

T-12532

T-12532

NOAA FORM 76-35
(6-80)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

<i>Map No.</i> T-12532	<i>Edition No.</i> 1
<i>Job No.</i> PH-6401	
<i>Map Classification</i> FINAL, FIELD EDITED MAP	
<i>Type of Survey</i> SHORELINE	
LOCALITY	
<i>State</i> HAWAII	
<i>General Locality</i> HAWAII ISLAND, WEST COAST UPOLO POINT TO KAILUA	
<i>Locality</i> WAIKAILIO BAY	
19 ₆₃ TO 19 ₆₈	
REGISTERED IN ARCHIVES	

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, Virginia OFFICER-IN-CHARGE Richard Houlder		SURVEY TR. <u>12532</u> MAP EDITION NO. (1) MAP CLASS Final JOB PH. <u>6401</u>	
I. INSTRUCTIONS DATED		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
1. OFFICE Compilation September 12, 1968 Supplement No. 1 February 11, 1969 Compilation March 11, 1969 Supplement No. 2 December 11, 1969		2. FIELD Control/Field Inspection April 29, 1964	
II. DATUMS			
1. HORIZONTAL: <input type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify) Old Hawaiian	
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 Hawaii ZONE 1	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY P. Hawkins Jun 1966 METHOD: Stereoplanigraph LANDMARKS AND AIDS BY J. Perrow Jun 1966			
2. CONTROL AND BRIDGE POINTS PLOTTED BY P. Hawkins Jun 1966 METHOD: Coradomat CHECKED BY J. Perrow Jun 1966			
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY R. White Sept 1968 COMPILATION CHECKED BY C. Bishop Sept 1968 INSTRUMENT: Wild B+8 CONTOURS BY N.A. SCALE: 1:10,000 CHECKED BY N.A.			
4. MANUSCRIPT DELINEATION PLANIMETRY BY R. White Sept 1968 CHECKED BY C. Bishop Sept 1968 METHOD: Smooth drafted CONTOURS BY N.A. SCALE: 1:10,000 CHECKED BY N.A. HYDRO SUPPORT DATA BY R. White Sept 1968 CHECKED BY C. Bishop Oct 1968			
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY C. Bishop Oct 1968			
6. APPLICATION OF FIELD EDIT DATA BY A. Shands Aug 1969 CHECKED BY R. Smith Jan 1970			
7. COMPILATION SECTION REVIEW BY R. Smith Jan 1970			
8. FINAL REVIEW BY J. Hancock Oct 1986			
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=152.29 mm		TYPES OF PHOTOGRAPHY LEGEND (C) COLOR (P) PANCHROMATIC (I) INFRARED		TIME REFERENCE	
TIDE STAGE REFERENCE <input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				ZONE Yukon	<input checked="" type="checkbox"/> STANDARD
				MERIDIAN 135th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
63S(P) 7809-7812 *	Aug. 27, 1963	11:00	1:30,000	1.8 ft. above MLLW	
63S(C) 7787-7788 **	Aug. 27, 1963	10:22	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 LOW-WATER LINE 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-9017	Surveyed 1968	Registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
No Survey	No Survey	T-12533 T-13132 (1:5,000)	T-12531

REMARKS

T-12532

HISTORY OF FIELD OPERATIONS

1. ☒ FIELD INSPECTION OPERATION

☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Newsom	Jun 1964
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None None
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
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	N.A.

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) 7811 (Matte Contact)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE

6. 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

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-12532
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	(USC&GS Ship McARTHUR) R. Newsom	Dec 1968
2. HORIZONTAL CONTROL	RECOVERED BY None 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 None LOCATED (Field Methods) BY None IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
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)

None

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

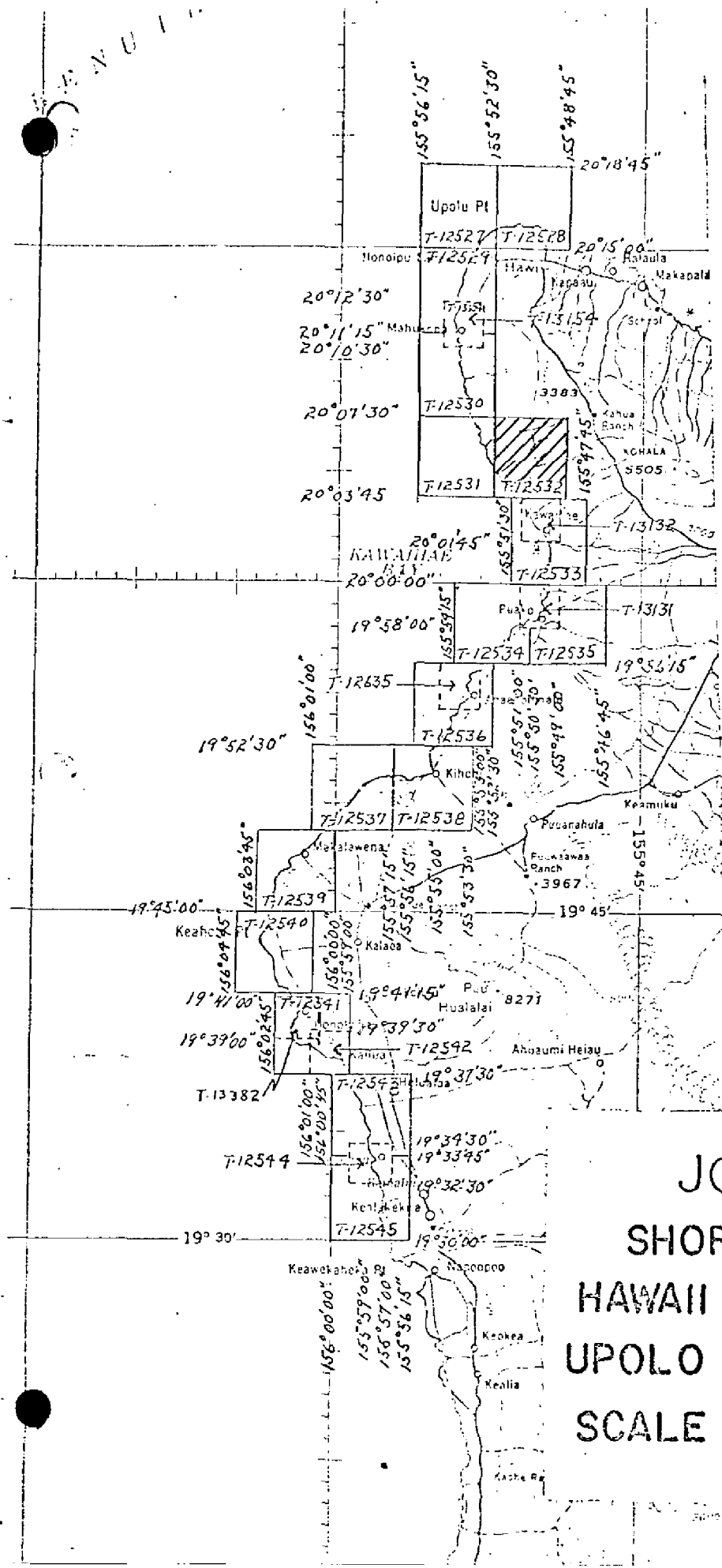
None

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

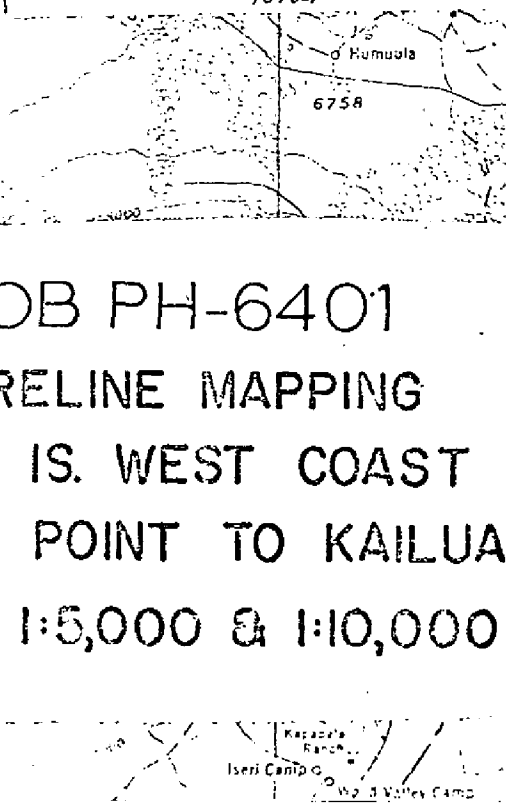
1 Field Edit Paper Print

1 Field Edit Report

<u>Sheet No.</u>	<u>Area</u> <u>Sq. Ft.</u>
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	4
T-12538	2
T-12539	4
T-12540	4
T-12541	4
T-12542	2
T-12543	3
T-12544	2
T-12545	3
T-12535	2
T-13131	2
T-13132	2
T-13154	2
T-13382	<u>1</u>
	61



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



6

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12532

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. 20° 03' 45" to Lat. 20° 05' 35".

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 October 1968. 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-12532

Field edit for this map was conducted in conjunction with hydrographic survey H-9017 by USC&GS Ship McARTHUR personnel in December 1968.

Application of field edit data was accomplished at the Atlantic Marine Center in January 1970 and the manuscript was advanced to Class I. A copy of the Class I manuscript was forwarded to the Hydrographic Surveys Branch.

Final review was performed at the Atlantic Marine Center in October 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.

FIELD INSPECTION
T-12532

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 BRIDGE REPORT
Hawaii Island, Hawaii
Job PH-6401

June, 1966

21. Area Covered

This report covers only Strip #1 and Strip #2 which fall along the northwestern tip of Hawaii Island. T-sheets in this area are numbered 12527 through T-12533.

22. Method

Both strips were bridged on the stereoplanigraph and were adjusted by IBM 1620 methods. Strip #1 was adjusted on five control stations with four additional stations as checks. Strip #2 was adjusted on four control stations with two additional stations as checks. All tie points between strips were averaged.

23. Adequacy of Control

The control provided by the field was adequate but did not comply with project instructions in that many stations were identified directly with no substation. The following stations could not be held in the bridging adjustments.

1. KAWAIHAE LIGHT 1948. The field misidentified this station by some 1,500 feet. The description places this station to the southeast of where it was pricked.
2. KÉPUHI 2, 1948, SS #1. The substation was misidentified during bridging operations; however, the home station held in the bridge.
- 3 & 4. MAHUKONA HARBOR SOUTH DAY BEACON 1910 and MAHUKONA NORTH DAY BEACON 1910. These two stations were identified directly. No Form 152's were provided by the field. The identification seems to fit the descriptions; however, the two stations could not be held in either bridge by same amounts (30' to 35'). In view of the bridging results, using the other control stations, and the good junction between strips, the two stations were disregarded. It is recommended that a field check of these stations be made during hydro operations.

24. Supplemental Data

Local Geological Survey Quads of the area were used to establish rough elevations for bridging.

25. Photography

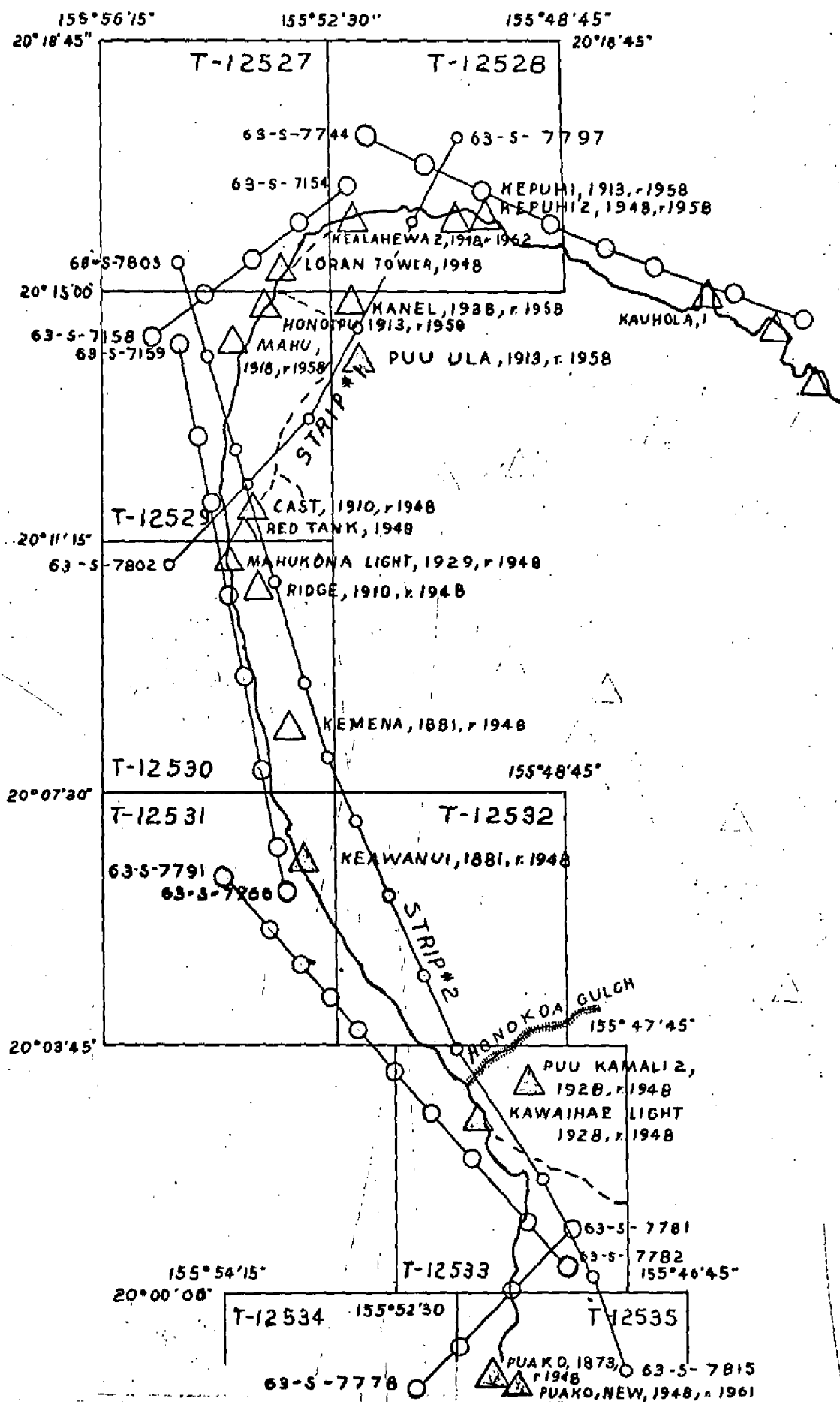
Photography was adequate as to coverage, overlap, definition and quality of diapositives.

Submitted by:

Paul Hawkins
Paul Hawkins

Approved by:

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

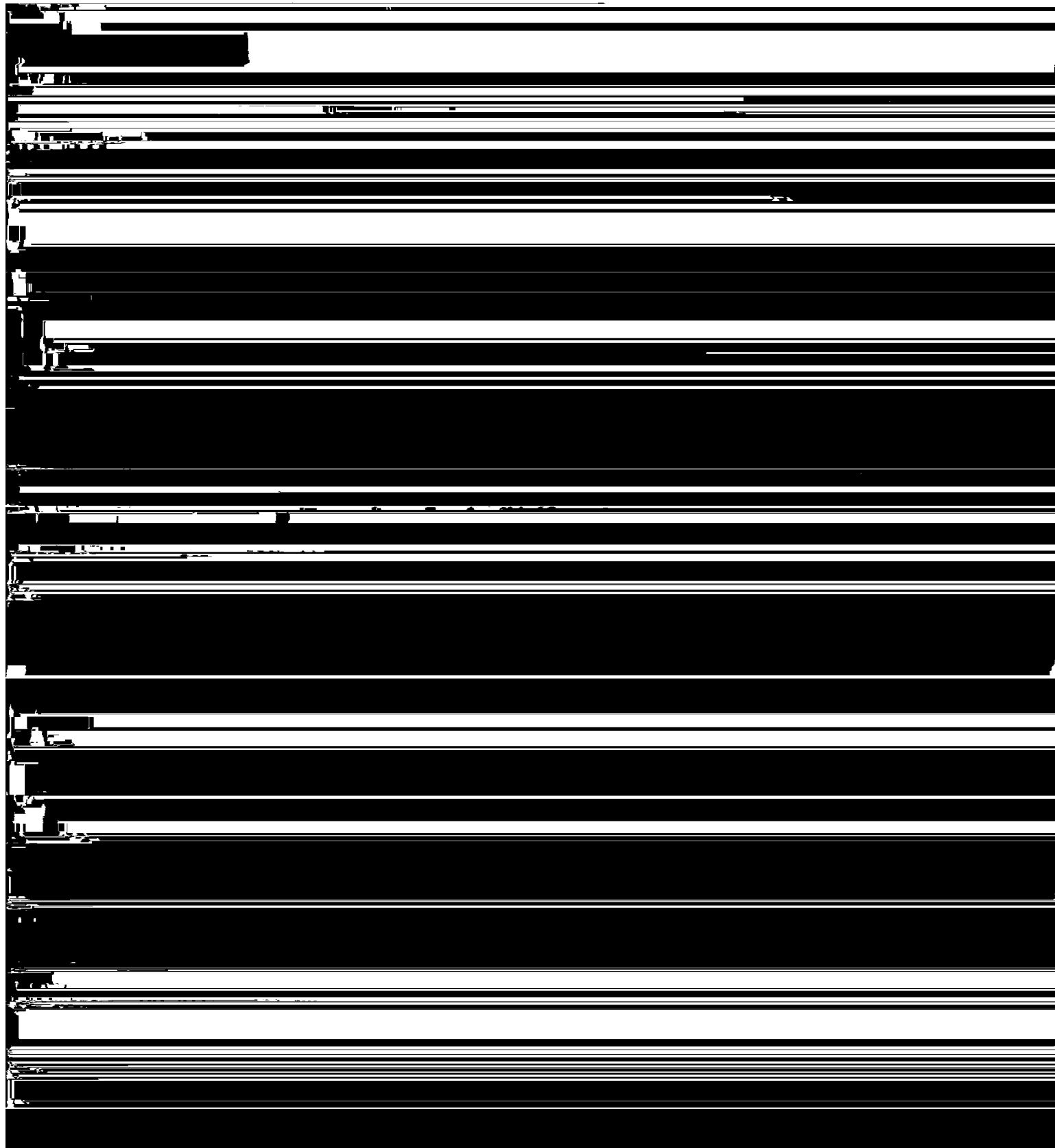


DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. T-12533	JOB NO. PH-6401	GEODEIC DATUM Old Hawaiian		ORIGINATING ACTIVITY Unit, AMC, Norfolk, VA				
STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	COORDINATES IN FEET		GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE	REMARKS		
			STATE Hawaii	ZONE 1				
			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							
X=	ϕ							
Y=	λ							
X=	ϕ							
Y=	λ							
X=	ϕ							
Y=	λ							
X=	ϕ							
Y=	λ							
X=	ϕ							
Y=	λ							
COMPUTED BY A. C. Rauck	DATE 8/68	COMPUTATION CHECKED BY C. Blood				DATE 8/30/68		
LISTED BY	DATE	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-12532



T-12532

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated June 1966.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with U.S.G.S Quadrangle, Kawaihae, Hawaii, dated 1956, 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.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by

Jerry L. Hancock

for R. R. White
Cartographic Aid
September 1968

Approved

Jerry L. Hancock

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

ADDENDUM TO THE COMPILATION REPORT

T-12532

Field edit was performed concurrent with hydrographic survey H-9017. Adequate field data 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-12532

Honokoa Gulch -----Not compiled *gwh*
Kaiopae Gulch
Kaiopae Point
Kamilo Gulch
Kapae Gulch
Kapole Gulch
Keanahalululu Gulch
Keawewai Gulch
Pacific Ocean
Palapalai Gulch -----Not compiled *gwh*
Puu Ulaula
Waiakailio Bay
Waiokanalopaka Falls -Not compiled *gwh*

Approved by:

A. J. Wraight
A. Joseph Wraight
Chief Geographer

Prepared by:

Frank W. Pickett
Frank W. Pickett
Cartographic Technician

16

Field Edit Report
to Accompany T12532

USC&GSS McARTHUR

Ronald L. Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Advance manuscript T 12532 was field edited by personnel aboard the USC&GSS McARTHUR in conjunction with hydrography on boatsheet AR 10-6-68, H 9017. The MLLW line was not developed due to the rugged nature of the coast line. The shore line drops off steeply and the MLLW is the same as the HWL shown on the manuscript. The field edit information was shown on the field edit ozalid copy of T 12532 in blue ink. No field edit was shown on the photos.

52 ADEQUACY

Manuscript T 12532 was completely adequate for a hydrographic survey.

54 RECOMMENDATIONS

None

REVIEW REPORT
T-12532

SHORELINE

61 - GENERAL STATEMENT

Final review for this final field edited map was accomplished at the Atlantic Marine Center in October 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 quadrangle Kawaihae, Hawaii, dated 1956, scale 1:24,000.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a portion of hydrographic survey H-9017, AR-10-6-68, 1:10,000 scale, field surveyed 1968. The comparison did not reveal any significant discrepancies; however, it was noted that several alongshore foul limits delineated on the map were not transferred to the hydrographic survey. It appears that alongshore sounding development took precedence over the foul limits.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS chart 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.

Submitted by

Jerry L. Hancock
Jerry L. Hancock
Final Reviewer

Approved for forwarding

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

Approved

Irving O. Robson *A. Y. Bryson*
Chief, Photogrammetric Production Sec. Chief, Photogrammetry Branch

