

TP-00069

TP-00069

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00069	Edition No. 1
Job No. CM-7712	
Map Classification FINAL, FIELD EDITED MAP	
Type of Survey SHORELINE	
LOCALITY	
State HAWAII	
General Locality HAWAII - NORTH COAST	
Locality PEPEEKEO POINT	
19 76 TO 19 80	
REGISTERED IN ARCHIVES	
DATE	

TYPE OF SURVEY

SURVEY TP- 00069

DESCRIPTIVE REPORT - DATA RECORD

☒ ORIGINAL

MAP EDITION NO. (1)

☐ RESURVEY

MAP CLASS Final

☐ REVISEDJOB ~~XPH~~-CM-7712

PHOTOGRAMMETRIC OFFICE

Coastal Mapping Division, Norfolk, VA

OFFICER-IN-CHARGE

Roy K. Matsushige

LAST PRECEDING MAP EDITION

TYPE OF SURVEY

JOB PH- _____

☐ ORIGINAL

MAP CLASS _____

☐ RESURVEY

SURVEY DATES:

☐ REVISED

19__ TO 19__

I. INSTRUCTIONS DATED

1. OFFICE

Aerotriangulation-----Feb. 13, 1978

Compilation -----April 12, 1979

2. FIELD

Control ----- Nov. 2, 1977

II. DATUMS

1. HORIZONTAL:

☐ 1927 NORTH AMERICAN

OTHER (Specify)

Old Hawaiian

2. VERTICAL:

☒ MEAN HIGH-WATER☐ MEAN LOW-WATER☐ MEAN LOWER LOW-WATER☐ MEAN SEA LEVEL

OTHER (Specify)

3. MAP PROJECTION

Transverse Mercator

4. GRID(S)

STATE

Hawaii

ZONE

1

5. SCALE

1:20,000

STATE

ZONE

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: Analytic	BY	S. Solbeck	Jan. 1979
	LANDMARKS AND AIDS BY	S. Solbeck	Jan. 1979
2. CONTROL AND BRIDGE POINTS METHOD: Coradomat	PLOTTED BY	S. Solbeck	Jan. 1979
	CHECKED BY	S. Solbeck	Jan. 1979
3. STEREOSCOPIC INSTRUMENT COMPILATION INSTRUMENT: Wild B-8 SCALE: 1:20,000	PLANIMETRY BY	R. Kravitz	Apr. 1979
	CHECKED BY	L. Neterer, Jr.	Apr. 1979
	CONTOURS BY	N.A.	--
	CHECKED BY	N.A.	--
4. MANUSCRIPT DELINEATION METHOD: Smooth drafted SCALE: 1:20,000	PLANIMETRY BY	L. Williams	Apr. 1979
	CHECKED BY	L. Neterer, Jr.	Aug. 1979
	CONTOURS BY	N.A.	--
	CHECKED BY	N.A.	--
	HYDRO SUPPORT DATA BY	L. Williams	Apr. 1979
	CHECKED BY	L. Neterer, Jr.	Aug. 1979
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	L. Neterer, Jr.	Aug. 1979
6. APPLICATION OF FIELD EDIT DATA	BY	G. Morris	Aug. 1981
	CHECKED BY	D. Butler	Apr. 1982
7. COMPILATION SECTION REVIEW	BY	D. Butler	Apr. 1982
8. FINAL REVIEW	BY	J. Hancock	Aug. 1985
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY	J. Hancock	Sept. 1985
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	P. Dempsey	Nov. 1985
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	E. DAUGHERTY	DEC 1985

TP-00069
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) F.L. = 153.21 mm Zeiss RMK A15/23 Lens 118960		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
<input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN	
150th					
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77GSAASY-384-387	Jan. 13, 1977	10:15	1:50,000	1.4 ft. above M.L.L.W.	
76GSAASY-227-230	Dec. 18, 1976	13:48	1:30,000	1.2 ft. above M.L.L.W.	
76GSAASY-232-237	Dec. 18, 1976	13:50	1:30,000	1.2 ft. above M.L.L.W.	
				Mean Range = 1.6 ft.	

REMARKS
Photography by American Aerial Survey, Inc. of Northern California
Geodetic Survey

2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled by instrument methods using the 1:50,000 scale photos and graphically using the 1:30,000 scale photos ratioed as follows:

227-230 x1.49
232-237 x1.48

3. SOURCE OF MEAN LOW-WATER OR 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 80	Registered			
H-9921	Nov. 1980	Registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
No survey	No survey	PH-6703 T-13261	TP-00068

REMARKS

TP-00069

HISTORY OF FIELD OPERATIONS

- I. ☒ FIELD INSPECTION OPERATION *Photo* ☐ FIELD EDIT OPERATION
Identification

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Jan-Feb 1978
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby ESTABLISHED BY None PRE-MARKED OR IDENTIFIED BY R. Melby	Jan 1978
3. VERTICAL CONTROL	RECOVERED BY None ESTABLISHED BY None PRE-MARKED OR IDENTIFIED BY None	Jan. 1978
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY R. Melby LOCATED (Field Methods) BY None IDENTIFIED BY None	Jan 1978
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 Photoidentified		2. VERTICAL CONTROL IDENTIFIED None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77GSAASY-386	Honohina, 1877 (direct)		
77GSAASY-385	Pepeekeo Point Light, 1949 (Sub. Pt. identified)		

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
77GSAASY-385	Pepeekeo Point Light		

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

7. SUPPLEMENTAL MAPS AND PLANS

None

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

2 - Forms 76-53, 1 - Form 269c; 1 - Form M-2504-12(2); and 1 - Field Operations Report

TP-00069

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	A. J. Patrick	Oct. 1980
2. HORIZONTAL CONTROL	RECOVERED BY P. E. Pegnato, R. B. Melby ESTABLISHED BY P. E. Pegnato, R. B. Melby PRE-MARKED OR IDENTIFIED BY None	Oct. 1980 Oct. 1980
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 P. E. Pegnato, R. B. Melby LOCATED (Field Methods) BY None IDENTIFIED BY A. F. Trimble	Oct. 1980 Oct. 1980
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY A. F. Trimble <input type="checkbox"/> NO INVESTIGATION	Oct. 1980
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY A. F. Trimble, T.A. Baxter	Oct. 1980
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)

76GSAASY 228, 229, 233-235 (Ratios)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER

OBJECT NAME

PHOTO NUMBER

OBJECT NAME

76GSAASY-229

Pepeekeo Radio Station KIPA Mast, 1978

76GSAASY-229

Pepeekeo Mill Tanks

76GSAASY-229

Pepeekeo Point Light, 1949

76GSAASY-233

Wailea Bridge

76GSAASY-229

Pepeekeo Stack, 1980

76GSAASY-234

Hakalau Bridge

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 Field Edit Ozalid, 2 Field 76-40 forms,
1 Field Edit Report

TP-00069
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. 10, 1979	Class III manuscript superseded	Aug. 1979	Aug. 1979
Field edit applied, compilation complete.	Apr. 1982	Class I manuscript superseded	None	Apr. 1982
Final Review	Aug. 1985	Final Map	Oct. 31, 1985	

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER (pages)	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
2		Oct. 31, 1985	Landmarks and Aid for Charting

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

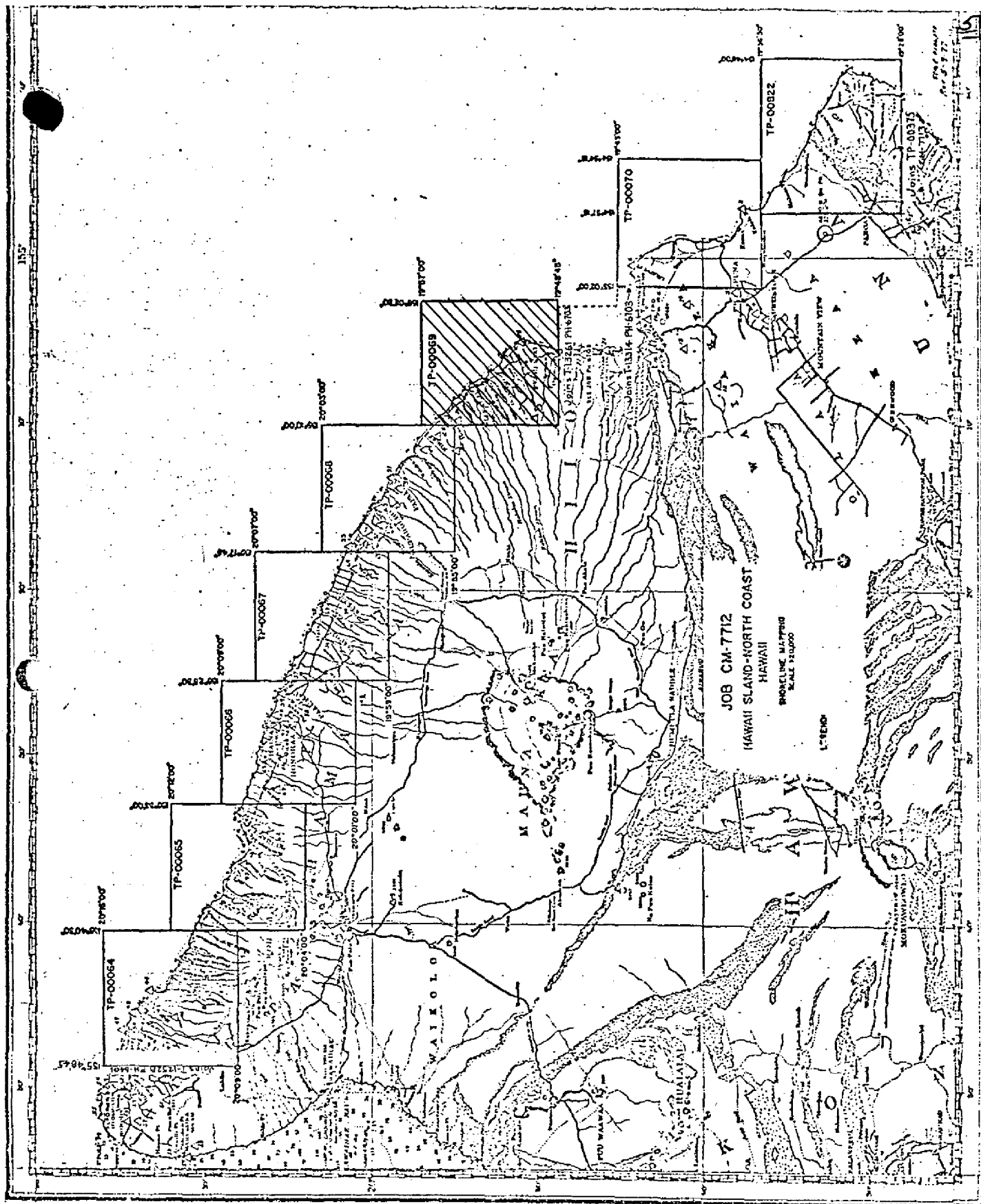
III. FEDERAL RECORDS CENTER DATA

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

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

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

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	



SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00069

This 1:20,000 scale final shoreline map is one of eight maps that comprise project CM-7712, Hawaii Island, North Coast, Hawaii. The eight 1:20,000 scale maps are assigned as TP-00064 through TP-00070 and TP-00822.

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 northeast coast of Hawaii Island from Lat. 19°48'45" to 19°57'00".

Photo coverage for the project was adequately provided with panchromatic photography flown by a private contractor, American Aerial Survey, Inc., with the Zeiss RMKA 15/23 camera. Aerotriangulation/ compilation photographs at 1:50,000 scale and supplemental compilation/ photo-hydro support photographs at 1:30,000 scale were taken at various times from Dec. 1976 to March 1977.

Field work prior to compilation consisted of the recovery, establishment, and photoidentification of horizontal control necessary for aerotriangulation. This activity was completed February 1978.

Analytic aerotriangulation was adequately provided by the Washington Science Center in January 1979. This activity also included ruling the base manuscripts and providing ratio photographs for compilation.

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

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 Photogrammetric Section, Pacific Marine Center in April 1982 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 August 1985. At this time a comparison was made with a registered copy of contemporary hydrographic surveys, H-9920 and H-9921, common to this

TP-00069

map. Hydrographic survey H-10052 also corresponds to a portion of the shoreline map, but no comparison was made because the survey is currently unregistered. 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 related data were forwarded to the Washington Science Center for final registration.

FIELD INSPECTION

TP-00069

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

FIELD OPERATIONS REPORT

Projects CM-7712 & CM-7713

North and Southeast Coast, Island of Hawaii, Hawaii

January - February 1978

Area:

The two adjoining projects covers the southeast and northeast coast of the Island of Hawaii. The southernmost portion of the area is virtually a desert with little rainfall. The northeast coast is subjected to considerable rainfall and sugar cane fields are commonplace.

Except for a couple of small, isolated beaches, the shoreline is steep and rocky, where the lava flows reached the ocean.

Photography:

Panchromatic aerial photography was furnished the field unit for the photo-identification of the required horizontal control stations, necessary for the aerotriangulation. The photography was considered adequate for the field identification.

Horizontal Control:

All of the stations were reached by vehicle or short distance back packing

Several sun azimuths were observed to determine the azimuth to substitute stations. Greenwich Mean Time was observed and recorded with short wave radio signals from WWVH and a digital watch. Time and observed zenith distances were recorded to permit either the time/azimuth or time/altitude method of computation.

Station HILINA USGS 1961 was photo-identified and a sun azimuth was observed. B.M. 139YY USGS was used as an intermediate azimuth point, in conjunction with the sun azimuth. The B.M. did not have a previous azimuth or position. The U.S.G.S. published data lists R.M.I. as 46°00' 26". A telephone conversation with the U.S.G.S. in Menlo Park, California confirmed the number 4 and 6 were transposed and the azimuth should read 64°00'26". The reference mark was used as a check angle.

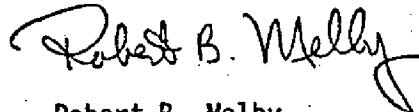
Station PUU ULAULA was photo-identified using a sun azimuth and a stack. the stack is station PAHALA, KAU SUGAR CO STACK, 1977. An N.G.S. Geodetic Field Party was working in the area and a position of the stack should be available from Geodesy in the near future. However, the sun azimuth can be used to determine the azimuth to the sub-points.

Page 2

The field-photo data was submitted to the Rockville office before this report was written to permit the aerotriangulation of the flightlines at the earliest date.

Two non-floating aids to navigation and one landmark for charts were located by triangulation/traverse methods. They have been entered and submitted on form 76-40 to C-3415.

Respectfully Submitted,



Robert B. Melby
Chief, PMC Photo Party
CPM 133

PHOTOGRAMMETRIC PLOT REPORT
Island of Hawaii, Hawaii
CM-7712

Jan. 2, 1979

AREA COVERED

The area covered by this report is the northern coast of the Island of Hawaii, excluding Hilo and its immediate surroundings. The area is covered by eight 1:20,000 scale manuscripts (TP-00064 through TP-00070 and TP-00822).

METHOD

Two strips of 1:50,000 scale black-and-white panchromatic photography were bridged by analytic aerotriangulation methods. Field identified control was provided.

Common points were located on the bridging photography and the 1:30,000 scale photography for ratio purposes.

Ratio prints have been ordered. The manuscripts were ruled on the Coradomat.

ADEQUACY OF CONTROL

The adjustment to ground of one strip in this project, as well as two strips on CM-7713 (the southeast coast), was not as good as expected. On strip one of CM-7713, the subpoints for Pulama, 1914 would not fit with the other control, being off by approximately 25 feet. Five stations were used to adjust this strip with a second degree curve. The largest residual error in the fit to the five stations was 3.5 feet which is considered reasonable.

On strips 2 and 4 of CM-7713 the intersection station, Honuopo, Hutchinson Sugar Co. Mill Stack, 1967, would not fit with the other control points. It was off approximately 16 feet. The fit to the other control points was good.

On strip one of this project the adjustment to ground is very poor, but no control points can be isolated as causing the poor adjustment. In the final adjustment, six control points were used to form a third degree curve. The largest residual error in the fit was six feet. Other control points were used as checks in this adjustment. The largest error of these was 16 feet and two were off by about 10 feet.

No apparent reason can be found for the discrepancies in the control for these two projects.

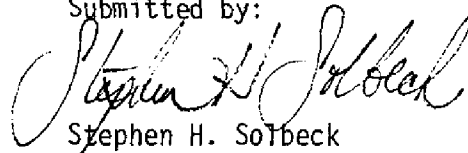
SUPPLEMENTAL DATA

USGS quads were used to provide vertical control for the job. Nautical charts covering this area were used to locate aids and landmarks.

PHOTOGRAPHY

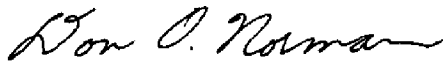
The coverage, overlap, and quality of the photography proved adequate for the job.

Submitted by:



Stephen H. Sotheck

Approved and Forwarded:



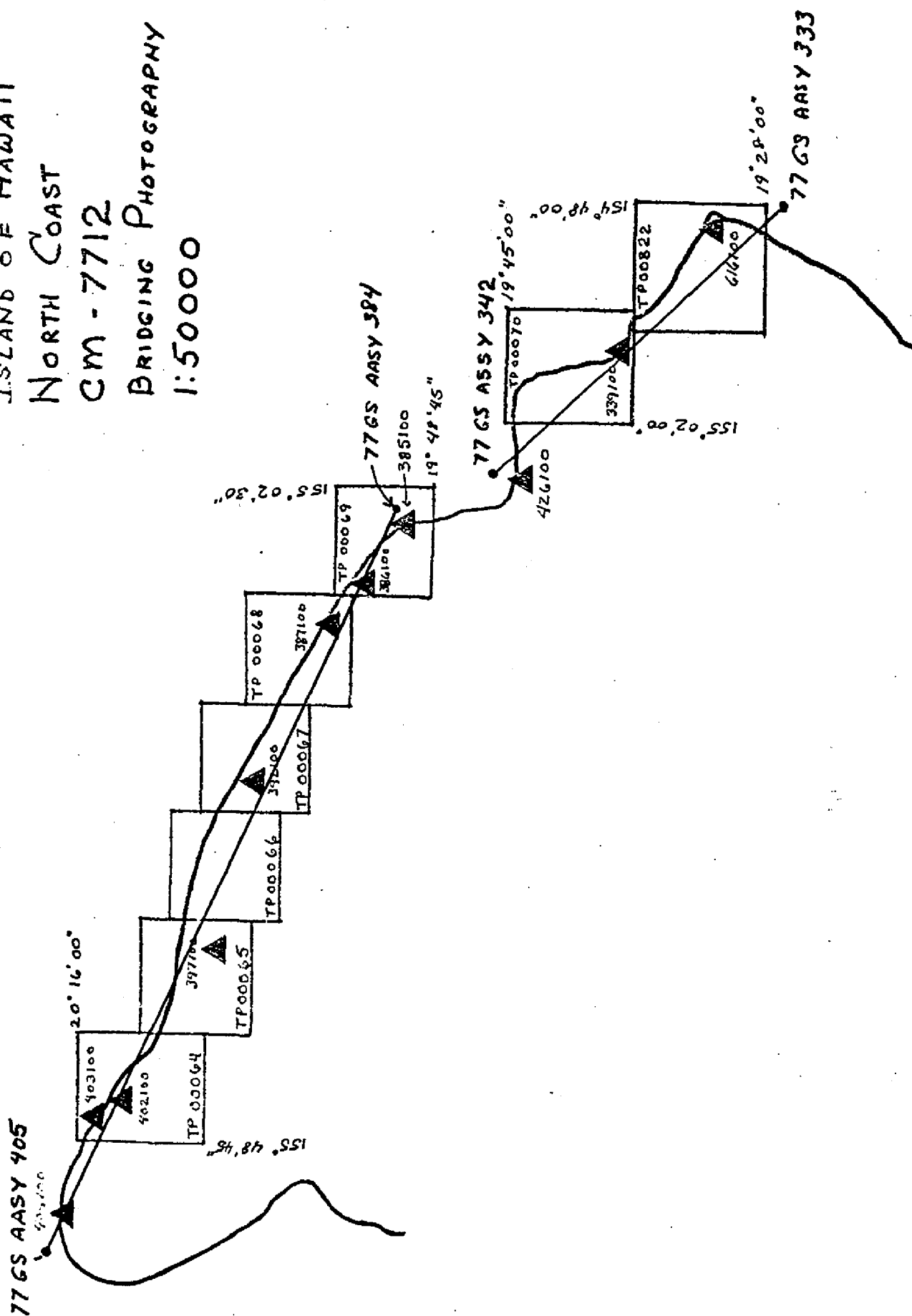
Don O. Norman
Chief, Aerotriangulation Section

CM-7712 HAWAII ISLAND, north coast strip 1

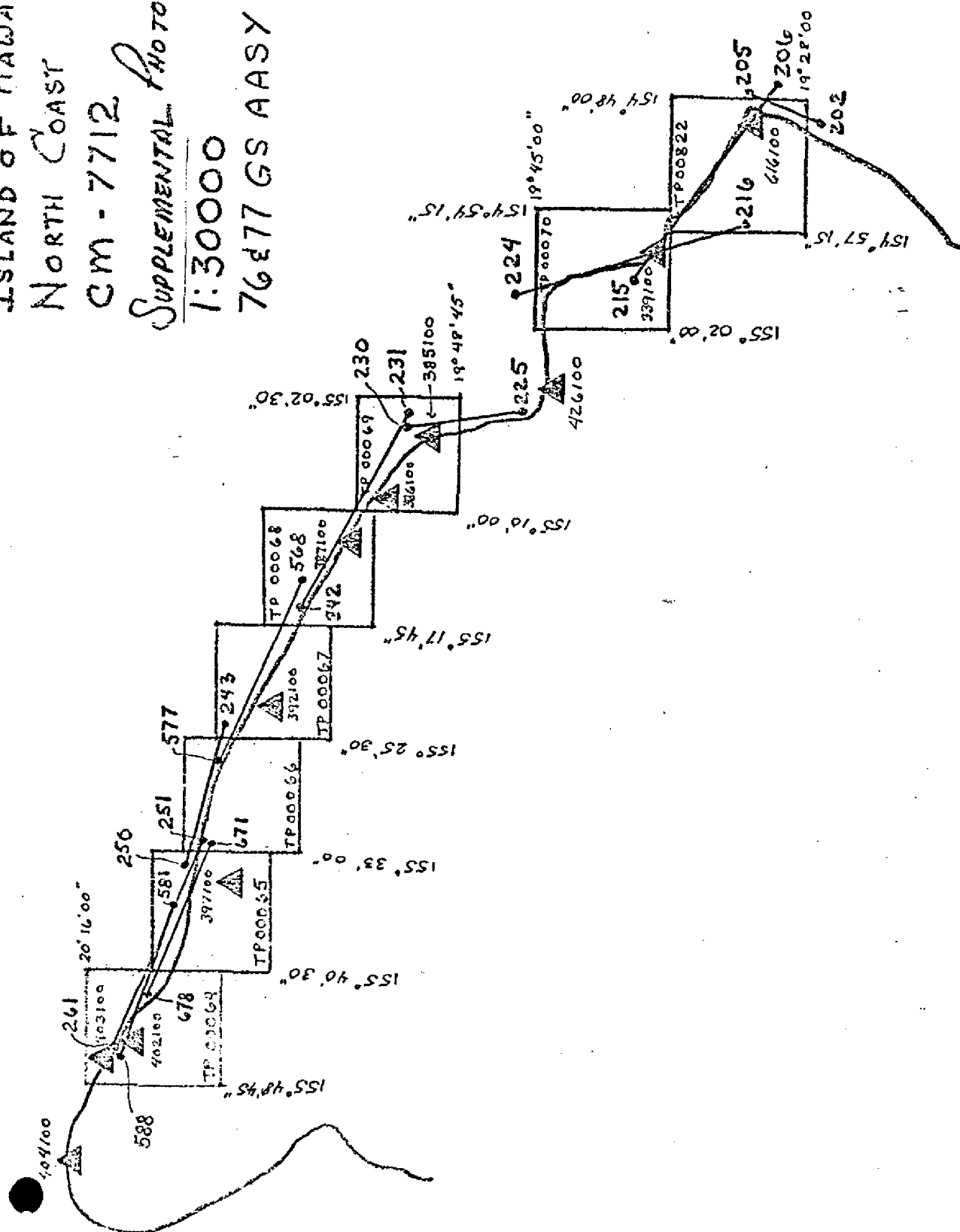
6 stations 3 degree

▲ 385100	PEPEEKEO POINT LT., 1948	(-0.8 -3.0)
385101	sub point	(-0.8 -4.0)
386100	HONOHINA, 1877 The image on the photo is very poor and its lack of fit has to be ignored although it does seem to be too large.	(-16.3 +7.7)
▲ 387101	PUU OHAI, 1877 sub point	(-1.5 +3.4)
392141	PAAUILO STACK, 1948	(+8.4 -4.6)
▲ 392101	OPIHILALA, 1948 sub point A	(+6.2 +3.6)
392102	sub point B	(+4.6 +1.4)
394141	PAAUHAU, PAAUHAU SUGAR CO. STACK, 1913	(+6.6 +1.4)
▲ 397101	PUU MAUU NORTH, 1938 sub point A	(-4.1 -2.6)
397102	sub point B	(-10.4 -2.3)
▲ 402100	NIULII, 1913	(-0.7 -5.6)
403100	KAUHOLA POINT LT., 1948	(+3.5 -6.8)
403141	HIND STACK, 1948	(-11.3 +0.1)
403401	KOHALA MILL STACK, 1948	(+2.0 -4.4)
404141	CATHOLIC CHURCH WEST CROSS ON BELFRY, 1948	(-4.0 +4.6)
404101	KEALAEHEWA 2, 1948 sub point A	(+3.1 +2.3)
▲ 404102	sub point B	(+1.0 +3.9)
405141	LORAN A, TOWER, 1964	(-1.5 +10.4)
405142	LORAN C, TOWER, 1964	(-4.1 +8.1)

1:50000



ISLAND OF HAWAII
 NORTH COAST
 CM - 7712
 SUPPLEMENTAL PHOTOGRAPHY
 1:30000
 76877 GS AASY



COMPILATION REPORT

TP-00069

31 - DELINEATION

Delineation was by instrument methods using the Wild B-8 stereoplotter and the 1:50,000 scale black-and-white photographs; and graphically using the 1:30,000 scale ratioed hydro-support photographs. Photograph quality and coverage were adequate for compilation.

32 - CONTROL

Refer to the Photogrammetric Plot Report dated January 2, 1979.

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 ratio photographs.

35 - SHORELINE AND ALONGSHORE DETAILS

Alongshore details were delineated by the Wild B-8 stereoplotter and by office stereoscopic interpretation of the ratioed photographs.

The mean high water line was office edited and refined by stereoscopic interpretation of the ratioed photographs.

36 - OFFSHORE DETAILS

There were no specific offshore details.

37 - LANDMARKS AND AIDS

There was one charted landmark and one charted aid within the mapping limits of the manuscript. Both of these were verified photogrammetrically.

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 January 2, 1979.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with U.S.G.S. quadrangle Papaikou, HA., scale 1:24,000, dated 1966, and with Papaaloa, HA., scale 1:24,000, dated 1966.

47 - COMPARISON WITH NAUTICAL CHARTS

Comparison was made with N.O.S. Chart No. 19320, scale 1:250,000, 12th edition, dated June 17, 1978.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

Jerry L. Hancock

for

L. Williams
Cartographic Technician
Date: April 23, 1979

Approved:

Billy H. Barmen for

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

ADDENDUM TO THE COMPILATION REPORT

TP-00069
CM-7712FIELD EDIT

The field editor identified two bridges that he states are of landmark value. The center of each span was used to determine its geographic position. Photographs 76GSAASY 233, 234, and 235 were used to locate the centers.

The stage of tide of the photographs (1.2 feet above MLLW) would not permit the delineation of a mean lower low water line; therefore, the ledge areas identified by the field editor were not applied to the manuscript. All of these areas exist inside the breaker limit line, which indicates a condition that is hazardous to navigation.

A small area on photograph 76GSAASY 229 is said to contain a submerged rock; however, since no image is visible and a note refers it to hydrographic investigation, the rock was not delineated.

Several geographic names were submitted by the field editor. Some of them have been applied to the manuscript because they appear on the Geographic Names Sheet and were evidently overlooked during compilation. The remaining names were forwarded to Mr. Harrington, the Chief Geographer, for approval. See accompanying copy of letter.

The compiled bluffs were not addressed by the field editor. However, since the coastline is characterized by the eroding bluffs and the chart does not indicate any of landmark value, they were removed to remain consistent with the rest of this project.

Submitted by:

David Butler, Cartographer
April 27, 1982

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7712 (Island of Hawaii - North Coast)

TP-00069

Alia Point	Nahaku Point
Alia Stream	Nanue Stream
Hakalau	Onomea
Hakalau Bay	Onomea Bay
Hakalau Stream	Pacific Ocean
Hanapueo Stream	Paheehee Stream
Honohina	Peleau Stream
Honomu	Peleuli Point
Honomu Stream	Pepeekeo
Kaahakini Stream	Pepeekeo Mill
Kapehu Stream	Pepeekeo Point
Kawainui	Pohakumanu Bay
Kawainui Bay	Umauma Stream
Kawainui Stream	Waiaama Stream
Kohola Point	Waiehu Point
Kolelele Stream Kolekole Stream <i>CH</i>	Waikaumalo Stream
Lae O Puni	Wailea
Lehuawehi Point	Wailea Bay
Loea Point	Waimaauou Stream
Makea Stream	

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

FIELD EDIT REPORT
TP-00069
HAWAII, EAST COAST
October, 1980

DESCRIPTION

The shoreline on this sheet from Onomea Bay north to Waiehu Point is characterized by steep, heavily vegetated bluffs. Wave action has eroded the coastline, resulting in detached rocks and submerged ledges, particularly around prominent points. Beaches do not occur along this stretch of coastline and there are no significant areas for small boat landings or harbors of refuge. There are no significant hazards to navigation in this area.

Pepeekeo Mill is a group of prominent structures. The tanks at approximately 19°50'42"N, 155°05'17"W are easily seen from seaward and make a good landmark, but the most prominent feature is the tall stack which is frequently emitting black smoke. This stack (Pepeekeo Stack, 1980) was located at 19°50'47.2"N, 155°05'19.4"W by third-order techniques.

There are two bridges which are of landmark value on this sheet. Wailea Bridge, at approximately 19°53'09"N, 155°07'20"W, crosses Kolekole Stream into Wailea Bay. Hakalau Bridge, at approximately 19°54'10"N, 155°07'57"W, crosses Hakalau Stream into Hakalau Bay. Both bridges are dominant concrete structures crossing deep gulches and are easily seen on the aerial photographs.

METHODS

Field edit was accomplished by visually inspecting the shoreline features and making comparisons to the manuscript and photographs from an open skiff. Little regard was paid to heights of tide due to the small range of tide and the clarity of the water. Rocks and ledges not on the manuscript were located on the paper photographs in the field using a magnifying glass and transferred to the cronopaque photos using a mirror stereoscope and light table on the ship. All items added to the manuscript are indicated on the photographs in violet ink. The appropriate photograph is referenced by number on the T-sheet. Green ink was used on the manuscript to indicate items to be deleted. Changes or additions to geographic names were indicated in red ink.

ADEQUACY AND COMPLETENESS OF COMPILATION

Numerous rocks and ledges were added within the "foul with rocks and submerged ledge" limits by the field editor to clarify detail of the coast. Most of the additional rocks were clearly visible on the photographs and could have been compiled from the photos.

The foul limits indicated by the compiler were changed by the field editor in some areas to include additional rocks and ledges and to correlate with in-shore sounding line limits. Since launch OIC's were instructed to break

sounding lines at the surfline, the inshore sounding line limits should be considered the "foul with surf" limits. In general the photo compiled "foul with rocks and submerged ledge" limits agree with field observations and inshore sounding line limits, except for major changes to foul limits at latitudes 19°50'30"N, 19°51'45"N and 19°55'58"N.

GEOGRAPHIC NAMES

All of the geographic names precompiled on this sheet were verified in the field as names used by the local residents. Numerous additional names have been added to this sheet in red to indicate names in local usage that were not given by the compiler. All names were verified by at least three sources before being added. See Geographic Names Report, OPR-T126-FA-80, for details.

Two significant additions were Kawainui Bay at 19°49'25"N, 155°05'28"W, and Wailea Bay, previously designated as Wailea, at 19°53'10"N, 155°07'18"W. All other additions are names used locally for regions of land between two major streams. These names are prominent in local usage for a large area and, although most do not indicate a point, bay or other prominent geographic feature, they would assist local mariners.

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

16

c

REVIEW REPORT
TP-00069

SHORELINE

61 - GENERAL STATEMENT

Final review for this final field edited map was accomplished at the Atlantic Marine Center in August 1985. 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 the following 1:24,000 scale U.S.G.S. quadrangles:
Papaaloa, Hawaii; dated 1966
Papaikou, Hawaii; dated 1966.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Portions of contemporary hydrographic surveys H-9920, H-9921 and H-10052 are common to this final shoreline map. A comparison was made with registered copies of H-9920, FA 10-4-80, 1:10,000 scale, field surveyed Oct./Nov. 1980 and H-9921, FA-20-6-81, 1:20,000 scale, field surveyed Nov. 1980. Survey H-10052 is currently unregistered and consequently a comparison was not made.

The hydrographic surveys indicate various ledge limits along the shoreline. It appears that these limits were transferred from the field editors/hydrographers delineation on the field edit prints. However, according to the Addendum to the Compilation Report, the ledge limits were not compiled on the shoreline map.

Hydro Survey H-9920 shows a prominent bare rock at Lat. 19°50.3', Long. 155°05.1'. This rock does not appear on the photographs nor did the field editor comment about a rock in the area. The existence of this rock is questionable.

65 - COMPARISON WITH NAUTICAL CHARTS

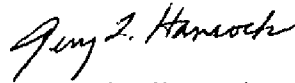
A comparison was made with the following NOS Chart: 19320, scale 1:250,000, 13th edition, July 10, 1982.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

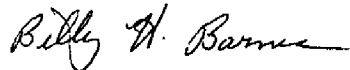
This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

TP-00069

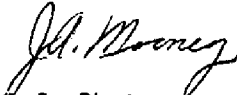
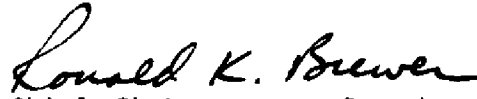
Submitted by,

Jerry L. Hancock
Final Reviewer

Approved for forwarding,

Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved,

J. H. Mooney
Chief, Photogrammetric Section,
RockvilleRonald K. Brewer
Chief, Photogrammetry Branch
Rockville

[illegible]

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

[illegible]

✓ PAB

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

