

T- 12531

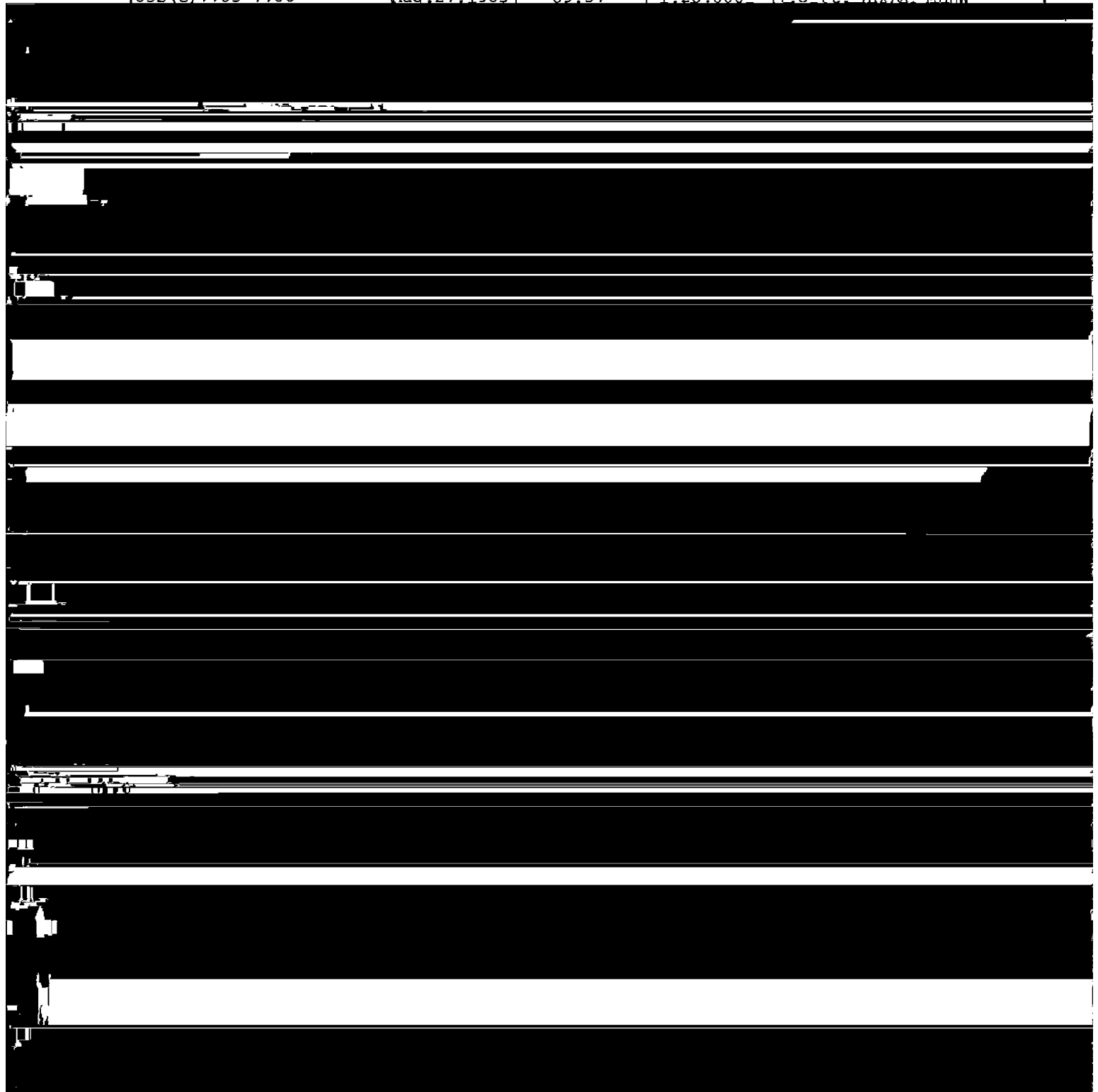
T- 12531

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. T-12531	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 KEAWANUI BAY	
19 63 TO 19 68	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED		SURVEY TR. <u>12531</u> MAP EDITION NO. (1) MAP CLASS Final JOB PH. <u>6401</u>	
DESCRIPTIVE REPORT - DATA RECORD							
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center, Norfolk, Virginia				LAST PRECEEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED			
OFFICER-IN-CHARGE Richard Houlder				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, 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 ZONE			
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 A. Shands 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 Oct 1968 METHOD: Smooth drafted CONTOURS BY N.A. CHECKED BY N.A. SCALE: 1:10,000 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.A. DAUGHERTY MAY 1987							

NOAA FORM 76-36B (3-72)	T-12531	U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY
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(C) 7765-7766**	Aug. 27, 1963	09:57	1:20,000	1.8 ft. above MLLW	



T-12531

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION

☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Newsom	May/Jun1964
RECOVERED BY	E. Cline	May/Jun1964
2. HORIZONTAL CONTROL	E. Cline	May/Jun1964
ESTABLISHED BY	E. Cline	May/Jun1964
PRE-MARKED OR IDENTIFIED BY	E. Cline	May/Jun1964
RECOVERED BY	None	
3. VERTICAL CONTROL	None	
ESTABLISHED BY	None	
PRE-MARKED OR IDENTIFIED BY	None	
RECOVERED (Triangulation Stations) BY	None	
4. LANDMARKS AND AIDS TO NAVIGATION	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 E. Cline	May/Jun1964
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)7809*	KEAWANUI, 1881 (Direct & Sub.pt)		
*Section of ratio photo submitted.			

3. PHOTO NUMBERS (Clarification of details)

63(S)7808, 7809 and 7811 (Matte Contacts)

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)

1 - Form 152 (CSI)

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

T-12531

HISTORY OF FIELD OPERATIONS

1. ☐ 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 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	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

I. MANUSCRIPT COPIES				
COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	Oct.1968	Class III Manuscript (Includes field inspection)	Oct.1968	Oct.1968 Dec.1969
Field edit applied, compilation complete	Jan.1970	Class I Manuscript	Mar.1977	Nov.1970
Final Review	Oct.1986	Final Map	mar 1987	mar 1987

II. LANDMARKS AND AIDS TO NAVIGATION None

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH			
NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: None
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 567 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	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL	

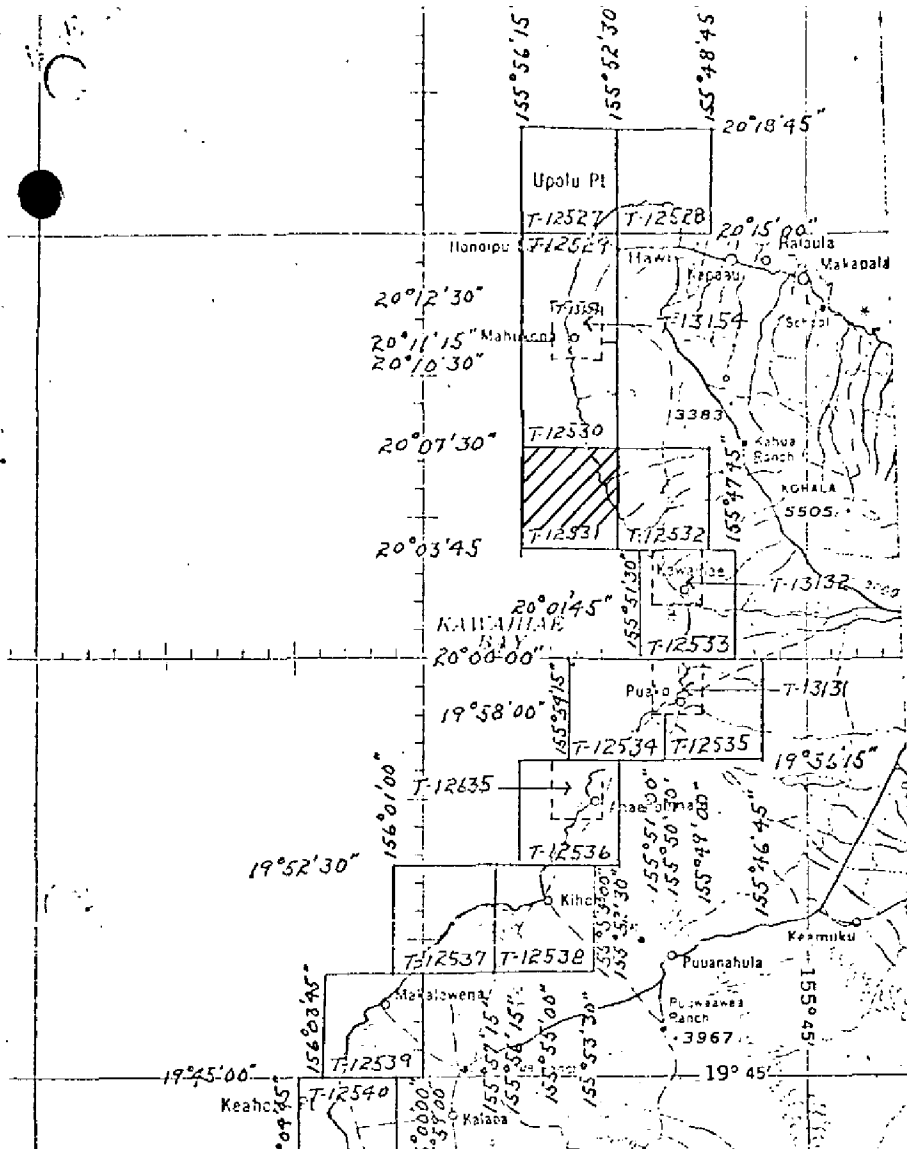
Official Mileage
For
Cost Accounts

Area
Sq. Mi.

Sheet No.

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-12635	2
T-13131	2
T-13132	2
T-13154	2
T-13382	1

Total 61



SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12531

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° 05.5' to Lat. 20° 07.5'.

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-12531

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-12531

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.

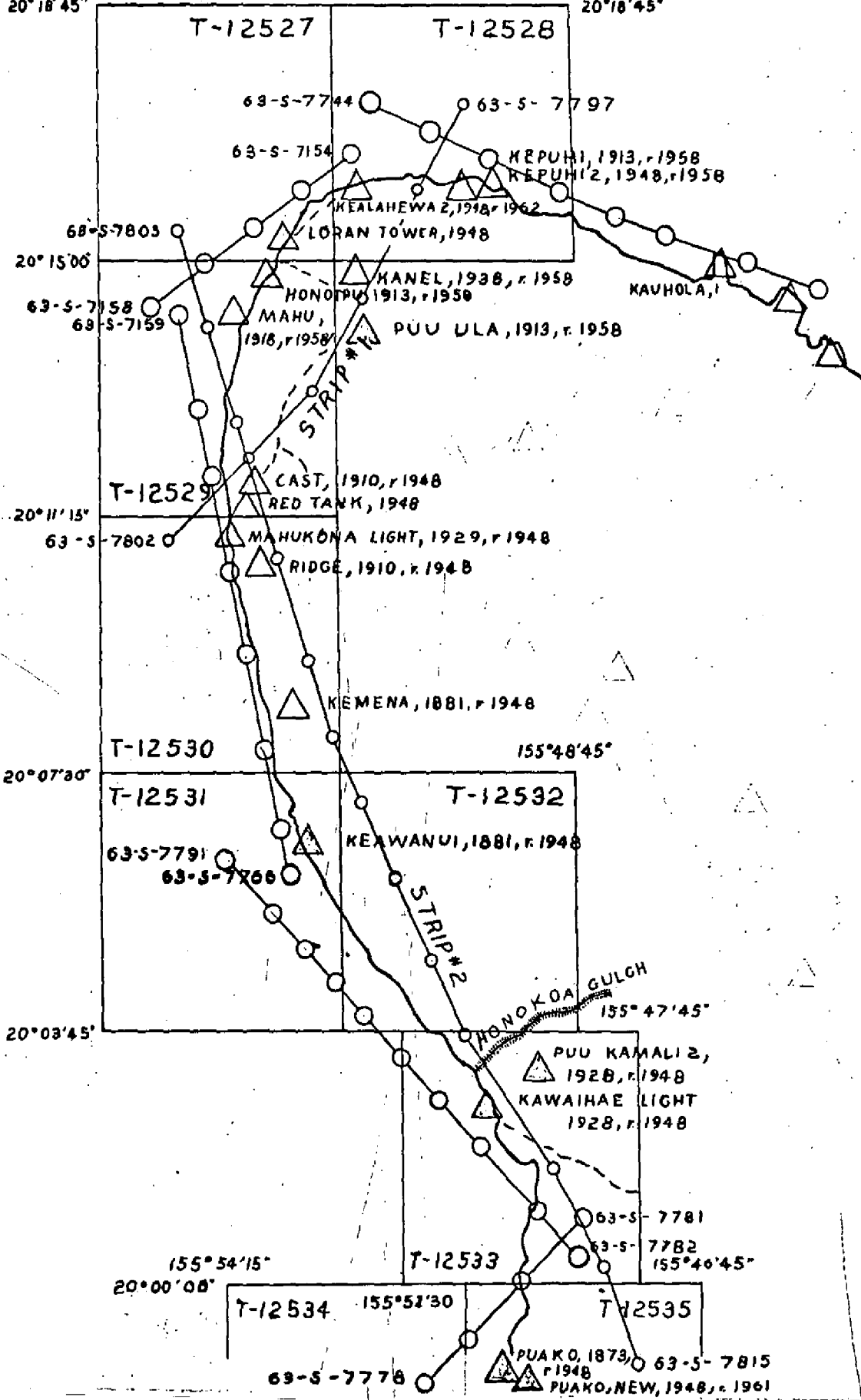
Submitted by:

Paul Hawkins
Paul Hawkins

Approved by:

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

155°56'15" 155°52'30" 155°48'45" 20°18'45" 20°18'45"



COMPILATION REPORT
T-12531

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, many of the field identified rocks were not discernible when ~~using the 1:30,000 scale color compilation photographs. Rocks that~~

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 June 1966.

33 - SUPPLEMENTAL DATA

None.

T-12531

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, Keawanui Bay, Hawaii, dated 1957, 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

Geny L. Hancock

for R. R. White
Cartographic Aid
September 1968

Approved

Geny L. Hancock

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

14

ADDENDUM TO THE COMPILATION REPORT

T-12531

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-12531

Keawanui Bay

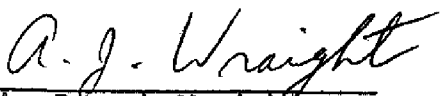
Keawaula Bay

Malae Point

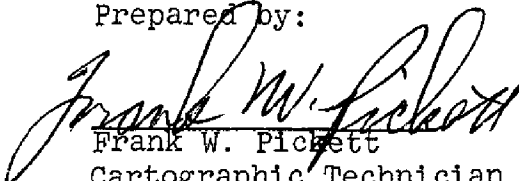
Pacific Ocean

Wawahonu Bay

Approved by:


A. Joseph Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

Field Edit Report
to Accompany T12531

USC&GSS ^MMcARTHUR

Ronald L. ^Newsom
CDR, USESSA
Commanding Officer

51 METHODS

Manuscript T 12531 was field edited by personnel aboard the USC&GSS McARTHUR in conjunction with the hydrography on boatsheet AR 10-6-68 (H9017). Shoreline inspection and all other acquisition of field edit material was accomplished from Launch AR-1. The delineation of the MLLW line was rendered impossible by the rocky, jagged shoreline. The steep bottom contour and small range of tides indicated that the MLLW line should approximately coincide with the MHWL. Additions and corrections to the manuscript have been noted on the field edit ozalid provided for T 12531 in blue pencil. No cross references to photos were necessary. No deletions on the field edit ozalid were made.

52 ADEQUACEY OF COMPILATION

Manuscript T 12531 is complete and adequate for use in conjunction with this hydrographic survey. The area of this manuscript from the shoreline seaward, was field edited.

54 RECOMMENDATIONS

None

REVIEW REPORT
T-12531

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 Keawanui Bay, Hawaii, dated 1957, 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.

T-12531

Submitted by

Jerry L. Hancock

Jerry L. Hancock
Final Reviewer

Approved for forwarding

Billy H. Barnes

Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved

Inez O. Robson

Chief, Photogrammetric Production Sec.

A. V. Bynum

Chief, Photogrammetry Branch

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-12531, PH-6401

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.

2. In "Remarks" column cross out words that do not apply.

3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review

CHART	DATE	CARTOGRAPHER	REMARKS
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.