

TP-00067

TP-00067

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00067	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 KOHOLALELE LANDING	
1977 TO 1981	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, Norfolk, VA		SURVEY TF. <u>00067</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB CM <u>RM-7712</u>	
OFFICER-IN-CHARGE Roy K. Matsushige		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB PH- MAP CLASS SURVEY DATES: 19__ TO 19__	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation----- Feb. 13, 1978 Compilation ----- April 12, 1979		Control ----- Nov. 2, 1977	
II. DATUMS			
1. HORIZONTAL: <input type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify) Old Hawaiian	
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify)	
3. MAP PROJECTION 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: <u>Analytic</u>		BY S. Solbeck Jan. 1979	
LANDMARKS AND AIDS BY		S. Solbeck Jan. 1979	
2. CONTROL AND BRIDGE POINTS METHOD: <u>Coradomat</u>		PLOTTED BY S. Solbeck Jan. 1979	
CHECKED BY S. Solbeck Jan. 1979		3. STEREOSCOPIC INSTRUMENT COMPILATION	
PLANIMETRY BY R. Kravitz Apr. 1979		CHECKED BY F. Mauldin Apr. 1979	
INSTRUMENT: <u>Wild B-8</u>		CONTOURS BY N.A. --	
SCALE: <u>1:20,000</u>		CHECKED BY N.A. --	
4. MANUSCRIPT DELINEATION		PLANIMETRY BY J. Roderick June 1979	
CHECKED BY F. Mauldin July 1979		CONTOURS BY N.A. --	
METHOD: <u>Smooth drafted</u>		CHECKED BY N.A. --	
SCALE: <u>1:20,000</u>		HYDRO SUPPORT DATA BY J. Roderick 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 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. DAUGHERTY Dec 1985	

TP-00067
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 <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-390-394 ✓	Jan. 13, 1977	10:15	1:50,000	1.4 ft. above M.L.L.W.	
77GSAASY-571-576 ✓	Mar. 26, 1977	10:18	1:30,000	0.7 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:

571-576 x1.50

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-9986	Nov. 1981 Sept/Oct 82	Registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
No survey	TP-00068	No survey	TP-00066

REMARKS

TP-00067
HISTORY OF FIELD OPERATIONSI. ☒ FIELD INVESTIGATION OPERATION ☐ FIELD EDIT OPERATION
Photo 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 -- 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	
Photoidentified		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77GSAASY-392	OPIHILALA, 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, 1 - Form 266, 1 - Form 269c and 1 - Field Operations Report.

ESSA FORM 76-36c
(2-70)U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEYTP-00067
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Land	Nov. 1981
2. HORIZONTAL CONTROL	D. Kruth	Nov. 1981
RECOVERED BY	None	
ESTABLISHED BY	None	
PRE-MARKED OR IDENTIFIED BY	None	
3. VERTICAL CONTROL	D. Kruth	Nov. 1981
RECOVERED BY	None	
ESTABLISHED BY	None	
PRE-MARKED OR IDENTIFIED BY	None	
4. LANDMARKS AND AIDS TO NAVIGATION	D. Kruth	Nov. 1981
RECOVERED (Triangulation Stations) BY	None	
LOCATED (Field Methods) BY	None	
IDENTIFIED BY	None	
5. GEOGRAPHIC NAMES INVESTIGATION	J. Gordon	Nov. 1981
TYPE OF INVESTIGATION		
<input type="checkbox"/> COMPLETE		
<input checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY		
<input type="checkbox"/> NO INVESTIGATION		
6. PHOTO INSPECTION	J. Gordon	Nov. 1981
CLARIFICATION OF DETAILS BY		
7. BOUNDARIES AND LIMITS	None	
SURVEYED OR IDENTIFIED BY		

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
None		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS (Clarification of details)			
None			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED			
None			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
5. GEOGRAPHIC NAMES: <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)			
Field edit ozalid, 1 Field 76-40 form, One original Field Edit Report			

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete, pending field edit.	July 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
1		Oct 31, 1985	A landmark for charts

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

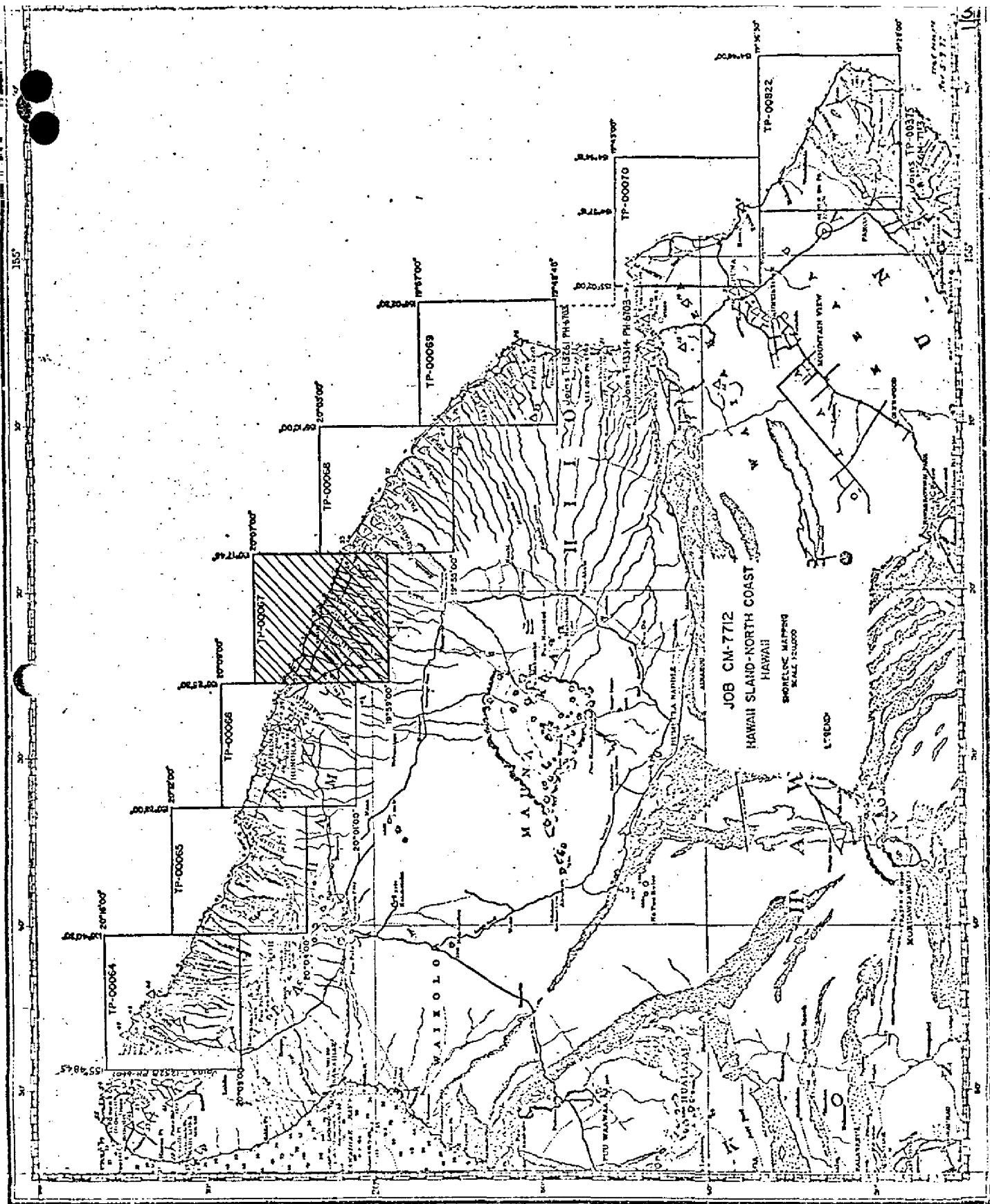
III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 76-46X 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-00067

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°17'45" to Long. 155°25'30".

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-9986 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-9986, common to this map. There

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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-00067

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.

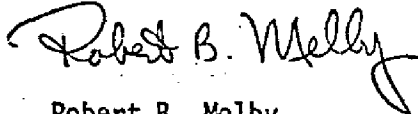
Station PUU ULAULA was photo-identified using a sun azimuth and a stack. the stack is station PAHALA, KAU SUGAR CO STACK, 1977. An N.G.S. Geodetic Field Party was working in the area and a position of the stack should be available from Geodesy in the near future. However, the sun azimuth can be used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



Robert B. Melby
Chief, PMC Photo Party
CPM 133

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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.

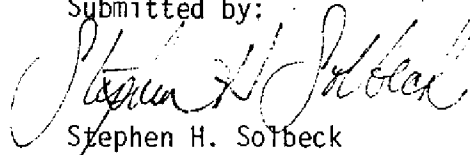
SUPPLEMENTAL DATA

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

PHOTOGRAPHY

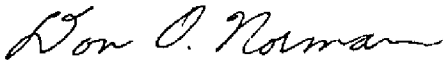
The coverage, overlap, and quality of the photography proved adequate for the job.

Submitted by:



Stephen H. Solbeck

Approved and Forwarded:



Don O. Norman
Chief, Aerotriangulation Section

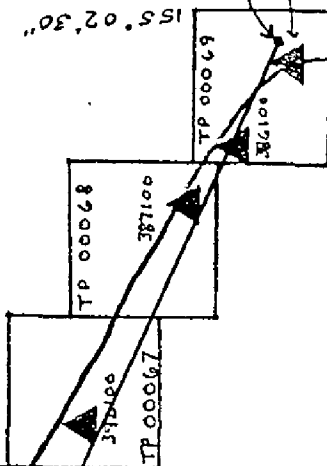
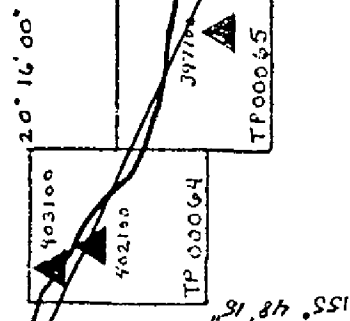
CM-7712 HAWAII ISLAND, north coast strip 1

6 stations 3 degree

▲ 385100	PEPEEKEO POINT LT., 1948	(-0.8 - 3.0)
385101	sub point	(-0.8 - 4.0)
386100	HONOHIINA, 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	KEALAHEWA 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)

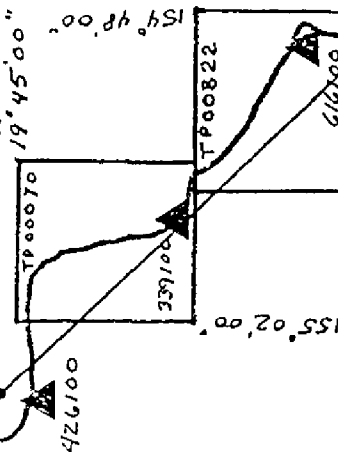
ISLAND OF HAWAII
 NORTH COAST
 CM-7712
 BRIDGING PHOTOGRAPHY
 1:50000

77 GS AASY 405



77 GS AASY 384

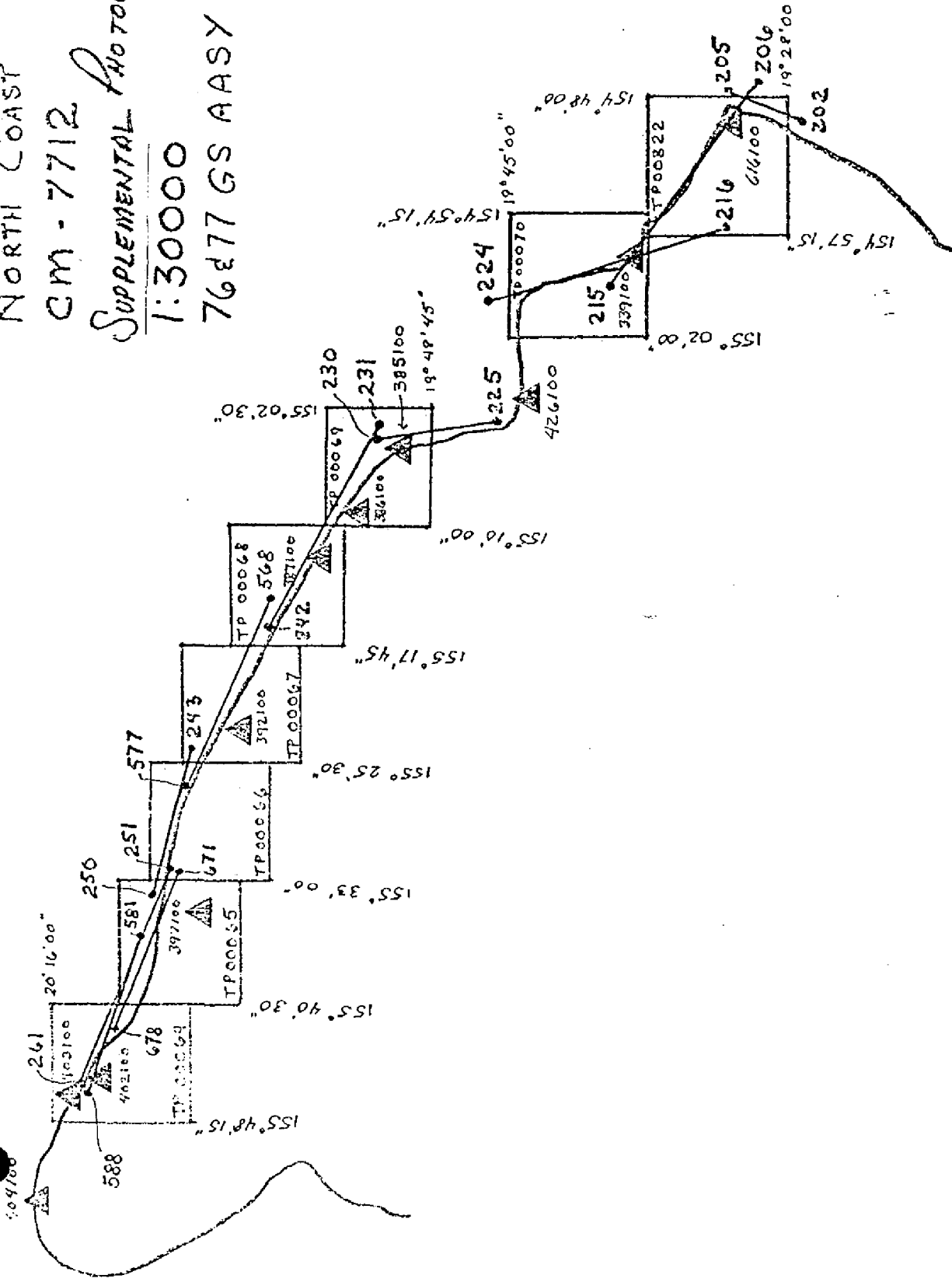
77 GS AASY 342



77 GS AASY 333

19° 28' 00"

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



COMPILATION REPORT

TP-00067

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 black-and-white ratio photos that were processed for hydro support. 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

No unusual problems.

37 - LANDMARKS AND AIDS

Within the limits of the manuscript, there was one charted landmark, which is triangulation, and it was verified photogrammetrically. There were no charted aids.

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 2 U.S.G.S. quadrangle maps: Honokaa, HA, and Kukaiau, HA, scales 1:24,000, dated 1957.

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:

Joanne Roderick
Joanne Roderick
Cartographer
Date: June 11, 1979

Approved:

Billy H. Bann
Albert C. Rauck, Jr.
Chief, Coastal Mapping Section

ADDENDUM TO THE COMPILATION REPORT

TP-00067

CM-7712

FIELD EDIT

Two rocks on this manuscript exist outside of the breaker-limit line:

- 1) 20°04'09", 155°23'25"
- 2) 20°05'15", 155°25'28"

The field editor has made reference to seven compiled rocks which he states "should be considered as part of the foul zone", but he failed to submit any height data for them:

- 1) 20°02'18", 155°19'39"
- 2) 20°02'42", 155°20'18"
- 3) 20°02'46", 155°20'27"
- 4) 20°02'54", 155°20'47"
- 5) 20°03'18", 155°21'37"
- 6) 20°03'39", 155°22'10"
- 7) 20°04'18", 155°23'52"

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 and 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.

Submitted by:



David P. Butler, Cartographer

¹³
AUG 13 1985

GEOGRAPHIC NAMES

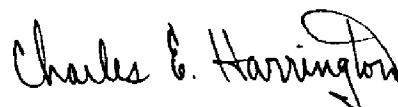
FINAL NAME SHEET

CM-7712 (Island of Hawaii - North Coast)

TP-00067

Alakaha Point
Hawaii (island)
Hikiau Falls
Kaala Stream
Kealakaha Stream
Koholalele Landing
Kukaiau
Paauiilo
Pacific Ocean
Papaaloa Point
Popoloau Point

Approved:



Charles E. Harrington
Chief Geographer
Nautical Charting Division

FIELD EDIT REPORT

OPR-T126-RA-81

TP-00067

CM-7712

HAWAII ISLAND

NORTHEAST COAST OF HAWAII

17 NOVEMBER - 30 NOVEMBER 1981

METHOD

Field edit operations on TP-00067 began on November 17, 1981 (JD 321) and ended on November 30, 1981 (JD 334). Greenwich Mean Time was used to reference shoreline features. Shoreline west of 155° 23' W was done on foot, and east of it 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 that due to changing sea conditions the line varied too much from one day to the next for charting purposes.

Kukaiau Stack, 1913, is listed as lost in the NGS records.

This corrected manuscript should supercede all previous shoreline compilations.

Submitted by,

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

Approved and Forwarded,

Ralph D. Land
Ralph D. Land
CDR, NOAA
Commanding

REVIEW REPORT
TP-00067

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:
Honokaa, Hawaii; dated 1957
Kukaiah, Hawaii; dated 1957.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a registered copy of contemporary hydrographic survey H-9986, RA 20-7-81, 1:20,000 scale, field surveyed Nov. 1981 and Sept./Oct. 1982.

There were no significant differences.

65 - COMPARISON WITH NAUTICAL CHARTS

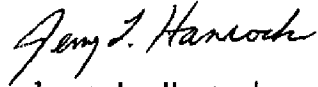
A comparison was made with the following NOS Chart:
19320, scale 1:250,000, 13th edition, July 10, 1982.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

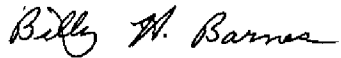
This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

TP-00067

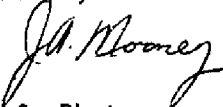
Submitted by,

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.

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

[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 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 P - Photogrammetric L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 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	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.	

