

NOAA FORM 76-35
(6-80)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Map No.

T-13261

Edition No.

1

Job No.

PH-6703

Map Classification

FINAL, FIELD EDITED MAP

Type of Survey

SHORELINE

LOCALITY

State

HAWAII

General Locality

HILO BAY, HAWAII

Locality

PAPAIKOU

1975 TO 1980

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 Division, AMC Norfolk, VA OFFICER-IN-CHARGE Cdr. Jeffrey G. Carlen		SURVEY XY- <u>T-13261</u> MAP EDITION NO. <u>1</u> MAP CLASS <u>Final</u> JOB PH- <u>6703</u> 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	
Aerotriangulation----- Oct. 6, 1975 Compilation ----- Dec. 3, 1975 Compilation (memo) ----- Apr. 29, 1977		Horizontal Control --- Jan. 15, 1969 Horizontal Control --- Jun. 13, 1972 Horizontal Control --- Aug. 27, 1975 (Supplement I)	
II. DATUMS			
1. HORIZONTAL: <input type="checkbox"/> 1927 NORTH AMERICAN 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) <u>Old Hawaiian Datum</u> OTHER (Specify)	
3. MAP PROJECTION <u>Transverse Mercator</u>		4. GRID(S) STATE <u>Hawaii</u> ZONE <u>1</u> STATE _____ ZONE _____	
5. SCALE <u>1:10,000</u>			
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: <u>Analytic</u> LANDMARKS AND AIDS BY		<u>B. Thornton</u>	<u>Nov. 1975</u>
2. CONTROL AND BRIDGE POINTS METHOD: <u>Coradomat</u> PLOTTED BY CHECKED BY		<u>S. Solbeck</u> <u>S. Solbeck</u>	<u>Nov. 1975</u> <u>Nov. 1975</u>
3. STEREOSCOPIC INSTRUMENT COMPILATION INSTRUMENT: <u>Wild B-8</u> SCALE: <u>1:10,000</u> PLANIMETRY BY CHECKED BY CONTOURS BY CHECKED BY		<u>R. Kravitz</u> <u>F. Mauldin</u> <u>N.A.</u> <u>N.A.</u>	<u>June 1979</u> <u>June 1979</u>
4. MANUSCRIPT DELINEATION METHOD: <u>Smooth drafted</u> PLANIMETRY BY CHECKED BY CONTOURS BY CHECKED BY SCALE: <u>1:10,000</u> HYDRO SUPPORT DATA BY CHECKED BY		<u>R. Kravitz</u> <u>C. Blood</u> <u>N.A.</u> <u>N.A.</u> <u>R. Kravitz</u> <u>C. Blood</u>	<u>July 1979</u> <u>Aug. 1979</u> <u>July 1979</u> <u>Aug. 1979</u>
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		<u>C. Blood</u>	<u>Aug. 1979</u>
6. APPLICATION OF FIELD EDIT DATA BY CHECKED BY		<u>G. Morris</u> <u>D. Butler</u>	<u>Sept. 1981</u> <u>May 1982</u>
7. COMPILATION SECTION REVIEW BY		<u>D. Butler</u>	<u>May 1982</u>
8. FINAL REVIEW BY		<u>J. Hancock</u>	<u>Sept 1985</u>
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		<u>J. Hancock</u>	<u>Sept 1985</u>
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		<u>P. Dempsey</u>	<u>Dec. 1985</u>
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		<u>F.A. DAUGHERTY</u>	<u>Dec 1985</u>

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-13261
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 (Focal Length=152.24mm)		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) PANCHROMATICX (I) INFRARED		ZONE Hawaii	<input checked="" type="checkbox"/> STANDARD
				MERIDIAN 150th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
75TNHY-4408P-4411P	Feb. 21, 1975	10:52	1:15,000	1.0 ft. above M.L.L.W.	

REMARKS

Mean high water at Hilo is 1.9 ft.

2. SOURCE OF MEAN HIGH-WATER LINE:

The MHWL was compiled from the above listed photographs.

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

None 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-9920	Oct/Nov, 1980	Registered			

5. FINAL JUNCTIONS

NORTH TP-00069 CM7712 1:20,000 scale	EAST No survey	SOUTH T-13316 (inset) 1:5,000 scale	WEST No survey
REMARKS T-13316 (1:5,000) is a part of the southwest corner of this map.			

T-13261
HISTORY OF FIELD OPERATIONS1. ☒ FIELD INSPECTION OPERATION (Hor. control) ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Sept. 1975
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	Sept. 1975
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY L. Riggers	Sept. 1975
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 <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY N.A.	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

N.A.

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
	LELEIWI (U.S.G.S., 1912), 1912 (Not on map, see Form 76-41)		

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

See T-13316 (1:5,000)

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE
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7. SUPPLEMENTAL MAPS AND PLANS

None

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

1 Form 76-53
1 Form 76-61A

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-13261
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	A. J. Patrick	Oct. 1980
2. HORIZONTAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY N.A.	
	ESTABLISHED BY N.A.	
	PRE-MARKED OR IDENTIFIED BY N.A.	
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 checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY <input type="checkbox"/> NO INVESTIGATION	
	A. F. Trimble	Oct. 1980
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY A. F. Trimble, A. T. Baxter	Oct. 1980
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY None	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

Not Applicable

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

75TNHY4409 & 4410 (ratios)

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

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

One Field Edit Ozalid
One Original Field Edit Report

T-13261
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	Aug. 1979	Class III manuscript superseded	Aug. 1979	Aug. 1979
Field edit applied, Compilation complete.	May 1982	Class I manuscript superseded	None	No Record
Final Review	Sept. 1985	Final Map	Nov. 1985	

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
			None

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

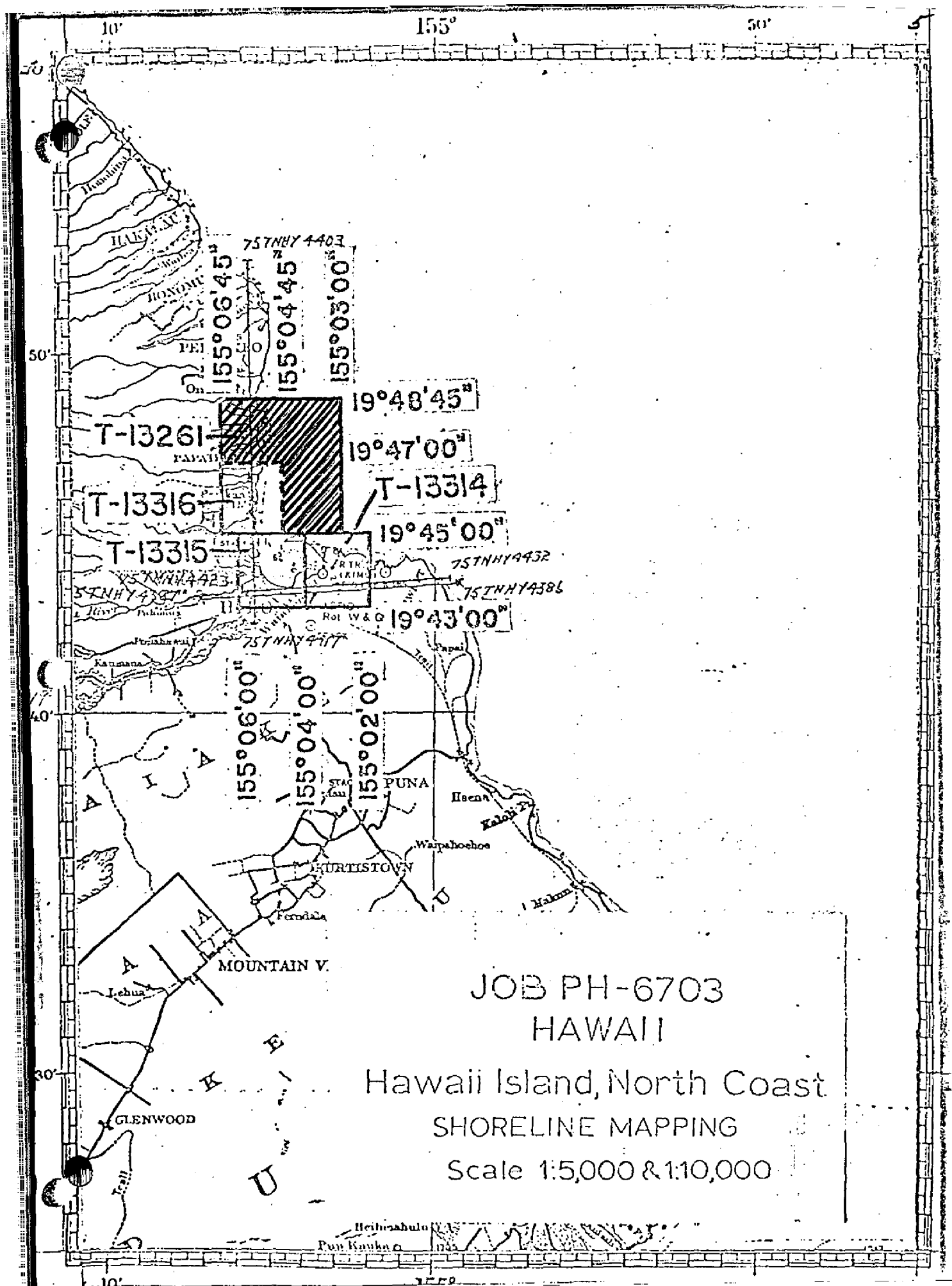
III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 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	



JOB PH-6703
HAWAII

Hawaii Island, North Coast
SHORELINE MAPPING

Scale 1:5,000 & 1:10,000

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-13261

This 1:10,000 scale final shoreline map is one of four maps that comprise project PH-6703, Hilo Bay, Hawaii Island, Hawaii. The other three maps, T-13314, T-13315, and T-13316 are 1:5,000 scale maps that were reviewed and registered in 1978. This project has experienced various modifications since the initial 1969 field instructions. According to an April 29, 1977 memorandum, the original project coverage was reduced to four maps which limited compilation in the vicinity of Hilo Bay. With the final review of this map, T-13261, the project requirements are satisfied. Project data in conjunction with this map will be prepared for registration.

The purpose of this map was to furnish shoreline data in support of hydrographic operations.

This map covers a portion of shoreline along the northeast coast of Hawaii island just north of Hilo Bay. This map and T-13314 junctions with project CM-7712 which was established in 1977.

Project photography was provided in February, 1975 at 1:15,000 and 1:30,000 scales by private contractor. Panchromatic film was used with the RC-8 camera. Coverage and quality were adequate except for incomplete coverage of the breakwater protecting Hilo Bay. Delineation of this feature was provided by data submitted during field edit.

Field work prior to compilation consisted of the recovery, establishment and photoidentification of horizontal control necessary for aerotriangulation. This activity was completed September 1975.

Analytic aerotriangulation was adequately provided by the Washington Science Center in November 1975. The Photogrammetric Plot Report dated November 14, 1975 indicates seven maps within the project; however, the Plot Report was written before the cancellation of three maps.

Compilation by office interpretation of the mapping photographs was performed at the Coastal Mapping Section, Atlantic Marine Center in August 1979. A copy of the Class III manuscript and hydrographic support data were forwarded to the hydrographer for field edit.

Field edit for this map was performed in conjunction with hydrographic survey H-9920 by NOAA Ship FAIRWEATHER personnel in October 1980.

Application of field edit data was accomplished at the Photogrammetry Office, Pacific Marine Center in May 1982. The manuscript was advanced to Class I.

Final review was performed at the Atlantic Marine Center in September 1985. At this time, a comparison was made with a registered copy of hydrographic survey H-9920, 1:10,000 scale, field surveyed Oct./Nov. 1980. There were no apparent differences. A final Chart Maintenance Print and Notes to Hydrographer Print were prepared and forwarded to Photogrammetry headquarters for distribution.

The Descriptive Report for this final field edited map contains all pertinent information used to produce this map. The original base manuscript and all project data were forwarded to the Washington Science Center for final registration.

FIELD INSPECTION

T-13261

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for aerotriangulation.

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PHOTOGRAMMETRIC PLOT REPORT
HILO BAY, HAWAII
Job PH-6703
November 14, 1975

Area Covered: The area covered in this project in the east coast area of the island Hawaii. This area is covered by four 1:10,000-scale sheets, TP-13259 thru TP-13262 and three 1:5,000-scale sheets, TP-13314 thru TP-13316. (See Des. Report Summary)

Method: Two strips of 1:15,000 scale black-and-white photography were bridged by analytic aerotriangulation methods. The two strips of bridging photography were controlled by field-identified control.

Common points were located on the bridging photography for ratio purposes. Tie points were used to insure an adequate junction of the strips during the adjustment.

All manuscripts were plotted on the Coradi and the photo requisition for the ratios has been submitted to the photo lab.

Adequacy of Control: The control checked well within map accuracy standards and is more than sufficient for its intended use. See attached sheet for accuracy of control in strip adjustment.

Supplemental Data: USGS quadrangles were used to provide vertical control for the adjustment.

Photography: The coverage, overlap, and quality of the photography was adequate for the job.

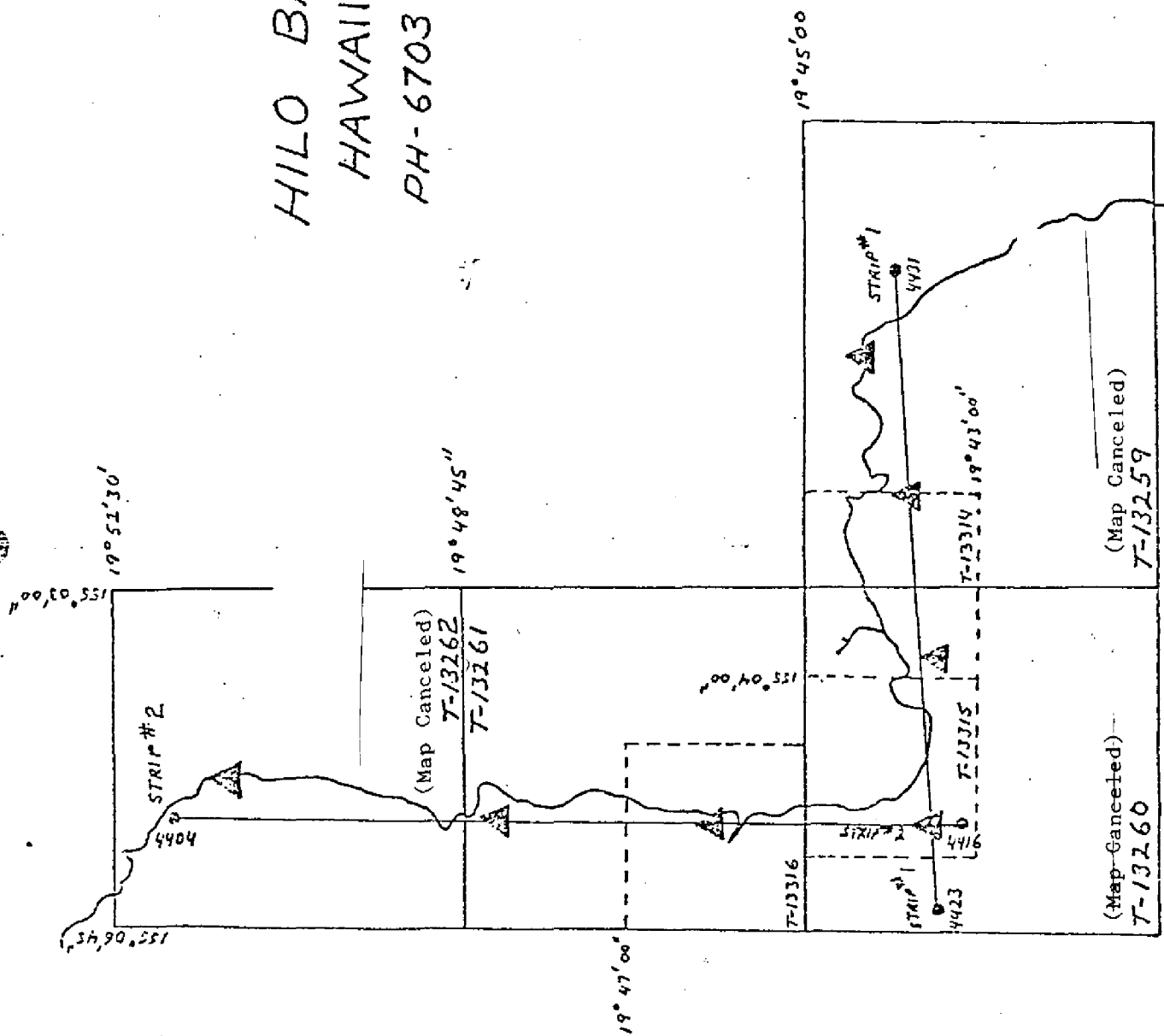
Submitted by,

Brian Thornton

Approved and forwarded:

John D. Perrow, Jr.
Chief, Aerotriangulation Section

HILO BAY HAWAII PH-6703



List & Accuracy of Control Used In Strip Adjustment

Strip #1	Point	X-Error	Y-Error
	416101	-.153	.071
	416102	2.098	2.736
	426101	.476	.187
	426102	.419	-.749
	428110	-.772	-.898
	429101	-.695	.198
	431101	.372	-.082
	431102	.614	-.886
Strip #2	405100	-.259	-.589
	405101	.020	-.002
	409101	-.045	.007
	409102	.490	.093
	412100	-.325	.564
	412101	.035	-.008
	416101	-.031	.004
	416102	2.203	2.786

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.		JOB NO.		GEODETIC DATUM		ORIGINATING ACTIVITY	
T-13261		PH-6703		Old Hawaiian		Coastal Mapping Div., AMC	
STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI-ANGULATION POINT NUMBER	COORDINATES IN FEET STATE ZONE		GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE		REMARKS
* NONE			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		
* SEE T-13316 (1:5,000)			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
COMPUTED BY		DATE	COMPUTATION CHECKED BY			DATE	
LISTED BY		DATE	LISTING CHECKED BY			DATE	
HAND PLOTTING BY		DATE	HAND PLOTTING CHECKED BY			DATE	

COMPILATION REPORT

T-13261

31 - DELINEATION

Delineation was by instrument method using the Wild B-8 stereoplotter and 1:15,000 scale photographs. Photo coverage within the limits of this manuscript was adequate.

32 - CONTROL

Refer to the Photogrammetric Plot Report dated Nov. 14, 1975.

33 - SUPPLEMENTAL DATA

None

34 - CONTOURS AND DRAINAGE

Contours are not applicable to the project. Drainage was delineated by the Wild B-8 stereoplotter and by office stereoscopic interpretation of the ratioed photographs.

35 - SHORELINE AND ALONGSHORE DETAILS

The mean high water line was office edited and refined from the ratioed photographs.

Alongshore details were delineated by the office interpretation of the ratioed photographs.

36 - OFFSHORE DETAILS

No unusual problems were encountered.

37 - LANDMARKS AND AIDS

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

38 - CONTROL FOR FUTURE SURVEYS

None

39 - JUNCTIONS

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

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated Nov. 14, 1975.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with USGS Quadrangle Papaikou, Hawaii, scale 1:24,000, dated 1966.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with National Ocean Survey Chart 19320, 12th Ed., scale 1:250,000, dated June 1978.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by:

Robert R. Kravitz
Robert R. Kravitz
Cartographic Technician
Date: July 11, 1979

Approved:

Billy D. Barnes for
Albert C. Rauck, Jr.
Chief, Coastal Mapping Section

ADDENDUM TO THE COMPILATION REPORT

T-13261
PH-6703FIELD EDIT

Since the stage of tide of the photographs (1.0 foot above MLLW) would not allow the compilation of a mean lower low water line, none of the ledge areas that the field editor identified were delineated on the manuscript. All of these areas are inside of the breaker limit line, which defines a condition that is hazardous to navigation.

T-13316, which is a 1:5,000 inset on this manuscript, refers to the offshore limit line as "foul with rocks". The same line has been labeled "Breakers" on this sheet to remain consistent with projects CM-7712 and CM-7713. Both terms are describing the same type of hazardous condition which exists along the entire north coast.

The compiled bluffs were removed since they are characteristic of the entire shoreline, and to remain consistent with project CM-7712 with which this manuscript will be registered. The 1:5,000 scale inset (T-13316) has all of the existing bluffs delineated, so a small portion was removed in order that a junction could be effected with this manuscript.

Submitted by:

*James L. Hancock**for* David P. Butler, Cartographer
May 17, 1982

AUG 13 1985

GEOGRAPHIC NAMES

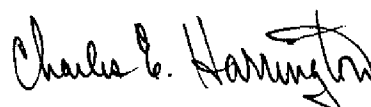
FINAL NAME SHEET

PH-6703 (Island of Hawaii - North Coast)

T-13261

Hanawi Stream
Hawaii (island)
Heeka Point
~~Hokeo Point~~ Hokeo Point *g/h*
Kaapoka Stream
Kaieie Stream
Kalaoa Stream
Kapue Stream
Kekiwi Point
Koili Point
Kukui Point
Mokihana Bay
Onomea Bay
Pacific Ocean
Papaikou
Waipahi Point

Approved:



Charles E. Harrington
Chief Geographer
Nautical Charting Division

FIELD EDIT REPORT
T-13261
HAWAII, EAST COAST
October, 1980

DESCRIPTION

The shoreline from Kekiwi Point north to Onomea Bay is characterized by a sinuous, beachless shoreline composed of weathering and overgrown lava flows. The bluffs are heavily vegetated, moderately high (60 to 120 feet) and sheer. Weather and sea action cause continual erosion, resulting in numerous submerged ledges and rocks awash at the base of the bluffs, but there are no significant navigational hazards outside of the "foul with rocks and surf" limits north to Onomea Bay. In Onomea Bay, there are significant submerged rock clusters which may pose a hazard to small craft approaching the shore.

The buildings on shore are generally not of significant landmark value due to the high bluffs, dense vegetation and low profiles of the structures.

METHODS

Field edit was accomplished from a skiff due to the sheer bluffs and dense vegetation along the coastline. Little regard was paid to heights of tide due to the small tidal range and the extreme clarity of the water.

The photographs of the area were very good and all features added to the manuscript were distinguishable on the photos. The paper photos were taken into the field and all rocks and ledges were identified on them using a magnifying glass. They were transferred to the cronopaque photos on the ship using a light table and mirror stereoscope.

All items added to the manuscript are indicated on the photograph in violet ink. The appropriate photo is referenced by number on the T-sheet. Green ink was used on the manuscript to indicate items to be deleted.

ADEQUACY AND COMPLETENESS OF COMPILATION

Compilation on this sheet was complete and accurate with only one notable exception. Four offshore rocks compiled at approximately 19°47'20"N, 155°05'25"W were not found during field investigation. The images on the photographs appear to be foam patches that were prevalent in this area and could have been mistaken for rocks by the compiler.

The foul limits compiled on this sheet were adequate with respect to coastal rocks and ledges. In some areas, the foul limits were extended by the field editor in conjunction with the shoreward ends of sounding lines run by the hydrographer. These foul limits should be labeled "foul with rocks and surf" as sounding lines were terminated where the surf made small boat handling a hazard.

GEOGRAPHIC NAMES

All of the geographic names on this sheet were investigated in the field to determine if they were used by the local residents. The name, Koili Point, at $19^{\circ}47'34''N$, $155^{\circ}05'27''W$, was not verified by any local sources and has been underlined in green ink. It is recommended that this name not be published on the new charts for this point. All other names were verified by at least three local sources and are underlined in violet ink. No new names or changes to names were added on this sheet.

MANUSCRIPT ACCURACY

No formal accuracy tests were conducted.

RECOMMENDATIONS

This manuscript will be complete, accurate and acceptable for charting purposes upon application of field edit data.

Submitted by:



A. F. Trimble
Ensign, NOAA

Approved by:



W. F. Forster
Commander, NOAA

FIELD EDIT NOTE
OPR-T126-FA-80
HAWAII, NORTHEAST COAST
October, 1980

There is a distinct difference between the northern sheets, TP-00069 and T-13261, and the southern sheets, TP-00070 and TP-00822, in this project. The southern coastline is characterized by heavy surf and rugged lava terrain. Field edit was accomplished by walking the shoreline to identify items on the photographs. The northern coastline is characterized by steep, heavily vegetated bluffs which made walking impractical. Field edit for these sheets was accomplished from an open skiff. Little regard was paid to stages of tide during field edit investigations because of the small tidal range and tremendous clarity of the water in these areas.

Constant heavy surf made standing on rocks and ledges impossible, but photo clarity allowed most items to be picked directly on the photo. In a few instances, water clarity allowed the field editor to see submerged rocks which could not be seen on the photos but could be a potential hazard to mariners. In these instances, foul limits were extended, according to estimated distances, to include the potential hazard.

Compiled foul limits were changed in numerous areas on all of the sheets. In some cases, the foul limits were shown extending much farther seaward than deemed necessary by the field editor. Upon field inspection, these ^A areas were found to have frequent foam patches which can be seen on the photographs and may have been mistaken for rocks or heavy surf.

Launch OIC's were instructed to end sounding lines inshore at the point where the surf, rocks or ledges made small boat handling hazardous. All foul limits were compared to these inshore sounding line limits and adjusted by the field editor to incorporate this data and any additional rocks and ledges added from the photo-identified items. It is recommended that these foul limits be labeled "foul with rocks, submerged ledge and surf" since they were derived by these methods.

All items added to the shoreline manuscript were identified in the field on the paper photographs using a magnifying glass. These items were later picked on the final, cronopaque photographs using a mirror stereoscope and a light table for greater accuracy. Additions and changes were made to the T-sheet, in violet ink, by sliding the photographs under and tracing the item onto the manuscript. Because of photographic distortions, these positions should all be considered approximate. All deletions were made in green ink.

An investigation of geographic names was performed. United States Geological Survey topographic maps, road maps, and other local sources were consulted (see Geographic Names Report, OPR-T126-FA-80). Prominent names compiled on the T-sheet were underlined in violet or green ink to indicate the recommendation for retention or deletion. Additional new names are written and underlined in red ink.

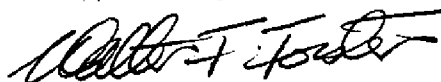
The only notable inadequacy in compilation was on sheet TP-00070. Photographic coverage for this sheet ended at approximate longitude 155°01'25"W. The section west of this point had no compiled items, demonstrating a possible lack of photo coverage for the compiler. Items were sketched on the T-sheet by the field editor using distances from prominent, identifiable points of land on the manuscript. This is not intended to be a precise survey of this area, but should serve as a guide to the compiler in future interpretations of photographs that were not made available for the field edit operations.

Submitted by:



A. F. Trimble
Ensign, NOAA

Approved by:



W. F. Forster
Commander, NOAA

REVIEW REPORT
T-13261
SHORELINE

61 - GENERAL STATEMENT

See the Summary included in 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
Papaikou Hawaii, dated 1966, scale 1:24,000.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a registered copy of hydrographic
survey H-9920, FA-10-4-80, 1:10,000 scale, field surveyed Oct./Nov.
1980. No significant differences were noted.

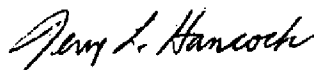
65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS chart 19320, scale 1:250,000,
13th edition, July 10, 1982.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

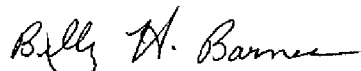
This map complies with the Project Instructions, and meets the
requirements for National Standards of Map Accuracy.

Submitted by,



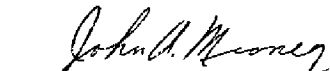
Jerry L. Hancock
Final Reviewer

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