

T-12541

T-12541

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. T-12541	Edition No. 1
Job No. PH-6401	
Map Classification FINAL FIELD EDITED MAP	
Type of Survey SHORELINE	
LOCALITY	
State HAWAII	
General Locality HAWAII ISLAND, WEST COAST, UPOLO POINT TO KAILUA	
Locality PAWAI BAY	
19 ⁶³ TO 19 ⁷²	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center Norfolk, VA OFFICER-IN-CHARGE Richard Houlder		SURVEY T& 12541 MAP EDITION NO. (1) MAP CLASS Final JOB PH. 6401	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center Norfolk, VA OFFICER-IN-CHARGE Richard Houlder		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Compilation September 12, 1968 Supplement No. 1 February 11, 1969 Compilation March 11, 1969 Supplement No. 2 December 11, 1969		Control/Field Inspection April 29, 64	
II. DATUMS			
1. HORIZONTAL: <input type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify) Old Hawaiian Datum	
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify)	
3. MAP PROJECTION Polyconic		4. GRID(S) STATE Hawaii ZONE 1	
5. SCALE 1:10,000		STATE ZONE	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	
1. AEROTRIANGULATION BY METHOD: stereoplanigraph LANDMARKS AND AIDS BY		J. Perrow Feb 1969 H. Eichert Feb 1969	
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: coradomat CHECKED BY		J. Perrow Feb 1969 H. Eichert Feb 1969	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY		A. Shands Oct 1969 C. Bishop Oct 1969	
INSTRUMENT: Wild B-8 SCALE: 1:10,000		CONTOURS BY N.A. -- N.A. --	
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY		A. Shands Oct 1969 C. Bishop Jan 1970	
METHOD: smooth drafted SCALE: 1:10,000		CONTOURS BY N.A. -- N.A. --	
HYDRO SUPPORT DATA BY CHECKED BY		A. Shands Oct 1969 C. Bishop Jan 1970	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		C. Bishop Jan 1970	
6. APPLICATION OF FIELD EDIT DATA BY		L. Graves Apr 1973 C. Blood Jun 1974	
7. COMPILATION SECTION REVIEW BY		C. Blood Jun 1974	
8. FINAL REVIEW BY		J. Hancock Feb 1987	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		J. Hancock Mar 1987	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		P. Dempsey May 1987	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		E.L. DAUGHERTY MAY 1987	

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild R.C. - 8"S"; S= 152.29mm		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE <input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Yukon MERIDIAN 135th	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
63S(P)8063-8066*	Sep 1, 1963	09:10	1:30,000	0.4 ft above MLLW	
63S(P)8093-8095*	Sep 1, 1963	09:22	1:30,000	0.4 ft above MLLW	
63S(C)7891-7894**	Aug 29, 1963	10:01	1:15,000	1.7 ft above MLLW	
63S(C)8147-8149**	Sep 1, 1963	10:30	1:15,000	1.0 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 LOW-WATER OR 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-9334	Surveyed 1972	registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
T-12540	No survey	T-12543	No survey

REMARKS

This sheet contains two 1:5,000 inset maps, T-12542 and T-13382.

T-12541
HISTORY OF FIELD OPERATIONS1. ☒ FIELD INSPECTION OPERATION ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Newsom	Jun/Jul 64
2. HORIZONTAL CONTROL	RECOVERED BY E. Cline	Jun/Jul 64
	ESTABLISHED BY E. Cline	Jun/Jul 64
	PRE-MARKED OR IDENTIFIED BY E. Cline	Jun/Jul 64
3. VERTICAL CONTROL	RECOVERED BY none	
	ESTABLISHED BY none	
	PRE-MARKED OR IDENTIFIED BY none	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY E. Cline	Jun/Jul 64
	LOCATED (Field Methods) BY none	
	IDENTIFIED BY E. Cline	Jun/Jul 64
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY E. Cline	Jun/Jul 64
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY none	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
		none	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
63(S)8036*	KEAHOULU POINT NW RANGE MARKER, 1948 and KEAHOULU POINT NE RANGE MARKER 1948 (Direct)		
63(S)8065*	KAILUA, 1887 (Direct & Sub Pt.)		
*Section of ratio photo submitted			

3. PHOTO NUMBERS (Clarification of details)

63(S)p8093-8096 (Matte Contacts)

63(S)c8152, 8153, 8155, 7909, 7911-7915 (Cronapague Contacts)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
63(S)8036	KEAHOULU POINT NE & NW RANGE MARKERS, 1948		

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)

2 forms 152 (CSI)

T-12541
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION ☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	(NOAA Ship RAINIER) G. Haraden	Sept 1972
2. HORIZONTAL CONTROL	RECOVERED BY S. Hollinshead	Sept 1972
	ESTABLISHED BY none	--
	PRE-MARKED OR IDENTIFIED BY none	--
3. VERTICAL CONTROL	RECOVERED BY none	--
	ESTABLISHED BY none	--
	PRE-MARKED OR IDENTIFIED BY none	--
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY S. Hollinshead	Sept 1972
	LOCATED (Field Methods) BY S. Hollinshead	Sept 1972
	IDENTIFIED BY S. Hollinshead	Sept 1972
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY * S. Hollinshead	Sept 1972
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY none	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
none		none	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

63(S) 8063, 8094 (Matte Ratios, 1:10,000 scale)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
63(S)8063	BUILDING (North one of three)		

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

7. SUPPLEMENTAL MAPS AND PLANS

U.S. Army Corps of Engineers Dredging Diagram of Honokohau Small Boat Harbor

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

1 Field Edit Report, 2 forms 76-40, 1 Field Edit Paper Print

(*Field edit is also included on the common inset maps (T-12542 & T-13382) field edit paper prints)

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONT-12541
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	Jan 1970	Class III manuscript	Jan 1970	Jan 1970
Field edit applied compilation complete	Jun 1974	Class I manuscript		May 1972
Final Review	Feb 1987	Final Map	mar 1987	mar 1987

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

76-40 NUMBER pages	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
2		mar 1987	Landmarks and aids for charts

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 76-40 ~~XXX~~ SUBMITTED BY FIELD PARTIES.
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <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 EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <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 EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <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	

A map showing the area around Kanapala Ranch and Iseri Camp. Kanapala Ranch is marked with a dot and labeled. Iseri Camp is marked with a dot and labeled. A road or path is shown connecting them. Other labels include 'W. 3 Valley Camp' and 'Iseri Camp'.

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SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12541

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 west coast of Hawaii Island from Lat. 19° 37' 30" to Lat. 19° 41' 15". Two 1:5,000 scale inset maps, T-13382 and T-12542, are contained within this map.

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 January 1970. 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.

T-12541

Field edit was conducted in conjunction with hydrographic survey H-9334 by NOAA Ship RAINIER personnel in September 1972. This activity also included field edit for the common inset maps, T-13382 and T-12452.

Field edit data from the two common inset maps was utilized during the application of field edit for this map. This function was accomplished at the Atlantic Marine Center in June 1974 and the manuscript was advanced to Class I.

Final review was performed at the Atlantic Marine Center in February 1987. A comparison was made with the common nautical chart and hydrographic survey. 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.

FIELD INSPECTION
T-12541

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 Anaehoomalu 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.

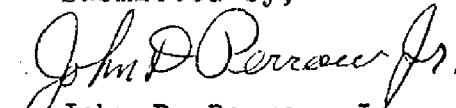
24. Supplemental Data

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

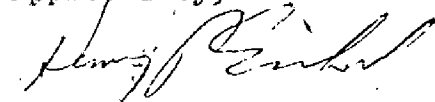
25. Photography

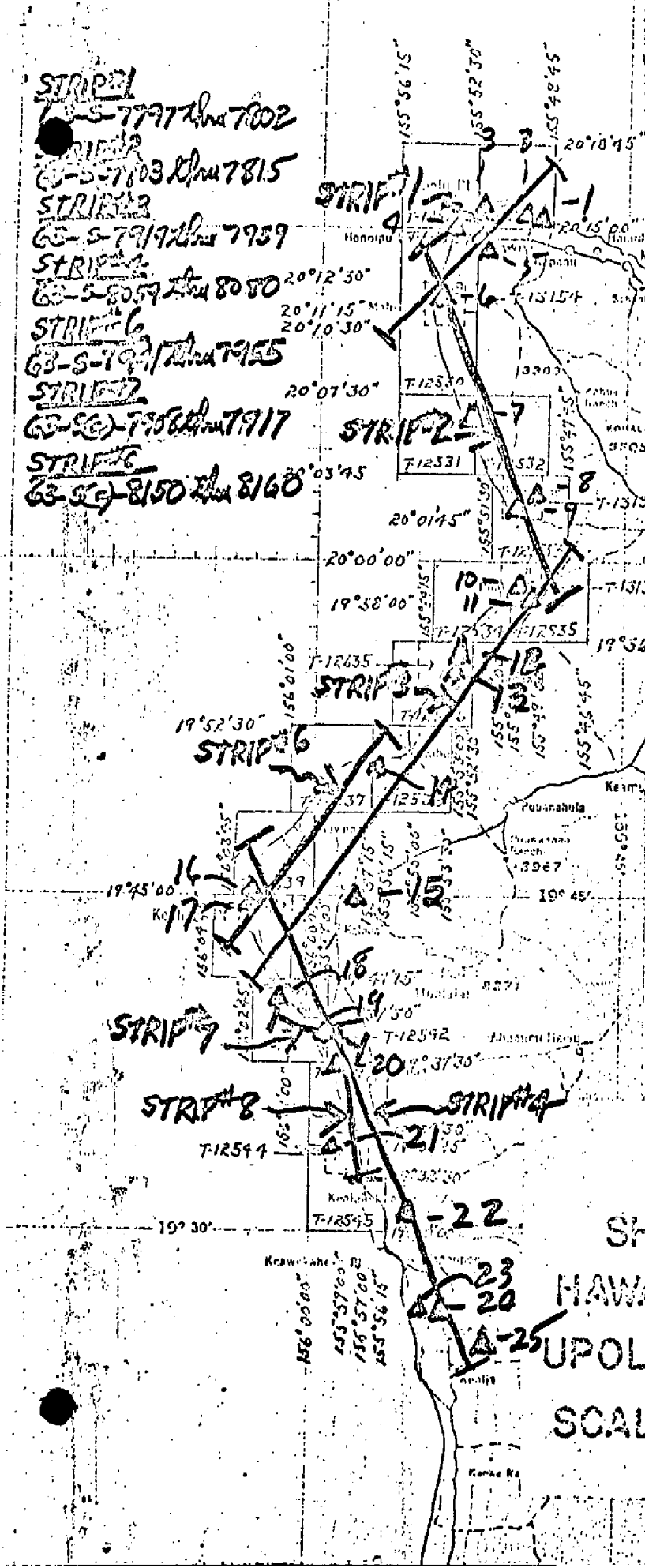
Photography was not adequate to provide coverage of the 1:5,000 scale sheets with the exception of T-12542. This inadequate coverage was caused by a change in the limits of the 1:5,000 areas after bridging was nearing completion. Photography was adequate in regard to definition and overlap.

Submitted by,


John D. Perrow, Jr.

Approved by,


Henry P. Eichert
Chief, Aerotriangulation Section



1. KEPUHI 2, 1948
2. KEPUHI, 1913
3. KEALAHEWA 2, 1948
4. LORAN TOWER, 1948
5. PUU ULA, 1913
6. RED TANK, 1948
7. KEAWANUI, 1948
8. PUU KAMALI, 2, 1928
9. KAWAIHAE LT. 1928
10. PUAKO, 1873
11. PUAKO NEW, 1948
12. ANAEOHOMALU, 1913
13. HAND, 1928
14. NAWAI, 1928
15. LAVA CONE, 1913
16. KEAHOLE 2, 1948
17. KEAHOLE, 1882
18. KEANUOLU 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. HONANAU 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

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. T-12541	JOB NO. PH-6401	STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETIC DATUM N.A. 1927		ORIGINATING ACTIVITY Coastal Mapping Unit, AMC	
					COORDINATES IN FEET STATE <u>Hawaii</u> ZONE <u>1</u>	GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE	REMARKS	
KEAHUOLU POINT, NORTHEAST RANGE MARKER 1948	G.P. pg.33				X=	ϕ 19 40 09.254		
					Y=	λ 156 01 54.221		
KEAHUOLU POINT, SOUTHWEST RANGE MARKER 1948	G.P. pg.33				X=	ϕ 19 39 08.374		
					Y=	λ 156 01 48.216		
KAILUA, MOKUAIKAWA CHURCH SPIRE, 1913	G.P. pg.33				X=	ϕ 19 38 33.854		
					Y=	λ 155 59 47.601		
KEAHUOLU (H.G.S.) 1882	G.P. pg.39				X=	ϕ 19 39 09.803		
					Y=	λ 156 01 42.202		
KEAHUOLU POINT SOUTHEAST RANGE MARKER 1948					X=	ϕ		
					Y=	λ		
KEA VORTAC, 1972	Field edit Report 72				X=	ϕ 19 39 27.01		
					Y=	λ 156 01 39.34		
KAIWI, 1972	Field edit Report 72				X=	ϕ 19 39 40.36		
					Y=	λ 156 02 03.26		
					X=	ϕ		
					Y=	λ		
					X=	ϕ		
					Y=	λ		
					X=	ϕ		
					Y=	λ		
COMPUTED BY A. L. Shands/A. C. Rauck, Jr.				DATE 10/69 & 7/69	COMPUTATION CHECKED BY A. L. Shands		DATE 10/13/69	
					LISTED BY	LISTING CHECKED BY	DATE	
HAND PLOTTING BY				DATE	HAND PLOTTING CHECKED BY		DATE	

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT
T-12541

31 - DELINEATION

Delineation was by instrument methods using the Wild B-8 stereoplotter and 1:15,000 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 1:15,000 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.

This map is common to two 1:5,000 scale inset maps, T-13382 and T-12542. The inset maps cover the entire shoreline except for a small portion of Pawai Bay. Shoreline detail was compared with the inset map delineation in order to eliminate discrepancies.

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

Appropriate data was prepared for field investigation.

38 - CONTROL FOR FUTURE SURVEYS

None.

T-12541

39 - JUNCTIONS

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

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:
Keahole Point, Hawaii, dated 1959, scale 1:24,000,
Kailua, Hawaii; dated 1959, scale 1:24,000.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with USC&GS Chart:
4140, scale 1:80,000, 3rd edition, dated Jan. 24, 1966.
4164, scale 1:5,000, 2nd edition, dated June 20, 1966.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by

Gerry L. Hancock

for A. L. Shands
Cartographer
October 1969

Approved

Gerry L. Hancock

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

ADDENDUM TO THE COMPILATION REPORT

T-12541

Field edit was performed in conjunction with hydrographic survey H-9334 in September 1972. Two common inset maps, T-12542 and T-13382 were edited with this map. Edit data from the combined sheets was applied to this manuscript and the map was advanced to Class I status.

August 1, 1969

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6401 (Hawaii)

T-12541

Honokohau

Honokohau Bay

Kahului Bay

Kailua Bay

Kailua Kona

Kaiwi Point

Kalae Paakai

Kaloko

Kaloko Point

Keahuolu Point

Kona Airport

Kukailimoku Point

Laniakea

Maliu Point

~~Noie Point~~ --- Noie Point *glt*

Oneo Bay

Pacific Ocean

Pawai Bay

Pohakuloa Rock

Waiana

Approved by:

A. Joseph Wraight
A. Joseph Wraight
Chief Geographer

Prepared by:

Frank W. Pickett
Frank W. Pickett
Cartographic Technician

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FIELD EDIT REPORT

OPR-419, 1972

T-12539 through T-12550 §
T-13332 T-11796
Kona Coast, Hawaii

NOAA Ship RAINIER

CAPT G.E. HARADEN
Commanding

INTRODUCTION - METHODS

Field edit was accomplished between 14 September and 26 October 1972 by personnel of the NOAA Ship RAINIER. Work was performed from a 16 foot skiff. Landings were made where necessary to verify shoreline character.

The field edit started approximately 0.4 mile north-east of Puialoa Point, Hawaii and extended southward to Puoa Point (see appendix). Editing was completed on Manuscripts T-12539, T-12540, T-12541, T-12542, T-13382, T-12543, T-12544, T-12545, T-11796, T-12546, T-12548, and T-12549. Field edit was begun but not completed on Manuscript T-12550. No field edit was done on Manuscripts T-12547 and T-11797.

All additions and corrections were noted in purple on the field edit ozalids. Deletions were accented in green. Photos used in this edit were from PH-6401 and 6402. Values given for distances from MHWL and heights of rocks were estimated. All time references were made to 150° W longitude.

To aid in cross-referencing, A "Manuscript Reference Index" and a "Position Abstract" are included in the appendix. Also included in the appendix are: 1) List of detached positions, 2) A complete signal tape listing, 3) Listing of Triangulation Stations recovered, established, and re-established.

ADEQUACY OF COMPILATION

The compilation of the MHWL on the edited manuscripts was excellent and required very few corrections. In general the compilation of off-shore features was also excellent. Time and height data for rocks not identified on the manuscripts has been included on the photographs.

DISCUSSION AND RECOMMENDATIONS

T-12539 (completed) Mahailua Bay

The shoreline in this area is primarily composed of steep cliffs 20' high, interspersed with sandy beach. The northern and southern-most buildings at Mahailua Bay are the only two prominent objects in the vicinity and therefore are of landmark value. The wooden windmill located at 19° 47' 13.35" N and 156° 02' 22.50" W, is no longer standing and should be deleted from C&GS Chart 4140. Further information is furnished on NOAA Form 76-40 (see appendix).

T-12540 (completed) Makako Bay

The shoreline in this area is composed primarily of low bluffs and sandy beach with marsh surrounding fish ponds.

Keahole Point Lighthouse is of landmark value. The lighthouse was field identified from photo 63-S-7943. Further information is provided on NOAA Form 76-40 (see appendix).

T-13382 (completed) Honokohau Bay

The shoreline in this area is composed primarily of gently sloping lava flows with interspersed sandy beach and marsh surrounding Kaloko Fish Pond.

Keahuolu Point Northeast Range Marker, 1948, is of landmark value. Keahuolu Point Northwest Range Marker, 1948*, has fallen over and is no longer visible from seaward. Four new navigational lights mark the entrance to the new boat basin at Honokohau, located just south of Malibu Point. Further information is provided on NOAA Form 76-40 (see appendix).

T-12541 (completed) Kailua Bay

The shoreline in this area is composed primarily of sloping lava rock with marsh surrounding small ponds and fish ponds at Honokohau Bay.

* NOTE: Keahuolu Point Northeast Range Marker, 1948, and Keahuolu Point Northwest Range Marker, 1948, are located on Manuscripts T-12541 and T-13382.

The northern-most building at Honokohau, although small, is of landmark value as a navigational aid when entering the Honokohau boat basin. Keahuolu Point Northeast, Keahuolu Point Southeast, and Keahuolu Point Southwest Range Markers are very faded and weathered but are of landmark value. The building located at Honokohau (approximate location, latitude $19^{\circ}40'25.85''$ N and longitude $156^{\circ}01'44.83''$ W) and Keahuolu Point Northwest Range Marker are not visible from seaward and should be deleted. Further information is provided on NOAA Form 76-40 (see appendix).

CP-12542 (completed) Kailua Bay

The shoreline in this area is composed primarily of low bluffs interspersed with sandy beach.

The facade of the Kona Hilton Hotel, which is illuminated yellow at night, and Kailua Lighthouse are of landmark value; both were intersected using second order, class II methods. A crane lighted at night by a floodlight and used by fishermen as a navigational aid and the Kailua Mokuaiakaua Church spire are also of landmark value.

The cattle pens, small craft warning mast, and building on the Kailua pier have been removed and should be deleted. The tanks located at latitude $19^{\circ}38'34.80''$ N, and longitude $156^{\circ}00'03.46''$ W, and the Kona Airport Airway Beacon have been removed and should be deleted. The church spire, latitude $19^{\circ}38'24.22''$ N and longitude $155^{\circ}59'37.05''$ W, is

present as described but is obscured by vegetation. Further information is provided on NOAA Form 76-40 (see appendix).

T-12543 (completed) Keauhou Bay

This area is composed primarily of rocky shoreline interspersed with sandy beaches.

New buildings at latitude $19^{\circ}35'52.50''$ N, longitude $155^{\circ}58'31.50''$ W and latitude $19^{\circ}34'39.60''$ W, longitude $155^{\circ}58'12.60''$ W are not of landmark value. A hotel just south of Kalaau o Kalakani and a blue church building at Kahaluu Bay are of landmark value.

A spire at Kahaluu Bay is not visible and should be deleted. Further information is provided on NOAA Form 76-40 (see appendix).

T-12544 (completed) Keauhou Bay

The shoreline in this area is primarily composed of lava bluffs 30 feet high.

Keauhou Bay Light and Keauhou Bay Entrance Directional Light (both lights on the same structure) and the Kona Surf Hotel (approximate position scaled) are of landmark value. Further information is provided on NOAA Form 76-40 (see appendix).

T-12545 (completed) Keikiwaha Point

The shoreline in this area is composed of low lava bluffs approximately 10 feet high. There are no objects of landmark value.

T-12546 (completed) Keawekahaka Bay

The shoreline in this area is primarily composed of lava bluffs approximately 30 feet high.

There are no objects of landmark value.

T-11796 (completed) Kealakekua Bay

The shoreline in this area consists of low lava bluffs six to ten feet high with rocky beaches and a steep cliff (160 feet high) on the northeast side of the bay.

Napoopoo, Kahikolu Church Spire, 1913, Napoopoo Lighthouse, and Captain Cook's Monument are all of landmark value. Further information is provided on NOAA Form 76-40 (see appendix).

T-12547 (incomplete) Kealakekua Bay

No field edit was done on this manuscript.

T-11797 (incomplete) Honaunau Bay

No field edit was done on this manuscript.

T- 12548 (completed) Kauhako Bay

The shoreline in this area is composed of bluffs approximately 40-60 feet high with interspersed sandy beach. Buildings in the area indicated on the manuscript at Kauhako Bay are of landmark value. (building locations were not determined by the field editor or located by the compiler - see manuscript).

A church steeple located near Palianihi Point no longer exists and should be deleted.

Further information is provided on NOAA Form 76-40 (see appendix).

T-12549 (completed) Kauluoa Point

The shoreline in this area is composed of cliffs from 10 to 60 feet high interspersed with gravel, sand, and rocky beaches. There are no objects of landmark value.

T-12550 (incomplete) Puoa Point

The shoreline in this area is composed of lava bluffs approximately 40-60 feet high. There are no objects of landmark value. Field edit was completed to Puoa Point.

Respectfully submitted,

Steven J. Hollinshead
Steven J. Hollinshead
LTJG, NOAA

MANUSCRIPT REFERENCE INDEX

OPR-419

FIELD EDIT

MANUSCRIPT NUMBER	REFERENCE PHOTO NUMBERS	REFERENCE DETACHED POSITIONS
T-12539 Mahailua Bay	63-S-7948 63-S-8060	
T-12540 Makako Bay	63-S-7943 63-S-8063*	
T-12541 Kailua Bay	63-S-8063* 63-S-8094	
T-13382 Honokohau Bay	69-E-9255 69-E-9254	
T-12542 Kailua Bay	63-S(C)-7913 63-S(C)-7915 63-S(C)-7917	Detached Positions 10/05/72
T-12543 Keauhou Bay	63-S-8067 63-S-8068	
T-12544 Keauhou Bay	63-S(C)-8158 63-S(C)-8159 63-S(C)-8160	

*NOTE: Photo 63-S-8063 used on T-Sheets T-12540
and T-12541

MANUSCRIPT NUMBER	REFERENCE PHOTO NUMBERS	REFERENCE DETATCHED POSITIONS
T-12545 Keikiwaha Point	63-S-8088 63-S-8087*	
T-12546 Keawekaheka Bay	63-S-8087*	
T-11796 Kealakekua Bay	63-S-8138	Detatched Position 9/14/72
T-12547 Kealakekua Bay	**	
T-11797 Honaunau Bay	**	
T-12548 Honaunau Bay	63-S(C)-8027 63-S(C)-8026 63-S(C)-8025	
T-12549 Kauluoa Point	63-S(C)-8024 63-S(C)-8023 63-S(C)-7888 63-S(C)-7887 63-S(C)-7886	
T-12550	63-S(C)-7884	

*NOTE: Photo 63-S-8087 used on T-Sheets T-12545 and T-12546

**NOTE: No field edit done

REVIEW REPORT
T-12541

SHORELINE

61 - GENERAL STATEMENT

Final review for this final field edited map was accomplished at the Atlantic Marine Center in February 1987. 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:
Keahole Point, Hawaii, dated 1959, scale 1:24,000,
Kailua, Hawaii, dated 1959, scale 1:24,000.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison made with a registered copy of H-9334, RA-10-7-72, surveyed in 1972 did not reveal any significant differences.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS charts:
19327, scale 1:80,000, 8th edition, September 5, 1981.
19331, scale 1:5,000 5th edition, July 9, 1977

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

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. Rohrer *A. J. Bryan*
Chief, Photogrammetric Production Sec. Chief, Photogrammetry Branch

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	NOAA Ship RAINIER
POSITIONS DETERMINED AND/OR VERIFIED	S. Hollinshead
	C. Blood
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) B. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD 1. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection	11. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75
A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	111. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75
**FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

**U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOTICE OF DELETION OF CHARTS**

<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED		REPORTING UNIT (If field party, ship or office) Coastal Mapping, AMC	STATE Hawaii	LOCALITY Hawaii Island	DATE Jun 1974
The following objects HAVE <input checked="" type="checkbox"/> HAVE NOT been inspected from seaward to determine their value as landmarks.					
OPR PROJECT NO.	JOB NUMBER	DATUM			
	PH-6401	T-12541			

CHARTING NAME	JOB NUMBER	SURVEY NUMBER	DATUM	POSITION				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
				LATITUDE		LONGITUDE		OFFICE	FIELD	
				° /	// D.M. Meters	° /	// D.P. Meters			
BUILDING	PH-6401	T-12541	Old Hawaiian	19 40	28.88	156 01	45.04	63(S) 8063 Sep 1, 1963	L-P-5 Sep 1972 63(S) 8063	19327 19331
RANGE MARKER				19 40	09.254	156 01	54.221	"	V-Vis Sep 1972	"
RANGE MARKER				19 39	09.803	156 01	42.202	"	V-Vis Sep 1972	"
RANGE MARKER				19 39	08.374	156 01	48.216	"	V-Vis Sep 1972	"
VORTAC				19 39	27.01	156 01	39.34	63(S) 8064 Sep 1, 1963	F-L-3-7- Sep 1972	
SPIRE				19 38	33.854	155 59	47.601	63(S) 8065 Sep 1, 1963	V-Vis Sep 1972	
HOTEL				19 38	05.50	155 59	36.04	"	F-L-3-7 Sep 1972	

ORIGINATING ACTIVITY

☐ HYDROGRAPHIC PARTY
☐ SEDIMENTARY PARTY
☐ PHOTO FIELD PARTY
☒ COMPILATION ACTIVITY
☐ FINAL REVIEWER
☐ QUALITY CONTROL & REVIEW GRP.
☐ COAST PILOT BRANCH
 (See reverse for responsible personnel)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	NOAA Ship RAINIER
POSITIONS DETERMINED AND/OR VERIFIED	S. Hollinshead
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	C. Blood
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) 8. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

**U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NONFLOATING AIDS OR LIGHTS FOR CHARTS**

<input checked="" type="checkbox"/> TO BE CHARTED (If field party, ship or office)	REPORTING UNIT Coastal Mapping, AMC	STATE Hawaii	LOCALITY Hawaii Island	DATE Jun 1974
<input type="checkbox"/> TO BE REVISED				
<input type="checkbox"/> TO BE DELETED				

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	DATUM				POSITION				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
		JOB NUMBER		SURVEY NUMBER		LATITUDE		LONGITUDE		OFFICE	FIELD	
		PH-6401	T-12541	° /	° /	D.M. Meters	D.P. Meters					
KAILUA LIGHTHOUSE		19 38	27.04	156 00	13.20	63(S)8065 Sep 1, 1963	Sep 1972 P-L-3-7	19327 19331				
	HONOKOHU HARBOR											
LIGHT 3	Entrance Channel Light 3	19 40	22.44	156 01	47.85	Not visible	U.S. Army Corp of Engr.					
LIGHT	Entrance Channel Directional Light	19 40	22.77	156 01	43.68	"	positions submitted by					
LIGHT 4	Channel Light 4	19 40	20.44	156 01	45.91	"	field editor Sept 1972					
LIGHT 5	Channel Light 5	19 40	20.70	156 01	43.20	"	"					

ORIGINATING ACTIVITY

☐ HYDROGRAPHIC PARTY
☐ GEODETIC PARTY
☐ PHOTO FIELD PARTY
☒ COMPILATION ACTIVITY
☐ FINAL REVIEWER
☐ QUALITY CONTROL & REVIEW GRP.
☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

