

TP-00064

TP-00064

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00064	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 PAOKALANI ISLAND	
1976 TO 1981	
REGISTERED IN ARCHIVES	
DATE	

TYPE OF SURVEY

☒ ORIGINAL☐ RESURVEY☐ REVISED

SURVEY TP. 00064

MAP EDITION NO. (1)

MAP CLASS Final

JOB ~~XX~~ CM-7712

DESCRIPTIVE REPORT - DATA RECORD

PHOTOGRAMMETRIC OFFICE

Coastal Mapping Division, Norfolk, VA

OFFICER-IN-CHARGE

Roy K. Matsushige

LAST PRECEDING MAP EDITION

TYPE OF SURVEY

☐ ORIGINAL☐ RESURVEY☐ REVISED

JOB PH. _____

MAP CLASS _____

SURVEY DATES:

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	May 1979
	CHECKED BY	J. Roderick	May 1979
	CONTOURS BY	N.A.	
	CHECKED BY	N.A.	
4. MANUSCRIPT DELINEATION METHOD: Smooth drafted SCALE: 1:20,000	PLANIMETRY BY	F. Mauldin	July 1979
	CHECKED BY	L. O. Neterer, Jr.	Aug. 1979
	CONTOURS BY	N.A.	
	CHECKED BY	N.A.	
	HYDRO SUPPORT DATA BY	F. Mauldin	July 1979
	CHECKED BY	L. O. Neterer, Jr.	Aug. 1979
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	L. O. Neterer, Jr.	Aug. 1979
6. APPLICATION OF FIELD EDIT DATA	BY	D. Butler	July 1982
	CHECKED BY	J. Massey	Oct. 1982
7. COMPILATION SECTION REVIEW	BY	J. Massey	Oct. 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. L. DAUGHERTY	Dec 1985

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 <input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Hawaii MERIDIAN 150th	
				<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77GSAASY-399-404	Jan. 13, 1977	10:15	1:50,000	1.4 ft. above M.L.L.W.	
77GSAASY-584-586	Mar. 26, 1977	10:27	1:30,000	0.7 ft. above M.L.L.W.	
76GSAASY-259-261	Dec. 18, 1976	13:25	1:30,000	1.3 ft. above M.L.L.W.	
				Mean range=1.6 ft.	

REMARKSPhotography 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:259-261 x1.51
584-586 x1.52**3. SOURCE OF 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-9975	Oct. 1981	Registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
No survey	TP-00065	No survey	PH-6401 T-12528

REMARKS

TP-00064

HISTORY OF FIELD OPERATIONS

1. ☒ 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 L. Riggers	Jan. 1978 -- Jan. 1978
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 R. Melby LOCATED (Field Methods) BY None IDENTIFIED BY L. Riggers	Jan. 1978 -- 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	BY
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	
photoidentified		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77GSAASY-402	KAUHOLA POINT LIGHT, 1948 (Direct)		
77GSAASY-402	NIULII, 1913 (Direct)		

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
77GSAASY-402	KAUHOLA POINT LIGHT		

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)

2 Forms 76-53; 1 - Field Operations Report.

ESSA FORM 76-36c
(2-70)U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEYTP-00064
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. J. Land	Nov. 1981
2. HORIZONTAL CONTROL	RECOVERED BY D. J. Kruth	Oct. 1981
	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 D. J. Kruth	Oct. 1981
	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	Oct. 1981
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY J. Gordon	Oct. 1981
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 260 and 261 (ratios) 77GSAASY 585 (ratio)			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED None			
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	
7. SUPPLEMENTAL MAPS AND PLANS None			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division) 1 Original Field Edit Report, 2 Field 76-40 forms, 1 Field Edit Ozalid			

TP-00064
RECORD OF SURVEY USEU. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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.	Oct. 1982	Class I manuscript. superseded	None	Oct. 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	Landmark 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: _____

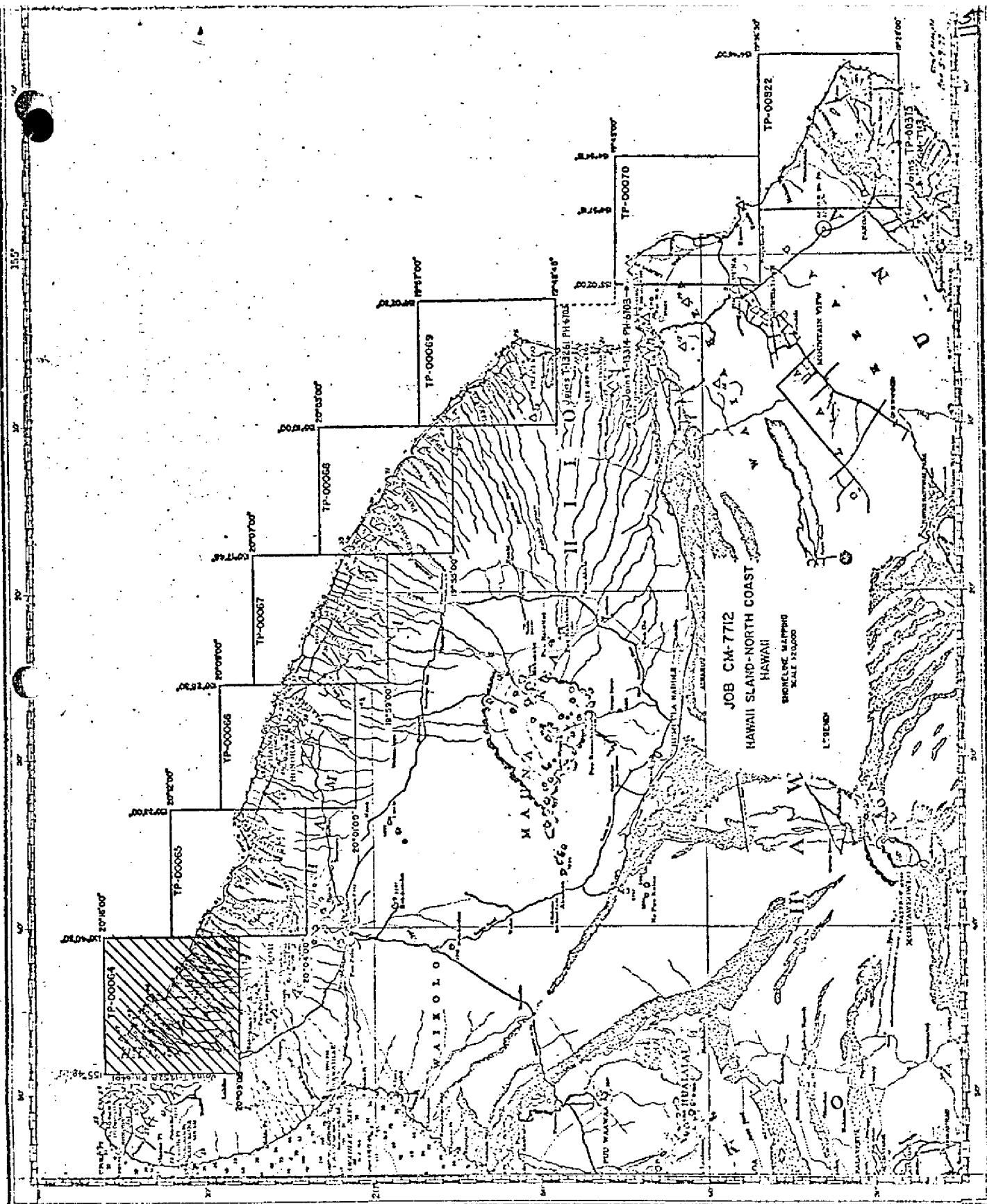
III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 76-40 ~~1005~~ 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	



JOB CM-7712

HAWAII SLAND-NORTH COAST

HAWAII

BARNESE MAPING

SCALE 1:250,000

L7ED0

TP-00064

TP-00065

TP-00066

TP-00067

TP-00068

TP-00069

TP-00070

TP-00071

TP-00072

TP-00073

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00064

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 northern coast of Hawaii Island from Long. 155°40'30" to Long. 155°48'45". This map defines the northwest limit of the project and junctions with shoreline project PH-6401.

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-9975 by NOAA Ship RAINIER personnel in November 1981.

Application of field edit data was accomplished at the Photogrammetric Section, Pacific Marine Center in October 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 the contemporary hydrographic survey, H-9975, common to this map. There

TP-00064

were no significant 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 related data were forwarded to the Washington Science Center for final registration.

FIELD INSPECTION

TP-00064

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.

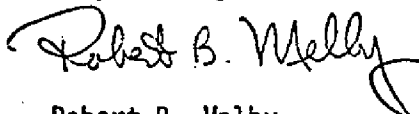
Station PUU ULAULA was photo-identified using a sun azimuth and a stack. the stack is station PAHALA, KAU SUGAR CO STACK, 1977. An N.G.S. Geodetic Field Party was working in the area and a position of the stack should be available from Geodesy in the near future. However, the sun azimuth can be used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

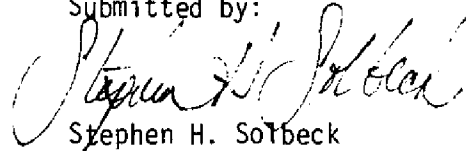
SUPPLEMENTAL DATA

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. Solbeck

Approved and Forwarded:



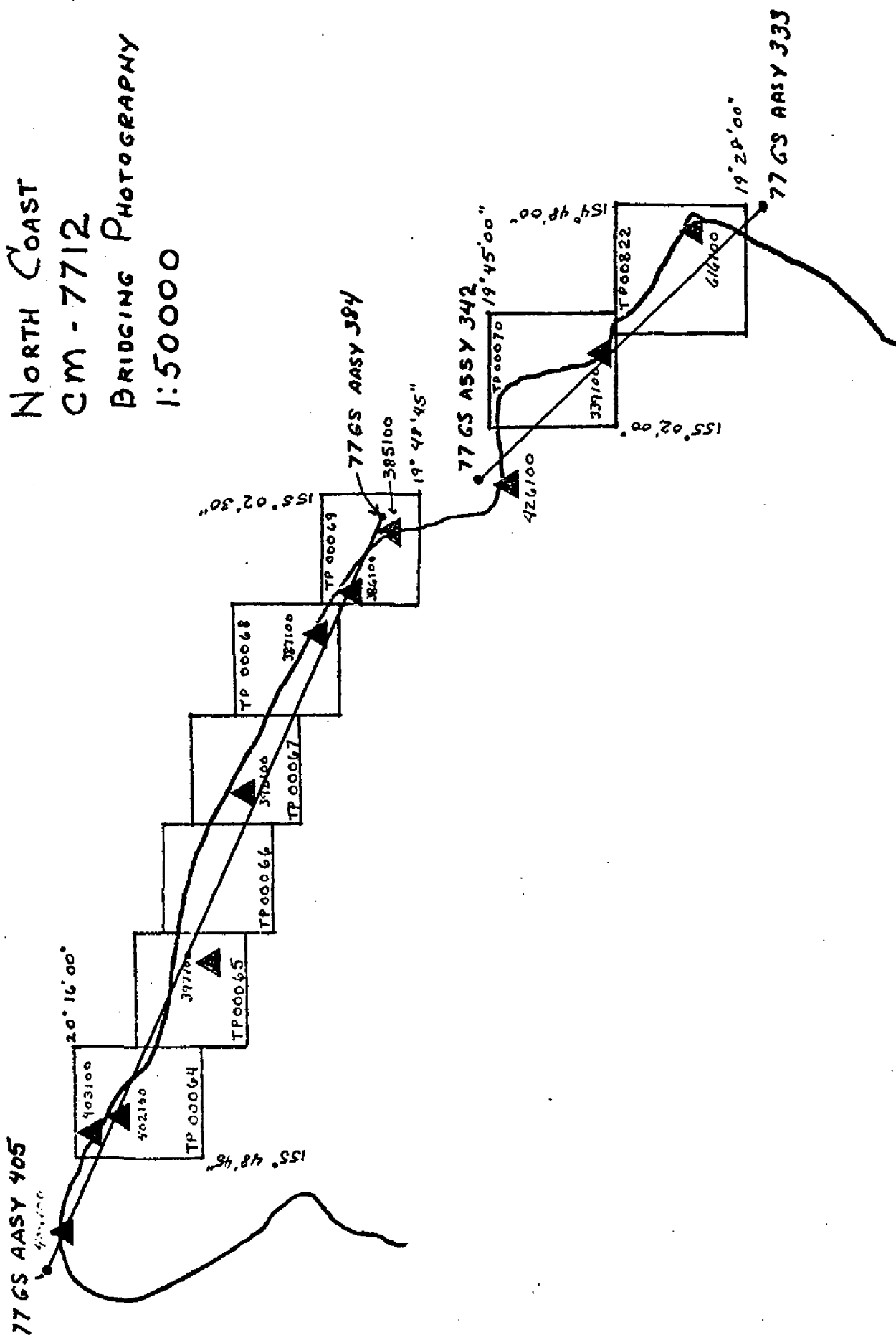
Don O. Norman
Chief, Aerotriangulation Section

CM-7712 HAWAII ISLAND, north coast strip 1

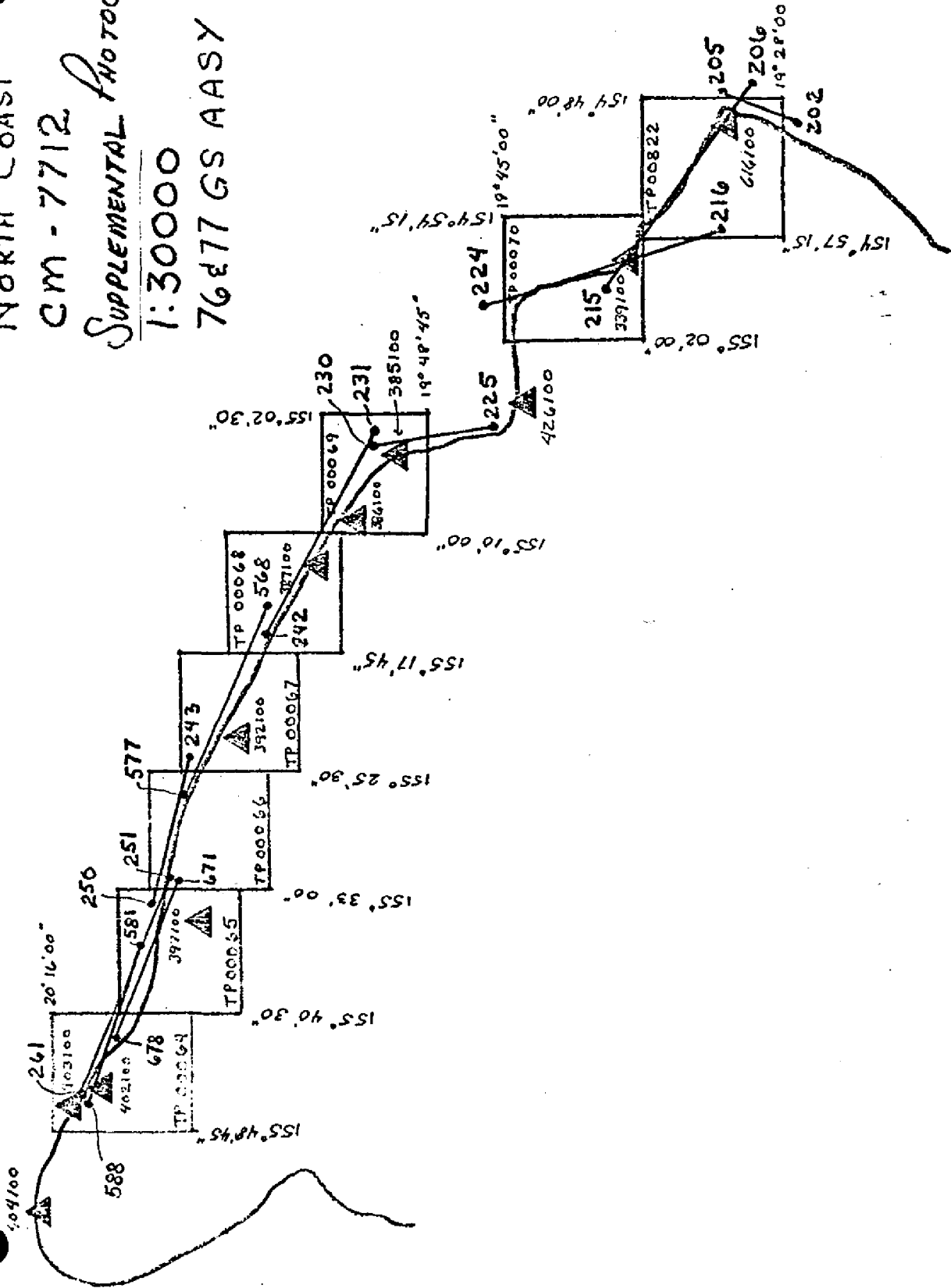
6 stations 3 degree

▲ 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 +7.9)
▲ 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	KEALAHWEA 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)

ISLAND OF HAWAII
 NORTH COAST
 CM - 7712
 BRIDGING PHOTOGRAPHY
 1:50000



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



DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	STATION NAME	JOB NO.	GEODEIC DATUM		ORIGINATING ACTIVITY				
			Old Hawaiian	Photogrammetric Branch, P.M.C.					
TP-00064		CM-7712	AEROTRIANGULATION POINT NUMBER	COORDINATES IN FEET		GEOGRAPHIC POSITION		REMARKS	
				STATE	ZONE	ϕ LATITUDE	λ LONGITUDE	Front	Back
NIULII, 1913		201553	402100	Hawaii	1	$x=$	ϕ 20° 13' 10.024"	308.2'	1536.8
						$y=$	λ 155° 44' 53.482"	1552.5'	189.2
KOHALA MILL STACK, 1948		201553	403401			$x=$ 403,335.80'	ϕ 20° 14' 13.643"	419.5'	1425.5
						$y=$ 509,872.49'	λ 155° 46' 55.121"	1599.9'	141.6
KAUHOLA POINT LIGHT, 1948		201553	403100			$x=$ 406,007.08'	ϕ 20° 14' 57.687"	1773.9'	71.1
						$y=$ 514,311.39'	λ 155° 46' 27.146"	787.9'	953.5
						$x=$	ϕ		
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COMPILATION REPORT

TP-00064

31 - DELINEATION

Delineation was by instrument method using the Wild B-8 stereoplotter and 1:50,000 scale black and white photographs; and graphically using the 1:30,000 scale black and white ratios that were processed for hydro support. There was no ratio coverage west of Kauhola Point. Quality of the photographs was adequate.

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 ratioed 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 edited and refined from the ratioed photographs by office stereoscopic interpretation.

36 - OFFSHORE DETAILS

There were coral reefs shown on the Quad that could not be seen by the compiler and will be left to field edit.

37 - LANDMARKS AND AIDS

There was one landmark and one aid for charts within the limits of this manuscript. Both of them 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 maps: -
Hawi, HA and Honokane, HA, scale 1:24,000, dated 1957.

47 - COMPARISON WITH NAUTICAL CHARTS

Comparison was made with N.O.S. Charts Nos. 19320, scale 1:250,000, 12th edition, dated June 17, 1978; and 19327, scale 1:80,000, 7th edition, dated July 9, 1977.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:



Fay T. Mauldin
Cartographer

Date: July 5, 1979

Approved:



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

ADDENDUM TO THE COMPILATION REPORT

TP-00064

CM-7712

FIELD EDIT

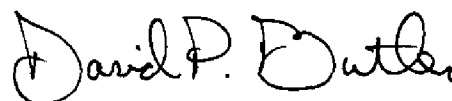
The foul line was changed to "breakers" in order to remain consistent with project CM-7713, and the southern sheets in this project (TP-00822, TP-00070 & TP-00069) which were field edited in 1979 and 1980 respectively. The breakers are the result of surf action caused by submerged rocks and ledge, and they are indicative of the entire east coast of the island of Hawaii. Both of the terms "foul" and "breakers" describe a similar condition which is hazardous to navigation, and this limit line is where the hydrographer ended his inshore sounding lines.

On the Field Edit Ozalid the field editor makes reference to a submerged rock that lies outside of the breaker limit line at 20°12'09", 155°42'45". This rock was not compiled, but is visible on the 1:50,000 scale compilation photographs (77GSAASY 400 & 401) and the 1:30,000 scale hydro support ratios (77GSAASY 585 & 586), and appears on Chart 19320. The position submitted by the field editor was only approximate, since a distance to the rock (30m) was estimated from a fix along a hydro sounding line and then scaled onto the smooth sheet for H-9975. Therefore, the position on the manuscript was obtained by, first, resetting the stereo-model on the B-8 and dropping a point for the image interpreted to be the submerged rock, then raying in the same image identified on the ratios as a check for that position.

Besides the aforementioned rock, three other rocks lie offshore of the breaker limit line:

- 1) 20°12'19", 155°43'34"
- 2) 20°12'20", 155°43'32"
- 3) 20°12'23", 155°43'36"

Submitted by:



David P. Butler, Cartographer
July 13, 1982

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7712 (Island of Hawaii - North Coast)

TP-00064

Akoakoa Point
Halaula
Halawa
Hapuu Bay
Hawaii (island)
Honokaheka Point
Honokane Iki Stream
Honokane Nui Stream
Honokea Stream
Honopue Stream
Kaheo Point
Kailikaula Stream
Kalalae Point
Kapaaiki Point
Kapana Bay
Kauhola Point
~~Keawaeli Point~~ Bay *gkA*
Neve Bay *gkA*

Keokea Bay
Kolealiilii Stream
Makapala
Mokupuku
Mokupupu
Nakooko Stream
Niulii
Niulii Stream
Ohiahuea Stream
Paalaea
Pacific Ocean
Paokalani Island
Pauekolu
Pololu Stream
~~Waipuka Stream~~ *gkA (on TP 00065)*
Waipahi Stream

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

FIELD EDIT REPORT

OPR-T126-RA-81

TP-00064

CM-7712

HAWAII ISLAND

NORTHEAST COAST, HAWAII

OCTOBER 30 - NOVEMBER 3, 1981

METHOD

Field edit operations on TP-00064 began on October 30, 1981 (JD 303) and ended on November 3, 1981 (JD 307). Greenwich Mean Time was used to reference shoreline features. West of Akoakoa Pt field edit was performed on foot. Due to inaccessibility, the eastern portion of that sheet was done from a low-flying helicopter.

Violet ink was used on the master film ozalid for verifying features and for answering questions. Red ink was used to show changes made to the ozalid by the field editor. Green ink was used to show items deleted.

This field edit survey complied with Chapter II, Manual of Coastal Mapping Field Procedures and the project instructions.

ADEQUACY AND COMPLETENESS

The manuscript, as amended by the field edit survey, is adequate and complete. The entire manuscript was field-edited.

GEOGRAPHIC NAMES

All names shown on the manuscript were the same that were used by the local people.

MANUSCRIPT ACCURACY

Direct visual comparison of the shoreline features with the discrepancy print and photos was the method of determining accuracy. Agreement was excellent except where noted.

RECOMMENDATIONS AND MISCELLANEOUS COMMENTS

The foul line depicted on the manuscript was found to be accurate, except where noted on the T-sheet. An attempt was made by the field editor to draw an accurate surf-line on the paper ozalid, but it was found that due to the changing sea conditions the line varied too much from one day to the next for charting purposes.

A rock reported on the prior surveys but not on the T-sheet was observed during field edit. It can be seen in red ink on the T-sheet located close to Paokalani Island. The G.P. of the rock was taken from the prior survey but should be verified from the photographs by the photogrammetry division.

This corrected manuscript should supercede all previous shoreline compilations.

Submitted by,

for Thomas G. Clark
James R. Gordon
LTJG, NOAA

Approved and Forwarded,

Ralph J. Land
Ralph J. Land
CDR, NOAA
Commanding

REVIEW REPORT
TP-00064

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:
Hawi, Hawaii; dated 1957
Honokane, Hawaii; dated 1957.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a registered copy of contemporary hydrographic survey H-9975, RA 20-5-81, 1:20,000 scale, field surveyed Oct. 1981.

There were no significant differences.

65 - COMPARISON WITH NAUTICAL CHARTS

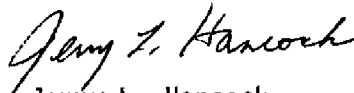
A comparison was made with the following NOS Charts:
19327, scale 1:80,000, 8th edition, Sept. 5, 1981
19320, scale 1:250,000, 13th edition, July 10, 1982.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

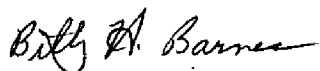
This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

TP-00064

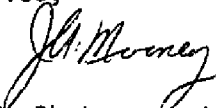
Submitted by,

Jerry L. Hancock
Final Reviewer

Approved for forwarding,

Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved,

Chief, Photogrammetric Section,
RockvilleChief, Photogrammetry Branch
Rockville

Replaces C&GS Form 567.

NONFLOATING AIDS

FOR CHARTS

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

ORIGINATING ACTIVITY

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

[illegible]

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Ralph J. Land, CDR, NOAA
POSITIONS DETERMINED AND/OR VERIFIED	David J. Kruth, LTJG, NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	David P. Butler, Cartographer
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) 8. 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 P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 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.	

Replaces C&GS Form 567.

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

ORIGINATING ACTIVITY

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

<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED	REPORTING UNIT (If field Party, Ship or Office) Photogrammetric Branch P.M.C., Seattle, WA	STATE Hawaii	LOCALITY Hawaii - North Coast	DATE July 1982
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The following sheets HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.
 (See reverse for responsible personnel)

T126-FA-81 OPB PROJECT NO.	CM-7712 JOB NUMBER	TP-00064 SURVEY NUMBER	DATUM		METHOD AND DATE OF LOCATION (See instructions on reverse side)	CHARTS
			Old Hawaiian	POSITION		

CHARTING NAME	DESCRIPTION <i>(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)</i>	LATITUDE		LONGITUDE		OFFICE	FIELD	AFFECTED
		° /	"	° /	"			
		° /	"	° /	"			
			D.M. Meters		D.P. Meters			

STACK -	(Kohala Mill, Stack, 1948) -	20 14	13.643	155 46	55.121	77GSAASY 403	V-VIS	19320 -
			419.5		1599.9	Jan. 13, 1977	Nov. 1, 1981	

[illegible]

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Ralph J. Land, CDR, NOAA
POSITIONS DETERMINED AND/OR VERIFIED	David J. Kruth, LTJG, NOAA David P. Butler, Cartographer
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<div> <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify) </div>
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.	

