

T-12560

T- 12560

NOAA FORM 76-35 (3-76)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. T-12560	Edition No. 1
Job No. PH-6402	
Map Classification FINAL FIELD EDITED MAP	
Type of Survey SHORELINE	
LOCALITY	
State HAWAII	
General Locality HAWAII ISLAND, WEST COAST KAILUA TO SOUTH CAPE	
Locality KAALUALU BAY	
19 63 TO 1979	
REGISTRY 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 Atlantic Marine Center, Norfolk, VA		SURVEY XX T-12560 MAP EDITION NO. (1) MAP CLASS FINAL JOB PH- 6402	
OFFICER-IN-CHARGE R. Matsushige		LAST PRECEEDING 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	
Compilation Oct. 28, 1969 Amendment I Jan. 3, 1973 Memo Sept. 1, 1978 Compilation (CM-7713) Jan. 23, 1978		Control/field inspection 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 1:10,000		STATE ZONE	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY METHOD: Analytic LANDMARKS AND AIDS BY		R. Fisher	May 1978
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Coradomat CHECKED BY		S. Solbeck	May 1978
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: Wild B-8 SCALE: 1:10,000 CONTOURS BY CHECKED BY		D. Butler	Sept. 1978
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY METHOD: Smooth drafted CONTOURS BY CHECKED BY SCALE: 1:10,000 HYDRO SUPPORT DATA BY CHECKED BY		J. Roderick	Sept. 1978
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		N.A.	
6. APPLICATION OF FIELD EDIT DATA BY		C. Blood	Oct. 1978
7. COMPILATION SECTION REVIEW BY		D. Butler	Oct. 1978
8. FINAL REVIEW BY		N.A.	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		C. Blood	Oct. 1978
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		D. Butler	Oct. 1978
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		D. Butler	Oct. 1978
12. MAP REGISTERED - COASTAL SURVEY SECTION BY		L. Williams	June 1980
13. MAP REGISTERED - COASTAL SURVEY SECTION BY		C. Blood	June 1980
14. MAP REGISTERED - COASTAL SURVEY SECTION BY		C. Blood	June 1980
15. MAP REGISTERED - COASTAL SURVEY SECTION BY		J. Hancock	May 1987
16. MAP REGISTERED - COASTAL SURVEY SECTION BY		J. Hancock	June 1987
17. MAP REGISTERED - COASTAL SURVEY SECTION BY		P. Dempsey	Aug 1987
18. MAP REGISTERED - COASTAL SURVEY SECTION BY		E.L. DAUGHERTY	SEP 87

NOAA FORM 76-36B (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY			
T-12560 COMPILATION SOURCES					
1. COMPILATION PHOTOGRAPHY					
CAMERA(S) Wild R.C. 8"S", S = 152.29mm		TYPES OF PHOTOGRAPHY LEGEND (C) COLOR (P) PANCHROMATIC (I) INFRARED		TIME REFERENCE	
TIDE STAGE REFERENCE <input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				ZONE Hawaii MERIDIAN 150th	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
63S(P) 7960-7962 *	Aug. 31, 1963	09:31	1:30,000	1.1 FT. above M.L.L.W.	
63S(C) 8016-8019 **	Aug. 31, 1963	10:10	1:15,000	1.6 FT. above M.L.L.W.	
				Mean tide range = 1.7 FT.	
REMARKS *Bridging/compilation photographs, **Compilation/hydro support photographs					
2. SOURCE OF MEAN HIGH-WATER LINE: The mean high water line was compiled from office interpretation of the compilation photographs using stereo instrument and graphic methods.					
3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE: No mean lower low water line was compiled.					
4. CONTEMPORARY HYDROGRAPHIC SURVEYS <i>(List only those surveys that are sources for photogrammetric survey information.)</i>					
SURVEY NUMBER H-9854 H-9857	DATE(S) 1979	SURVEY COPY USED Registered	SURVEY NUMBER	DATE(S)	SURVEY COPY USED
5. FINAL JUNCTIONS					
NORTH TP-00380 (CM-7713)	EAST None	SOUTH None	WEST T-12559		
REMARKS					

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HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	E. Cline	Feb.-Sept. 1964
2. HORIZONTAL CONTROL	RECOVERED BY E. Cline	July 1964
	ESTABLISHED BY E. Cline	July 1964
	PRE-MARKED OR IDENTIFIED BY E. Cline	July 1964
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 E. Cline	Aug. 1964
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
63S(P)7961*	KAMILO (HGS) (HTS,1938), 1898 (Direct & Sub. Pt.)		
*Partial ratio print			

3. PHOTO NUMBERS (Clarification of details)

63S(P) 7960-7963 (1:30,000 matte contact photographs)

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 152, 1 Project field report

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HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION (Additional Hor. Control) ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Jan. 1978
2. HORIZONTAL CONTROL	RECOVERED BY L. Riggers	Jan. 1978
	ESTABLISHED BY L. Riggers	Jan. 1978
	PRE-MARKED OR IDENTIFIED BY L. Riggers	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 L. Riggers	Jan. 1978
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
77 GS AASY* 555	KAMILO (HGS) (HTS, 1938), 1898 (Direct & Sub. Pt. A) *Matte Contact Print		

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 NOAA Form 76-53

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-12560
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	(NOAA SHIP RAINIER) W. Melby	Oct.-Dec. 1979
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None 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 T. Clark	Oct-Dec 1979
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY N.A.	

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) 63S(C)8016-8019 (Cronapaque ratios, 1:10,000 scale) (76GS AASY 50, reference is made to this photo on field edit paper print; however, photo could not be located during final review.)			
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 Field edit film print, 1 Field edit paper print, 1 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	Oct. 1978	Class II manuscript	Oct. 1978	Oct. 1978
Field edit applied compilation complete	June 1980	Class I manuscript	June 1980	June 1980
Final Review	May 1987	Final Map	July 1987	July 1987

II. LANDMARKS AND AIDS TO NAVIGATION None

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: None3. ☐ 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 PH-6402
 SHORELINE MAPPING
 HAWAII IS. WEST COAST
 AILUA TO SOUTH CAPE
 SCALE 1:10,000

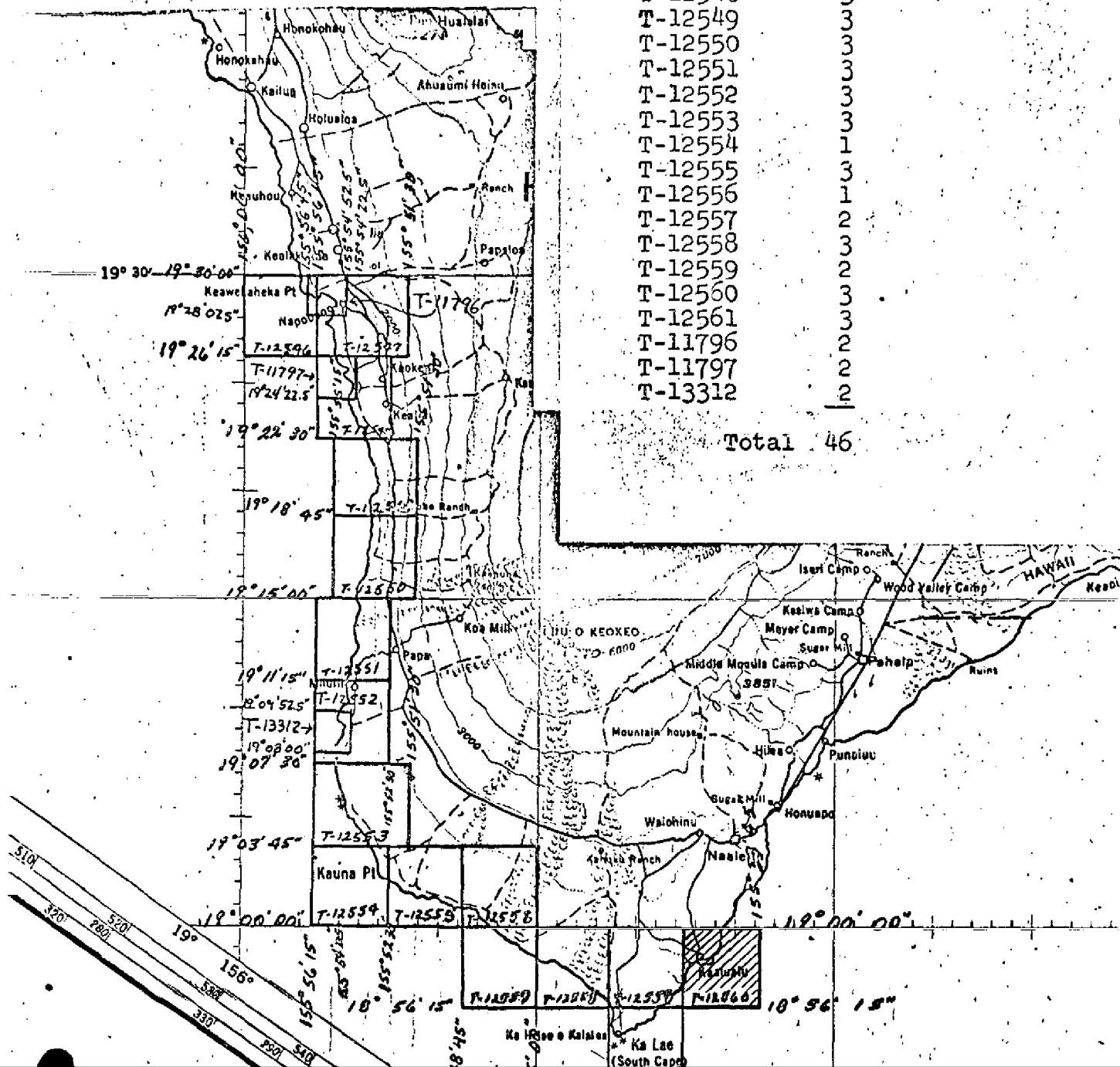
JOB PH-6402

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Area Sq. Miles
--------------	-------------------

T-12546	1
T-12547	3
T-12548	3
T-12549	3
T-12550	3
T-12551	3
T-12552	3
T-12553	3
T-12554	1
T-12555	3
T-12556	1
T-12557	2
T-12558	3
T-12559	2
T-12560	3
T-12561	3
T-11796	2
T-11797	2
T-13312	2

Total 46



6

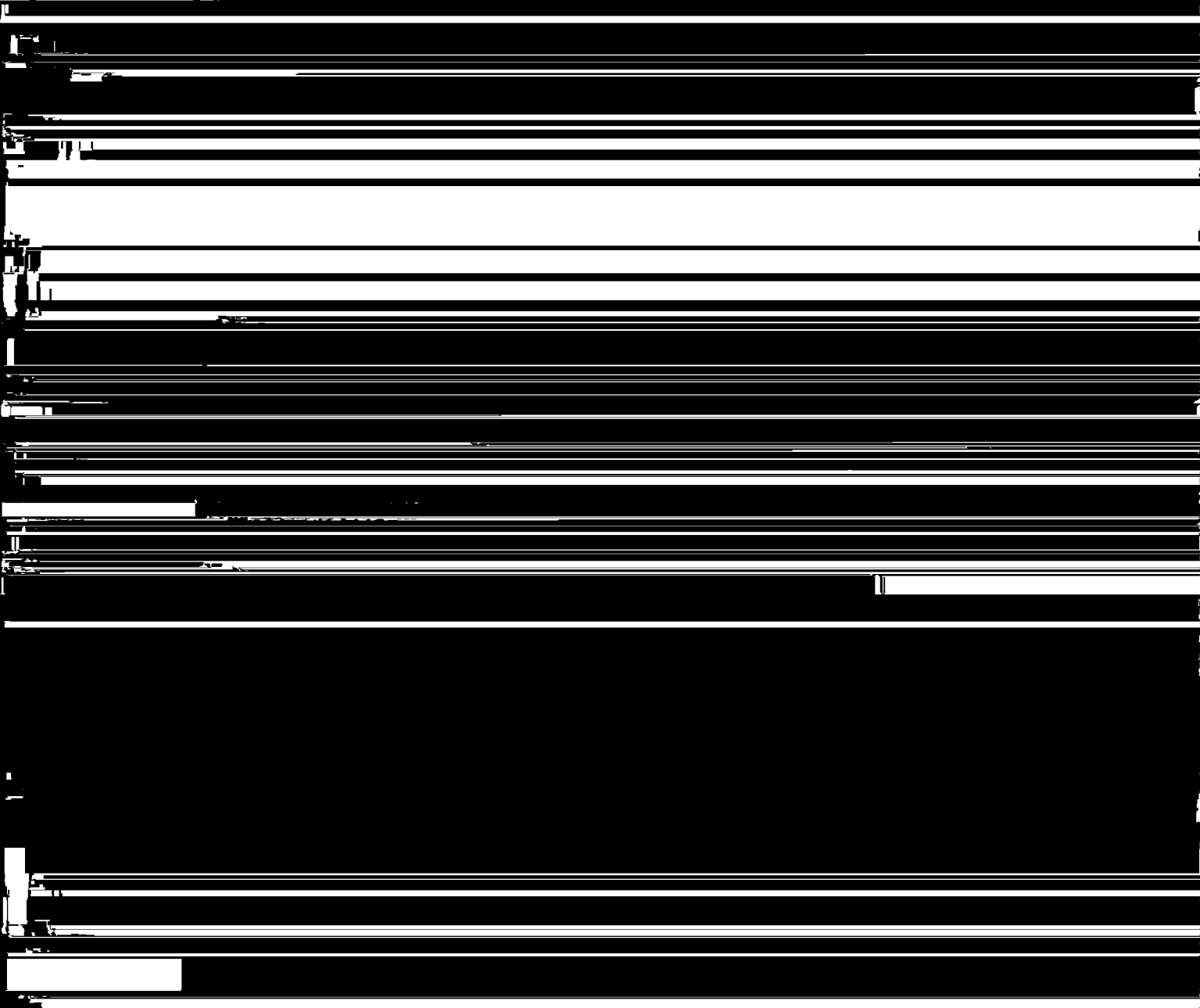
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12560

This 1:10,000 scale Final Field Edited Map is one of nineteen maps that comprise PH-6402, Hawaii Island, West Coast, Kailua to South Cape. The project consists of sixteen 1:10,000 scale maps (T-12546 thru T-12561) and three 1:5,000 scale inset maps (T-11796, T-11797, T-13312).

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 includes shoreline along the southern coast of Hawaii

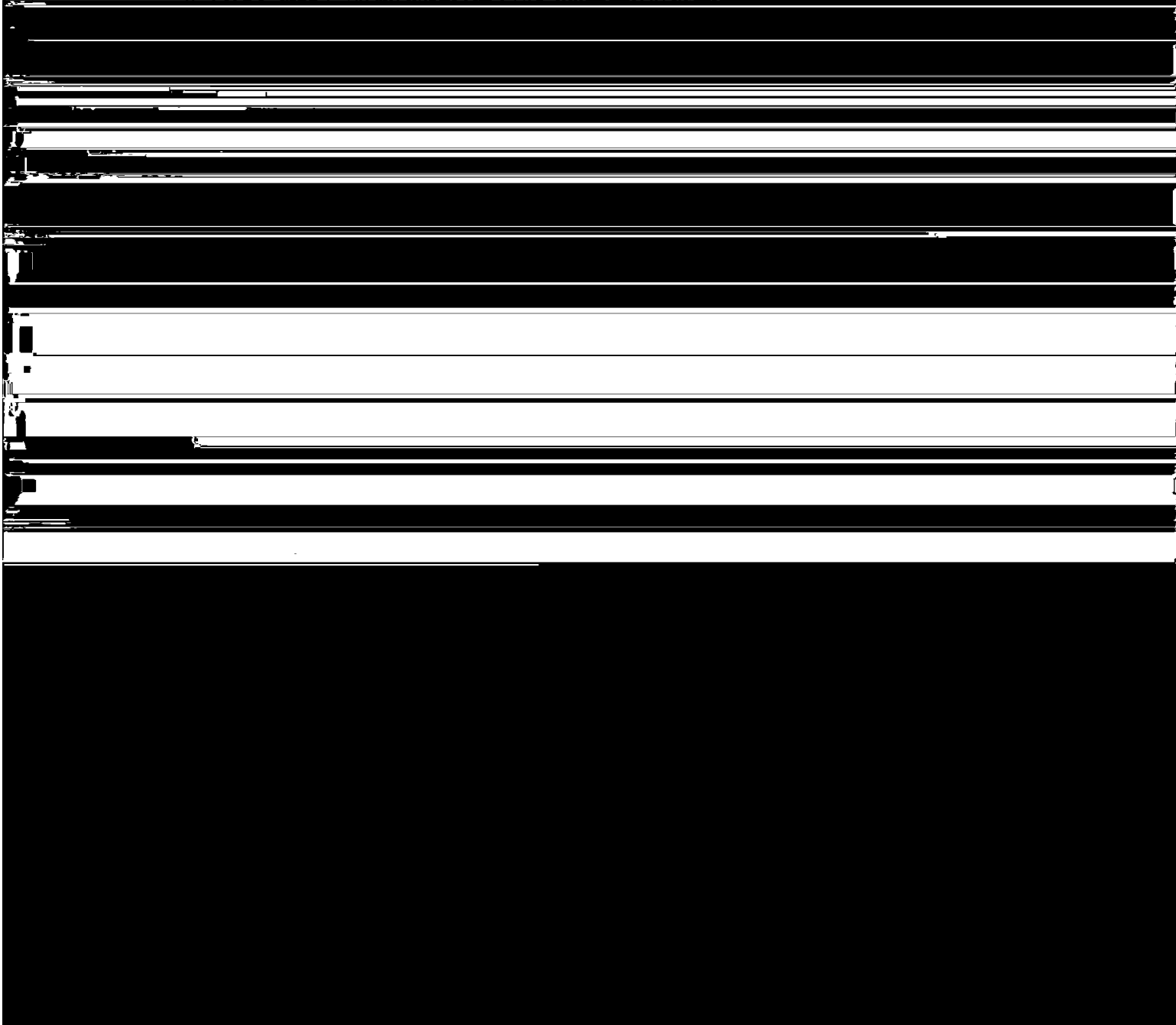


T-12560

Field edit was conducted in October thru December 1979 by NOAA ship RAINIER personnel in conjunction with hydrographic surveys H-9854 and H-9857.

Application of field edit was performed at the original compilation office in June 1980. Map copies were submitted to Marine Charts and to the hydrographer for smooth sheet application.

Final review was performed at the Atlantic Marine Center in May 1987. A comparison was made with the common hydrographic survey and nautical chart. The original base manuscript and related data along with a final Chart Maintenance Print and a Hydrographic Print were forwarded



FIELD INSPECTION

T-12560

Field activity prior to compilation included a field inspection of the shoreline and the recovery/photoidentification of horizontal control necessary for project aerotriangulation. Results of the 1964 field inspection were submitted on the 1:30,000 scale contact photographs. Due to inadequate bridging results for maps T-12558 thru T-12561, additional horizontal control was established in January 1978 in conjunction with adjoining project CM-7713.

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

40

631W

TO : Chief, Photogrammetric Field Operations
THRU : Honolulu Field Officer *DR*

DATE: August 5, 1964

FROM : Lt(jg) Edward P. Cline

SUBJECT: Control Identification Project No. 21413

No problems were found in the control identification on Project 21413. The following is a list of the stations identified on the various Flight Lines:

FLIGHT STRIP NO. 5

WAIKAKUU, 4, 1951
KAPUKAWAA, 1884
OHEPUUPUU, 1890

FLIGHT STRIP NO. 6

KAMOI, 1948
NA PUU & PELE, 1891
PUU KI, 1914
TANK, 1948

Supplimental Station Pricked:
KAUNA POINT LIGHT, 1948

FLIGHT STRIP NO. 7

KALAE 2, 1948
PALAHEMO 1898
KAMILO, 1898
KIPAEPAE, 1898

Supplimental Stations Pricked:
KALAE LIGHT, 1948
KALAE, 1887
MAHANA, 1898

The ratio prints provided by the Washington Office were of great assistance in the identification of the stations and they were very well placed.

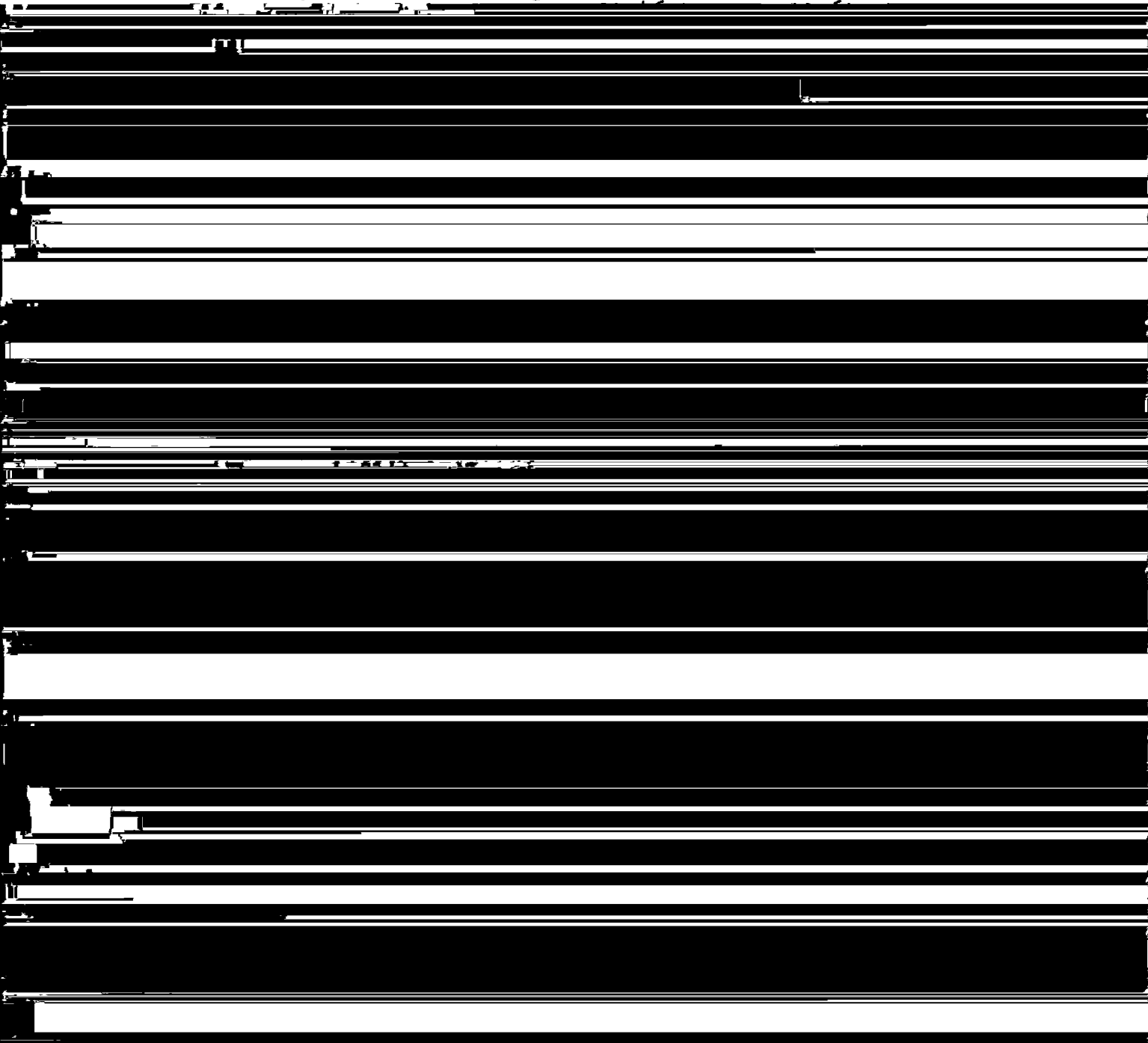
Edward P. Cline
Edward P. Cline

Photogrammetric Plot Report
Hawaii Island, Hawaii
PH-6402

June 10, 1969

21. Area Covered

This project extends along the southwest shore of Hawaii



This project joins PH-6401 which extends along the north-west shore of the island.

2. KAMILO, 1949 and SS #1 3. KIPAEPAE, 1948
and SS #1. Problems with these two stations could
not be resolved. Re-identification of the stations
is planned at the same time that work continues
to the east.

4. McCANDLESS, 1948 SS #1 and SS #2 although held
in the bridging could be seen on only one photograph
in Strip #10 due to cloud coverage.

24. Supplemental Data

Ratio prints will be provided to aid in compilation.
Local USGS quads were used to provide vertical points
needed for the strip adjustment program.

25. Photography

Photography was not adequate to provide coverage of
the 1:5,000 scale sheets. This inadequate coverage was
caused by a change in the limits of the 1:5,000 areas
after bridging was nearing completion. Photography was
adequate in regard to definition and overlap.

Submitted by,

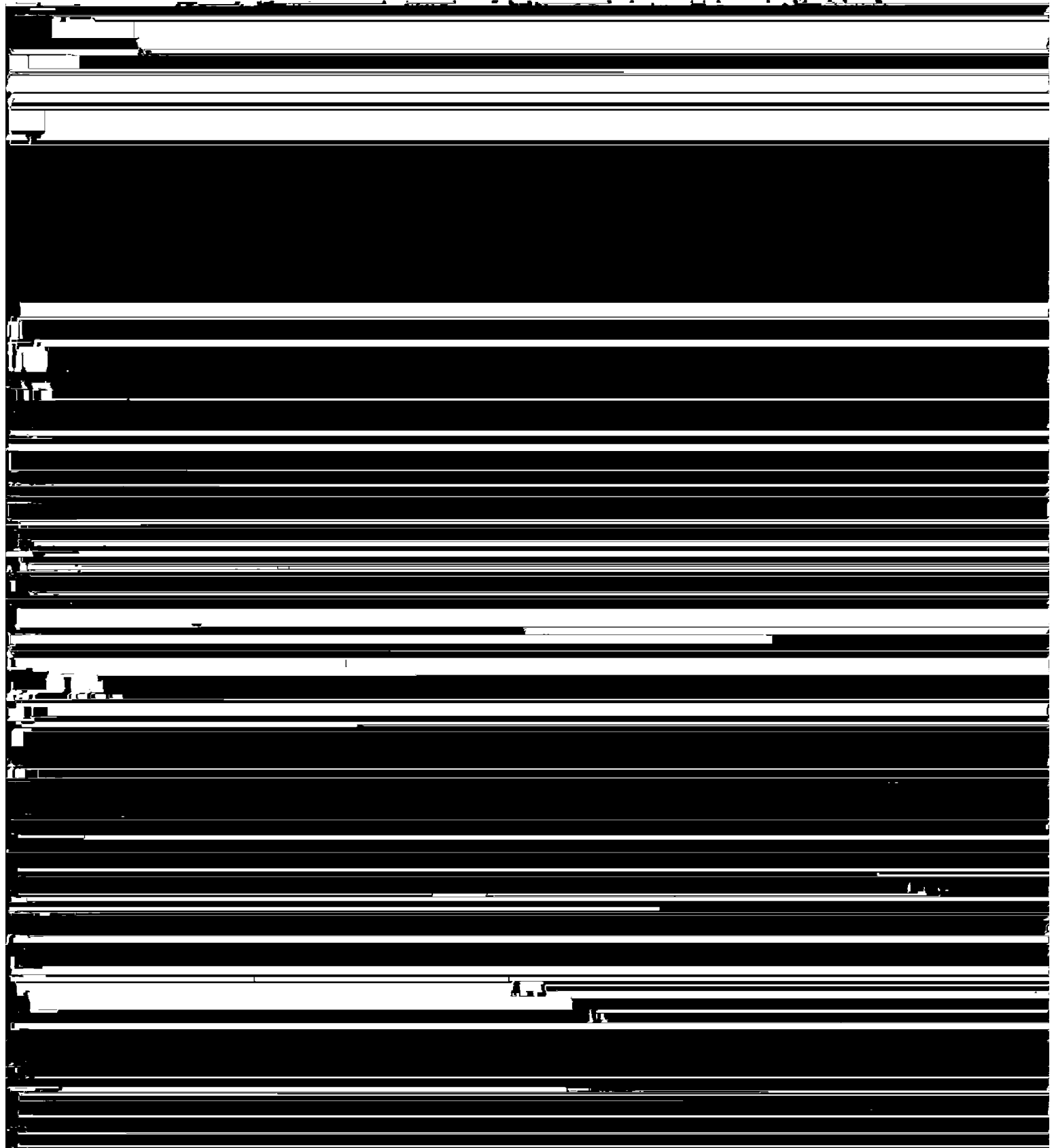
John D. Perrow Jr.
John D. Perrow, Jr.

Approved by,

Henry P. Eichert

Henry P. Eichert
Chief, Aerotriangulation Section

Notes to Compiler
PH-6402
Hawaii Island, Hawaii

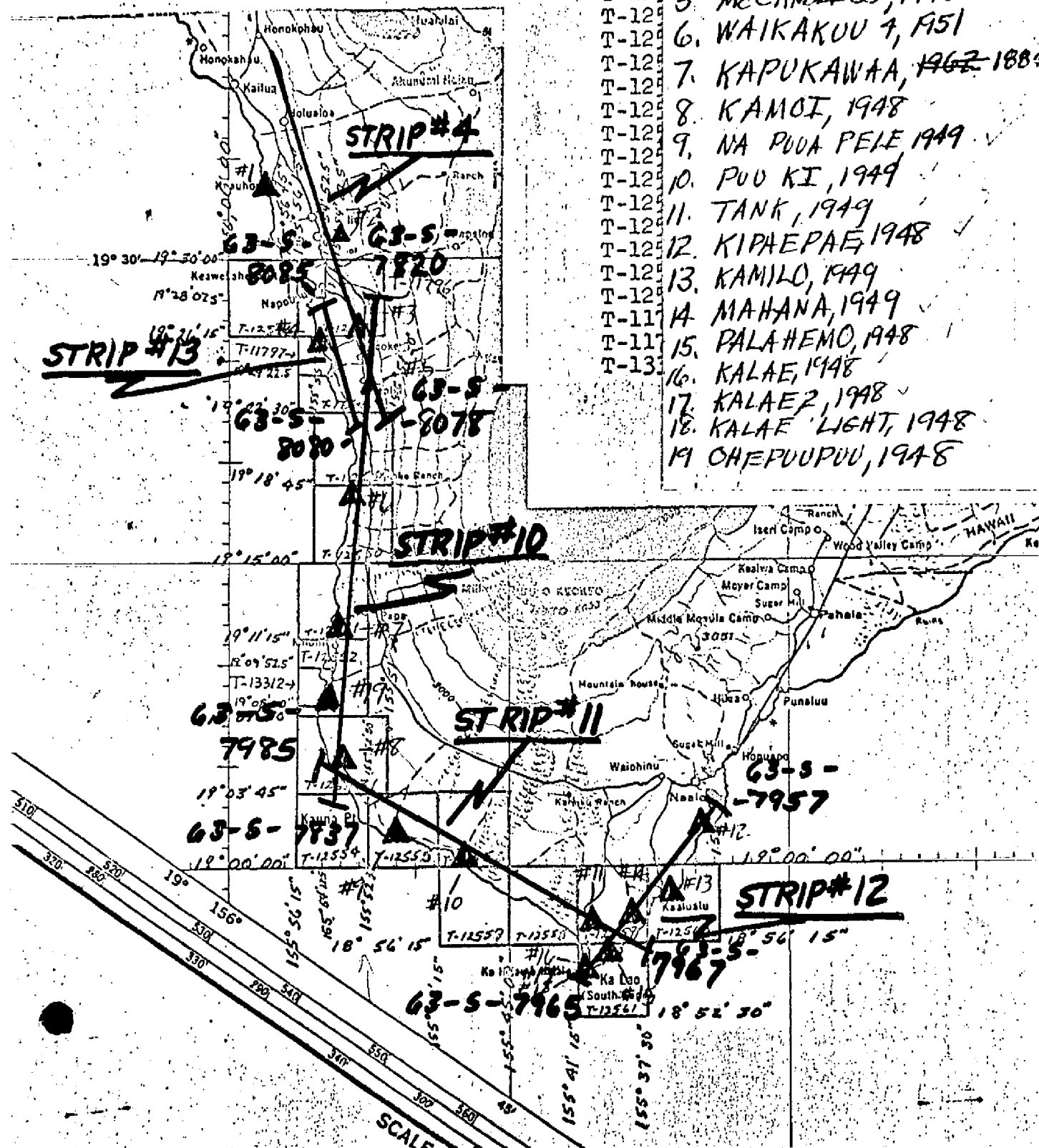


11

JOB PH-6402

OFFIC

Sheet
No.



PHOTOGRAMMETRIC PLOT REPORT
HAWAII ISLAND-SOUTHEAST COAST
CM-7713

May 10, 1978

Area Covered

This project covers most of the southeast coast of Hawaii Island, Hawaii. The following T-sheets are involved:

TP-00375 thru TP-00380 (1:20,000)
TP-00488 and TP-00489 (1:5,000)

In addition to the above T-sheets, T-12559 thru T-12561 at 1:10,000 scale from PH-6402 are also covered.

Method

Two strips of 1:50,000 (strips 1 and 2) and one strip of 1:30,000 (strip 4) panchromatic photography were bridged by analytic aero-triangulation methods.

Strip 4 was bridged solely to provide compilation points for 1:15,000 compilation photography covering TP-00488 and TP-00489.

Ties were made with strip 2 of CM-7712 on the north coast and strip 12 of PH-6402 located near the southern end of the island.

Ratio points for the offshore 1:30,000 scale strips 11 thru 18 were read on the 1:50,000 strips.

Strip 12, 1:30,000, of PH-6402 which would not adjust satisfactorily in 1969 for unknown reasons was rebridged using old horizontal control along with 1977 identified horizontal control and ties from the 1:50,000 strip 2 of the CM-7713 project.

Strips 2 and 4 of CM-7713 and strip 12 of PH-6402 adjusted satisfactorily. The 1964 subpoint for KAMILO (HTS) 1898 is believed to be in error and was disregarded.

Strip 1 of CM-7713 could not be adjusted to meet bridging accuracy standards for all stations. A problem is suspected with PULAMA 1914 but could not be resolved. The final adjustment to this strip was made letting PULAMA 1914 float and disregarding the error in y of about -25 feet at this station.

Ratio points for an offshore 1:15,000 color strip were read on Strip 12. (PH-6402)

T-sheets TP-00375 through TP-00380, TP-00488, TP-00489, and T-12559 through T-12561 were plotted and sent to AMC at Norfolk, Virginia.

Adequacy of Control

With the exception of a horizontal control problem in strip 1 the horizontal control was adequate.

Vertical control was obtained from shoreline points and USGS quadrangle elevations and was satisfactory.

Photography

The quality and location of the photography was satisfactory.

This photography was flown by American Aerial Survey, Inc., with a Zeiss RMK-A 15/23 camera, lens serial number 118960.

Submitted by:

Robert E. Fisher

Robert E. Fisher

Approved and Forwarded:

Don O. Norman

Don O. Norman
Acting Chief
Aerotriangulation Section

HORIZONTAL CONTROL FOR CM-7713

- 1 KALAE LIGHT 1948
- 1A KALAE 2, 1948
- 1B KALAE 1887
- 2 PALAHEMO 1898
- 3 MAHANA 1898
- 4 KAMILO (HTS) 1898
- 5 STEIN 2 (HTS) 1949
- 6 LUU 1930
- 7 PUU ULAULA 1914
- 8 HILINA USGS 1961
- 9 PULAMA 1914
- 10 KALIU 1949
- 11 CAPE KUMUKAHI LIGHTHOUSE 1949

HORIZONTAL FIT TO CONTROL (FEET)

STRIP #1 (1:50,000)

6. LUU 1930 SUB PT.	(1.90, 0.26) (1.45, -1.00)
7. PUU ULAULA 1914	(-3.55, -0.98)
8. HILINA USGS 1961 SUB PT. A SUB PT. B	(5.34, -1.60) (1.67, 1.16)
9. PULAMA 1914 SUB PT. A SUB PT. B	(4.59, -23.68) (11.88, -28.72)
10. KALIU 1949 SUB PT.	(-2.05, -8.61) (0.03, -2.17)

STRIP #2 (1:50,000)

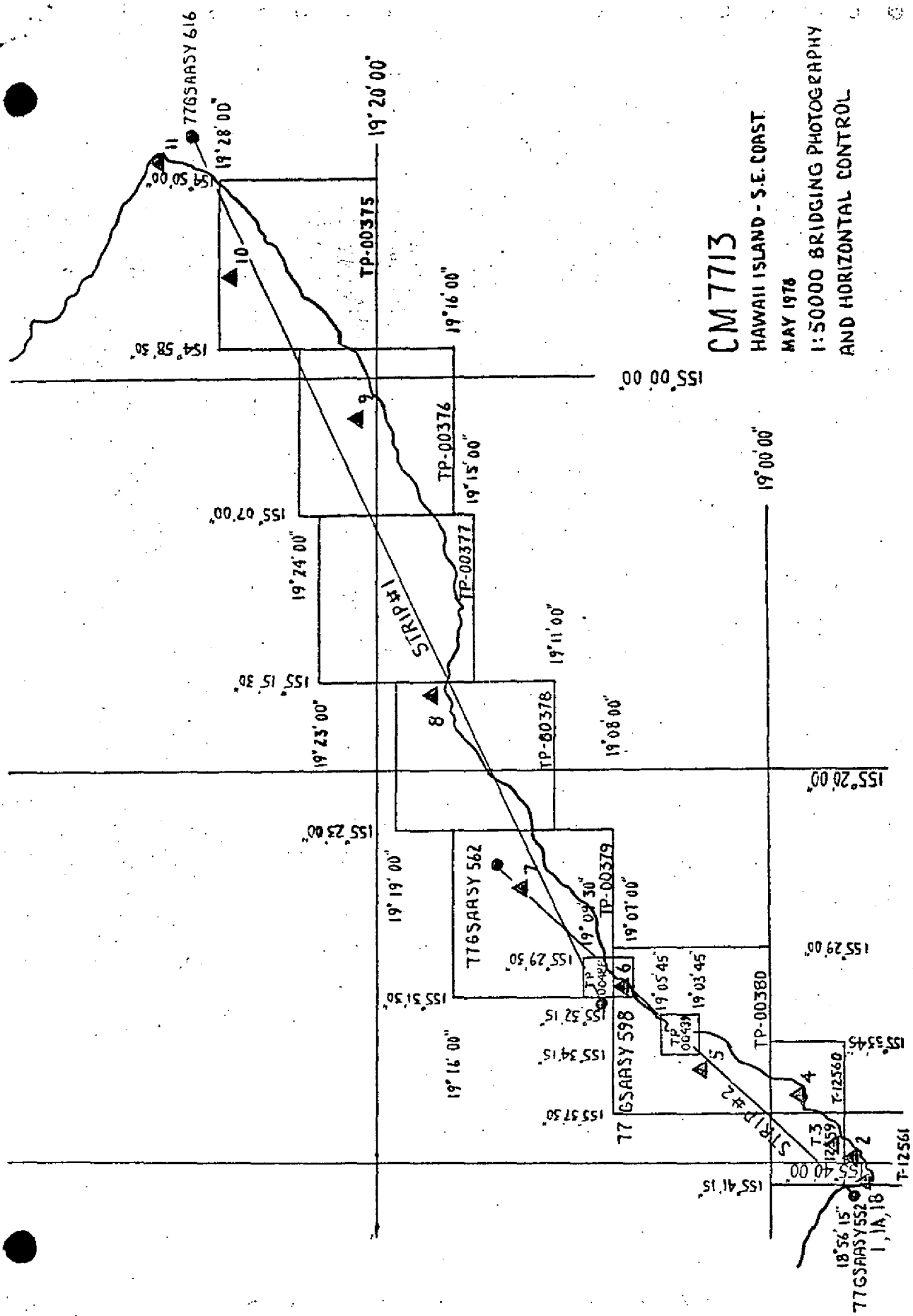
1A KALAE 2, 1948 SUB PT. A SUB PT. B	(-0.96, 0.23) (1.19, 0.95)
4. KAMILO (HTS) 1898 SUB PT.	(2.06, 0.58) (0.33, -0.11)
5. STEIN 2 (HTS) 1949 SUB PT.	(-1.26, -1.59) (2.42, 1.99)
6. LUU 1930 SUB PT.	(-0.07, 1.16) (-0.24, -0.47)
7. PUU ULAULA 1914	(0.23, -0.36)

STRIP #4 (1:30,000)

5. STEIN 2 (HTS) 1949 SUB PT.	(-0.01, -0.04) (0.11, 4.03)
6. LUU 1930	(0.00, 0.00)
7. PUU ULAULA 1914	(0.01, 0.01)

STRIP #12 (1:30,000)

- | | |
|------------------------------|----------------|
| 4. KAMILO (HTS) 1898 | (4.01, -0.39) |
| 3. MAHANA 1898 | (1.48, 0.46) |
| 2. PALAHEMO 1898 | (2.64, -1.31) |
| 1B. KALAE 1887 | (0.36, -0.37) |
| 1A. KALAE 2, 1948
SUB PT. | (2.30, 1.46) |
| 1. KALAE LIGHT 1948 | (-0.16, -0.27) |



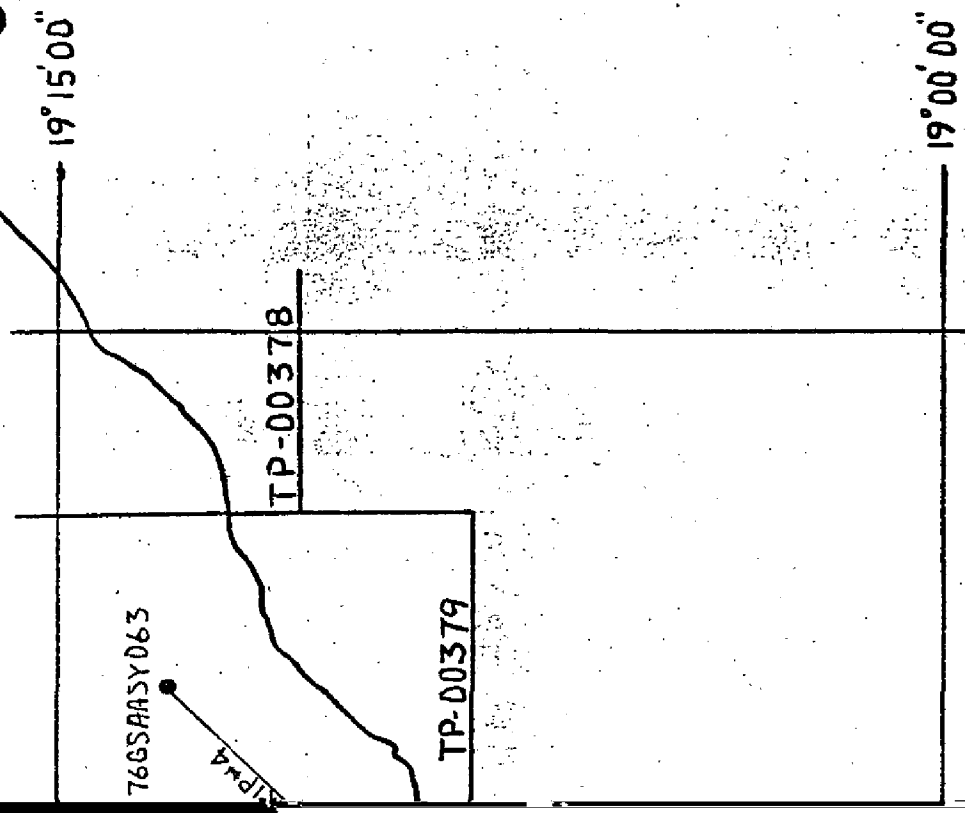
CM 7713

HAWAII ISLAND - S.E. COAST

MAY 1976

1:50000 BRIDGING PHOTOGRAPHY

AND HORIZONTAL CONTROL

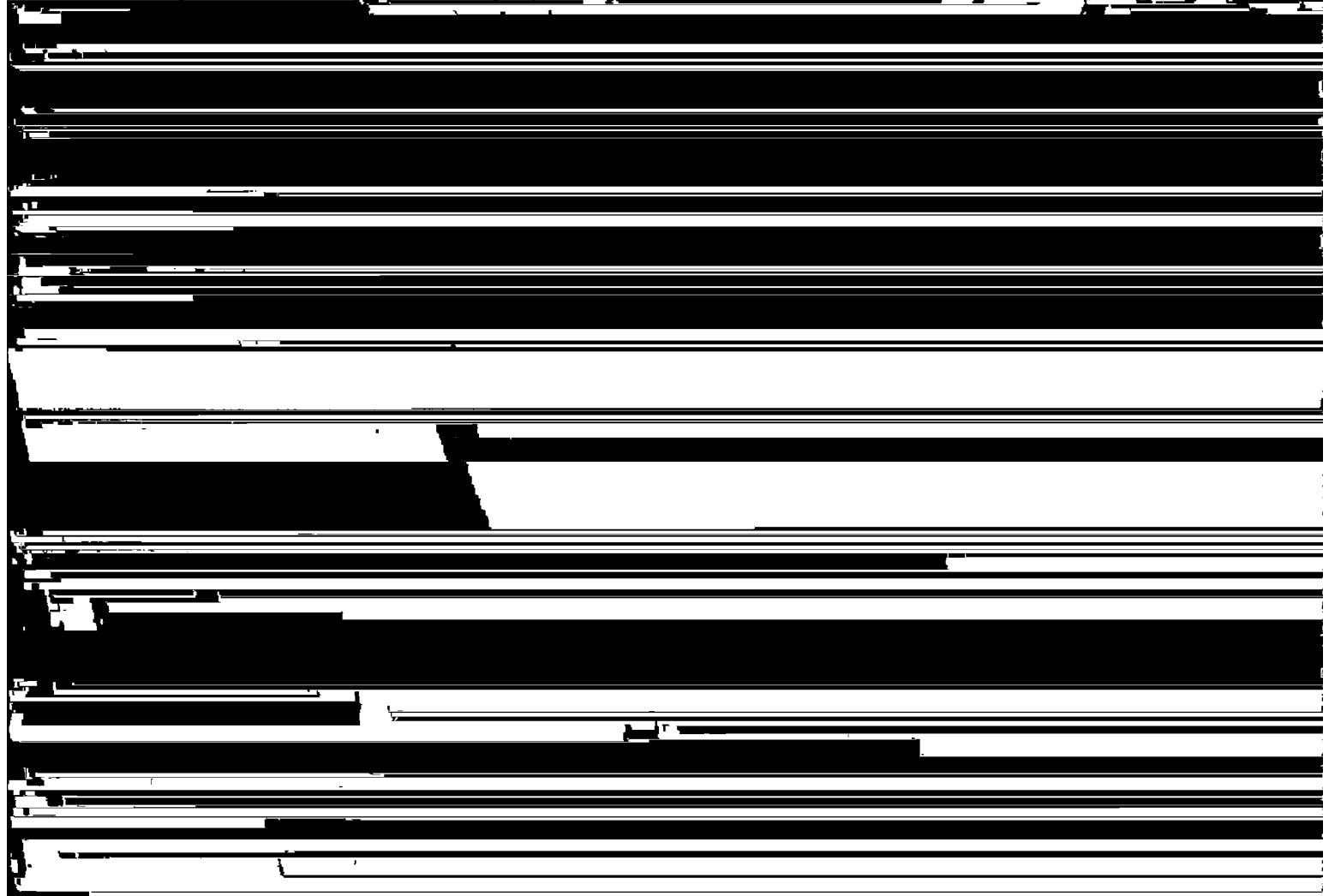


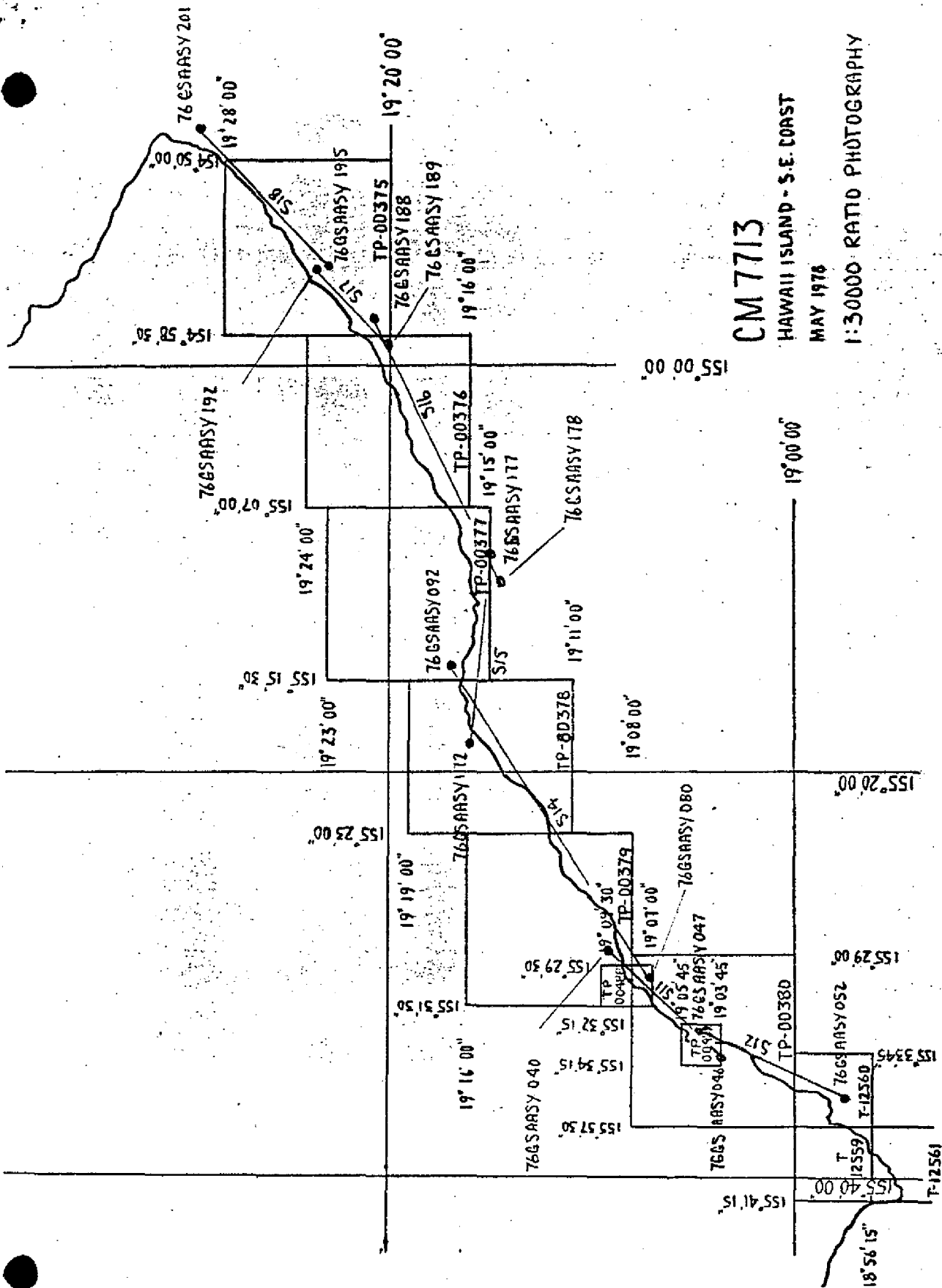
M 7713

WALL IS - S.E. COAST

1978

1000 BRIDGING PHOTOGRAPHY
1000 COMPIATION PHOTOGRAPHY ONLY (STRIP#5)





CM 7713

HAWAII ISLAND - S.E. COAST

MAY 1976

1:30000 RATIO PHOTOGRAPHY

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	PH-6402	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETIC DATUM		ORIGINATING ACTIVITY	
					Old Hawaiian Datum	Geographic Position	Coastal Mapping Section, AMC	
STATION NAME					COORDINATES IN FEET	ϕ LATITUDE	REMARKS	
					STATE <u>Hawaii</u>	λ LONGITUDE		
					ZONE <u>1</u>			
KAMILO (H.G.S.)	G.P.				X=	ϕ 18° 58' 23.300"		
(H.T.S. 1938), 1898	Pg. 19				Y=	λ 155° 36' 15.919"		
					X=	ϕ		
					Y=	λ		
					X=	ϕ		
					Y=	λ		
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					Y=	λ		
					X=	ϕ		
					Y=	λ		
COMPUTED BY	A. C. Rauck, Jr.	DATE	7-29-69	COMPUTATION CHECKED BY	D. Butler	DATE	9-18-78	
LISTED BY		DATE		LISTING CHECKED BY		DATE		
HAND PLOTTING BY		DATE		HAND PLOTTING CHECKED BY		DATE		

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT

T-12560

31. DELINEATION:

Delineation was by instrument methods using the Wild B-8 stereoplotter and 1:30,000 scale panchromatic compilation/bridging photographs. Ratio prints of the 1:15,000 scale color photographs were used graphically to supplement the compilation of minor detail and to assist in photo interpretation.

The field inspection supplied on the 1:30,000 scale contact prints was difficult to interpret. Individual rocks that could not be clearly identified during compilation were not compiled.

Photo quality and coverage were adequate.

32. CONTROL:

Specified control stations from adjoining project CM-7713 were provided to strengthen the horizontal control for this manuscript.

Refer to the Photogrammetric Plot Reports, dated June 10, 1969 and May 10, 1978 (CM-7713).

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are inapplicable. Drainage was delineated from the compilation photographs.

35. SHORELINE AND ALONGSHORE DETAILS:

The shoreline, coral and foul limits were delineated from office interpretation of the photographs and from the annotated photographs resulting from the precompilation field inspection. Because of the small tide range, no mean lower low water line was compiled.

36. OFFSHORE DETAILS:

Compilation of offshore detail was performed as described in Item #31.

T-12560

37. LANDMARKS AND AIDS:

There are no charted landmarks or fixed aids within the limits of this manuscript.

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 Reports dated June 10, 1969 and May 10, 1978 (CM-7713).

46. COMPARISON WITH EXISTING MAPS:

A comparison was made with USGS quadrangle Ka Lae, Hawaii, scale 1:24,000, dated 1959.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with NOS Chart 19320, 12th edition, scale 1:250,000, dated June 17, 1978.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted by:

for *Greg L. Hancock*
Charles Blood
Cartographic Technician
October 1978

Approved:

for *Greg L. Hancock*
Albert C. Rauck, Jr.
Chief, Coastal Mapping Section

ADDENDUM TO THE COMPILATION REPORT

T-12560

Field edit was conducted in October thru December 1979 by NOAA ship RAINIER personnel in conjunction with hydrographic surveys H-9854 and H-9857. Field annotated ratio photograph 76GS AASY50 from adjoining project CM-7713 was submitted with the field edit data. Adequate information was furnished to advance the manuscript to Class I.

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6402 Hawaii

T-12560

Island of Hawaii ✓

Kaalela ✓

Kaalualu ✓

Kaalualu Bay ✓

Kaiole Bay ✓

Kaluachonu ✓

Kamilo Point ✓

Kii ✓

Pacific Ocean ✓


Paiahaa Bay ✓

Puu Koihala -----Not compiled.

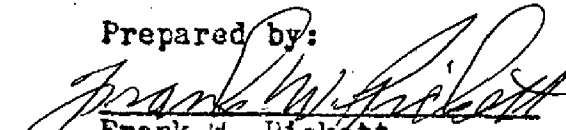
Puu Lou ✓

Puu Nahaha ✓

Approved by:


A. Joseph Wright
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

FIELD EDIT REPORT
OPR-T126-RA-79
CM-7713
T-12560

HAWAII
Hawaii, Southeast Coast
Kaalualu Bay

1 Field Edit

6 October 1979 - 4 December 1979
(J.D. 279 - J.C. 338)

Methods

Field edit operations on T-12560 began 6 October 1979 (J.D. 279) and ended 4 December 1979 (J.D. 338). Ship's time (GMT-9) was used to reference shoreline features in the field, but conversion was made to GMT (Ship's time +9) on the field edit sheet and final discrepancy sheet. Notes on the field edit sheet and discrepancy print were made using colors with the following acceptable meanings: green-deletion of features; red-answers to specific questions on the sheets; violet-verification or additions.

The features were verified on foot. Additions of rocks were photo-pricked and referenced on the discrepancy print. Rocks that were not visible on photographs were located by magnetic bearing and estimated distance from a photo identifiable spot.

There were several rocks neither verified nor disproved, due to surf, difficulty of picking out specific rocks in a foul area, or the distance from shore. In these cases the rocks were left unreferenced on the discrepancy sheet.

The bare rock at 155° 36' 42" W, 18° 58' 05" N, was not found. Careful visual inspection from shore was fruitless, while surf prevented any other mode of investigation. Due to the negligible tide range it is highly doubtful that such a rock could have escaped notice had it actually bared 4 ft. at MHW, as indicated on the manuscript.

Due to surf, it was difficult and sometimes impossible to determine the exact limits of submerged ledges or foul areas.

The color photographs 8016, 8017, 8018, 8019, the black and white photograph 50, the discrepancy print and the field edit sheet were used to record and present data.

This field edit survey complied with Chapter 11, Manual of Coastal Mapping Field Procedure and project instructions.

Adequacy and Completeness

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

Geographical Names

There was no investigation of geographical names.

Manuscript Accuracy

Direct comparison of shoreline features with the discrepancy print and photos was used to determine accuracy. Agreement was excellent.

Recommendations

The rocks neither verified nor disproved should be retained as plotted on the manuscript. The bare rock at $155^{\circ} 36' 42''$ W, $18^{\circ} 58' 05''$ N, should be re-plotted as a rock awash.

This corrected manuscript should supercede all previous shoreline compilations.

Respectfully submitted,

Approved and Forwarded

Thomas G. Clark
Thomas G. Clark
Lieutenant, NOAA

Wayne L. Mobley
Wayne L. Mobley
Captain, NOAA
Commanding

Attachments: Sketch
76-36 A, B, C, D
76-40 Landmarks for Navigation
Master Signal Tape Listing

Separate Items: Photographs C&GS 31 AUG 63 S(C) 8016-8019
NOS 15 DEC 76 GSAASY 50
Final Discrepancy Print
Field Discrepancy Print

20

REVIEW REPORT
SHORELINE
T-12560

61. GENERAL STATEMENT:

Final review for this Final Field Edited Map was accomplished at the Atlantic Marine Center in May 1987. 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 USGS quadrangle Ka Lae, Hawaii, scale 1:24,000, dated 1962.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

A comparison was made with a registered copy of two 1979 hydrographic surveys; H-9854, RA-10-5-79, 1:10,000 scale and H-9857, RA-20-4-79, 1:20,000 scale. No significant differences were noted.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with NOS Chart 19320, 13th edition, scale 1:250,000, dated 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.

Submitted by:

Jerry L. Hancock
Jerry L. Hancock
Final Reviewer

Approved for forwarding:

Billy H. Barnes
Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved:

Jay O. Bohon *A. Y. Ryan*
Chief, Photogrammetric Production Sec. Chief, Photogrammetry Branch

