
1:5,000	1:5,000
DATE RECEIVED IN WASHINGTON OFFICE (IV):	**DATE REPORTED TO NAUTICAL CHART BRANCH (IV):**

APPLIED TO CHART NO.	DATE:	DATE REGISTERED (IV):

GEOGRAPHIC DATUM (III):	VERTICAL DATUM (III):
Old Hawaiian Datum	High Water 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):

KEAWANUI, 1925

LAT.:	LONG.:	☒ ADJUSTED ☐ UNADJUSTED

PLANE COORDINATES (IV):		STATE	ZONE
Y = 262,154.00	X = 436,416.00	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.

USCOMM-DC 36393A-P66

FORM C&GS-181b
(3-66)

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

DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (II):	DATE:
Leonard F. Van Scoy	Jan. Oct. 1962

MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

1961 Photography with shoreline inspection.

PROJECTION AND GRIDS RULED BY (IV):	DATE
F. E. Buck	July 1962
PROJECTION AND GRIDS CHECKED BY (IV):	DATE
W. Masula	July 1962
CONTROL PLOTTED BY (III):	DATE
H. R. Rudolph	July 1962
CONTROL CHECKED BY (III):	DATE
J. Steinberg	July 1962
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):	DATE
E. H. Ramey	July 1962
STEREOSCOPIC INSTRUMENT COMPILATION (III): PLANIMETRY	DATE
J. C. Richter	July 1962
CONTOURS	DATE
MANUSCRIPT DELINEATED BY (III):	DATE
L. Senasack	Aug. 1962
SCRIBING BY (III):	DATE
L. L. Graves	March 1964
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):	DATE
C. C. Harris	March 1964

REMARKS:

USCOMM-DC 36393B-P66

FORM C&GS-181c
(3-66)

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

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

RC-8 - "W"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
61W 732 - 733	23 Sept 1961	0846	1:15,000	0.1 above MLLW
61W 997 - 998	24 Sept 1961	1152	1:15,000	0.9 above MLLW

TIDE (III) Diurnal

RATIO OF	MEAN	SPRING

T-11962

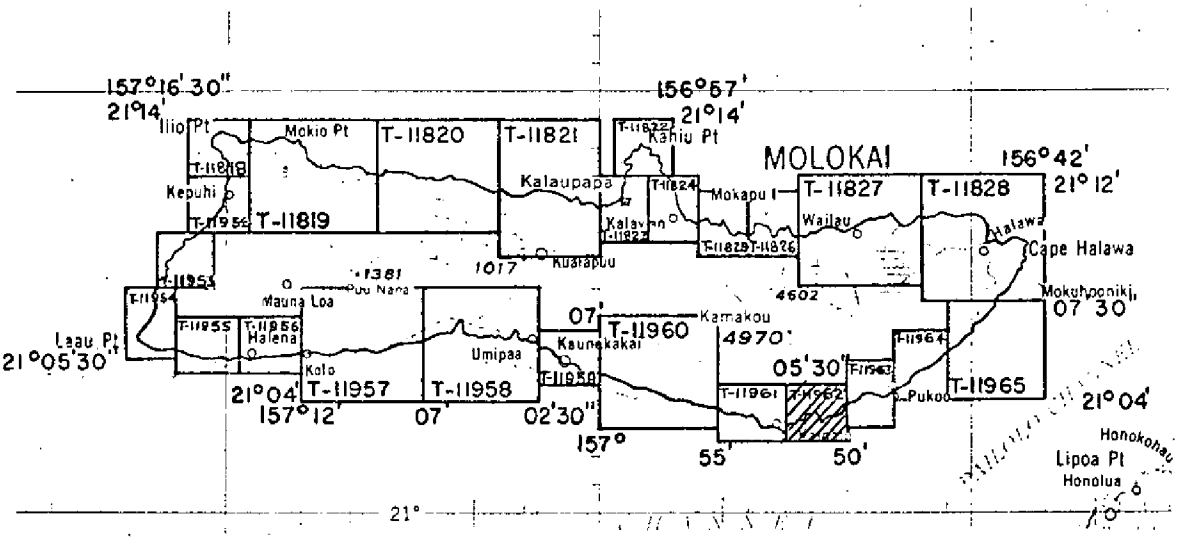
COMPILATION RECORD	COMPLETION DATE	REMARKS
Alongshore area for hydro	July 1964	
Final Review	Jan. 1971	

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-11962

Shoreline survey T-11962 is one of twenty-five similar surveys in Project PH-6201. These surveys cover the entire coast of Molokai. This survey covers that part of the south coast extending from Ualapue to the vicinity of Kamalo. See page 5 for the area within the project.

Field work preceded compilation. This consists of recovery and identification of horizontal control, shoreline and field inspection and the selection of landmarks for charts.

Compilation was at 1:5,000 scale by Kelsh Instrument methods using the photography of October 1960 and September 1961. Cronaflex copies of the compilation manuscript along with ozalids and specially prepared photographs were subsequently furnished for transfer of the shoreline to the boat sheet, field edit use and for photohydro support.

There is no field edit report or sheet for this survey. It was evidently field edited in conjunction with hydrography in the area and no discrepancies noted.

The compilation manuscript was a vinylite sheet 2 minutes in latitude by 2 minutes 30 seconds in longitude which was scribed and reproduced on cronaflex. Final review was in the Atlantic Marine Center in January 1971. 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 errosion and the ocean created the great cliffs along the north coast. A later eruption formed the Makanalua Peninsula on the north central coast. The Kauhako Crater remains as evidence of this eruption. The highest peak is Kamakou 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 seldomed 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 Kalaupapa. The settlement is maintained by the State of Hawaii, Department of Health for the treatment of Hanson'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 breakwater 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 accessable 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 an 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 accessable 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
Maihuna, Aero Beacon Red Light
Haulapuu, Aero Beacon Red Light

Molokai VOR (MKK)
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) 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 inaccessable northeast coast of the issland 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 accessable 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 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 Halealeno. All in-

[redacted]

(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 Loran Mast
Kaunakakai Harbor, Entrance Range, Front Light
Kaunakakai Harbor, Entrance Range, Rear Light

[redacted]

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

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

OCT 30 1962

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

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

Aerotriangulation Report
MOLOKAI Island, Hawaii
Project PH-6201
July 1962

Aera Covered

This report discusses the results of aerotriangulation of three strips of photographs on the southeast portion of Molokai Island. It covers shoreline surveys T-11828 (in part) at 1:10,000 scale, T-11958 (in part) at 1:10,000 scale, T-11959 at 1:5000 scale, T-11960 at 1:10,000 scale, T-11961 thru T-11964 at 1:5000 scale and T-11965 at 1:10,000 scale. Other parts of this project will be covered by subsequent reports.

Method

The three strips were done by stereoplanigraph and furnish sufficient pass points for compilation of shoreline details by Kelsh instruments. Strip #3 coordinates were computed by a linear transformation using the Clary Computer. Strip #1 and #2 were computed by the IBM-650 Computer. Although two stations did not hold in the adjustment for Strip #2 (See Item 23 below), the adjustment for all strips is believed to be satisfactory for the required accuracy of these surveys. This is based on the closures to other stations and the ties between strips. (See appended sketch)

23. Adequacy of Control

With exceptions below, control was adequate and complied with project instructions.

Advance field positions for Stations HALEAHI, 1962 and RAYKAMI, 1962 were used. Both indicated a similar error in X-coordinates. Inconsistencies were detected in directions furnished by the field party which could account for these discrepancies. Positions affected in Strip #2 should be verified after the receipt of final positions.

24. Supplemental Data

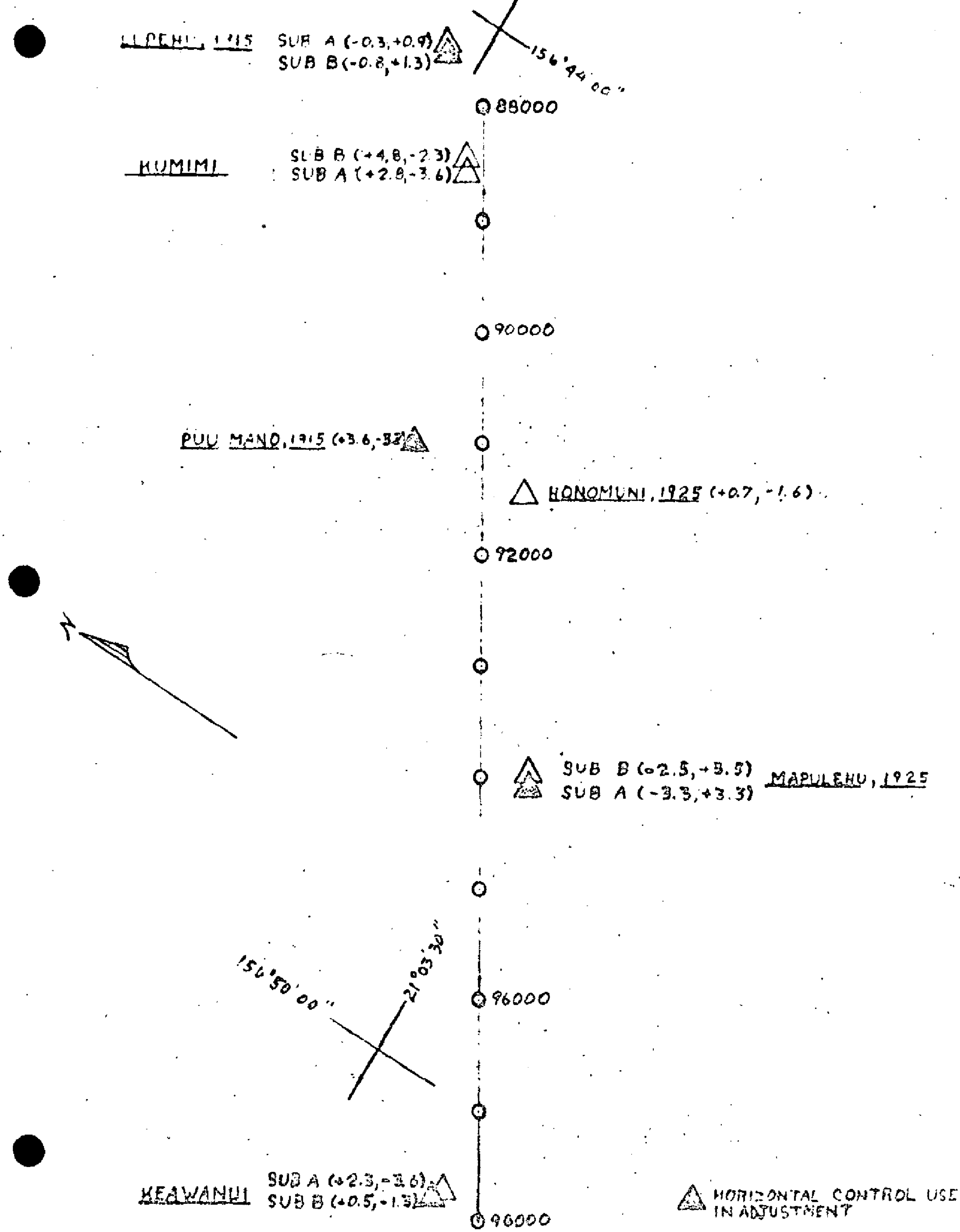
None.

25. Photography

Adequate for aerotriangulation

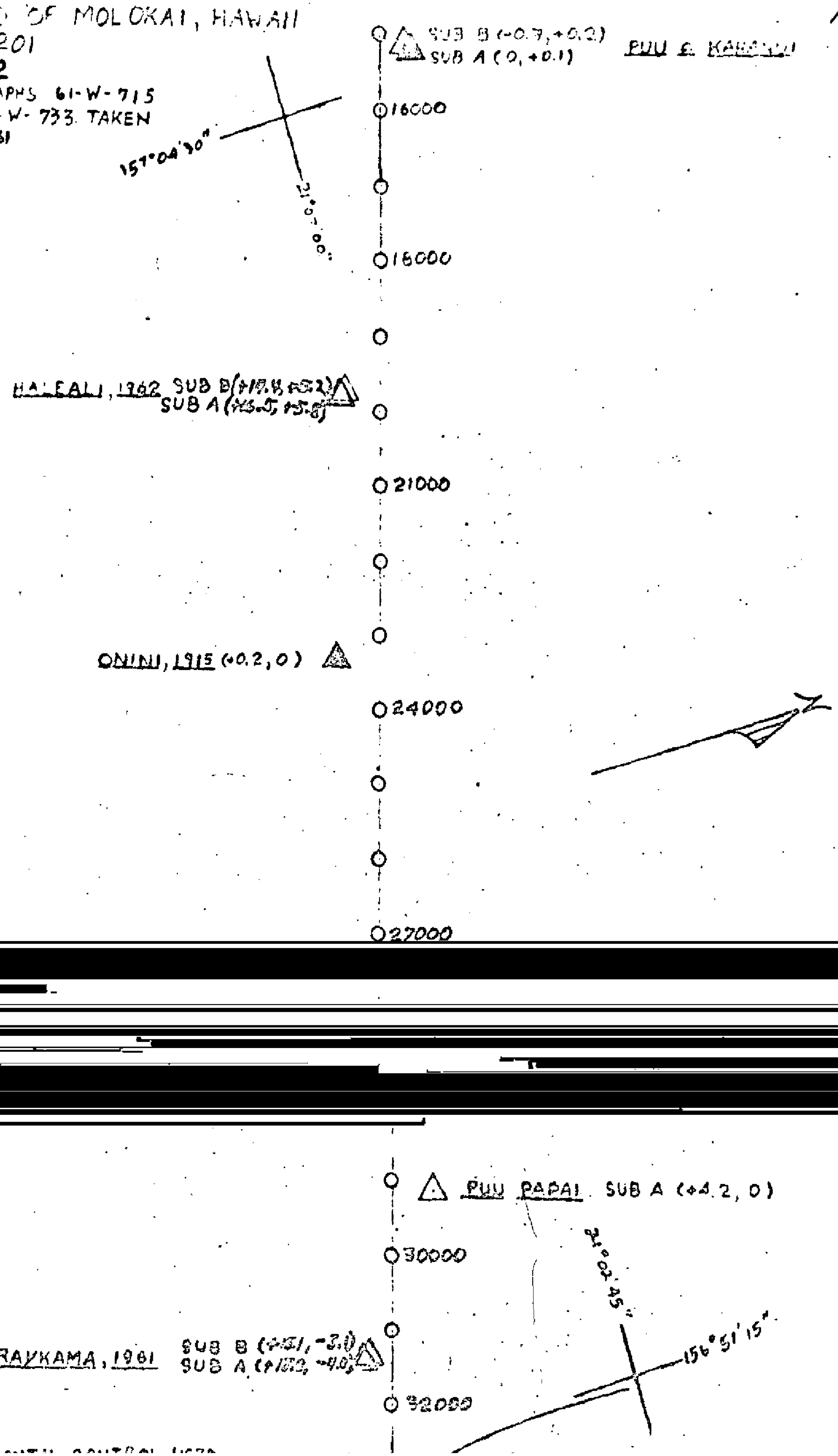
ISLAND OF MOLOKAI, HAWAII
PH-6201
STRIP 1

PHOTOGRAPHS 61-W-988 THRU 61-W-995 TAKEN 24 SEP 61 15

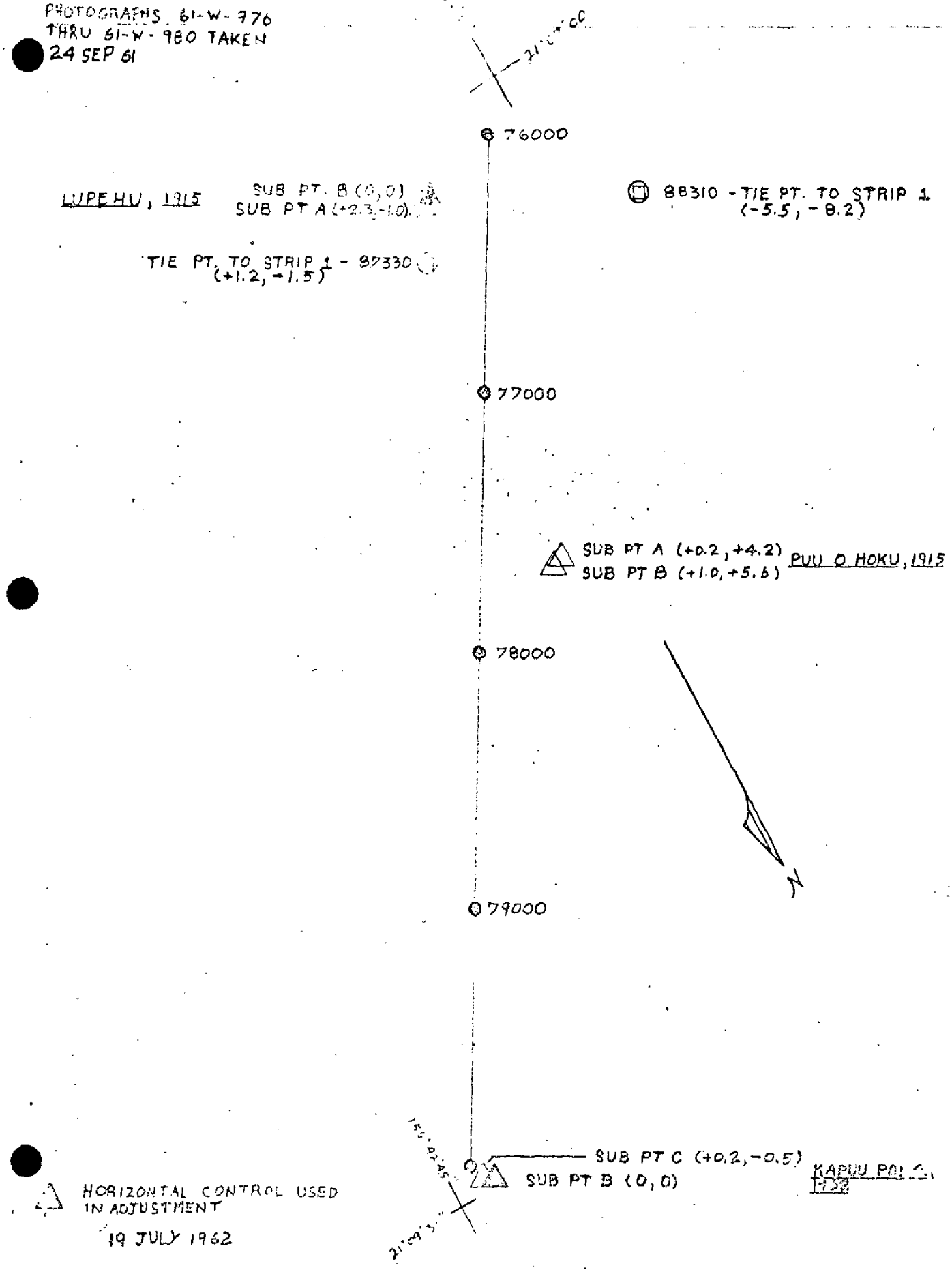


5 JULY 1962

ISLAND OF MOLOKAI, HAWAII
PH - 6201
STRIP 2
PHOTOGRAPHS 61-W-715
THRU 61-W-733 TAKEN
23 SEP 61



PH - 6201
STRIP 3
PHOTOGRAPHS 61-W-976
THRU 61-W-980 TAKEN
24 SEP 61



FORM 164
(4-23-54)

U.S. DEPARTMENT OF COMMERCE — COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT — CONTROL RECORD

MAP T- 11962 PROJECT NO. PH-6201 SCALE OF MAP 1:5,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE / LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
KEAWANUI 1925	P C Pg. 3	Old Hawaiian	262,154.00 436,416.00							
MANAWAI 1888	"	"	262 900 441 312							
MANAWAI	p. 67		21° 03 25.52 156° 50 19.63							

1 FT. = .3048006 METER

COMPUTED BY: E. L. Williams DATE 2/15/63 CHECKED BY: D. M. Brant DATE 3/1/63

COMM-DC-57843

PROJECT 21044 (PH-6291)

Preliminary Compilation Report
Surveys T-11959 thru T-11965

31. DELINEATION

Stereoscopic instrument (Kelsh Plotter) methods were used for compilation with photography taken in 1961.

Interior details are incomplete.

32. CONTROL

The identification, density and placement of horizontal control was adequate.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours - Inapplicable

Drainage was delineated by stereoscopic methods.

35. SHORELINE AND ALONGSHORE DETAILS

Shoreline inspection was adequate. The highwater line was delineated using the reference distances from prominent objects where they were recorded on the field inspection photographs.

The low water line (where shown) was delineated from office interpretation of the photographs.

36. OFFSHORE DETAILS

Offshore details (reef lines, etc.) were delineated from office interpretation of the photographs. The color photography was used as an aid for compiling the offshore details.

37. LANDMARKS AND AIDS

Landmarks and aids for surveys T-11959 thru T-11965 are reported on Forms 567. Copies of these forms are a part of this report.

38. CONTROL FOR FUTURE SURVEYS

There are no recoverable topographic stations on this group of surveys.

An incomplete copy of these surveys showing the shoreline and offshore details along with a set of ratio photographs with pass points and field identified photo-hydro signals was prepared and submitted for the use of the hydrographic party.

39. JUNCTIONS

Junctions for surveys T-11959 thru T-11965 are in agreement.

40. HORIZONTAL AND VERTICAL ACCURACY

See Item 23 of the Aerotriangulation Report bound with this report.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with the following U.S.G.S. Quadrangles:

Kamalo, Hawaii	1:24,000 Scale	1952
Halawa, Hawaii	" "	"
Kaunakai, Hawaii	" "	"

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 4130	1:80,000	3rd Ed. 1936	Revised 6/2/58
Chart No. 4120	1:80,000	1st Ed. 1942	Revised 8/1/60
Chart No. 4121	1:5,000	1st Ed. 1928	Revised 9/17/57

Items to be applied to Nautical Charts immediately: None

Items to be carried forward: None

Respectfully submitted,
22 January 1964

Donald M. Brant
Carto. (Photo.)

Approved and Forwarded

Miller J. Tonkel
CDR. C. & G. S.
Baltimore District Office

September 11, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6201 (Molokai Island, Hawaii)

T-11962

Kahananui Gulch
Kainaohe Fishpond
Kalaeloa
Kalaeloa Harbor
Kalohi Channel
Keawanui Fishpond
Paialoa Fishpond
Puhaloa Fishpond
Ualapue (village)
Ualapue Fishpond
Wawaia Gulch
Molokai

Approved by:

A. J. Wraight

A. Joseph Wraight
Chief Geographer

Prepared by:

Frank W. Pickett

Frank W. Pickett
Cartographic Technician

FORM C&GS-1002
(9-66)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

T- 11962

1. PROJECTION AND GRIDS	2. TITLE	3. MANUSCRIPT NUMBERS	4. MANUSCRIPT SIZE
DMB	DMB	DMB	DMB
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
DMB	DMB		DMB
8. BENCH MARKS	9. PLOTTING OF SEXTANT FIXES	10. PHOTOGRAMMETRIC PLOT REPORT	11. DETAIL POINTS
DMB	XX	DMB	DMB
ALONGSHORE AREAS *(Nautical Chart Data)*			
12. SHORELINE	13. LOW-WATER LINE	14. ROCKS, SHOALS, ETC.	15. BRIDGES
DMB	DMB	DMB	XX
16. AIDS TO NAVIGATION	17. LANDMARKS	18. OTHER ALONGSHORE PHYSICAL FEATURES	19. OTHER ALONGSHORE CULTURAL FEATURES
DMB	DMB	DMB	DMB
PHYSICAL FEATURES			
20. WATER FEATURES	21. NATURAL GROUND COVER		22. PLANETABLE CONTOURS
DMB	DMB		XX
23. STEREOSCOPIC INSTRUMENT CONTOURS	24. CONTOURS IN GENERAL	25. SPOT ELEVATIONS	26. OTHER PHYSICAL FEATURES
XX	XX	XX	DMB
CULTURAL FEATURES			
27. ROADS	28. BUILDINGS	29. RAILROADS	30. OTHER CULTURAL FEATURES
DMB	DMB	XX	DMB
BOUNDARIES			
31. BOUNDARY LINES		32. PUBLIC LAND LINES	

[redacted]

MISCELLANEOUS		
33. GEOGRAPHIC NAMES	34. JUNCTIONS	35. LEGIBILITY OF THE MANUSCRIPT

[redacted]

REVIEW REPORT T-11962

SHORELINE

JANUARY 7, 1971

61. GENERAL STATEMENT:

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

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Comparison was made with a copy of registered survey No. 4113, 1:5,000 scale, dated January, 1925. The shoreline of the two surveys is not in good agreement, that of survey No. 4113 is north of that delineated on T-11962. Survey No. 4113 is superseded by T-11962 for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Comparison was made with U.S.G.S. KAMALO, HAWAII, 7.5 by 8.5 minute quadrangle, 1:24,000 scale, edition of 1952. The two surveys are in good general agreement, no conflicts were noted.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

There were no contemporary hydrographic surveys available for comparison purposes at the time of final review.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with chart 4130 6th edition, February 10, 1969. The following were noted:

> The fixed aid to navigation at Kalaeloa Harbor is not visible on the photographs nor is it listed in the 1970 Light List, Vol. III, Pacific Coast and Pacific Islands.

A rock awash located at latitude 21°02.6' longitude 156°51.2' is not visible on photographs of the area.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

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:

Chief, Photogrammetric Branch

Jack E. Guth

Chief, Photogrammetry Division

Form 567
(10-15-5[illegible])

U.S. DEPARTMENT OF COMMERCE
COAST AND GE[illegible]TIC SURVEY

~~NONFLOATING AIDS OR~~ LANDMARKS FOR CHARTS

TO BE CHARTED
~~xxxxxxxxxx~~ } STRIKE OUT TWO
~~xxxxxxxxxx~~

Molokai Island, Hawaii Feb. 18, 19 63

I recommend that the following objects which have (~~xxxx~~) been inspected from seaward to determine their value as landmarks be charted on (~~xxxxxxxx~~) the charts indicated.

The positions given have been checked after listing by Donald M. Brant

Miller J. Tonkel
Chief of Party.

STATE Hawaii

CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE* ° ′	LATITUDE* ″ D.M. METERS	LONGITUDE* ° ′	LONGITUDE* ″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
TANK	Ht. 20 (224) (Steel)		21 03	47.02 1446.1	156 51	20.24 584.3	Old Hawaii	Photo T-11962	May 1962			X	4116 4130
TANK	Ht. 30 (281) (Steel)		21 04	11.12 341.9	156 50	0.75 21.75	"	Photo T-11962	May 1962			X	"

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating 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

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