

T-12542

T-12542

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. T-12542	Edition No. 1
Job No. PH-6402	
Map Classification FINAL, FIELD EDITED MAP	
Type of Survey SHORELINE	
LOCALITY	
State HAWAII	
General Locality HAWAII ISLAND, WEST COAST UPOLO POINT KAILUA	
Locality KAILUA BAY	
1963 TO 1972	
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		SURVEY TP. <u>12542</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>PH- 6401</u>	
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 <u>PH- _____</u> MAP CLASS <u>_____</u> SURVEY DATES: 19 <u> </u> TO 19 <u> </u>	
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, 1964	
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 <u>Hawaii</u> ZONE <u>1</u> STATE <u> </u> ZONE <u> </u>	
5. SCALE 1:5,000		STATE <u> </u> ZONE <u> </u>	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY <u>J. Perrow</u> METHOD: stereoplanigraph LANDMARKS AND AIDS BY <u>H. Eichert</u>			Feb 1969 Feb 1969
2. CONTROL AND BRIDGE POINTS PLOTTED BY <u>J. Perrow</u> METHOD: coradomat CHECKED BY <u>H. Eichert</u>			Feb 1969 Feb 1969
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY <u>A. Shands</u> COMPILATION CHECKED BY <u>C. Bishop</u> INSTRUMENT: wild B-8 SCALE: 1:5,000 CONTOURS BY <u>N.A.</u> CHECKED BY <u>N.A.</u>			Sep 1969 Sep 1969 -- --
4. MANUSCRIPT DELINEATION PLANIMETRY BY <u>L. Graves</u> CHECKED BY <u>R. Pate</u> CONTOURS BY <u>N.A.</u> CHECKED BY <u>N.A.</u> METHOD: Smooth drafted SCALE: 1:5,000 HYDRO SUPPORT DATA BY <u>L. Graves</u> CHECKED BY <u>R. Pate</u>			Oct 1969 Jan 1970 -- -- Oct 1969 Jan 1970
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY <u>R. Pate</u>			Jan 1970
6. APPLICATION OF FIELD EDIT DATA BY <u>L. Graves</u> CHECKED BY <u>C. Blood</u>			Aug 1973 May 1974
7. COMPILATION SECTION REVIEW BY <u>C. Blood</u>			May 1974
8. FINAL REVIEW BY <u>J. Hancock</u>			Feb 1987
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY <u>J. Hancock</u>			Mar 1987
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY <u>P. Dumsley</u>			May 1987
11. MAP REGISTERED - COASTAL SURVEY SECTION BY <u>E. L. DAUGHERTY</u>			MAY 1987

T-12542
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	<input checked="" type="checkbox"/> STANDARD
				MERIDIAN 135th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
63S(C)7913-7917	Aug 30, 63	09:16	1:15,000	1.1 ft above MLLW	
63S(C)8151-8153	Sep 1, 63	10:32	1:15,000	1.1 ft above MLLW	
63S(C)8148-8149	Sep 1, 63	10:30	1:15,000	1.0 ft above MLLW	
				Mean Tide Range = 1.4 ft	

REMARKS

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-13382	No survey	T-12543	T-13382

REMARKS

This 1:5,000 scale inset map is contained within the limits of map T-12541 (1:10,000 scale)

T-12542
HISTORY OF FIELD OPERATIONSI. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Newsom	Jun/Jul 1964
2. HORIZONTAL CONTROL	RECOVERED BY E. Cline	Jun/Jul 1964
	ESTABLISHED BY E. Cline	Jun/Jul 1964
	PRE-MARKED OR IDENTIFIED BY E. Cline	Jun/Jul 1964
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 none	--
	LOCATED (Field Methods) BY none	--
	IDENTIFIED BY E. Cline	Jun/Jul 1964
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 1964
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)8065*	KAILUA, 1887 (Direct and Sub Pt.)		
*Section of ratio photo submitted.			

3. PHOTO NUMBERS (Clarification of details)

63(S)C 7912-7915, 8151-8153 (Cronapaque Contacts)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
63(S)7914	Kailua Lighthouse		

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 form 152 (CSI)

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-12542
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	(NOAA Ship RAINIER) G. Harden	Sep/Oct 1972
2. HORIZONTAL CONTROL	RECOVERED BY S. Hollinshead	Sep/Oct 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	Oct 1972
	LOCATED (Field Methods) BY S. Hollinshead	Oct 1972
	IDENTIFIED BY none	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	<input type="checkbox"/> COMPLETE BY	
	<input type="checkbox"/> SPECIFIC NAMES ONLY	
	<input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY S. Hollinshead	Oct 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)7913, 7915, 7917 (Matte Ratios, 1:5,000 scale)		

OBJECT NAME

PHOTO NUMBER

OBJECT NAME

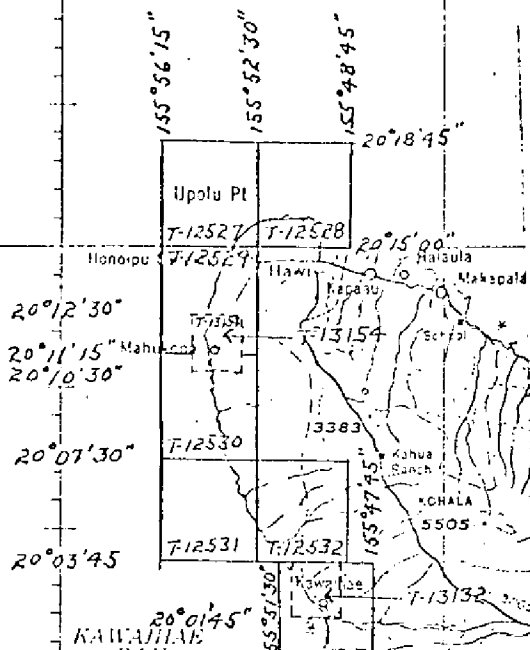
PHOTO NUMBER

NOAA FORM 76-36D (3-72)	T-12542	U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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 May 1972
field edit applied compilation complete	May 1974	Class I Manuscript		May 1974
Final Review	Feb 1987	Final Map	mar 1987	mar 1987

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

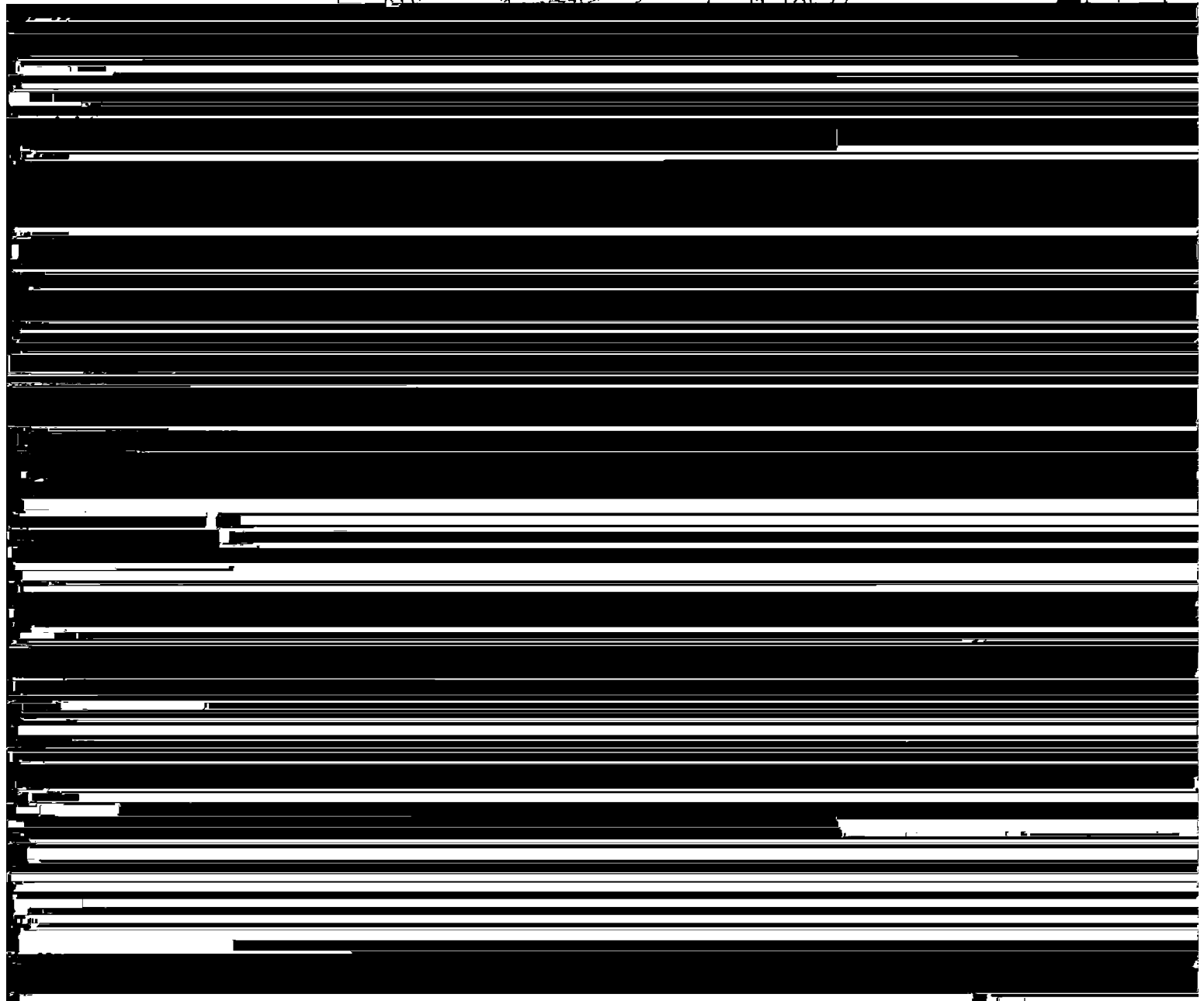
Official Mileage For Cost Accounts



Sheet No.

Area
Sq. Mi.

T-12527	1
T-12528	3
T-12529	3
T-12530	3
T-12531	2
T-12532	2
T-12533	3
T-12534	2
T-12535	2
T-12536	3
T-12537	



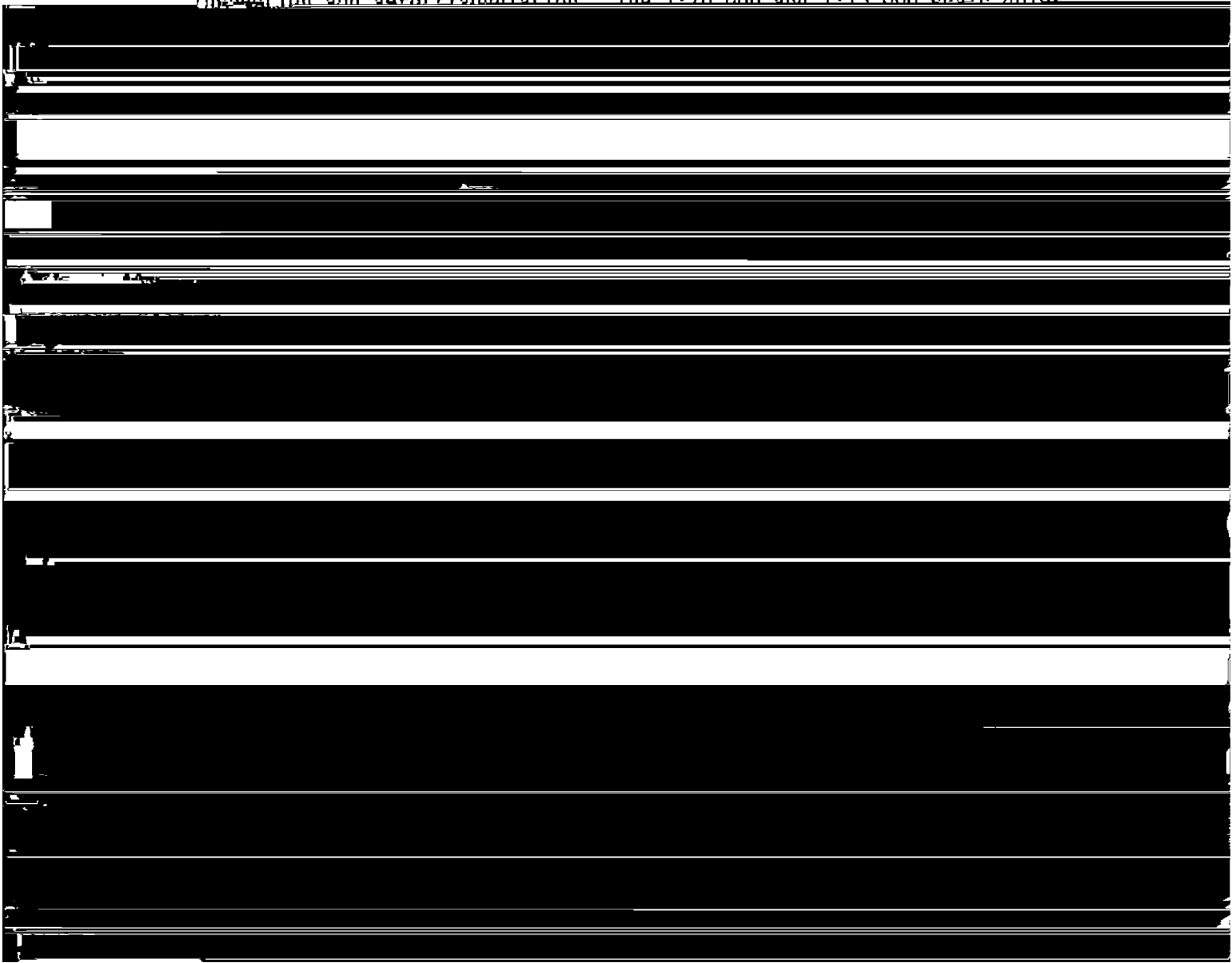
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12542

This 1:5,000 scale final shoreline inset 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 inset map was to provide a large scale portrayal of Kailua Bay and vicinity for support of hydrographic operations and marine chart maintenance.

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



T-12542

Field edit was conducted in conjunction with hydrographic survey H-9334 by NOAA Ship RAINIER personnel in September/October 1972.

Application of field edit was accomplished at the Atlantic Marine Center in May 1974 and the manuscript was advanced to Class I. Copies of the Class I manuscript were forwarded to the Hydrographic Surveys Branch.

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-12542

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.

8

Photogrammetric Plot Report

PH-6401

Hawaii Island, Hawaii

Feb. 4, 1969

21. Area Covered

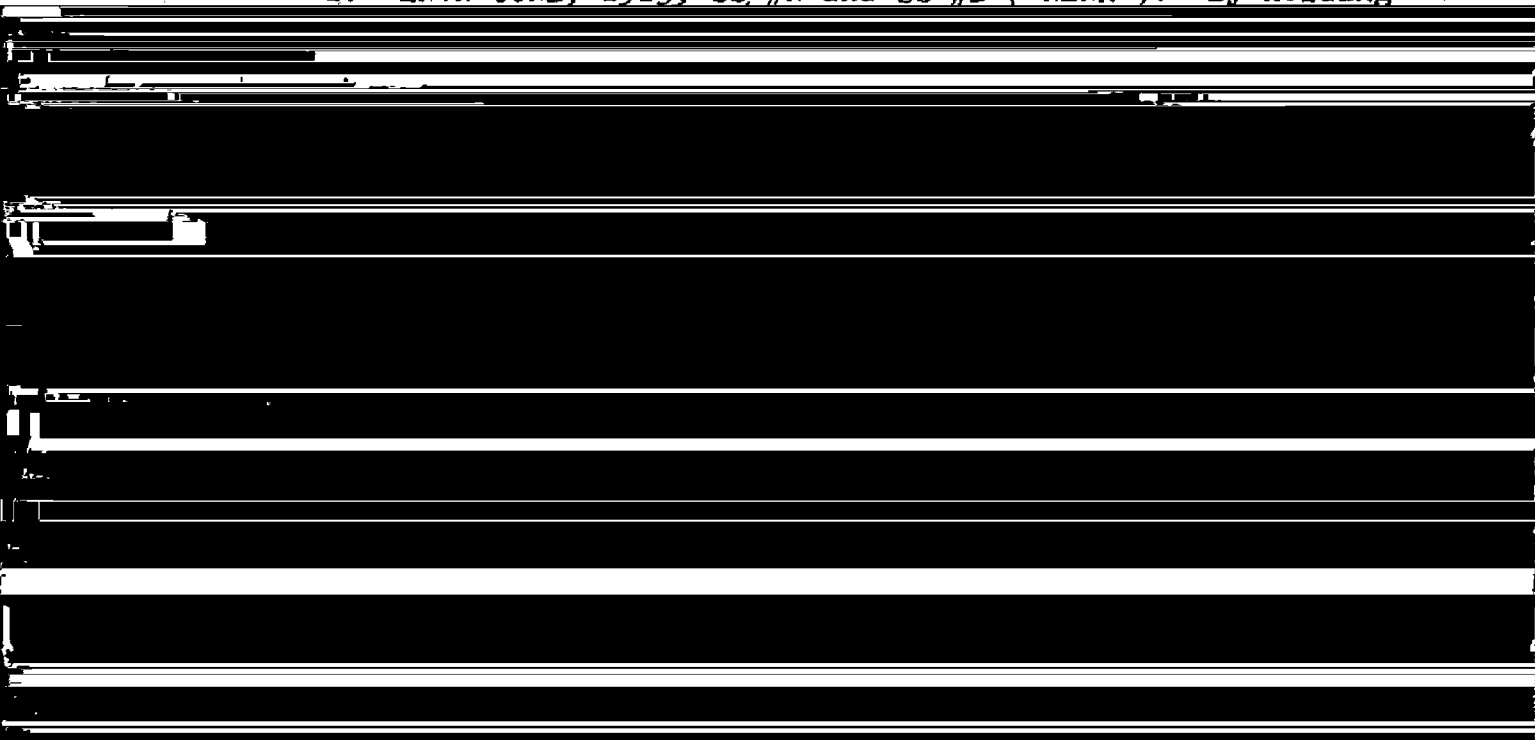
The area covered by this report is along the northwest coast of Hawaii Island. T-sheets in this area are numbered 12534 thru 12541, 12543, and 12545 at 1:10,000 scale. T-sheets 12542, 12544, 12635, 13131 and 13132 at 1:5,000 scale. Sheets T-12527 thru 12533 and 13154 were covered by a previous report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

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,

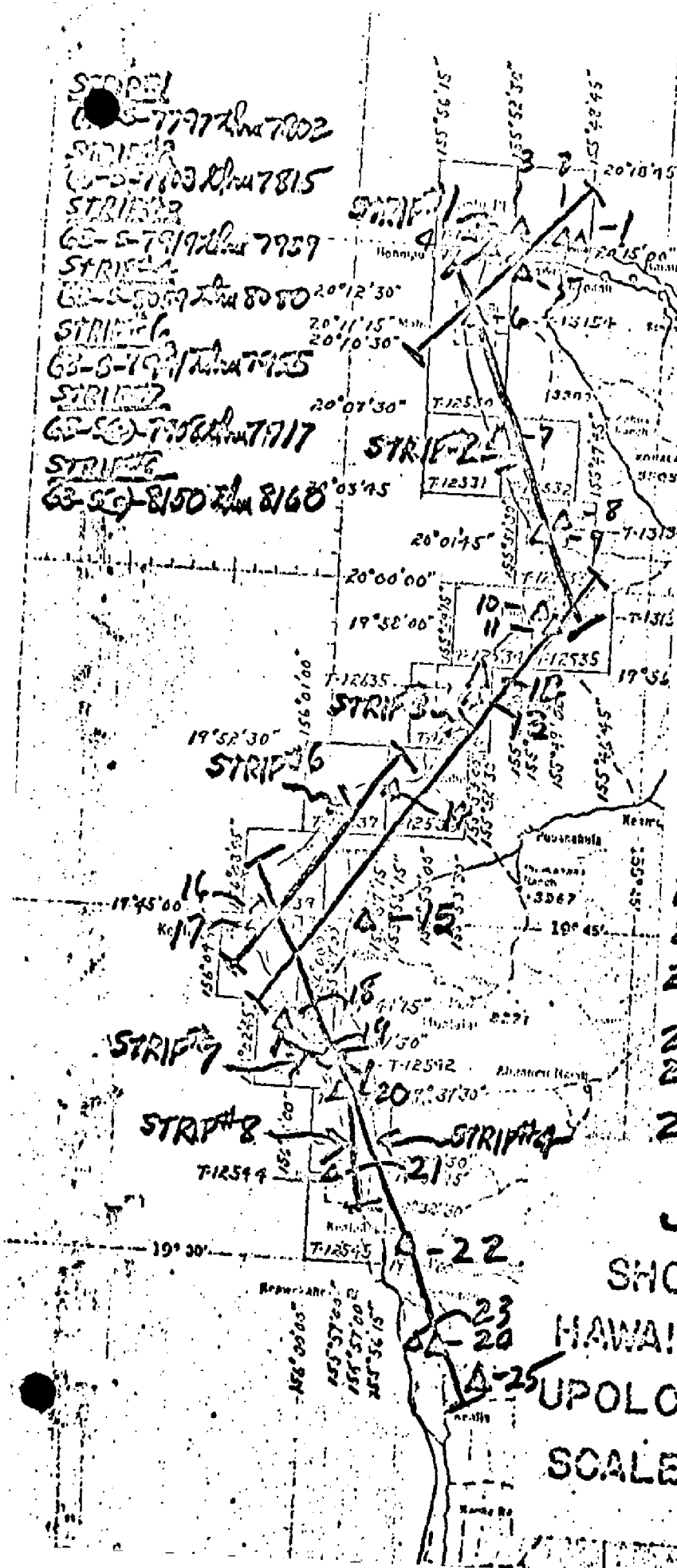
John D. Perrow Jr.
John D. Perrow, Jr.

Approved by,

Henry P. Eichert

Henry P. Eichert

Chief, Interpretation Section



1. KEPUNI 2, 1948
2. KEPUNI, 1913
3. KEALAHUEA 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. PUKO, 1873
11. PUKO 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. NAV. RANGE MARKER, 1948
19. KAILUA, 1887
20. KAHALO, 1882
21. POINT, 1928
22. KEALAKEKUM KONA CH. SPIRE, 1948
23. KEEL 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

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	GEODETTIC DATUM		ORIGINATING ACTIVITY	
		Old Hawaiian	Coastal Mapping Unit, AMC		
STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI-ANGULATION POINT NUMBER	COORDINATES IN FEET STATE <u>Hawaii</u> ZONE <u>1</u>	GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE	REMARKS
KAILUA, MOKUAUKAUA CHURCH SPIRE, 1913	G.P. pg 33		X=	ϕ 19 38 33.854	
			Y=	λ 155 59 47.601	
			X=	ϕ	
			Y=	λ	
			X=	ϕ	
			Y=	λ	
			X=	ϕ	
			Y=	λ	
			X=	ϕ	
			Y=	λ	
			X=	ϕ	
			Y=	λ	
			X=	ϕ	
			Y=	λ	
			X=	ϕ	
			Y=	λ	
COMPUTED BY L. Graves/A. C. Rauck, Jr.	DATE 9/69.8/69	COMPUTATION CHECKED BY A. C. Rauck/L. Graves	DATE 9/11/69		
LISTED BY	DATE	LISTING CHECKED BY	DATE		
HAND PLOTTING BY	DATE	HAND PLOTTING CHECKED BY	DATE		

COMPILATION REPORT
T-12542

21 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.

T-12542

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 Charts:

4164, scale 1:5,000, 2nd edition, dated June 20, 1966,

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

Jerry L. Hancock

for L. Graves
Cartographer
October 1969

Approved

Jerry L. Hancock

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

ADDENDUM TO THE COMPILATION REPORT

T-12542

Field edit for this inset map was performed in conjunction with hydrographic survey H-9334 in September/October 1972. The common small scale sheet, T-12541 was also edited during this time. Pertinent edit data from both sheets was applied to the manuscript and the map was advanced to Class I status.

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6401 (Hawaii)

T-12542

Kahului Bay

Kailua Bay

Kailua Kona

Kalae Paakai

Kukailimoku Point

Laniakea

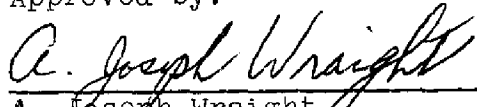
Oneo Bay

Pacific Ocean

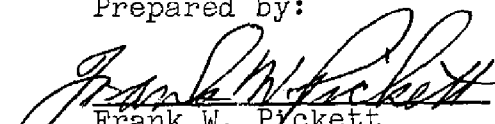
Pohakuloa Rock

Waiaha

Approved by:


A. Joseph Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

FIELD EDIT REPORT

OPR-419, 1972

T-12539 through T-12550 5
T-13382 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 $19^{\circ} 47' 13.35''$ N and $156^{\circ} 02' 22.50''$ 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 Maliu 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).

~~CT-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 Mokuauikaia 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

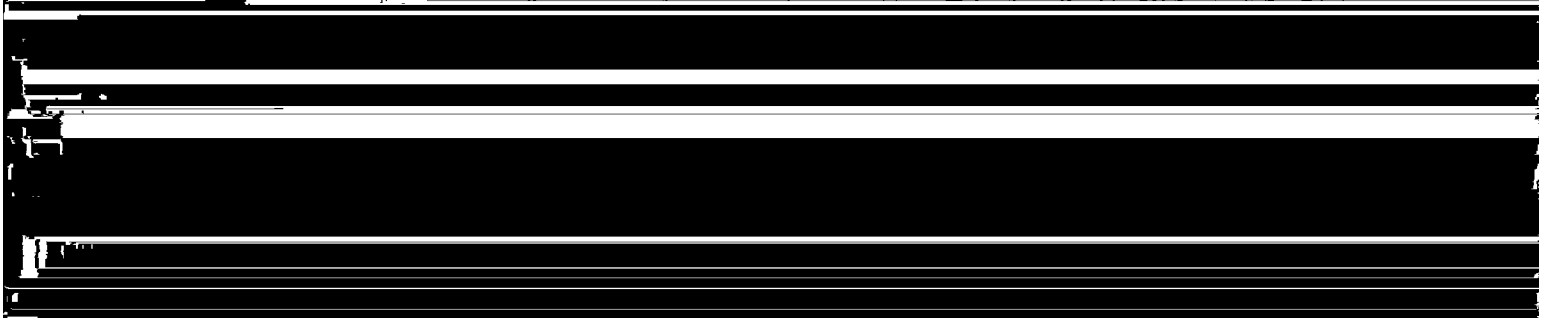
No field edit was done on this manuscript.

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 -



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

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

T-12549 (completed) Kaulua 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 DETATCHED 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	Detatched 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-8062 used on M Sheets M-12540

REVIEW REPORT
T-12542

SHORELINE

61 - GENERAL STATEMENT

Final review for this final Class III 1:5,000 scale inset map was accomplished at the Atlantic Marine Center in February 1987. The field inspection was performed in conjunction with the common smaller scale map, T-12541, which encompasses this inset map. 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:
19331, scale 1:5,000, 5th edition, July 9, 1977;
19327, scale 1:80,000, 8th edition, September 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.

Submitted by

Jerry L. Hancock
Jerry L. Hancock
Final Reviewer

Approved for forwarding

Billy H. Barnes
Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved

Dwight O. Bohren *A. Y. Byrum*
Chief, Photogrammetric Production Sec. Chief, Photogrammetry Branch

Replaces C&GS Form 567.

MONITORING

<input checked="checked" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED	REPORTING UNIT <i>(Field Party, Ship or Office)</i> Coastal Mapping Atlantic Marine
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[illegible][illegible]

RESPONSIBLE PERSONNEL		ORIGINATOR
TYPE OF ACTION	NAME	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
OBJECTS INSPECTED FROM SEAWARD	NOAA Ship RAINIER	
POSITIONS DETERMINED AND/OR VERIFIED	S. Hollinshead	FIELD ACTIVITY REPRESENTATIVE
	C. Blood	OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)		
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		
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 I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 5 - Field Identified 1 - Triangulation 6 - Theodolite 2 - Traverse 7 - Planetable 3 - Intersection 8 - Sextant 4 - Resection A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.		
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.		

Replaces C&GS Form 567.

NONFLOATING AIDS OR EXAMINATION AIDS FOR CHARTS

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

ORIGINATING ACTIVITY

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

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
Coastal Mapping Sect.	Hawaii	Hawaii Island	June 1974

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

DÄTUM

SURVEY NUMBER

PH-6401

T-12542

Old Hawaiian

POSITION

LATITUDE		LONGITUDE	
° /	"	° /	"
D. M. Meters		D. P. Meters	

DESCRIPTION
(R)Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parenthesis.

FIELD

FIELD

CHARTS
AFFECTED

KAILUA
LIGHTHOUSE

63(S)8065
Sept 1, 1963

F-L-3-7
Sept 1972

19327
19331

