

11821

11821

| | |
|---|--------------------|
| 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-11821 |
| LOCALITY | |
| State | HAWAII |
| General locality | MOLOKAI |
| Locality | KALUANUI |
| 19 60 ⁶⁵ - 1968 | |
| CHIEF OF PARTY | |
| Allen L. Powell, Director, AMC | |
| LIBRARY & ARCHIVES | |
| DATE | |

DESCRIPTIVE REPORT - DATA RECORD

T -11821

PROJECT NO. (II):

PH-6201

FIELD OFFICE (II):

Honolulu

CHIEF OF PARTY

H. J. Seaborg

PHOTOGRAMMETRIC OFFICE (III):

Atlantic Marine Center

OFFICER-IN-CHARGE

Allen L. Powell, Director, AMC

INSTRUCTIONS DATED (I) (III):

Office Compilation

| | | | |
|---|---|-----------|-----|
| " | " | Amendment | I |
| " | " | " | II |
| " | " | " | III |
| " | " | " | IV |

May 31, 1962

December 14, 1962

February 20, 1963

January 8, 1964

April 24, 1967

METHOD OF COMPILATION (III):

Wild B-8

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 (III):

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):

HAHAEULA 2, 1962 ✓

LAT.:

LONG.:

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

y = 301 811.0 ft. ✓ x = 384, 207.8 ft. ✓

Hawaii

2

ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (I) 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.

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: |
| L. F. Van Scoy | | August 1962 |
| MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): | | |
| 2 October 1960 Wild B-8 Plotter | | |
| PROJECTION AND GRIDS RULED BY (IV): | | DATE |
| A. E. Roundtree | | 2-2-65 |
| PROJECTION AND GRIDS CHECKED BY (IV): | | DATE |
| R. Glaser | | 2-10-65 |
| CONTROL PLOTTED BY (III): | | DATE |
| Portland Photogrammetric Office | | 1965 |
| CONTROL CHECKED BY (III): | | DATE |
| Portland Photogrammetric Office | | 1965 |
| RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): | | DATE |
| H. P. Eichert | | December 1964 |
| STEREOSCOPIC INSTRUMENT COMPILATION (III): | PLANIMETRY | DATE |
| | Wild B-8 | A. L. Shands July 24, 1967 |
| | CONTOURS | DATE |
| | Inapplicable | |
| MANUSCRIPT DELINEATED BY (III): | | DATE |
| A. L. Shands | | September 16, 1967 |
| SCRIBING BY (III): | | DATE |
| B. Wilson | | Oct 15, 1969 |
| PHOTOGRAMMETRIC OFFICE REVIEW BY (III): | | DATE |
| Compilation C. H. Bishop | | Sept. 20, 1967 |
| Field Edit R. E. Smith | | Oct. 17, 1969 |
| Scribing & Stick-up R. E. Smith | | Dec. 5, 1969 |
| 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 |
|------------------------|-------------|------|---------|-------------------|
| 60 W 2171 thru 2173 | 2 Oct. 1960 | 0849 | 1:25160 | 0.8 ft. above MHW |

TIDE (III) Predicted

Diurnal

| | RATIO OF RANGES | MEAN RANGE | SEMI RANGE |
|--------------------------------|--------------------|---------------|--------------------------|
| REFERENCE STATION: HONOLULU | | 1.2 | 1.9 |
| SUBORDINATE STATION: Waimanalo | 0.92 | 1.1 | 1.8 |
| SUBORDINATE STATION: | | | |

WASHINGTON OFFICE REVIEW BY (IV): *Leo F. Baugnot, Atlantic Marine Center*

DATE:

August 1970

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

8

RECOVERED:

2

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):

4

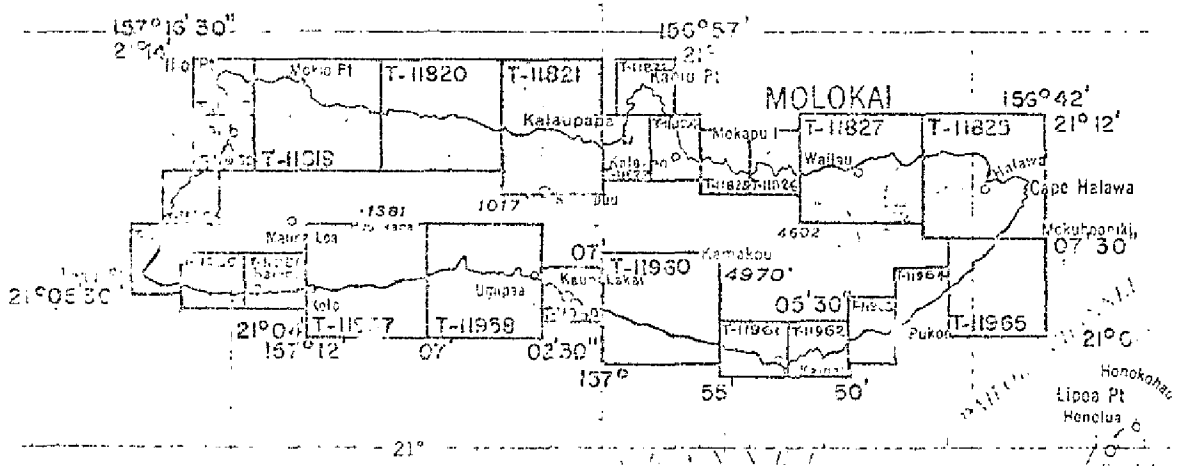
REMARKS:

T-11821

| COMPILATION RECORD | COMPLETION DATE | REMARKS |
|--|-----------------|------------|
| Alongshore area for hydro | August 1967 | Superseded |
| Field edit applied compilation complete | July 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 | 98 |

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11821

Shoreline survey T-11821 is one of twenty-five similar surveys in Project PH-6201. The surveys in this project cover the entire coast of Molokai Island, Hawaii. This survey covers that part of the north coast extending from Halo eastward to Auahua.

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

Compilation was at 1:10,000 scale by Wild B-8 Plotter methods, using the photography of October 2, 1960. Cronaflex copies of the manuscript along with ozalids and specially prepared photographs were provided for transfer of the shoreline to the boat sheets, location of photo-hydro signals, and field edit use.

The manuscript was a vinylite sheet 5 minutes in latitude by 4 minutes in longitude. After application of field edit, which was accomplished in December 1968, the survey was scribed, reproduced on cronaflex, and stick-up applied. Final review was in the Atlantic Marine Center in August 1970. One cronaflex 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 FH-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 Malanala 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 Haleclon 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 Makenalua 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 (Leper^{ry}sey). 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 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 Makenalua 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 (MOK)
 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 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 Fukoo, 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 Moomoni 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
- 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

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

14

Photogrammetric Plot Report

Project 21044

Molokai, Hawaii

December, 1964

21. Area Covered

This report pertains to the remainder of the Island of Molokai. It covers surveys T-11818 thru T-11824.

22. Method

Three strips were bridged by analytic aerotriangulation. Strips 6 and 7 were at a scale of 1:15,000 and strip 8 at 1:25,000.

During the processing of the data for strip 8, distortions were evident at the eastern terminal. Model 2169-70 was eliminated from the bridge, and model 2170-2171 appeared to have distortions also in the center and north side although the two tie points on the south side of the model agreed well with strips 4 and 6. Fortunately these models were not needed as the area is adequately covered by strips 6 and 7.

23. Adequacy of Control

The failure of horizontal points in strip 8 to hold together beyond point 86110 and 11 was attributed at first to a possible datum difference. This could not be proved. When additional measurements and a study of the cantilever output indicated distortions in the bridge, this idea was discarded.

Although control point 10100 would not hold well with 86110 and 11 in strip 8, when 10100 was used as a terminal in strip 7, tie point 10403 agreed reasonably well with strip 8.

Control complied with project instructions and was adequate.


24. Supplemental Data

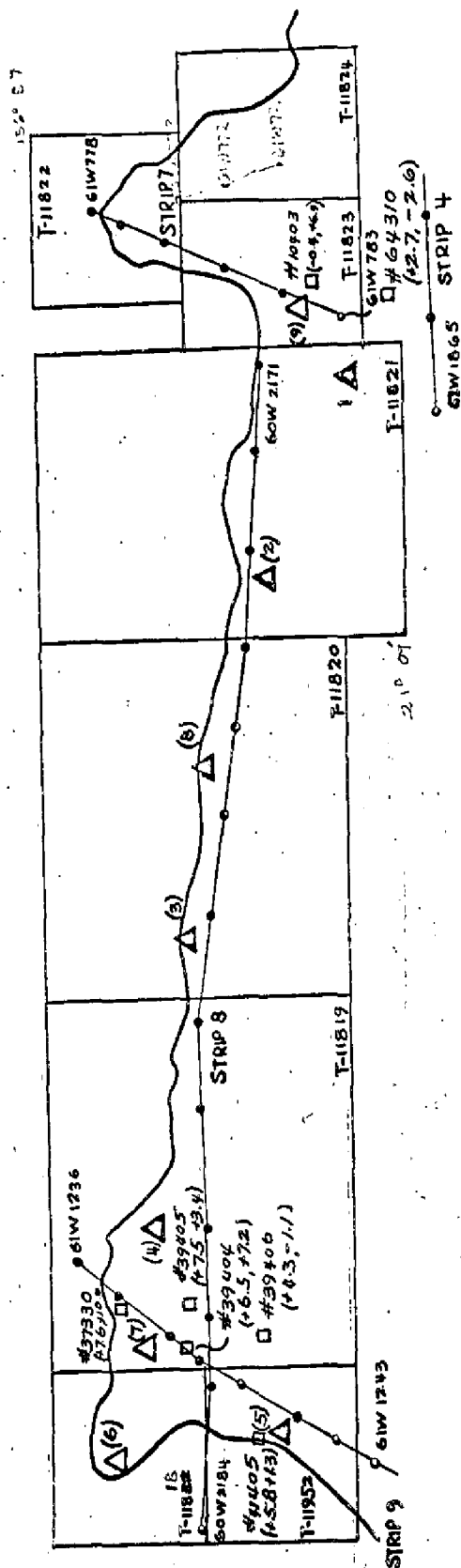
None

25. Photography

Photography was adequate with regard to coverage, overlap, and definition.

Respectfully submitted,


Henry P. Eichert, Acting Chief,
Aerotriangulation Section



AEROTRIANGULATION SKETCH

MOLOKAI ISLAND, HAWAII

PROJECT 21044

LEGEND

△ CONTROL USED IN ADJUSTMENT

△ CONTROL USED AS CHECK

□ TIE POINTS

- (1) NAHAEULA 2, 1962 Sub Pt. A (+0.3, +0.9) Sub Pt. B (+2.8, -1.1)
 - (2) POHAKUNUI, 1888 Sub Pt. A (-2.8, +0.8) Sub Pt. B (-10.0, -3.2)
 - (3) MOOMOMI, 1962 Sub Pt. A (-16.2, 7) Sub Pt. B (-10, -5.3)
 - (4) LAINA (KAA) 1926 Sub Pt. A (0.0, 4.9)
 - (5) POU O KAIKA, 1915 Sub Pt. A (+1.2, -2.1) Sub Pt. B (-6.2, 10.1)
 - (6) SAND 1950 Sub Pt. A (+2.6, 17.9) Sub Pt. B (42.0, 16.8)
 - (7) KAE O 1926 Sub Pt. A (2.8, 9.1) Sub Pt. B (40.7, +8.9)
 - (8) POU KAPELE, 1088 Sub Pt. A (+2.9, -1.2) Sub Pt. B (-14, -5.0)
 - (9) POUWAHI 1962 Sub Pt. A (10.1, 20.0)
- Sub Pts. for SAND 1950 were considered poor at the time of plate measurement

LEGEND

△ Control used in adjustment

△ Control used as check

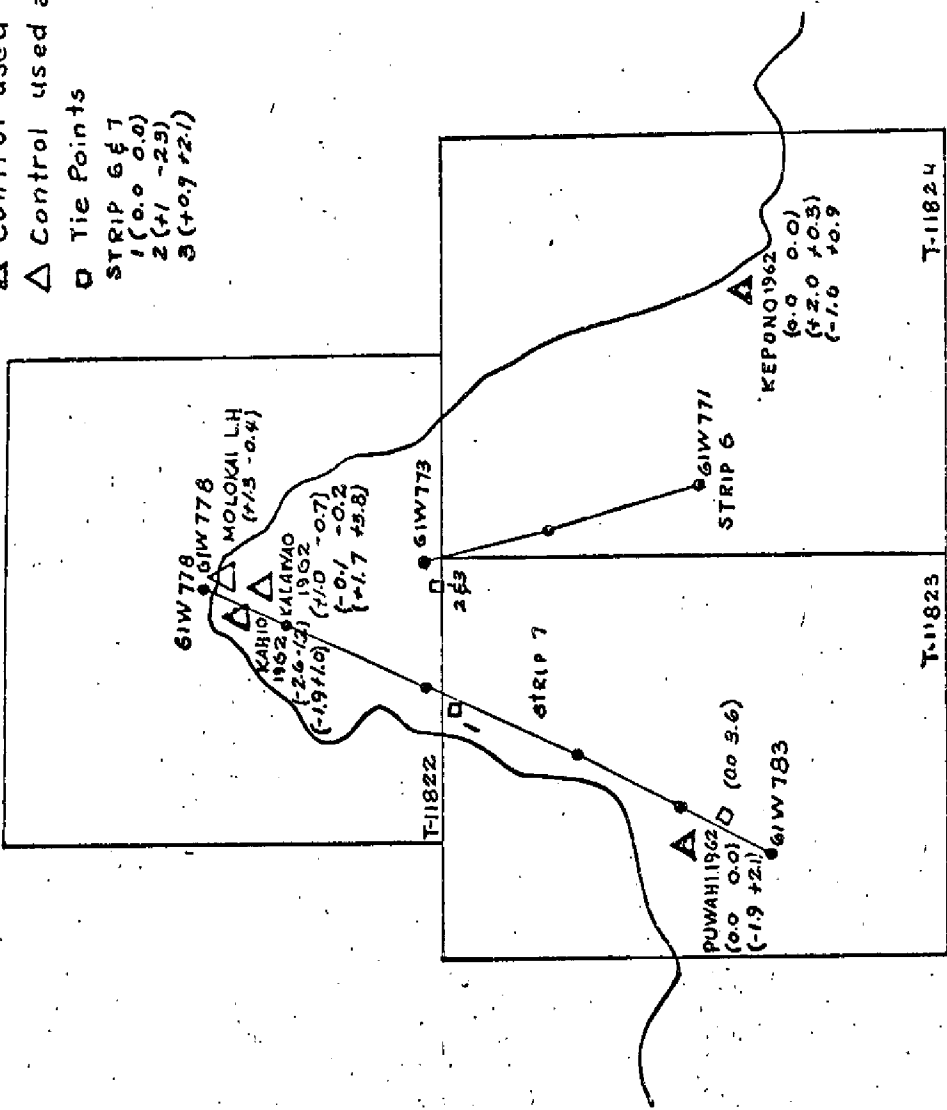
□ Tie Points

STRIP 6 & 7

1 (0.0 0.0)

2 (+1 -2.9)

3 (+0.9 +2.1)



AEROTRIANGULATION SKETCH

MOLOKAI ISLAND HAWAII

PROJECT 21044

MAP T- 11821

PROJECT NO.

PH-6201

SCALE OF MAP 1:10,000

SCALE FACTOR

| STATION | SOURCE OF INFORMATION (INDEX) | DATUM | X X X X X COORDINATE X X X X X X Y Y Y Y Y X COORDINATE X | N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (<i>if Ft. = 3048006 meter</i>) FORWARD (BACK) |
|--|----------------------------------|---------------|--|---|
| HAAHAEULA 2, 1962 | Form 164 W. O. IBM | Old Hawaii | x = 384 207.8 ✓ y = 301 811.0 ✓ | 4 207.8 (0793.2) ✓ 1 811.0 (3189.0) ✓ |
| KAULAPUU AERO BEACON RED LIGHT 1962 | GP Page 113 | " | 21° 09' 11.842 ✓ 157° 03' 14.588 ✓ | 364.2 (1189.0) ✓ 420.9 (1310.1) ✓ |
| KAULIWAI 1885 | GP Page 72 | " | 21 09 40.07 ✓ 157 00 58.11 ✓ | |
| MIDDLE HILL (HGS) 1885 | GP Page 107 | " | 21° 09' 11.161" ✓ 157° 03' 14.828" ✓ | 343.2 (1502.0) ✓ 427.8 (1303.2) ✓ |
| Puu O KAMAO | GP Page 72 | " | 21 10 43.11 ✓ 157 01 47.16 ✓ | |
| OLELEUWE 1885 | " | " | 21 10 24.51 ✓ 157 02 21.62 ✓ | |
| POHAKUNUI 1962 | Form 164 W. O. | X= Y= | 368 354.00 ✓ 310 466.70 ✓ | 3 354.00 (1 646.00) ✓ 0 466.70 (4 533.30) ✓ |
| Puu IUA 1885 | GP Page 72 | " | 21 10 43.09 ✓ 157 00 38.16 ✓ | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

COMPUTED BY

CHB

DATE _____

9/20/67

CHECKED BY

DATE _____

COMPILATION REPORT
Map Manuscript T-11821
Project PH-6201

31. DELINEATION:

Planimetry was compiled with the Wild B-8 Plotter.

32. CONTROL:

See the Photogrammetric Plot Report by H. P. Eichert dated December 1964.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are not applicable.

The drainage from Kapale Gulch and Mimino Gulch was compiled from office stereo interpretation. This drainage pattern could not be traced to the ocean because of much deep shadow.

35. SHORELINE AND ALONGSHORE FEATURES

Field inspection was adequate for the delineation of the mean high water line. Foul limits, bluff lines, and rocks for which elevations are not shown are from office interpretation of the photographs.

36. OFFSHORE DETAILS

None.

37. LANDMARKS AND AIDS

None. One Aeronautical Aid is within this survey. It is KAULAPUU AERO BEACON, RED LIGHT 1962. Form 567 is herewith submitted.

40. HORIZONTAL ACCURACY:

No Statement.

46. COMPARISON WITH EXISTING MAPS:

Comparison was made with U.S.G.S. Quadrangle KAUNAKAKI, HAWAII, Scale 1:24,000, dated 1952.

47. COMPARISON WITH NAUTICAL CHARTS:

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

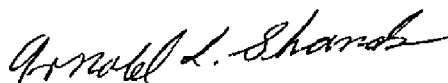
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted:



Arnold L. Shands
Cartographic Technician
2 November 1967

Approved:



Allen L. Powell, RADM, USESSA
Director, AMC

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6201

T-11821

AUAHUA

HALO

HAWAII (title)

KALUANUI

KAPALE GULCH

KAPUAHIAPELE

KUKUIOKANALOA

MIMINO GULCH

MOLOKAI

PACIFIC OCEAN

POHAKUNUI

Approved by:

A. J. Wraight
A. J. Wraight
Chief Geographer

Prepared by:

F. W. Pickett
F. W. Pickett
Cartographic Technician

49. NOTES FOR THE HYDROGRAPHER

Refer to the Field Edit Ozalid.

Photo-hydro points were selected by the Field Inspector in 1962.

The following is a list of photo-hydro points that are shown on the manuscript and cronapaque ratio prints for your use if they still exist:

| <u>Point</u> | <u>Description</u> |
|--------------|-------------------------|
| 2101 | Lone clump of low brush |
| 2102 | Large bush |
| 2103 | Large lone bush |
| 2104 | Clump of brush |

PHOTOGRAMMETRIC OFFICE REVIEW

T- 11821

| | | | |
|---|--|---|---|
| 1. PROJECTION AND GRIDS CHB | 2. TITLE CHB | 3. MANUSCRIPT NUMBERS CHB | 4. MANUSCRIPT SIZE CHB |
| CONTROL STATIONS | | | |
| 5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY CHB | 6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) X | | 7. PHOTO HYDRO STATIONS X |
| 8. BENCH MARKS X | 9. PLOTTING OF SEXTANT FIXES X | 10. PHOTOGRAMMETRIC PLOT REPORT Bridge - W. O. | 11. DETAIL POINTS Wild B-8 |
| ALONGSHORE AREAS (Nautical Chart Data) | | | |
| 12. SHORELINE CHB | 13. LOW-WATER LINE X | 14. ROCKS, SHOALS, ETC. CHB | 15. BRIDGES X |
| 16. AIDS TO NAVIGATION ACR | 17. LANDMARKS X | 18. OTHER ALONGSHORE PHYSICAL FEATURES CHB | 19. OTHER ALONGSHORE CULTURAL FEATURES CHB |
| PHYSICAL FEATURES | | | |
| 20. WATER FEATURES X | 21. NATURAL GROUND COVER X | | 22. PLANETABLE CONTOURS X |
| 23. STEREOSCOPIC INSTRUMENT CONTOURS X | 24. CONTOURS IN GENERAL X | 25. SPOT ELEVATIONS X | 26. OTHER PHYSICAL FEATURES X |
| CULTURAL FEATURES | | | |
| 27. ROADS CHB | 28. BUILDINGS CHB | 29. RAILROADS X | 30. OTHER CULTURAL FEATURES X |
| BOUNDARIES | | | |
| 31. BOUNDARY LINES X | | 32. PUBLIC LAND LINES X | |
| MISCELLANEOUS | | | |
| 33. GEOGRAPHIC NAMES CHB | 34. JUNCTIONS CHB | | 35. LEGIBILITY OF THE MANUSCRIPT CHB |
| 36. DISCREPANCY OVERLAY X | 37. DESCRIPTIVE REPORT CHB | 38. FIELD INSPECTION PHOTOGRAPHS CHB | 39. FORMS CHB |
| 40. REVIEWER <i>Charles H. Bishop</i> C. H. Bishop 9/20/67 | | SUPERVISOR, REVIEW SECTION OR UNIT <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr. | |
| 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. | | | |
| COMPILED Albert C. Rauck, Jr. Rev. by: R. E. Smith | | SUPERVISOR <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr. | |
| 43. REMARKS <i>P. C. Smith</i> | | | |
| Field Edit applied from: Field Edit Ozalid & Field Edit Photo. No. 60-W-2172 | | | |

Field Edit Report
To Accompany T 11821

USC&GSS McARTHUR

Ronald L. Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Manuscript T 11821 was field edited by personnel aboard the USC&GSS McARTHUR in conjunction with the hydrography on boatsheets AR 20-1-68 (H 8981) and AR 10-2-68 (H 8975). Shoreline area inspection and all other acquisition of field edit material was accomplished from Launch AR-1. Heavy swell and the resulting surf along with a steep bottom contour made delineation of the MLLW line impossible. Additions and corrections to the manuscript have been noted on the single field edit ozalid that was provided for T 11821 and then cross referenced and noted in violet ink on photo number 60W2172. No deletions on the field edit ozalid were necessary

52 ADEQUACY OF COMPILATION

Manuscript T 11821 is complete and adequate for use in conjunction with this hydrographic survey. The area of this manuscript from the bluff lines seaward was field edited.

54 RECOMMENDATIONS

None

REVIEW REPORT T-11821

SHORELINE

AUGUST 4, 1970

61. GENERAL STATEMENT

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

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

There were no registered topographic surveys available for comparison purposes at the time of final review.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Comparison was made with USGS KAUNAKAKAI, HAWAII, 9.5 by 7.5 minute quadrangle, 1:24,000 scale, edition of 1952. There are no rocks or offshore features shown on the USGS quadrangle. The shoreline of the two surveys is in only fair agreement. The difference has been shown on the comparison print in brown.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with copies of boat sheets H-8975 (AR-10-2-68 sheet "ee") and H-8981 (AR-20-1-68). None of the rocks close inshore to the mean high water line are shown on these boat sheets.

The shoreline of H-8975 (AR-10-2-68) is in good agreement with that of T-11821. The shoreline for H-8981 (AR-20-1-68) was evidently obtained from a reduction of T-11821. Two small discrepancies in the shoreline were noted between longitudes 157°02'30" and 157°03'30". These have been noted on the comparison print in purple.

65. COMPARISON WITH NAUTICAL CHARTS

A visual comparison was made with Chart 4120, 3rd edition, dated October 14, 1968. The shoreline of the chart is generalized and shows no rocks in the area of this survey.

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, USESSA
Director, Atlantic Marine Center

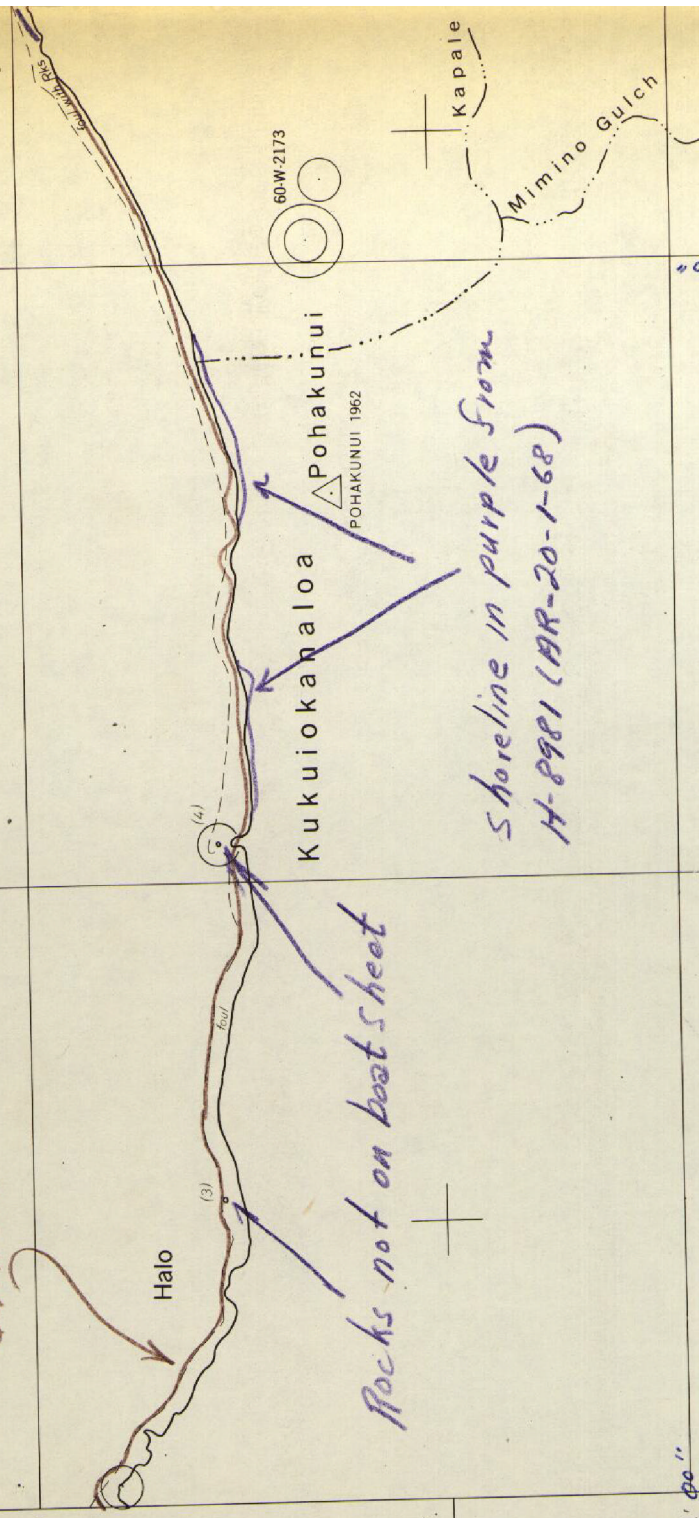
Approved by:

Charles L. Leman *Jack E. Guth*
Chief, Photogrammetric Branch Chief, Photogrammetry Division

Shoreline in brown from USGS Quadrangle

Shoreline in brown from USGS Quadrangle

21° 11' 30"



1:310,000 FT.

21° 11' 00"

157° 04' 00"

157° 03' 00"

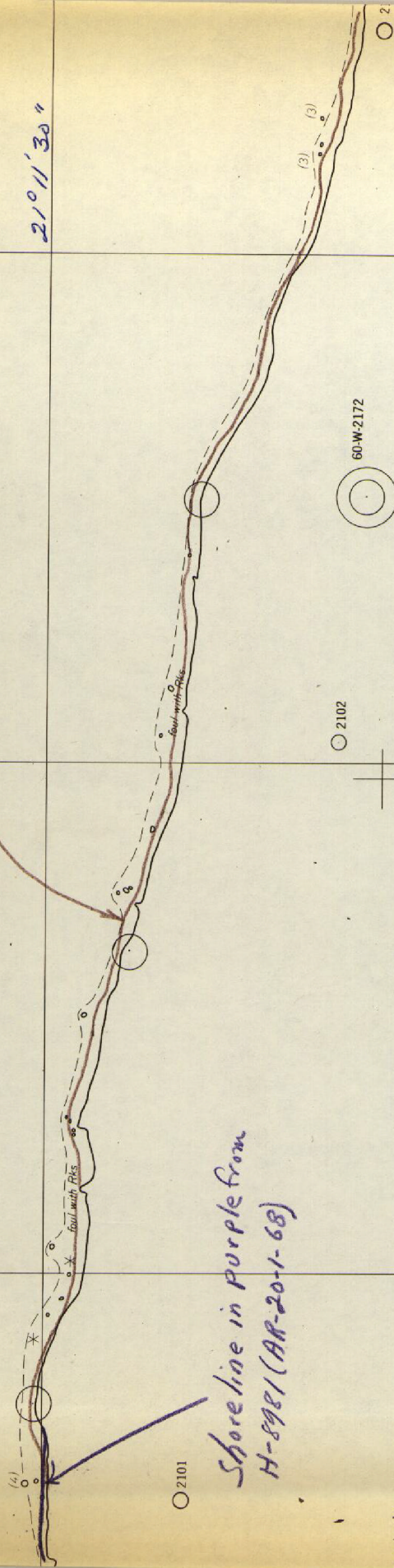
T-11821

25

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."

Shoreline in brown from USGS Quadriangle



Shoreline in purple from
H-8981 (AR-20-1-68)

Note: No rocks in this area
are shown on the boat sheet

21° 11' 00"

157° 02' 30"

T-11821

26

Shoreline in brown from USGS Quadrangle

21° 11' 30"

157° 00' 00"

1:310,000 FT.

Kaluanui

60-W-2171

lowest MHW

Kapuahiapele

foal with ribs

21° 11' 00"

2104

157° 01' 00"

A w a h u a

Note: No rocks in this area
are shown on the boat sheet

T-11821

27

STRIKE OUT TWO

~~NON-FLOATING AIDS OR LANDMARKS FOR CHARTS~~

AERONAUTICAL AID FOR CHARTS

Atlantic Marine Center

Dec. 8, 1969

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

The positions given have been checked after listing by

A. C. Rauck, Jr.

Allen L. Powell, Director, AMC *Chief of Party.*

Allen L. Powell, Director, AMC *Chief of Party.*

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-13 to 22 inclusive, and Fig. 79. 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