

T-12534

T-12534

|                                                                                                         |                  |
|---------------------------------------------------------------------------------------------------------|------------------|
| NOAA FORM 76-35<br>(6-80)                                                                               |                  |
| U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION<br>NATIONAL OCEAN SURVEY |                  |
| DESCRIPTIVE REPORT                                                                                      |                  |
| Map No.<br>T-12534                                                                                      | Edition No.<br>1 |
| Job No.<br>PH-6401                                                                                      |                  |
| Map Classification<br>FINAL, FIELD EDITED MAP                                                           |                  |
| Type of Survey<br>SHORELINE                                                                             |                  |
| LOCALITY                                                                                                |                  |
| State<br>HAWAII                                                                                         |                  |
| General Locality<br>HAWAII ISLAND, WEST COAST<br>UPOLO POINT TO KAILUA                                  |                  |
| Locality<br>KAPUNIAU POINT                                                                              |                  |
| 19 <sub>63</sub> TO 19 <sub>70</sub>                                                                    |                  |
| REGISTERED IN ARCHIVES                                                                                  |                  |
| DATE                                                                                                    |                  |

|                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                        |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| NOAA FORM 76-36A<br>(3-72)                                                                                                                                                                                                                                    |  | U. S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.                                                                                                                                                                |             |
| <b>DESCRIPTIVE REPORT - DATA RECORD</b>                                                                                                                                                                                                                       |  | TYPE OF SURVEY<br><input checked="" type="checkbox"/> ORIGINAL<br><input type="checkbox"/> RESURVEY<br><input type="checkbox"/> REVISED                                                                                                |             |
| PHOTOGRAMMETRIC OFFICE<br>Coastal Mapping Unit, Atlantic Marine Center<br>Norfolk, Virginia.                                                                                                                                                                  |  | SURVEY TR. <u>12534</u><br>MAP EDITION NO. (1)<br>MAP CLASS Final<br>JOB PH. <u>6401</u>                                                                                                                                               |             |
| OFFICER-IN-CHARGE<br><br>Richard Houlder                                                                                                                                                                                                                      |  | <b>LAST PRECEDING MAP EDITION</b><br>TYPE OF SURVEY<br><input type="checkbox"/> ORIGINAL<br><input type="checkbox"/> RESURVEY<br><input type="checkbox"/> REVISED<br>JOB PH. _____<br>MAP CLASS _____<br>SURVEY DATES:<br>19__ TO 19__ |             |
| <b>I. INSTRUCTIONS DATED</b>                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                        |             |
| <b>1. OFFICE</b>                                                                                                                                                                                                                                              |  | <b>2. FIELD</b>                                                                                                                                                                                                                        |             |
| Compilation September 12, 1968.<br>Supplement No. 1 February 11, 1969<br>Compilation March 11, 1969<br>Supplement No. 2 December 11, 1969                                                                                                                     |  | Control/Field Inspection April 29, 1964                                                                                                                                                                                                |             |
| <b>II. DATUMS</b>                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                        |             |
| <b>1. HORIZONTAL:</b> <input type="checkbox"/> 1927 NORTH AMERICAN                                                                                                                                                                                            |  | OTHER (Specify)<br>Old Hawaiian Datum                                                                                                                                                                                                  |             |
| <b>2. VERTICAL:</b><br><input checked="" type="checkbox"/> MEAN HIGH-WATER<br><input type="checkbox"/> MEAN LOW-WATER<br><input type="checkbox"/> MEAN LOWER LOW-WATER<br><input type="checkbox"/> MEAN SEA LEVEL                                             |  | OTHER (Specify)                                                                                                                                                                                                                        |             |
| <b>3. MAP PROJECTION</b><br><br>Polyconic                                                                                                                                                                                                                     |  | <b>4. GRID(S)</b><br>STATE Hawaii ZONE 1                                                                                                                                                                                               |             |
| <b>5. SCALE</b><br>1:10,000                                                                                                                                                                                                                                   |  | STATE ZONE                                                                                                                                                                                                                             |             |
| <b>III. HISTORY OF OFFICE OPERATIONS</b>                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                        |             |
| <b>OPERATIONS</b>                                                                                                                                                                                                                                             |  | <b>NAME</b>                                                                                                                                                                                                                            | <b>DATE</b> |
| <b>1. AEROTRIANGULATION</b> BY J. Perrow Feb 1969<br>METHOD: Stereoplanigraph LANDMARKS AND AIDS BY H. Eichert Feb 1969                                                                                                                                       |  |                                                                                                                                                                                                                                        |             |
| <b>2. CONTROL AND BRIDGE POINTS</b> PLOTTED BY J. Perrow Feb 1969<br>METHOD: Coradomat CHECKED BY H. Eichert Feb 1969                                                                                                                                         |  |                                                                                                                                                                                                                                        |             |
| <b>3. STEREOSCOPIC INSTRUMENT</b> PLANIMETRY BY A. Shands Mar 1969<br>COMPILATION CHECKED BY C. Bishop Mar 1969<br>INSTRUMENT: Wild B-8 CONTOURS BY N.A.<br>SCALE: 1:10,000 CHECKED BY N.A.                                                                   |  |                                                                                                                                                                                                                                        |             |
| <b>4. MANUSCRIPT DELINEATION</b> PLANIMETRY BY A. Shands Mar 1969<br>CHECKED BY C. Bishop Mar 1969<br>METHOD: Smooth drafted CONTOURS BY N.A.<br>CHECKED BY N.A.<br>SCALE: 1:10,000 HYDRO SUPPORT DATA BY A. Shands Mar 1969<br>CHECKED BY C. Bishop Mar 1969 |  |                                                                                                                                                                                                                                        |             |
| <b>5. OFFICE INSPECTION PRIOR TO FIELD EDIT</b> BY C. Bishop Mar 1969                                                                                                                                                                                         |  |                                                                                                                                                                                                                                        |             |
| <b>6. APPLICATION OF FIELD EDIT DATA</b> BY R. White Feb 1972<br>CHECKED BY C. Parker Feb 1972                                                                                                                                                                |  |                                                                                                                                                                                                                                        |             |
| <b>7. COMPILATION SECTION REVIEW</b> BY C. Parker Feb 1972                                                                                                                                                                                                    |  |                                                                                                                                                                                                                                        |             |
| <b>8. FINAL REVIEW</b> BY J. Hancock Nov 1986                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                        |             |
| <b>9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH</b> BY J. Hancock Mar 1987                                                                                                                                                                                     |  |                                                                                                                                                                                                                                        |             |
| <b>10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH</b> BY P. Dempsey                                                                                                                                                                                              |  |                                                                                                                                                                                                                                        |             |
| <b>11. MAP REGISTERED - COASTAL SURVEY SECTION</b> BY E. L. DUGHERTY                                                                                                                                                                                          |  |                                                                                                                                                                                                                                        |             |

## COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

|                                                                                                                                                                                           |               |                                               |          |                           |                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------|----------|---------------------------|-----------------------------------------------------------------------------------|
| CAMERA(S)<br>Wild R.C. -8"S" S=152.29 mm                                                                                                                                                  |               | TYPES OF PHOTOGRAPHY<br>LEGEND                |          | TIME REFERENCE            |                                                                                   |
| TIDE STAGE REFERENCE<br><input checked="" type="checkbox"/> PREDICTED TIDES<br><input type="checkbox"/> REFERENCE STATION RECORDS<br><input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY |               | (C) COLOR<br>(P) PANCHROMATIC<br>(I) INFRARED |          | ZONE<br>Yukon             | <input checked="" type="checkbox"/> STANDARD<br><input type="checkbox"/> DAYLIGHT |
| MERIDIAN<br>135th                                                                                                                                                                         |               |                                               |          |                           |                                                                                   |
| NUMBER AND TYPE                                                                                                                                                                           | DATE          | TIME                                          | SCALE    | STAGE OF TIDE             |                                                                                   |
| 63S(P) 7921-7923*                                                                                                                                                                         | Aug. 31, 1963 | 09:07                                         | 1:30,000 | 0.7 ft. above MLLW        |                                                                                   |
| 63S(C) 7775-7778**                                                                                                                                                                        | Aug. 27, 1963 | 10:16                                         | 1:20,000 | 1.9 ft. above MLLW        |                                                                                   |
|                                                                                                                                                                                           |               |                                               |          | Mean Tide Range = 1.4 Ft. |                                                                                   |

REMARKS \*Bridging photographs, \*\*Compilation photographs

## 2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled from office interpretation of the compilation photographs using stereo instrument methods.

3. SOURCE OF ~~MEAN HIGH-WATER LINE~~ MEAN LOWER LOW-WATER LINE:

No mean lower low water line was compiled.

## 4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

| SURVEY NUMBER | DATE(S)               | SURVEY COPY USED | SURVEY NUMBER | DATE(S) | SURVEY COPY USED |
|---------------|-----------------------|------------------|---------------|---------|------------------|
| H-9018        | Surveyed<br>1969/1970 | Registered       |               |         |                  |

## 5. FINAL JUNCTIONS

|               |                                              |                                               |                   |
|---------------|----------------------------------------------|-----------------------------------------------|-------------------|
| NORTH<br>None | EAST*T-13131 (1:5,000)<br>T-12535 (1:10,000) | SOUTH T-12635 (1:5,000)<br>T-12536 (1:10,000) | WEST<br>No Survey |
|---------------|----------------------------------------------|-----------------------------------------------|-------------------|

REMARKS \*The western portion of inset map T-13131 (1:5,000 scale) lies within the northeast segment of this map.

T-12534

## HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

| OPERATION                           | NAME                                                                                                                                                               | DATE     |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1. CHIEF OF FIELD PARTY             | R. Newsom                                                                                                                                                          | Jun 1964 |
| 2. HORIZONTAL CONTROL               | RECOVERED BY: None<br>ESTABLISHED BY: None<br>PRE-MARKED OR IDENTIFIED BY: None                                                                                    |          |
| 3. VERTICAL CONTROL                 | RECOVERED BY: None<br>ESTABLISHED BY: None<br>PRE-MARKED OR IDENTIFIED BY: None                                                                                    |          |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY: None<br>LOCATED (Field Methods) BY: None<br>IDENTIFIED BY: None                                                             |          |
| 5. GEOGRAPHIC NAMES INVESTIGATION   | TYPE OF INVESTIGATION<br><input type="checkbox"/> COMPLETE<br><input type="checkbox"/> SPECIFIC NAMES ONLY<br><input checked="" type="checkbox"/> NO INVESTIGATION |          |
| 6. PHOTO INSPECTION                 | CLARIFICATION OF DETAILS BY: E. Cline                                                                                                                              | Jun 1964 |
| 7. BOUNDARIES AND LIMITS            | SURVEYED OR IDENTIFIED BY: None                                                                                                                                    |          |

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

None

| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
|--------------|--------------|--------------|---------------------|
|              |              |              |                     |

3. PHOTO NUMBERS (Clarification of details)

63(S)7921,7922,7923 (Matte Contacts)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
|--------------|-------------|--------------|-------------|
|              |             |              |             |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

None

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

| OPERATION                           | NAME                                                                                                                                                               | DATE                 |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1. CHIEF OF FIELD PARTY             | (USC&GS Ship PATHFINDER)<br>E. Taylor                                                                                                                              | Feb 1970             |
| 2. HORIZONTAL CONTROL               | RECOVERED BY<br>ESTABLISHED BY<br>PRE-MARKED OR IDENTIFIED BY                                                                                                      | None<br>None<br>None |
| 3. VERTICAL CONTROL                 | RECOVERED BY<br>ESTABLISHED BY<br>PRE-MARKED OR IDENTIFIED BY                                                                                                      | None<br>None<br>None |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY<br>LOCATED (Field Methods) BY<br>IDENTIFIED BY                                                                               | None<br>None<br>None |
| 5. GEOGRAPHIC NAMES INVESTIGATION   | TYPE OF INVESTIGATION<br><input type="checkbox"/> COMPLETE<br><input type="checkbox"/> SPECIFIC NAMES ONLY<br><input checked="" type="checkbox"/> NO INVESTIGATION |                      |
| 6. PHOTO INSPECTION                 | CLARIFICATION OF DETAILS BY                                                                                                                                        | L. Riggers           |
| 7. BOUNDARIES AND LIMITS            | SURVEYED OR IDENTIFIED BY                                                                                                                                          | None                 |

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

None

| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
|--------------|--------------|--------------|---------------------|
|              |              |              |                     |

3. PHOTO NUMBERS (Clarification of details)

63S(C)7778 (Cronapaque Ratio), 63S(P)7921, 7922, 7923 (Cronapaque Ratio)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
|--------------|-------------|--------------|-------------|
|              |             |              |             |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 Field Edit Report and Supplement to Field Edit Report  
1 Field Edit Paper Print

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOAA FORM 76-36D<br>(3-72)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 | U. S. DEPARTMENT OF COMMERCE<br>T-12534 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION |                                                                                                                                                                                                                                                         |
| <b>RECORD OF SURVEY USE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| <b>I. MANUSCRIPT COPIES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| COMPILATION STAGES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                                                                                         | DATE MANUSCRIPT FORWARDED                                                                                                                                                                                                                               |
| DATA COMPILED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | DATE                            | REMARKS                                                                                 | MARINE CHARTS    HYDRO SUPPORT                                                                                                                                                                                                                          |
| Compilation complete<br>pending field edit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Mar 1969                        | Class III Manuscript<br>(Includes field inspection)                                     | Mar 1969    Mar 1969<br>Dec 1969                                                                                                                                                                                                                        |
| Field edit application<br>completed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Feb 1972                        | Class I Manuscript                                                                      | Mar 1977    Mar 1973<br>Nov 1973                                                                                                                                                                                                                        |
| Final Review                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Nov 1986                        | Final Map                                                                               | Mar 1987    Mar 1987                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| <b>II. LANDMARKS AND AIDS TO NAVIGATION</b> None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| <b>1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CHART LETTER<br>NUMBER ASSIGNED | DATE<br>FORWARDED                                                                       | REMARKS                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| 2. <input type="checkbox"/> REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: <u>None</u><br>3. <input type="checkbox"/> REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____                                                                                                                                                                                                                                                                                                                                             |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| <b>III. FEDERAL RECORDS CENTER DATA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| 1. <input checked="" type="checkbox"/> BRIDGING PHOTOGRAPHS; <input checked="" type="checkbox"/> DUPLICATE BRIDGING REPORT; <input checked="" type="checkbox"/> COMPUTER READOUTS.<br>2. <input checked="" type="checkbox"/> CONTROL STATION IDENTIFICATION CARDS; <input type="checkbox"/> FORM NOS 567 SUBMITTED BY FIELD PARTIES.<br>3. <input type="checkbox"/> SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.<br>ACCOUNT FOR EXCEPTIONS:<br>4. <input type="checkbox"/> DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____ |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| <b>IV. SURVEY EDITIONS</b> (This section shall be completed each time a new map edition is registered)                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                                                                                         |                                                                                                                                                                                                                                                         |
| SECOND<br>EDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SURVEY NUMBER<br>TP - _____ (2) | JOB NUMBER<br>PH - _____                                                                | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT                                                                      |                                                                                                                                                                                                                                                         |
| THIRD<br>EDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SURVEY NUMBER<br>TP - _____ (3) | JOB NUMBER<br>PH - _____                                                                | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT                                                                      |                                                                                                                                                                                                                                                         |
| FOURTH<br>EDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SURVEY NUMBER<br>TP - _____ (4) | JOB NUMBER<br>PH - _____                                                                | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT                                                                      |                                                                                                                                                                                                                                                         |

JOB PH-6401  
SHORELINE MAPPING  
HAWAII IS. WEST COAST  
UPOLO POINT TO KAILUA  
SCALE 1:5,000 & 1:10,000

SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT

T-12534

This 1:10,000 scale final shoreline map is one of twenty-three maps that comprise PH-6401, Hawaii Island, Hawaii, West Coast, Upolo Point to Kailua. The project consists of seventeen 1:10,000 scale maps (T-12527 thru T-12541, T-12543, T-12545) and six 1:5,000 scale inset maps (T-12542, T-12544, T-12635, T-13131, T-13132, T-13382).

The purpose of this map was to furnish data in support of hydrographic operations and to provide current shoreline data for marine charts.

This map portrays a portion of shoreline along the northwest coast of Hawaii Island from Lat. 19 56.15' to Lat. 19 58.30'. The western portion of inset map T-13131 duplicates northeast segment of this map at 1:5,000 scale.

Photo coverage for the project was adequately provided in August/September 1963 using the Wild RC-8 "S" camera. Photography consisted of 1:30,000 scale panchromatic photographs used for field inspection and aerotriangulation. The 1:20,000 and 1:15,000 scale color photographs were used for compilation and hydro support. The 1:20,000 scale photo coverage was obtained for the 1:10,000 scale maps and the 1:15,000 scale photographs provided coverage of the 1:5,000 scale inset maps. Additional color photographs at 1:15,000 scale were obtained in February 1969 with the Wild RC-8"E" camera. These photographs were bridged and a supplemental plot report was prepared in order to compile three 1:5,000 scale inset maps (T-13131, T-13132 and T-12635). The stage of tide for all project photographs was based upon predicted tide data. No infrared photographs were provided.

Field work prior to aerotriangulation consisted of the recovery and establishment of horizontal control by photoidentification methods. In addition, a field inspection was performed for the project area utilizing the 1:30,000 scale photographs. This activity was conducted in May/June 1964.

Analytic aerotriangulation was adequately provided by the Washington Science Center in three phases. Initial bridging activity was accomplished for seven of the northern project maps in June 1966. The second phase was conducted for the remaining project maps in February 1969. A final bridge was provided in October 1971 for the 1969 photo coverage of three 1:5,000 scale inset maps. Aerotriangulation activity included ruling the base manuscripts and also provided ratio photographs for the compilation and hydrographic/field edit operations.

Compilation for this map was performed at the Coastal Mapping Section, Atlantic Marine Center in March 1969. Copies of the manuscript and hydrographic support data were forwarded to the hydrographer for field edit. A copy of the manuscript was also submitted to the Marine Charts Section.



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Field edit was performed in conjunction with hydrographic survey H-9018 by USC&GS Ship PATHFINDER personnel in February 1970.

Application of field edit was accomplished at the Atlantic Marine Center in February 1972 and the manuscript was advanced to Class I. A copy of the Class I manuscript was forwarded to Marine Charts and the Hydrographic Surveys Branch.

Final review was performed at the Atlantic Marine Center in November 1986. A comparison was made with the common nautical chart(s) and hydrographic survey(s). The original base manuscript and related data along with a final Chart Maintenance Print and a Hydrographic Print were forwarded to the Washington Science Center for registration and distribution.

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FIELD INSPECTION  
T-12534

Field activity prior to compilation included a field inspection of the shoreline and the recovery/photoidentification of horizontal control necessary for project aerotriangulation. Results of the 1964 field inspection were submitted on the 1:30,000 scale contact photographs.

Photogrammetric Plot Report

PH-6401

Hawaii Island, Hawaii

Feb. 4, 1969

21. Area Covered

The area covered by this report is along the northwest coast of Hawaii Island. T-sheets in this area are numbered 12534 thru 12541, 12543, and 12545 at 1:10,000 scale. T-sheets 12542, 12544, 12635, 13131 and 13132 at 1:5,000 scale. Sheets T-12527 thru 12533 and 13154 were covered by a previous report on Strips #1 and #2.

22. Method

All strips were bridged on the stereoplanigraph and adjusted by IBM 1620 methods. Strip #3 was adjusted on four stations with two additional stations as checks. Strip #4 was adjusted on seven stations with two additional stations as checks. Strip #6 was adjusted on two control points plus 7 tie points. Strip #7 was adjusted on one control station and three tie points. Strip #8 was adjusted on three control stations and three tie points. All tie points between strips were averaged. Points were drilled using the Wild PUG.

23. Adequacy of Control

The control provided by the field was adequate after reidentification of Amaehoomalu 1913, Lana Cone, 1913 and the identification of Hand, 1928 and Nawai 1928. The following stations could not be held in the bridging adjustments.

1. LAVA CONE, 1913, SS #A and SS #B ("NEAR"). By holding four triangulation stations and floating substitute stations "NEAR A AND B", a 1 ft. check was achieved between these substitute stations and placed LAVA CONE, 1913 80 ft. north of survey mark "NEAR" and on the high point of the immediate area. This bares out the field recovery note for station LAVA CONE 1913 that the survey mark "NEAR" and intersection station LAVA CONE, 1913 are not one and the same. Geodesy Division has been notified of our findings and the bridging information added to their files.

2. KEEI SOUTH BASE, 1948 SS #1 and SS #2 could not be held in Strip #4 by 11' and 16' respectively. It is believed these errors are due to bad identification, since seven other stations were held in the adjustment. This station falls in Strip #4 but is outside of the PH-6401 area of compilation.

24. Supplemental Data

Local USGS quads were used to provide vertical points needed for the strip adjustment program.

25. Photography

Photography was not adequate to provide coverage of the 1:5,000 scale sheets with the exception of T-12542. This inadequate coverage was caused by a change in the limits of the 1:5,000 areas after bridging was nearing completion. Photography was adequate in regard to definition and overlap.

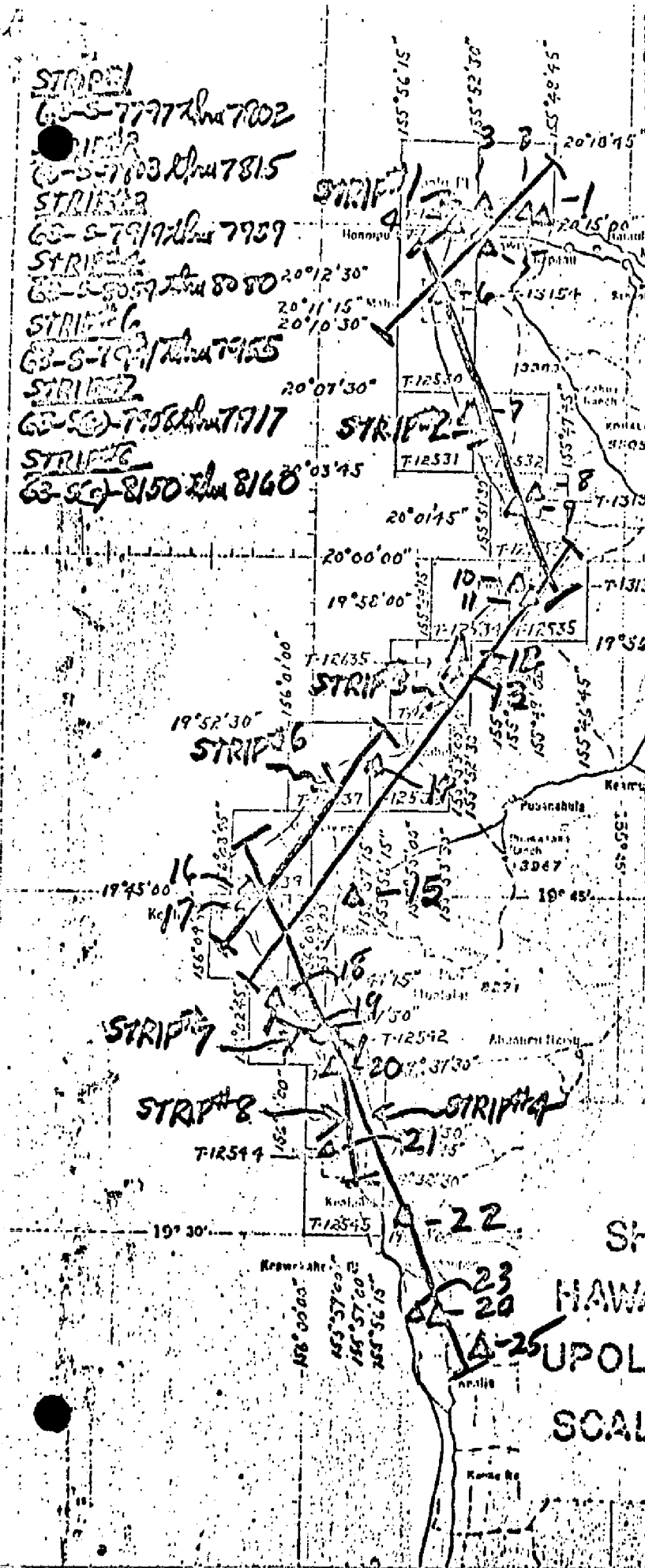
Submitted by,

*John D. Perrow Jr.*  
John D. Perrow, Jr.

Approved by,

*Henry P. Eichert*

Henry P. Eichert  
Chief, Aerotriangulation Section



1. KEPUNI 2, 1948
2. KEPUNI, 1913
3. KEALAHWEA 2, 1948
4. LORAN TOWER, 1948
5. PUU ULA, 1913
6. RED TANK, 1948
7. KEAWANI, 1948
8. PUU KAMALI, 2, 1928
9. KAWAIAE LT. 1928
10. PUAKO, 1873
11. PUAKO NEW, 1948
12. ANAHOOMALU, 1913
13. HAND, 1928
14. NAWAI, 1928
15. LAVA CONE, 1913
16. KEAHOLE 2, 1948
17. KEAHOLE, 1882
18. KEARUOLU PT. NW. RANGE MARKER, 1948
19. KAILUA, 1887
20. KAHALO, 1882
21. POINT, 1928
22. KEALAKEKUM KONA CH. SPIRE, 1948
23. KEEI SOUTH BASE, 1948
24. HONAUHUA, ST. BENEDICT CATH. CHURCH SPIRE, 1948
25. MC CANDLESS, 1948

**JOB PH-6401**

**SHORELINE MAPPING**

**HAWAII IS. WEST COAST**

**UPOLO POINT TO KAILUA**

**SCALE 1:5,000 @ 1:10,000**



COMPILATION REPORT  
T-12534

31 - DELINEATION

Delineation was by instrument methods using the Wild B-8 stereoplotter and 1:20,000 scale color photographs. The 1:30,000 scale panchromatic field inspection photographs were used during compilation; however, several of the field identified rocks were not discernible when viewing the 1:20,000 scale color compilation photographs. Rocks that were not clearly identifiable were not compiled.

Compilation ratio photographs were processed for hydro support and were used graphically to assist in delineation of minor details. Photo coverage and quality were adequate.

32 - CONTROL

Refer to the Photogrammetric Plot Report, dated February 4, 1969.

33 - SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

Contours are inapplicable. Drainage was delineated from the compilation photographs.

35 - SHORELINE AND ALONGSHORE DETAILS

The shoreline was delineated from office interpretation of the mapping photographs and from the annotated photographs resulting from the precompilation field inspection. Because of the small tide range, no mean lower low water line was compiled.

36 - OFFSHORE DETAILS

There were no significant offshore details.

37 - LANDMARKS AND AIDS

There were no landmarks or navigational aids within the limits of this map.

38 - CONTROL FOR FUTURE SURVEYS

None.

39 - JUNCTIONS

Refer to the Data Record Form 76-36B, Item 5.

T-12534

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated February 4, 1969.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with U.S.G.S Quadrangles  
Puu Hinai, Hawaii, dated 1956, scale 1:24,000  
Anahoomalu, Hawaii, dated 1959, scale 1:24,000.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with USC&GS Charts  
4167, scale 1:10,000, 3rd edition, dated Jun. 26, 1967  
4140, scale 1:80,000, 3rd edition, dated Jan. 24, 1966.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by

*Henry J. Hancock*

for A. Shands  
Cartographic Technician  
March 1969

Approved

*Albert C. Rauck, Jr.*

for Albert C. Rauck, Jr.  
Chief, Coastal Mapping Section



ADDENDUM TO THE COMPILATION REPORT

T-12534

Field edit was performed in conjunction with hydrographic survey H-9018. Adequate information was furnished in order to advance the manuscript to Class I status.

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6401 (Hawaii, West Coast I. of Hawaii)

T-12534

Honokaope Bay

Hopeala Fishpond

Iliilinaehehe Bay

Kapuniau Point

Kawaihae Bay

Keanapou Fishpond

Keanapukalua

Lae o Ili

Lae o Panipou

Lae o Puili

Lahuipuaa

Makaiwa Bay

~~Maoku Fishpond~~  
Manoku Fishpond *gH*

Nanuku Inlet

Pacific Ocean

Papakonani Boat Landing

Pauoa Bay

Puako

Puako Point

Waawaa Point

Waiaakumalae Point

Waima Point

Waipuhi Fishpond

Approved by:

*A. J. Wright*  
A. Joseph Wright  
Chief Geographer

Prepared by:

*Frank W. Pickett*  
Frank W. Pickett  
Cartographic Technician

FIELD EDIT REPORT

CHART TOPOGRAPHY

West Coast Of Hawaii, Hawaii

Map Manuscripts, T-12534, T-12535,

T-12536, T-12537 & T-12538

February 1970

## FIELD EDIT REPORT - OPR 419

Chart Topography  
Hawaii, West Coast  
Map Manuscripts, T-12534 T-12535, T-12536,  
T-12537, T-12538

This report covers the west shore of the island of Hawaii from Kaunaoa Point south to Kau Bay.

The entire shoreline was inspected using a small boat and/or walking. The field edit copies (discrepancy prints) of the map manuscripts were used as the index for the field corrections and the photographs containing the bulk of the corrections were cross-referenced to the field edit copies.

Adequacy of Compilation:

The extent and accuracy of the maps appear to be complete.

Methods:

The shoreline was inspected and the correction have been indicated on the field edit photography in red ink. Annotations on the field edit sheet were done with a purple pencil and in some cases with a ball point pen. Deletions of features on both the field edit sheets and the photography are in green ink.

Mean high water references were made to identifiable alongshore objects. In general the mean high water compilation was very good. The characteristics of the shore are generally a lava composition with a few sand beaches. The foreshore and adjacent offshore underwater areas are quite shallow. Coral heads are forming in areas that have a water depth of three feet or more.

There are no communities of any size. There are several residents along the shore south of Ohai Point to an area about 1/2 mile south of Kapuniau Point.

Rocks and shoals were investigated. The elevations of these features in relationship to the stage of tide at the time of the investigation were recorded on the field edit photography and/or the field edit sheets where required.

A Geographic Names investigation was not made, however one discrepancy was brought to the attention of the Field Editor by a local resident of over 50 years. The spelling of the small bay about 1/4 mile north of Ohai Point is spelled Wailea Bay and not Waialea Bay.

Pertinent information pertaining to each individual discrepancy sheet will be listed under that specific sheet.

Sheet T-12534

Considerable time was spent looking for the submerged rocks from office interpretation but those west of the foul line were not found. Methods included fixes from identifiable objects from shore and investigation from a small boat.

Several areas have been mapped as coral however no coral was found close to the shoreline. Coral heads and coral are found in areas that are constantly under water.

Sheet T-12535

The first half of this sheet was done by personnel of the ship MCARTHUR in 1969.

A new boat ramp was constructed since the photography. A sketch was drawn on the back of photo 63 S 7779. Three tanks that are close together were picked as a landmark, See photo 63 S 7780. A form 567 will be submitted.

Sheet T-12536

See the comments on the Field Edit Ozalid.

Sheet T-12537

See the comments on the Field Edit Ozalid.  
A new development has been constructed on Mahewalu Point. Several of the buildings will be of landmark value. The plans are being submitted with this report.

Sheet T-12538

See the comments on the Field Edit Ozalid.

Respectfully submitted,

*Lyle L. Riggers*

Lyle L. Riggers  
Surveying Tech.

Approved:

E. A. Taylor, CAPT, USESSA  
Comd. Officer "PATHFINDER"

Supplement To  
FIELD EDIT REPORT  
CHART TOPOGRAPHY

March 25, 1970

West Coast of Hawaii, Hawaii  
Map Manuscripts, T-12534, T-12535  
T-12536, T-12537, and T-12538

Three additional Geographic Names discrepancies have been located on the following T-sheets.

T-12534 The discrepancy on this sheet concerns Makaiwa Bay located at Lat. 19°57' and Long. 155°53.5' just west of LAHUIPUAA. On C&GS chart 4140 Jan. 24, 1966 the location of the name appears to refer to a different part of the coastline than on this T-sheet.

T-12536 A bay located at Lat. 19°55.8' Long. 155°53.5' has a spelling discrepancy. This T-sheet gives the spelling as Waiulua Bay and chart 4140 gives the spelling as Waialua Bay.

T-12537 In the general area of Kakapa Bay at Lat. 19°49' Long. 156°00.3' there exists a major discrepancy in the names of two prominent points of land. This T-sheet shows the point which forms the north shore of Kakapa Bay as Kikaua Pt. and the point forming the south shore as Papiha Pt. The chart 4140 gives the name of Papiha Pt. to the northern point and does not name the point to the south.

A Geographic Names investigation was not made on any of these discrepancies due to the lack of time at the end of the project when these discrepancies were found.

Respectfully submitted,

Approved:



Richard D. Olson  
ENS, USESSA  
Photogrammetric Officer

E. A. Taylor, CAPT, USESSA  
Comd. Officer "PATHFINDER"

REVIEW REPORT  
T-12534

SHORELINE

61 - GENERAL STATEMENT

Final review for this final field edited map was accomplished at the Atlantic Marine Center in November 1986. For a schedule of the office and field operations, refer to the Summary included with this Descriptive Report.

62 - COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63 - COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with U.S.G.S quadrangles Puu Hinai, Hawaii, dated 1956, scale 1:24,000  
Anaehoomalu, Hawaii, dated 1959, scale 1:24,000.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A portion of hydrographic survey H-9018, H-9131 and H-9234 are common to this final shoreline map. A comparison was made with the following registered surveys:  
H-9018, AR-10-7-68/PF-10-1-70, 1:10,000 scale, field surveyed 1969/1970  
H-9131, PF-10-2-70, 1:10,000 scale, field surveyed 1970  
H-9234, FA-5-1-71, 1:5,000, field surveyed 1971.

Field edit for the map was performed in conjunction with H-9018 in February 1970. Though H-9018 is considered the contemporary survey, a comparison revealed a discrepancy for a portion of shoreline between Long. 155° 50.5' to Long. 155° 51.0' which is common to H-9018 and inset H-9234. This portion of shoreline was revised during field edit application and apparently was used for H-9234 but not for H-9018.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS charts  
19330, scale 1:10,000, 7th edition, Oct. 15, 1983  
19327, scale 1:80,000, 8th edition, Sept. 5, 1981.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

T-12534

Submitted by

*Jerry L. Hancock*

Jerry L. Hancock  
Final Reviewer

Approved for forwarding

*Billy H. Barnes*

Billy H. Barnes  
Chief, Photogrammetric Section, AMC

Approved

*Jerry O. Roberson*

Chief, Photogrammetric Production Sec.

*A. J. Bryan*

Chief, Photogrammetry Branch



