

TP-00065

TP-00065

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00065	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 WAIPIO BAY	
19 76 TO 19 81	
REGISTERED IN ARCHIVES	
DATE	

TYPE OF SURVEY

SURVEY TF. 00065

DESCRIPTIVE REPORT - DATA RECORD

☒ ORIGINAL☐ RESURVEY☐ REVISED

MAP EDITION NO. (1)

MAP CLASS Final

JOB CM ~~XX~~ 7712

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	N.A.	--
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	Mauldin, L. Neterer, J. Roderick	May 1979
	CONTOURS BY	N.A.	--
	CHECKED BY	N.A.	--
4. MANUSCRIPT DELINEATION METHOD: Smooth drafted and graphic SCALE: 1:20,000	PLANIMETRY BY	R. Kravitz	June 1979
	CHECKED BY	F. Mauldin	July 1979
	CONTOURS BY	N.A.	--
	CHECKED BY	N.A.	--
	HYDRO SUPPORT DATA BY	R. Kravitz	June 1979
	CHECKED BY	F. Mauldin	July 1979
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	F. Mauldin	July 1979
6. APPLICATION OF FIELD EDIT DATA	BY	D. Butler	June 1982
	CHECKED BY	J. Massey	Sept. 1982
7. COMPILATION SECTION REVIEW	BY	J. Massey	Sept. 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-00065
COMPILATION SOURCESU. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

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 396-400	Jan. 13, 1977	10:15	1:50,000	1.4 ft. above M.L.L.W.	
77GSAASY 672-675	Mar. 27, 1977	10:20	1:30,000	1.0 ft. above M.L.L.W.	
77GSAASY 581-584	Mar. 26, 1977	10:27	1:30,000	0.7 ft. above M.L.L.W.	
76GSAASY 249-250	Dec. 18, 1976	13:32	1:30,000	1.3 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:

249-250	x1.49
581-584	x1.52
672-675	x1.51

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-9983	Oct.- Dec. 1981	Registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
No survey	TP-00066	No survey	TP-00064

REMARKS

ESSA FORM 76-36c
(2-70)U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEYTP-00065
HISTORY OF FIELD OPERATIONSI. ☒ 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 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	
		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77GSAASY-397	PUU MAUU NORTH, 1948 (Sub Pts A & B)		

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

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

7. SUPPLEMENTAL MAPS AND PLANS

None

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

1 - Form 76-53; 2 - Form 76-61A; and 1 - Field Operations Report.

ESSA FORM 76-36c
(2-70)U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEYTP-00065
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 D. J. Kruth	Oct. 1981
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY None	
	LOCATED (Field Methods) BY D. J. Kruth	Oct. 1981
	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	J. Gordon Nov. 1981
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY J. Gordon	Nov. 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) 77GSAASY 673 (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, 1 Field 76-40 form, 1 Field Edit Ozalid			

TP-00065
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.	Jul 17, 1979	Class III manuscript. superseded	Aug. 1979	Aug. 1979
Field edit applied, compilation complete.	Sept. 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	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		Oct. 31, 1985	1 Aid for Charts

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

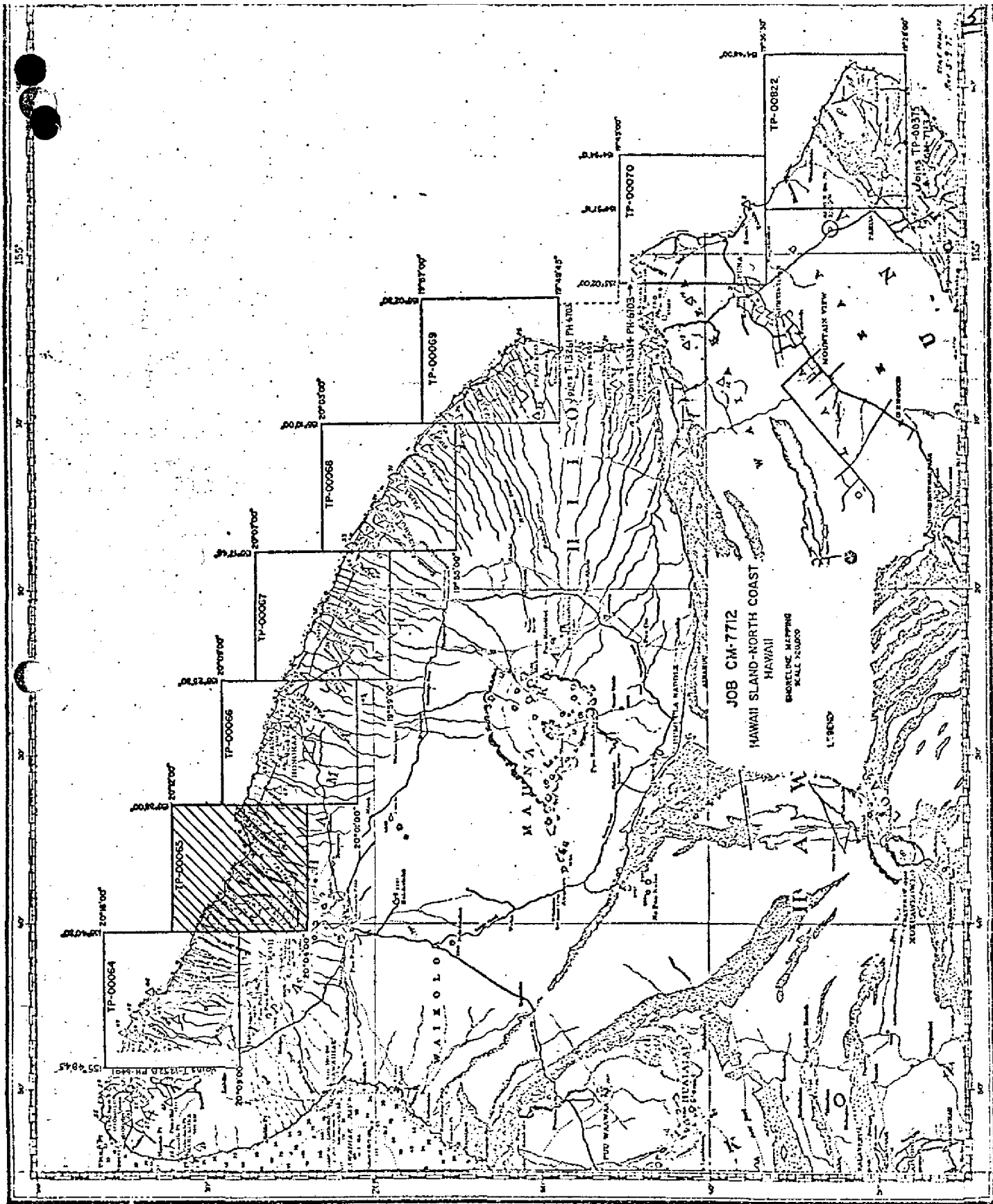
III. FEDERAL RECORDS CENTER DATA

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 - _____	<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 - _____	<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 - _____	<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	



6

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00065

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°33.0' to Long. 155°40.5' and features Waipio Bay.

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 July 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-9983 by NOAA Ship RAINIER personnel in November 1981.

Application of field edit data was accomplished at the Photogrammetric Section, Pacific Marine Center in September 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-9983, common to this map. There

TP-00065

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-00065

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 $46^{\circ}00'26''$. 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 $64^{\circ}00'26''$. The reference mark was used as a check angle.

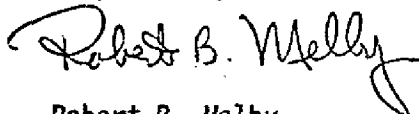
Station PUU ULAULA was photo-identified using a sun azimuth and a stack. the stack is station PAHALA, KAU SUGAR CO STACK, 1977. An N.G.S. Geodetic Field Party was working in the area and a position of the stack should be available from Geodesy in the near future. However, the sun azimuth can be used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

A handwritten signature in cursive script, reading "Robert B. Melby".

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.

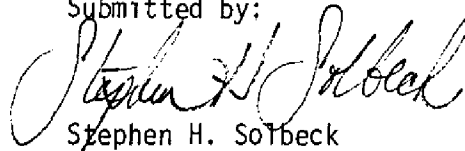
SUPPLEMENTAL DATA

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

PHOTOGRAPHY

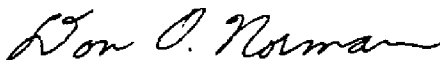
The coverage, overlap, and quality of the photography proved adequate for the job.

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	OPINILALA, 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)

ISLAND OF HAWAII

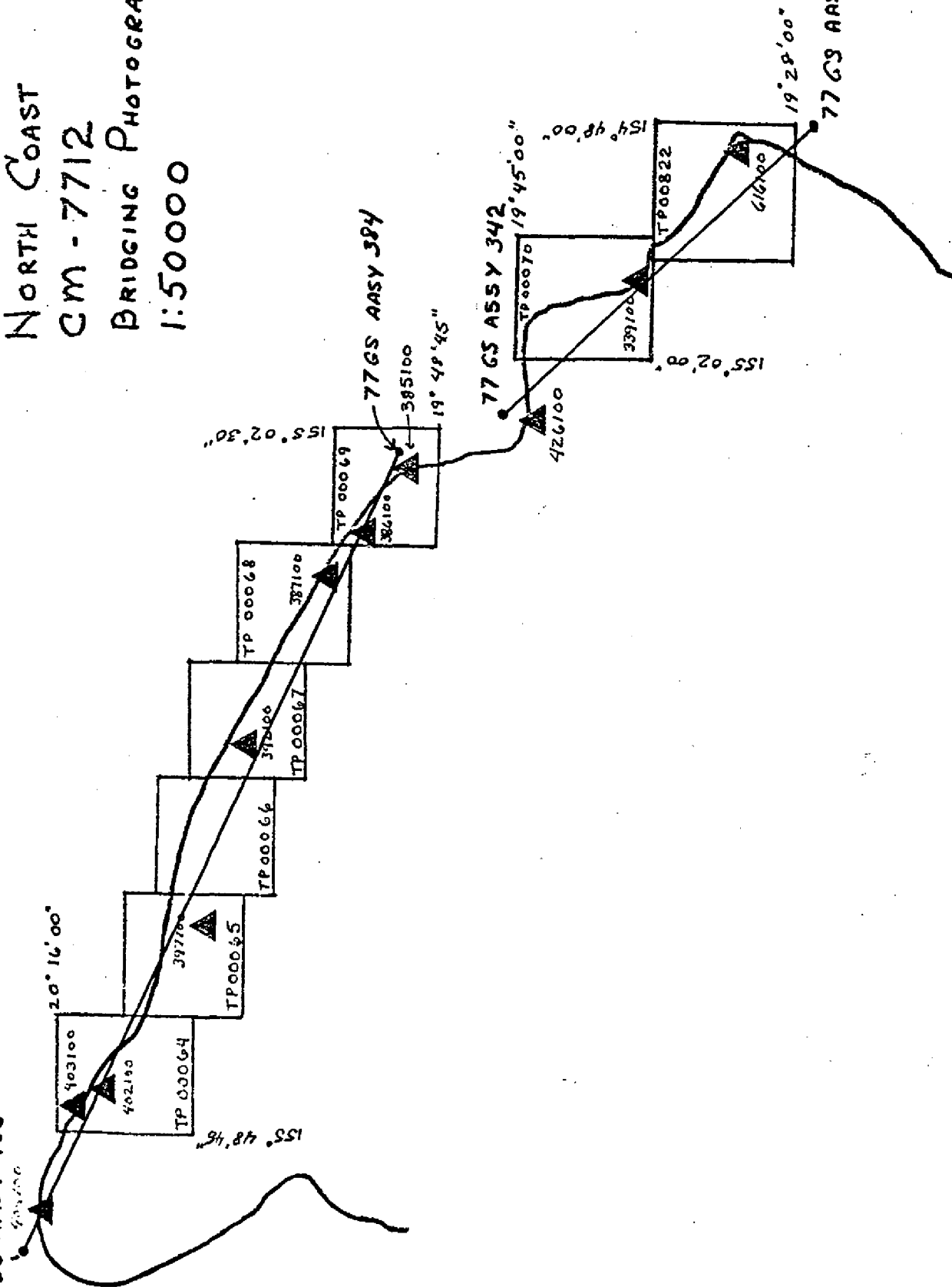
NORTH COAST

CM-7712

BRIDGING PHOTOGRAPHY

1:50000

77 GS AASY 405



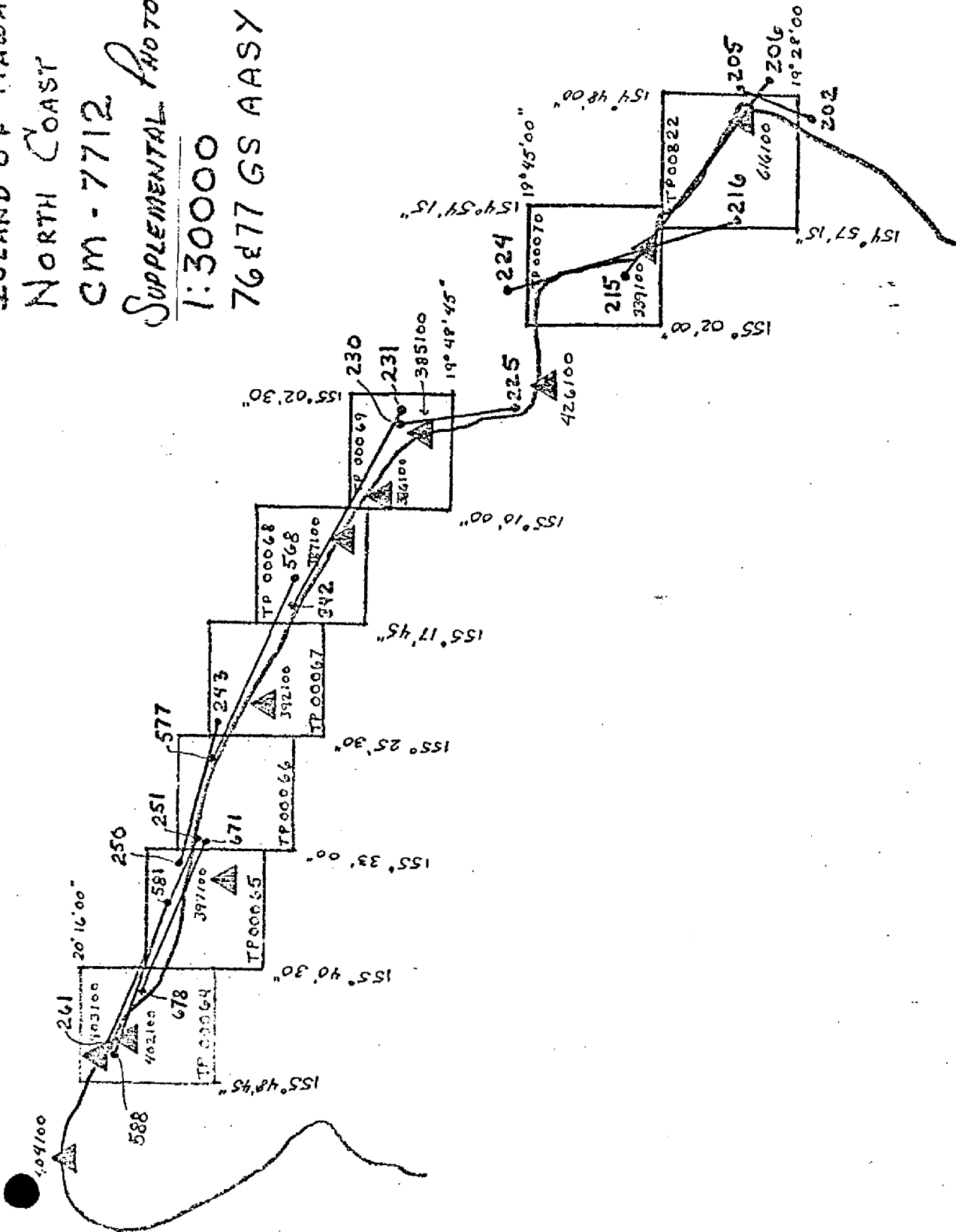
ISLAND OF HAWAII
NORTH COAST

CM - 7712

SUPPLEMENTAL PHOTOGRAPHY

1:30000

76877 GS AASY



DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	STATION NAME	JOB NO.	GEODETIC DATUM		AEROTRI- ANGULATION POINT NUMBER	COORDINATES IN FEET		GEOGRAPHIC POSITION		ORIGINATING ACTIVITY	
			SOURCE OF INFORMATION (Index)	Old Hawaiian		STATE ZONE	Hawaii	φ	λ	φ	λ
TP-00065	PUU MAUU NORTH (HTS), 1948	CM-7712	201553	397100		φ	20° 06'	05.283"		162.5	1682.5
						λ	155° 34'	30.615"		889.4	853.6
	KUKUTHAELE LIGHT, 1981		Preliminary Adjusted Position	--		φ	20° 07'	51.73675"		1590.9	254.1
						λ	155° 33'	31.58608"		917.4	825.3
						φ					
						λ					
						φ					
						λ					
						φ					
						λ					
						φ					
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						λ					
						φ					
						λ					
						φ					
						λ					
COMPUTED BY						COMPUTATION CHECKED BY				DATE	
LISTED BY	D. Butler					LISTING CHECKED BY				DATE	
HAND PLOTTING BY						HAND PLOTTING CHECKED BY				DATE	

COMPILATION REPORT

TP-00065

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 ratioed hydro-support photographs. Photograph quality and coverage was 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 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 office edited and refined by stereoscopic interpretation of the ratioed photographs.

36 - OFFSHORE DETAILS

No unusual problems were encountered.

37 - LANDMARKS AND AIDS

There is only one charted aid within the mapping limits of this manuscript. Its geodetic position could not be verified photogrammetrically. It appears to have been moved. There are no charted landmarks.

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

Comparison was made with U.S.G.S. quadrangle maps: - Honokane, HA, and Kukuihaele, HA, scale 1:24,000, dated 1957.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with N.O.S. Chart No. 19320, scale 1:250,000, 12th edition, dated June 17, 1978 and No. 19322, scale 1:2,500, 5th edition, June 25, 1977.

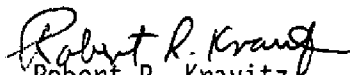
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:


Robert R. Kravitz
Cartographic Technician
Date: June 21, 1979

Approved:



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

16

ADDENDUM TO THE COMPILATION REPORT

TP-00065
CM-7712

FIELD EDIT

The geographic position of Kukuihaele Light shown on the final Form 76-40 is taken from a list of Preliminary Adjusted Positions, which is why it differs from the one submitted by the field editor.

Even though the name Honokaape Landing appears on Chart 19320, it has not been added to the manuscript pending the approval of Charles Harrington, Chief Geographer.

On the Field Edit Ozalid the field editor has indicated two buildings in the area where Wailoa Stream empties into Waipio Bay. However, they have not been delineated because they are not visible on the photographs and it appears the positions were merely scaled off of the USGS quadrangle Kukuihaele, Hawaii.

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. This limit line is where the hydrographer ended his inshore sounding lines.

Submitted by:



David P. Butler, Cartographer

GEOGRAPHIC NAMES

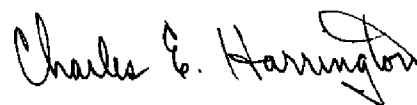
FINAL NAME SHEET

CM-7712 (Island of Hawaii - North Coast)

TP-00065

Ainahou
Apau
Honokaape Landing
Kahoopuu Stream
Kaimu Stream
Kukui Stream
Kukuihaele
Kukuihaele Landing
Laupahoehoe Iki
Laupahoehoe Nui
Nakooko Stream
Naluea Stream
Pacific Ocean
Paopao Stream
Punalulu Stream
Waiaalala Stream
Waiapuka Stream
Waikalua Stream
Waimaile Stream
Waimanu Bay
Waimanu Stream
Waimanu Valley
Waipahoehoe Stream
Waipio Bay
Waipio Stream
Waiulili Stream
Kaluahine Falls *Q2A*

Approved:



Charles E. Harrington
Chief Geographer
Nautical Charting Division

FIELD EDIT REPORT

OPR-T126-RA-81

TP-00065

CM-7712

HAWAII ISLAND

NORTHEAST COAST HAWAII

3 NOVEMBER - 4 NOVEMBER 1981

METHOD

Field edit operations on TP-00065 began on November 3, 1981 (JD 307) and ended on November 4, 1981 (JD 308). Greenwich Mean Time was used to reference shoreline features. Due to inaccessibility of the area, field edit 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 11, Manual of Coastal Mapping Field Procedure 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 soon found, due to changing sea conditions, that the line varied too much from one day to the next for charting purposes.

Note that stations Kukuihaele Landing, Pacific Sugar Mill, Stack 1948 and Kukuihaele Landing, Stack, 1913 have already been listed as lost in the NGS files.

Submitted by,

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

Approved and Forwarded,

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

REVIEW REPORT
TP-00065

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

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a registered copy of contemporary hydrographic survey H-9983, RA 20-6-81, 1:20,000 scale, field surveyed Oct.- Dec. 1981.

There were no significant differences.

65 - COMPARISON WITH NAUTICAL CHARTS

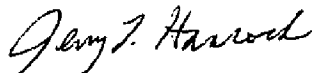
A comparison was made with the following NOS Charts:
19322, scale 1:2,500, 6th edition, June 25, 1983
19320, scale 1:250,000, 13th edition, July 10, 1982.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

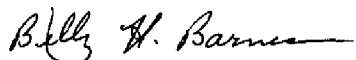
This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

TP-00065

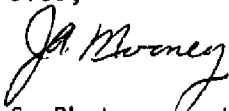
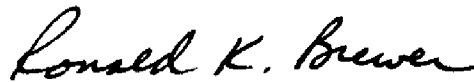
Submitted by,

Jerry L. Hancock
Final Reviewer

Approved for forwarding,

Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved,

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

NONFLOATING AIDS

FOR CHARTS

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

ORIGINATING ACTIVITY

[illegible]

11

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	ORIGINATOR <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
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	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 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	FIELD 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.	

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. TP-00065 (CM-7712)

INSTRUCTIONS

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

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

[illegible]