

TP- 00068

TP- 00068

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00068	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 LAUPAHOEHOE POINT	
1976 TO 19 81	
REGISTERED IN ARCHIVES	
DATE	

DESCRIPTIVE REPORT - DATA RECORD

TYPE OF SURVEY

- ☒ ORIGINAL
☐ RESURVEY
☐ REVISED

SURVEY TP- 00068

MAP EDITION NO. (1)

MAP CLASS Final

JOB CMXPH- 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	BY	S. Solbeck	Jan. 1979
METHOD: Analytic	LANDMARKS AND AIDS BY	None	--
2. CONTROL AND BRIDGE POINTS	PLOTTED BY	S. Solbeck	Jan. 1979
METHOD: Coradomat	CHECKED BY	S. Solbeck	Jan. 1979
3. STEREOSCOPIC INSTRUMENT	PLANIMETRY BY	R. Kravitz	Apr. 1979
COMPILATION	CHECKED BY	L. Neterer	Apr. 1979
INSTRUMENT: Wild B-8	CONTOURS BY	N.A.	--
SCALE: 1:20,000	CHECKED BY	N.A.	--
4. MANUSCRIPT DELINEATION	PLANIMETRY BY	L. Williams	May 1979
	CHECKED BY	F. Mauldin	July 1979
METHOD: Smooth drafted	CONTOURS BY	N.A.	--
and graphic	CHECKED BY	N.A.	--
SCALE: 1:20,000	HYDRO SUPPORT DATA BY	L. Williams	May 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	May 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-00068
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	<input checked="" type="checkbox"/> STANDARD
				MERIDIAN 150th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77GSAASY-387-390	Jan. 13, 1977	10:15	1:50,000	1.4 ft. above M.L.L.W.	
77GSAASY-569-570	Mar. 26, 1977	10:18	1:30,000	0.7 ft. above M.L.L.W.	
76GSAASY-237-241	Dec. 18, 1976	13:50	1:30,000	1.2 ft. above M.L.L.W.	
				Mean range = 1.6 ft.	

REMARKS

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

2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled by instrument methods using the
1:50,000 scale photos and graphically using the 1:30,000 scale photos ratioed
as follows:237-241 x1.48
569-570 x1.50

3. SOURCE OF MEAN 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-00069	No survey	TP-00067

REMARKS

TP-00068
HISTORY OF FIELD OPERATIONS

I. ☒ FIELD ~~RECORDING~~ OPERATION Photo Identification ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Jan. - Feb. 1978
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	Jan. 1978
	ESTABLISHED BY None	--
	PRE-MARKED OR IDENTIFIED BY R. Melby	Jan. 1978
3. VERTICAL CONTROL	RECOVERED BY None	--
	ESTABLISHED BY None	--
	PRE-MARKED OR IDENTIFIED BY None	--
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			
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77GSAASY-388	PUU OHAI, 1877 (Sub Pt.)		

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 ☒ NONE

6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS
None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)
1 - Form 76-53 and 1 - Field Operations Report.

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

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HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Land	Nov. 1981
2. HORIZONTAL CONTROL	RECOVERED BY D. Kruth	Dec. 1981
	ESTABLISHED BY D. Kruth	Dec. 1981
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY D. Kruth	Dec. 1981
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY D. Kruth	Dec. 1981
	LOCATED (Field Methods) BY D. Kruth	Dec. 1981
	IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY J. Gordon <input type="checkbox"/> NO INVESTIGATION	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) 76 GSAASY 569 (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) Field edit original, 2 Field 76-40 forms, 1 original Field edit report			

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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.	July 10, '79	Class III manuscript superseded	Aug. 1979	Aug. 1979
Field edit applied, compilation complete.	May 28, 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	One Landmark and one 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: _____

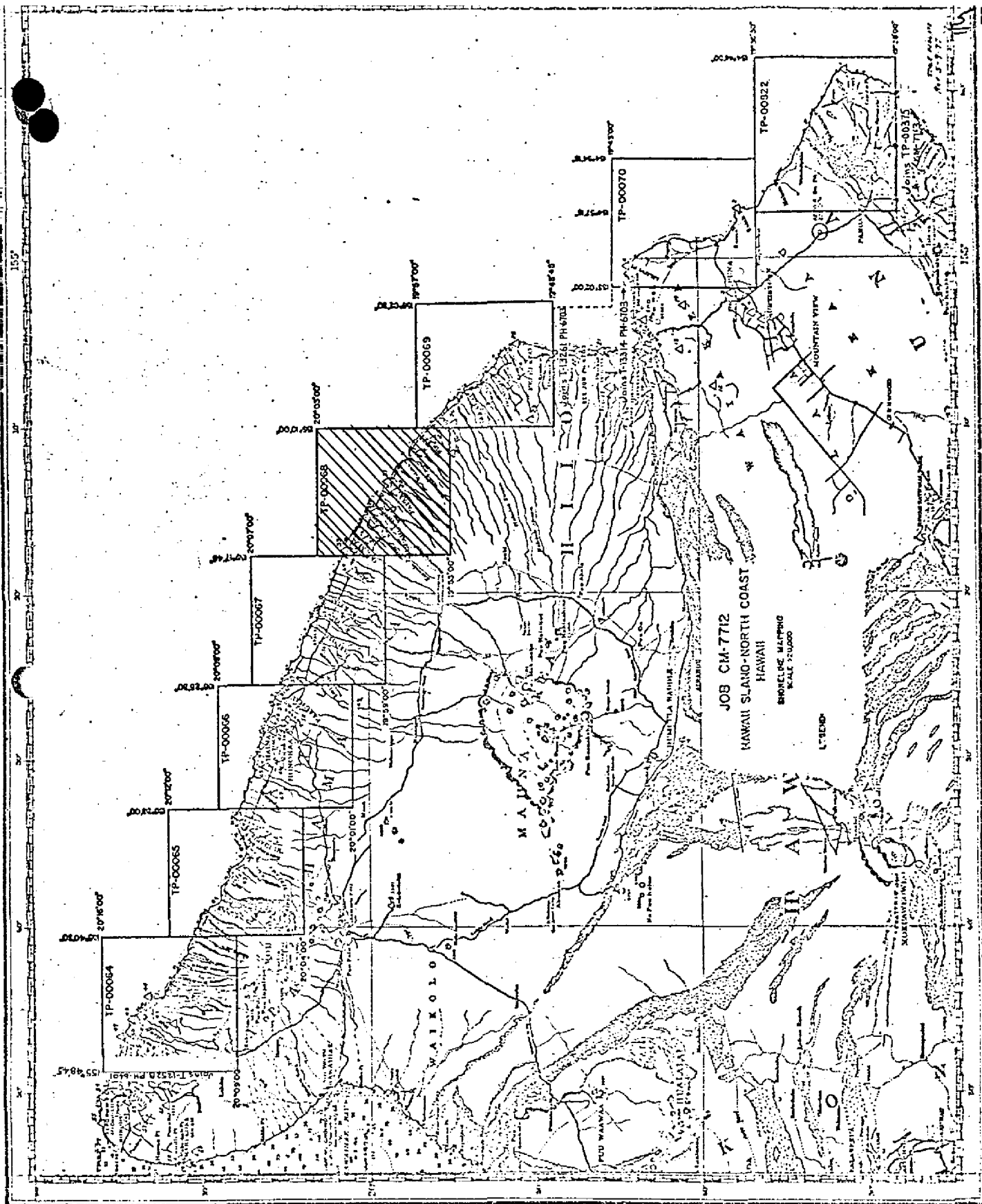
III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:

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

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

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY 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

SHORELINE MAPPING

SCALE 1:10000

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00068

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°10'00" to Long. 155°17'45".

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. Another

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survey, H-10052, corresponds to portions of the shoreline map, but no comparison was made because the survey is currently unregistered. A final Chart Maintenance Print and Notes to Hydrographer Print were prepared and forwarded to Photogrammetry headquarters for distribution.

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

FIELD INSPECTION

TP-00068

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.

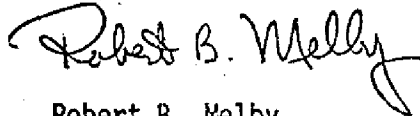
Station PUU ULAULA was photo-identified using a sun azimuth and a stack. the stack is station PAHALA, KAU SUGAR CO STACK, 1977. An N.G.S. Geodetic Field Party was working in the area and a position of the stack should be available from Geodesy in the near future. However, the sun azimuth can be used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

A handwritten signature in cursive script, reading "Robert B. Melby". The signature is written in dark ink and is positioned below the typed name.

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.

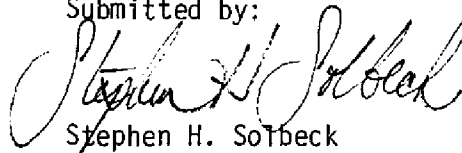
SUPPLEMENTAL DATA

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

PHOTOGRAPHY

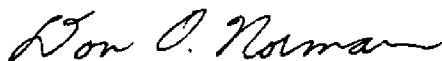
The coverage, overlap, and quality of the photography proved adequate for the job.

Submitted by:



Stephen H. Solbeck

Approved and Forwarded:



Don O. Norman
Chief, Aerotriangulation Section

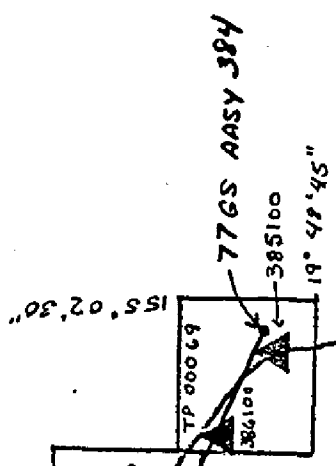
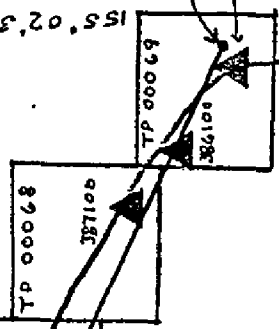
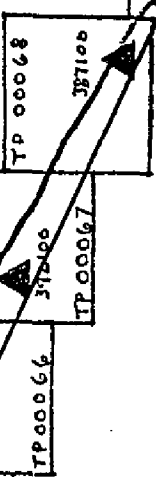
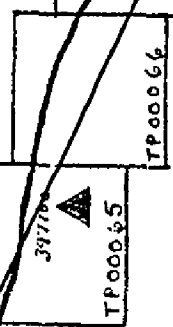
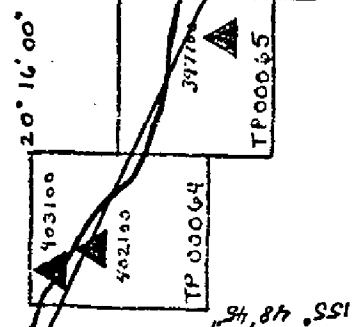
CM-7712 HAWAII ISLAND, north coast strip 1

6 stations 3 degree

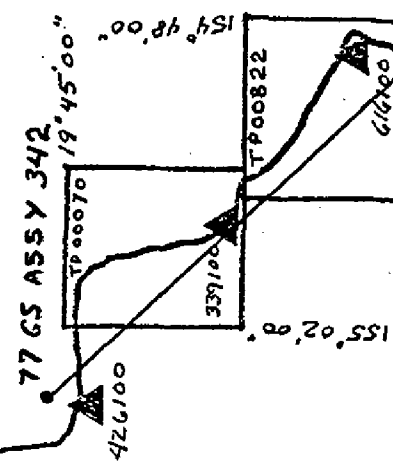
▲385100	PEPEEKEO POINT LT., 1948	(-0.8 -3.0)
385101	sub point	(-0.8 -4.0)
386100	HONOHINA, 1877 The image on the photo is very poor and its lack of fit has to be ignored although it does seem to be too large.	(-16.3 +7.9)
▲387101	PUU OHAI, 1877 sub point	(-1.5 +3.4)
392141	PAAUILO STACK, 1948	(+8.4 -4.6)
▲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	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

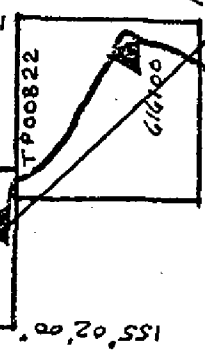
77 GS AASY 405



77 GS AASY 384
 19° 48' 45"



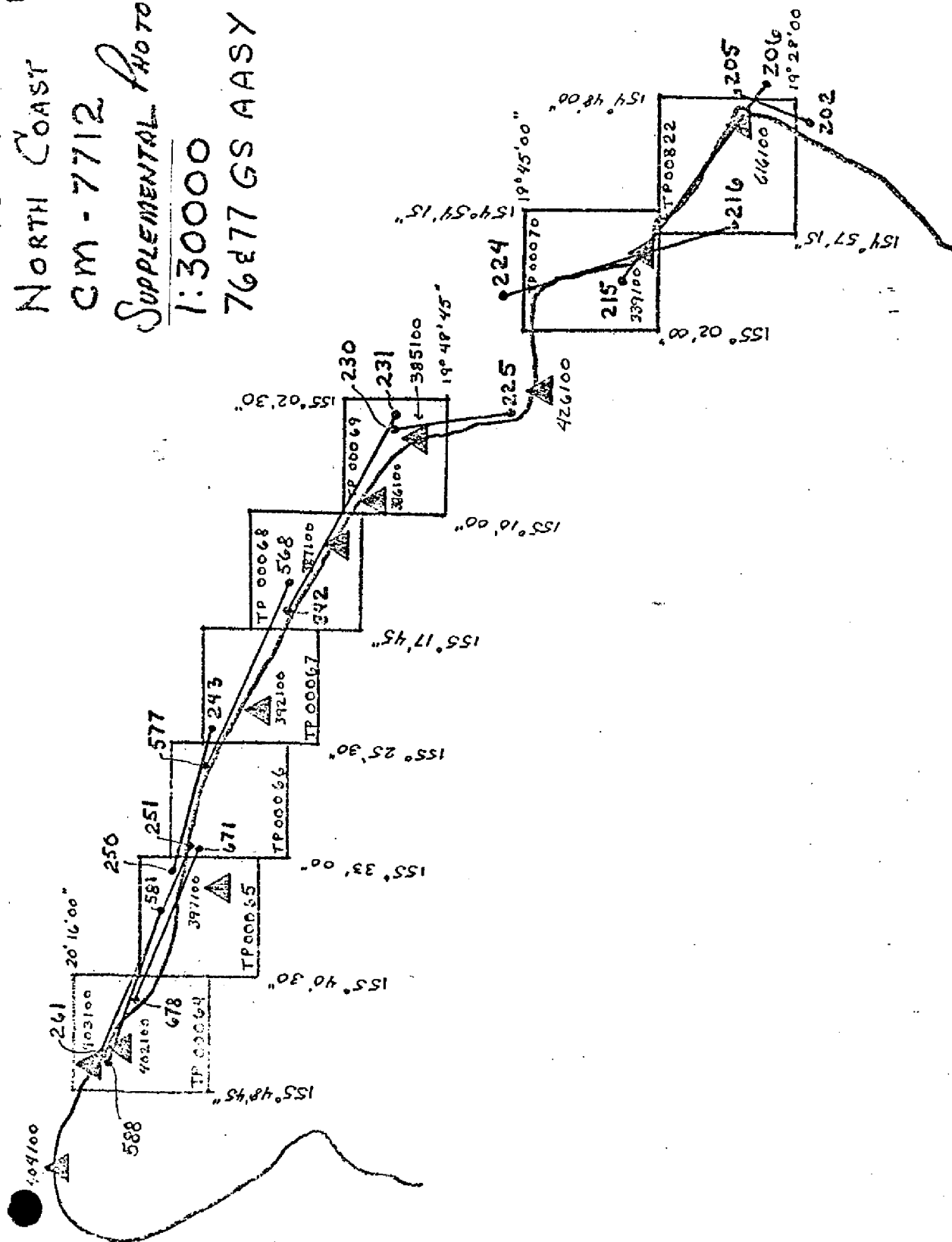
77 GS AASY 342



19° 28' 00"

77 GS AASY 333

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



COMPILATION REPORT

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31 - DELINEATION

Delineation was by instrument method using the Wild B-8 stereoplotter and 1:50,000 scale photographs; and by graphic methods using 1:30,000 hydro-support photographs. The quality and coverage of the photographs 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 this 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 inspection of the ratioed photographs. The MHWL was delineated, in part, graphically from the ratioed photographs and, in part, by the Wild B-8 stereoplotter.

36 - OFFSHORE DETAILS

There were no unusual problems.

37 - LANDMARKS AND AIDS

There were no charted landmarks and only one charted aid within the mapping limits of this manuscript. The aid could not be located photogrammetrically.

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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: Kukaiau, HA, and Papaaloa, HA, both at scale 1:24,000 and dated 1957 and 1966, respectively.

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:

for *Gary L. Hancock*
L. Williams
Cartographic Technician
Date: May 31, 1979

Approved:

Billy W. Borne for
Albert C. Rauck, Jr.
Chief, Coastal Mapping Section

ADDENDUM TO THE COMPILATION REPORT

TP-00068

CM-7712

FIELD EDIT

The Field editor failed to submit any height data on the seven rocks compiled at Laupahoehoe Point. All of these are inshore of the breaker limit line.

The foul line was changed to "breakers" in order to remain consistent with project CM-7713, and the southern sheets in this project (TP-00069, TP-00070, and TP-00822) 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

GEOGRAPHIC NAMES

FINAL NAME SHEET

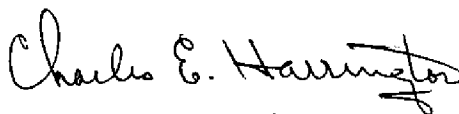
CM-7712 (Island of Hawaii - North Coast)

TP-00068

Ahoa Stream
Ahole Stream
Haakoa Stream
Haiku Point
Hawaii (island)
Huliilii Stream
Kaaheiki Stream
Kaalau Stream
Kaawalii Stream
Kaiaakea Point
Kaiwilahilahi Stream
Kapehu Stream
Kihalani Stream
Kilau Stream
Kuku Point
Kukui Village
Kulanakii Stream
Kuwaikahi Stream
Laupahoehoe

Laupahoehoe Point
Laupahoehoe Stream
Manoloa Stream
Manowaiopae Stream
Maulua Bay
Maulua Stream
Milo Village
Nahiwa Point
Ninole
Niu Village
Ookala
Pacific Ocean
Pahale Stream
Papaaloa
Pohakupuka Stream
Poupou Stream
Waikolu Stream
Waipunalei Stream
Weloka

Approved:



Charles E. Harrington
Chief Geographer
Nautical Charting Division

FIELD EDIT REPORT

OPR-T126-RA-81

TP-00068

CM-7712

HAWAII ISLAND

NORTHEAST COAST HAWAII

NOVEMBER 24 - NOVEMBER 30, 1981

METHOD

Field edit operations on TP-00068 began on November 24, 1981 (JD 328) and ended on November 30, 1981 (JD 334). Greenwich Mean Time was used to reference shoreline features.

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.

The mode of travel for this T-sheet was by helicopter. Stream locations were verified by direct examination of the Quad Sheets, T-sheet, and photographs.

This field edit survey complied with Chapter 11, 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 soon found, due to changing sea conditions, that the line varied too much from one day to the next for charting purposes. Oókala Microwave Tower, a new landmark, was field located. 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-00068

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:
Kukaiiau, Hawaii; dated 1957
Papaaloa, Hawaii; dated 1966.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A portion of two contemporary hydrographic surveys, H-9986 and H-10052, are common to this final shoreline map. A comparison was made with a registered copy of H-9986, RA 20-7-81, 1:20,000 scale, field surveyed Nov. 1981 and Sept./Oct. 1982. Survey H-10052 is currently unregistered and consequently a comparison was not made.

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

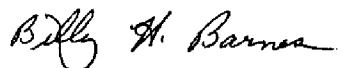
This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

TP-00068

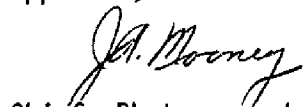
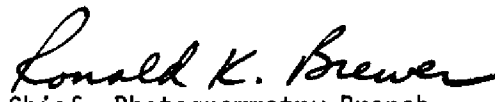
Submitted by,

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)

TO BE CHARTED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
<input checked="" type="checkbox"/> TO BE CHARTED	Photogrammetric Branch	Hawaii	Hawaii - North Coast	May 1982
<input type="checkbox"/> TO BE REVISED	P.M.C., Seattle, WA			
<input type="checkbox"/> TO BE DELETED				

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

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[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 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	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	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)
<input type="checkbox"/> TO BE REVISED	Photogrammetric Branch	Hawaii	Hawaii - North Coast	May 1982	
<input type="checkbox"/> TO BE DELETED	P.M.C., Seattle, WA				

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