T-12543

T- 12543

NOAA FORM 76-35
(6-80)

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

DESCRIPTIVE REPORT

Map No.	*Edition No.*
T-12543	1

Job No.
PH-6401

Map Classification
FINAL FIELD EDITED MAP

Type of Survey
SHORELINE

LOCALITY

State
HAWAII

General Locality
HAWAII ISLAND, WEST COAST, UPOLO POINT TO KAILUA

Locality
KAHALUU BAY

19 63 TO 19 72

REGISTERED IN ARCHIVES

DATE

*U.S. GOVERNMENT PRINTING OFFICE: 1980-665-115

NOAA FORM 76-36A (3-72) — U. S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.

DESCRIPTIVE REPORT - DATA RECORD

TYPE OF SURVEY
- [x] ORIGINAL
- [ ] RESURVEY
- [ ] REVISED

SURVEY TP- 12543
MAP EDITION NO. (1)
MAP CLASS Final
JOB PH- 6401

PHOTOGRAMMETRIC OFFICE
Coastal Mapping Unit, Atlantic Marine Center
Norfolk, VA

OFFICER-IN-CHARGE
Richard Houlder

LAST PRECEEDING MAP EDITION
TYPE OF SURVEY
- [ ] ORIGINAL
- [ ] RESURVEY
- [ ] REVISED

JOB PH-
MAP CLASS
SURVEY DATES:
19__ TO 19__

I. INSTRUCTIONS DATED

1. OFFICE		2. FIELD
Compilation	September 12, 1968	Control/Field Inspection April 29, 1964
Supplement No. 1	February 11, 1969	
Compilation	March 11, 1969	
Supplement No. 2	December 11, 1969	

II. DATUMS

[redacted]

NOAA FORM 76-36B
(3-72)

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

T-12543

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S): Wild R.C. - 8"S" S=152.29mm

TIDE STAGE REFERENCE
- [X] PREDICTED TIDES
- [ ] REFERENCE STATION RECORDS
- [ ] TIDE CONTROLLED PHOTOGRAPHY

TYPES OF PHOTOGRAPHY LEGEND
(C) COLOR
(P) PANCHROMATIC
(I) INFRARED

TIME REFERENCE
ZONE: Hawaii — [X] STANDARD [ ] DAYLIGHT
MERIDIAN: 150th

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
63S(P)8067-8069*	Sept 1, 1963	09:10	1:30,000	0.4 ft above MLLW
63S(C)8142-8146**	Sept 1, 1963	10:28	1:15,000	1.0 ft above MLLW
				Mean Tide Range = 1.4 ft

REMARKS

*Bridging photographs, ** Compilation 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 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 *(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-9335	surveyed 1972	registered			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
*T-12541	No survey	**T-12545	No survey

REMARKS

* This sheet also junctions with inset map T-12542, 1:5,000 scale
** This sheet also junctions with inset map T-12544, 1:5,000 scale

☆U.S.GOVERNMENT PRINTING OFFICE: 1985-564-007

NOAA FORM 76-36C
(3-72)

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

T-12543

HISTORY OF FIELD OPERATIONS

I. [X] FIELD INSPECTION OPERATION [ ] FIELD EDIT OPERATION

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		R. Newsom	Jun/Jul 1964
2. HORIZONTAL CONTROL	RECOVERED BY	E. Cline	Feb 1964
	ESTABLISHED BY	E. Cline	Feb 1964
	PRE-MARKED OR IDENTIFIED BY	E. Cline	Feb 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 [ ] COMPLETE [ ] SPECIFIC NAMES ONLY [X] NO INVESTIGATION	BY	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	E. Cline	Jun/Jul 1964
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	none	--

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED
none

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
63(S)8066*	Kahelo, 1882 (2 sub pts) *Section of ratio photos submitted		

3. PHOTO NUMBERS (*Clarification of details*)
63S(P) 8090 (Matte contact)
63S(C) 8153-8159 (Cronapaque Contacts)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED
none

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: [ ] REPORT [X] NONE

6. BOUNDARY AND LIMITS: [ ] REPORT [ ] NONE

7. SUPPLEMENTAL MAPS AND PLANS
none

8. OTHER FIELD RECORDS (*Sketch books, etc.* DO NOT *list data submitted to the Geodesy Division*)
2 forms 152 (CSI)
1 form 266
1 form 269 C

NOAA FORM 76-36C
(3-72)

*U.S. GOVERNMENT PRINTING OFFICE:1977-765-092

NOAA FORM 76-36C
(3-72)

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

T-12543

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION ☒ FIELD EDIT OPERATION

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		(NOAA Ship RAINIER) G. Haraden	Oct 1972
2. HORIZONTAL CONTROL	RECOVERED BY	S. Hollinshead	Oct 1972
	ESTABLISHED BY	S. Hollinshead	Oct 1972
	PRE-MARKED OR IDENTIFIED BY	none	--
3. VERTICAL CONTROL	RECOVERED BY	none	--
	ESTABLISHED BY	none	--
	PRE-MARKED OR IDENTIFIED BY	none	--
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (*Triangulation Stations*) BY	none	--
	LOCATED (*Field Methods*) BY	none	--
	IDENTIFIED BY	S. Hollinshead	Oct 1972
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION ☐ COMPLETE ☐ SPECIFIC NAMES ONLY ☒ NO INVESTIGATION — BY		
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	*S. Hollinshead	Oct 1972
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	none	--

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

none

PHOTO NUMBER	STATION NAME

2. VERTICAL CONTROL IDENTIFIED

none

PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (*Clarification of details*)

63(S)8067 and 8068 (Matte Ratios, 1:10,000 scale)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
63(S)8068	CHURCH		

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 Field Edit Report, 2 Forms 76-40, 1 Field Edit Paper Print (*Field edit is also included on the ~~on the~~ common inset map (T-12544) field edit paper print and matte ratio.63(S) 8158, 1: 5 ,000 scale.)

NOAA FORM 76-36C
(3-72)

*U.S. GOVERNMENT PRINTING OFFICE:1977-765-092

NOAA FORM 76-36D
(3-72)

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

T-12543

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	Jan 1970	Class III manuscript	Jan 1970	Jan 1970
Partial Field Edit applied	May 1974	Class III manuscript		May 1972 May 1974
Field Edit applied Compilation Complete	Aug 1980	Class I manuscript	Aug 1980	Aug 1980
Final Review	Feb 1987	Final Map	Mar 1987	Mar 1987

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

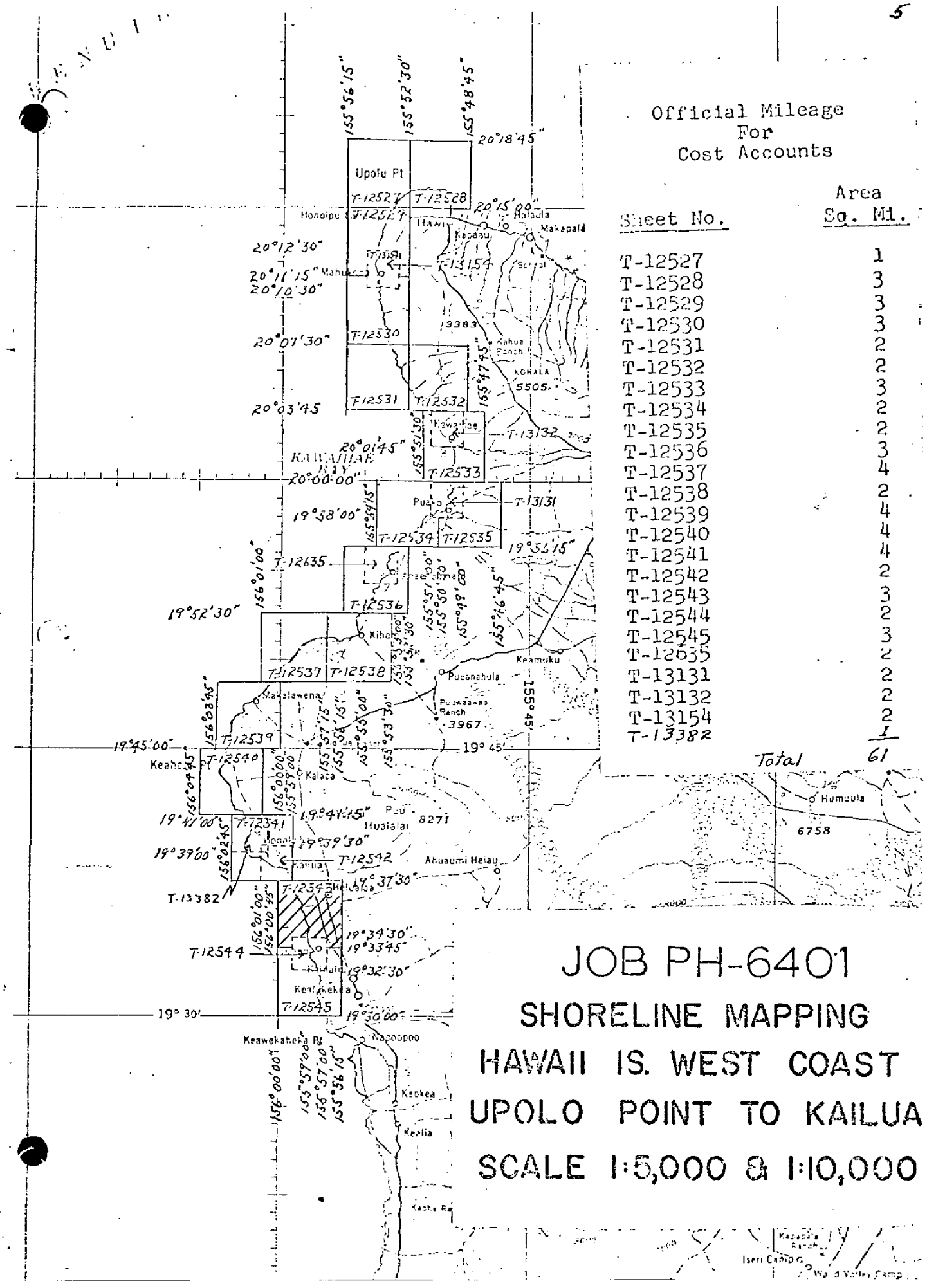
NUMBER pages	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
2		Mar 1987	Landmark and Aid for Charts

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.

[redacted]



Official Mileage
For
Cost Accounts

Sheet No.	Area Sq. Mi.
T-12527	1
T-12528	3
T-12529	3
T-12530	3
T-12531	2
T-12532	2
T-12533	3
T-12534	2
T-12535	2
T-12536	3
T-12537	4
T-12538	2
T-12539	4
T-12540	4
T-12541	4
T-12542	2
T-12543	3
T-12544	2
T-12545	3
T-12635	2
T-13131	2
T-13132	2
T-13154	2
T-13382	1
Total	61

JOB PH-6401

SHORELINE MAPPING

HAWAII IS. WEST COAST

UPOLO POINT TO KAILUA

SCALE 1:5,000 & 1:10,000

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12543

This 1:10,000 scale final shoreline map is one of twenty-three maps that comprise PH-6401, Hawaii Island, Hawaii, West Coast, Upolo Point to Kailua. The project consists of seventeen 1:10,000 scale maps (T-12527 thru T-12541, T-12543, T-12545) and six 1:5,000 scale inset maps (T-12542, T-12544, T-12635, T-13131, T-13132, T-13382).

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 west coast of Hawaii Island from Lat. 19° 33' 45" to Lat. 19° 37' 30". The southern segment of the map is common to the northern portion of inset map T-12544, 1:5,000 scale.

Photo coverage for the project was adequately provided in August/September 1963 using the Wild RC-8 "S" camera. Photography consisted of 1:30,000 scale panchromatic photographs used for field inspection and aerotriangulation. The 1:20,000 and 1:15,000 scale color photographs were used for compilation and hydro support. The 1:20,000 scale photo coverage was obtained for the 1:10,000 scale maps and the 1:15,000 scale photographs provided coverage of the 1:5,000 scale inset maps. Additional color photographs at 1:15,000 scale were obtained in February 1969 with the Wild RC-8"E" camera. These photographs were bridged and a supplemental plot report was prepared in order to compile three 1:5,000 scale inset maps (T-13131, T-13132 and T-12635). The stage of tide for all project photographs was based upon predicted tide data. No infrared photographs were provided.

Field work prior to aerotriangulation consisted of the recovery and establishment of horizontal control by photoidentification methods. In addition, a field inspection was performed for the project area utilizing the 1:30,000 scale photographs. This activity was conducted in June/July 1964.

Analytic aerotriangulation was adequately provided by the Washington Science Center in three phases. Initial bridging activity was accomplished for seven of the northern project maps in June 1966. The second phase was conducted for the remaining project maps in February 1969. A final bridge was provided in October 1971 for the 1969 photo coverage of three 1:5,000 scale inset maps. Aerotriangulation activity included ruling the base manuscripts and also provided ratio photographs for the compilation and hydrographic/field edit operations.

Compilation for this map was performed at the Coastal Mapping Section, Atlantic Marine Center in January 1970. Copies of the manuscript and hydrographic support data were forwarded to the hydrographer for field edit. A copy of the manuscript was also submitted to the Marine Charts Section.

T-12543

Field edit was conducted in conjunction with hydrographic survey H-9335 by NOAA Ship RAINIER personnel in October 1972. This activity also included field edit for the common inset map T-12544.

Application of field edit was completed at the Atlantic Marine Center in August 1980. This included the transferring of field edited shoreline detail from the common inset map T-12544. Sufficient information was submitted to advance the manuscript to Class I.

Final review was performed at the Atlantic Marine Center in February 1987. A comparison was made with the common nautical chart and

[redacted]

forwarded to the Washington Science Center for registration and distribution.

FIELD INSPECTION
T-12543

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.

Photogrammetric Plot Report
PH-6401
Hawaii Island, Hawaii

Feb.4, 1969

21. Area Covered

The area covered by this report is along the northwest coast of Hawaii Island. T-sheets in this area are numbered 12534 thru 12541, 12543, and 12545 at 1:10,000 scale. T-sheets 12542, 12544, 12635, 13131 and 13132 at 1:5,000 scale. Sheets T-12527 thru 12533 and 13154 were covered by a previous report on Strips #1 and #2.

22. Method

All strips were bridged on the stereoplanigraph and adjusted by IBM 1620 methods. Strip #3 was adjusted on four stations with two additional stations as checks. Strip #4 was adjusted on seven stations with two additional stations as checks. Strip #6 was adjusted on two control points plus 7 tie points. Strip #7 was adjusted on one control station and three tie points. Strip #8 was adjusted on three control stations and three tie points. All tie points between strips were averaged. Points were drilled using the Wild PUG.

23. Adequacy of Control

The control provided by the field was adequate after reidentification of Anaehoomalu 1913, Lana Cone, 1913 and the identification of Hand, 1928 and Nawai 1928. The following stations could not be held in the bridging adjustments.

1. LAVA CONE, 1913, SS #A and SS #B ("NEAR"). By holding four triangulation stations and floating substitute stations "NEAR A AND B", a 1 ft. check was achieved between these substitute stations and placed LAVA CONE, 1913 80 ft. north of survey mark "NEAR" and on the high point of the immediate area. This bares out the field recovery note for station LAVA CONE 1913 that the survey mark "NEAR" and intersection station LAVA CONE, 1913 are not one and the same. Geodesy Division has been notified of our findings and the bridging information added to their files.

2. KEEI SOUTH BASE, 1948 SS #1 and SS #2 could not be held in Strip #4 by 11' and 16' respectively. It is believed these errors are due to bad identification, since seven other stations were held in the adjustment. This station falls in Strip #4 but is outside of the PH-6401 area of compilation.

24. Supplemental Data

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 with the exception of T-12542. 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.

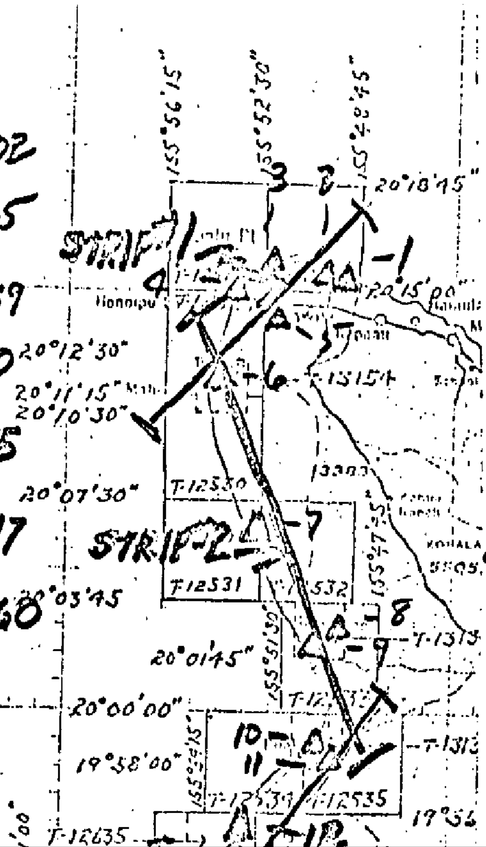
Submitted by,

John D. Perrow, Jr.

Approved by,

Henry P. Eichert
Chief, Aerotriangulation Section

STRIP 1
63-S-7797 thru 7802
STRIP 2
63-S-7803 thru 7815
STRIP 3
63-S-7919 thru 7939
STRIP [illegible]
63-S-8059 thru 8080
STRIP 6
63-S-7941 thru 7955
STRIP 7
63-S(C)-7906 thru 7917
STRIP 8
63-S(C)-8150 thru 8160



1. KEPUHI 2, 1948
2. KEPUHI, 1913
3. KEMAHEWA 2, 1948
4. LORAN TOWER, 1948
5. PUU ULA, 1913
6. RED TANK, 1948
7. KEAWANUI, 1948
8. PUU KAMALI, 2, 1928
9. KAWAIHAE LT. 1928
10. PUAKO, 1873
11. PUAKO NEW, 1948
12. ANAEHOOMALU, 1913
13. HAND, 1928
14. NAWAI, 19[illegible]
15. LAVA CONE, 1913
16. KEAHOLE 2, 1948

[redacted]

NOAA FORM [illegible]41
(6-75)

U.S. DEPARTMENT OF [illegible]OMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	GEODETIC DATUM	ORIGINATING ACTIVITY
T-12543	PH-6401	Old Hawaiian	Coastal Mapping Unit, AMC

STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRIANGULATION POINT NUMBER	~~COORDINATES IN FEET~~ STATE Hawaii ZONE 1	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE	REMARKS
KAHELO (HGS), 1882	GP pg 14		x= 19 37 23.477	φ	
			y= 155 59 16.911	λ	
LAALOA, 1948	pg 15		x= 19 35 27.670	φ	
			y= 155 58 28.416	λ	
SIGNAL, 1928	pg 69		x= 19 34 04.129	φ	
			y= 155 58 07.091	λ	
			x=	φ	
			y=	λ	
			x=	φ	
			y=	λ	
			x=	φ	
			y=	λ	
			x=	φ	
			y=	λ	
			x=	φ	
			y=	λ	
			x=	φ	
			y=	λ	
			x=	φ	
			y=	λ	

COMPUTED BY	DATE	COMPUTATION CHECKED BY	DATE
A. C. Rauck, Jr.	7/24/69	C. Blood	7/30/80
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-12543

31 - DELINEATION

Delineation was by instrument methods using the Wild B-8 stereoplotter and 1:15,000 scale color photographs. The 1:30,000 scale panchromatic field inspection photographs were used during compilation; however, several of the field identified rocks were not discernible when viewing the 1:15,000 scale color compilation photographs. Rocks that were not clearly identifiable were not compiled.

Compilation ratio photographs were processed for hydro support and were used graphically to assist in delineation of minor details. Photo coverage and quality were adequate.

The southern segment of this map is common to the northern portion of inset map T-12544, 1:5,000 scale. Shoreline detail for this area was originally omitted since it was going to be compiled on the inset.

32 - CONTROL

Refer to the Photogrammetric Plot Report, dated February 4, 1969.

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 was delineated from office interpretation of the mapping 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

There were no significant offshore details.

37 - LANDMARKS AND AIDS

Appropriate data was prepared for field investigation.

38 - CONTROL FOR FUTURE SURVEYS

None.

T-12543

39 - JUNCTIONS

Refer to the Data Record Form 76-36B, Item 5.

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated February 4, 1969.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with U.S.G.S Quadrangle:
Kealakekua, Hawaii, dated 1960, scale 1:24,000,

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with USC & GS Chart:
4140, scale 1:80,000, 3rd edition, dated Jan. 24, 1966.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

Jerry L Hancock

for Charles Blood
Cartographic Technician
November 1969

Approved:

Jerry L. Hancock

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

ADDENDUM TO THE COMPILATION REPORT

T-12543

Field edit was performed in conjunction with hydrographic survey H-9335 in October 1972. Inset map, T-12544, which is partially common to this map, was also field edited at the same time. During the application of field edit, the common inset detail was reduced and transferred to this map. The combined edit data was applied to the manuscript and the map was advanced to Class I.

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6401 (Hawaii)

T-12543

Disappearing Sands Beach

Haikuua

Heeia Bay

Holualoa --Not Compiled

Holualoa Bay

Kahaluu

Kahaluu Bay

Kalaau o Kalakani

Kamoa Point

Keauhou

Keauhou Bay

Laaloa

Laaloa Point

Pacific Ocean

Puapua Point

Approved by:

A. Joseph Wraight
Chief Geographer

Prepared by:

Frank W. Pickett
Cartographic Technician

FIELD EDIT REPORT

OPR-419, 1972

T-12539 through T-12550
T-13352 T-11796
Kona Coast, Hawaii

NOAA Ship RAINIER

CAPT G.E. HARADEN
Commanding

INTRODUCTION - METHODS

Field edit was accomplished between 14 September and 26 October 1972 by personnel of the NOAA Ship RAINIER. Work was performed from a 16 foot skiff. Landings were made where necessary to verify shoreline character.

The field edit started approximately 0.4 miles northeast of Puialoa Point, Hawaii and extended southward to Puoa Point (see appendix). Editing was completed on Manuscripts T-12539, T-12540, T-12541, T-12542, T-13382, T-12543, T-12544, T-12545, T-11796, T-12546, T-12548, and T-12549. Field edit was begun but not completed on Manuscript T-12550. No field edit was done on Manuscripts T-12547 and T-11797.

All additions and corrections were noted in purple on the field edit ozalids. Deletions were accented in green. Photos used in this edit were from PH-6401 and 6402. Values given for distances from MHWL and heights of rocks were estimated. All time references were made to 150° W longitude.

To aid in cross-referencing, A "Manuscript Reference Index" and a "Position Abstract" are included in the appendix. Also included in the appendix are: 1) List of detached positions, 2) A complete signal tape listing, 3) Listing of Triangulation Stations recovered, established, and re-established.

ADEQUACY OF COMPILATION

The compilation of the MHWL on the edited manuscripts was excellent and required very few corrections. In general the compilation of off-shore features was also excellent. Time and height data for rocks not identified on the manuscripts has been included on the photographs.

DISCUSSION AND RECOMMENDATIONS

T-12539 (completed) Mahailua Bay

The shoreline in this area is primarily composed of steep cliffs 20' high, interspersed with sandy beach. The northern and southern-most buildings at Mahailua Bay are the only two prominent objects in the vicinity and therefore are of landmark value. The wooden windmill located at 19° 47' 13.35" N and 156° 02' 22.50" W, is no longer standing and should be deleted from C&GS Chart 4140. Further information is furnished on NOAA Form 76-40 (see appendix).

T-12540 (completed) Makako Bay

The shoreline in this area is composed primarily of low bluffs and sandy beach with marsh surrounding fish ponds.

Keahole Point Lighthouse is of landmark value. The lighthouse was field identified from photo 63-S-7943. Further information is provided on NOAA Form 76-40 (see appendix).

[redacted]

The shoreline in this area is composed primarily of gently sloping lava flows with interspersed sandy beach and marsh surrounding Kaloko Fish Pond.

Keahuolu Point Northeast Range Marker, 1948, is of landmark value. Keahuolu Point Northwest Range Marker, 1948*, has fallen over and is no longer visible from seaward. Four new navigatinal lights mark the entrance to the new boat basin at Honokohau, located just south of Maliu Point. Further information is privided on NOAA Form 76-40 (see appendix).

T-12541 (completed) Kailua Bay

The shoreline in this area is composed primarily of sloping lava rock with marsh surrounding small ponds and fish ponds at Honokohau Bay.

* NOTE: Keahuolu Point Northeast Range Marker, 1948, and Keahuolu Point Northwest Range Marker, 1948, are

The northern-most building at Honokohau, although small, is of landmark value as a navigational aid when entering the Honokohau boat basin. Keahuolu Point Northeast, Keahuolu Point Southeast, and Keahuolu Point Southwest Range Markers are very faded and weathered but are of landmark value. The building located at Honokohau (approximate location, latitude 19°40'25.85" N and longitude 156°01'44.83" W) and Keahuolu Point Northwest Range Marker are not visible from seaward and should be deleted. Further information is provided on NOAA Form 76-40 (see appendix).

T-12542 (completed) Kailua Bay

The shoreline in this area is composed primarily of low bluffs interspersed with sandy beach.

The facade of the Kona Hilton Hotel, which is illuminated yellow at night, and Kailua Lighthouse are of landmark value; both were intersected using second order, class II methods. A crane lighted at night by a floodlight and used by fishermen as a navigational aid and the Kailua Mokuaikaua Church spire are also of landmark value.

The cattle pens, small craft warning mast, and building on the Kailua pier have been removed and should be deleted. The tanks located at latitude 19°38'34.80" N. and longitude

[redacted]

present as described but is obscured by vegetation. Further information is provided on NOAA Form 76-40 (see appendix).

T-12543 (completed) Keauhou Bay

This area is composed primarily of rocky shoreline interspersed with sandy beaches.

New buildings at latitude 19°35'52.50 " N, longitude 155°58'31.50" W and latitude 19°34'39.60" W, longitude 155°58'12.60" W are not of landmark value. A hotel just south of Kalaau o Kalakani and a blue church building at Kahaluu Bay are of landmark value.

A spire at Kahaluu Bay is not visible and should be deleted. Further information is provided on NOAA Form 76-40 (see appendix).

T-12544 (completed) Keauhou Bay

The shoreline in this area is primarily composed of lava bluffs 30 feet high.

Keauhou Bay Light and Keauhou Bay Entrance Directional Light (both lights on the same structure) and the Kona Surf Hotel (approximate position scaled) are of landmark value. Further information is provided on NOAA Form 76-40 (see appendix).

T-12545 (completed) Keikiwaha Point

The shoreline in this area is composed of low lava bluffs approximately 10 feet high. There are no objects of landmark value.

T-12546 (completed) Keawekaheka Bay

The shoreline in this area is primarily composed of lava bluffs approximately 30 feet high.

There are no objects of landmark value.

T-11796 (completed) Kealakekua Bay

The shoreline in this area consists of low lava bluffs six to ten feet high with rocky beaches and a steep cliff (160 feet high) on the northeast side of the bay.

Napoopoo, Kahikolu Church Spire, 1913, Napoopoo Lighthouse, and Captain Cook's Monument are all of landmark value. Further information is provided on NOAA Form 76-40 (see appendix).

T-12547 (incomplete) Kealakekua Bay

No field edit was done on this manuscript.

T-11797 (incomplete) Honaunau Bay

No field edit was done on this manuscript.

T- 12548 (completed) Kauhako Bay

The shoreline in this area is composed of bluffs approximately 40-60 feet high with interspersed sandy beach. Buildings in the area indicated on the manuscript at Kauhako Bay are of landmark value. (building locations were not determined by the field editor or located by the compiler - see manuscript).

A church steeple located near Palianihi Point no longer exists and should be deleted.

Further information is provided on NOAA Form 76-40 (see appendix).

T-12549 (completed) Kauluoa Point

The shoreline in this area is composed of cliffs from 10 to 60 feet high interspersed with gravel, sand, and rocky beaches. There are no objects of landmark value.

T-12550 (incomplete) Puoa Point

The shoreline in this area is composed of lava bluffs approximately 40-60 feet high. There are no objects of landmark value. Field edit was completed to Puoa Point.

Respectfully submitted,

Steven J. Hollinshead

Steven J. Hollinshead
LTJG, NOAA

MANUSCRIPT REFERENCE INDEX

OPR-419

FIELD EDIT

MANUSCRIPT NUMBER	REFERENCE PHOTO NUMBERS	REFERENCE DETATCHED POSITIONS
T-12539 Mahailua Bay	63-S-7948 63-S-8060	
T-12540 Makako Bay	63-S-7943 63-S-8063*	
T-12541 Kailua Bay	63-S-8063* 63-S-8094	
T-13382 Honokohau Bay	69-E-9255 69-E-9254	
T-12542 Kailua Bay	63-S(C)-7913 63-S(C)-7915 63-S(C)-7917	Detatched Positions 10/05/72
~~T-12543~~ Keauhou Bay	63-S-8067 63-S-8068	
T-12544 Keauhou Bay	63-S(C)-8158 63-S(C)-8159 63-S(C)-8160	

*NOTE: Photo 63-S-8063 used on T-Sheets T-12540 and T-12541

MANUSCRIPT NUMBER	REFERENCE PHOTO NUMBERS	REFERENCE DETATCHED POSITIONS
T-12545 Keikiwaha Point	63-S-8088 63-S-8087*	
T-12546 Keawekaheka Bay	63-S-8087*	
T-11796 Kealakekua Bay	63-S-8138	Detatched Position 9/14/72
T-12547 Kealakekua Bay	**	
T-11797 Honaunau Bay	**	
T-12548 Honaunau Bay	63-S(C)-8027 63-S(C)-8026 63-S(C)-8025	
T-12549 Kauluoa Point	63-S(C)-8024 63-S(C)-8023 63-S(C)-7888 63-S(C)-7887 63-S(C)-7886	
T-12550	63-S(C)-7884	

*NOTE: Photo 63-S-8087 used on T-Sheets T-12545 and T-12546

**NOTE: No field edit done

REVIEW REPORT
T-12543

SHORELINE

61 - GENERAL STATEMENT

Final review for this final field edited map was accomplished at the Atlantic Marine Center in February 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 U.S.G.S. Quadrangle:
Kealakekua, Hawaii, dated 1960, scale 1:24,000,

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a registered copy of H-9335, RA-10-8-72, surveyed in 1972. Three minor shoreline discrepancies appear to have resulted from field edit data that was not applied to the hydrographic sheet. These items will be addressed on the final Hydrographic Print as prepared by the final review unit.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS chart:
19327, scale 1:80,000, 8th edition, September 5, 1981.

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
Final Reviewer

Approved for forwarding:

Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved:

Chief, Photogrammetric Production Sec.

Chief, Photogrammetry Branch


OBJECTS INS
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NOAA FORM

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR 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)

☒ TO BE CHARTED
☐ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
Coastal Mapping Unit AMC, Norfolk, VA	Hawaii	Keauhou Bay,	Apr 1980

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
419	PH-6401	T-12543	Old Hawaiian

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
LIGHT	Keauhou Bay Light	19 .33	53.84	155 .57	53.40	63(S)8142 Sep 1, 1963	L-P-5 Oct 15, 1972 63(S)8158	19327
LIGHT	Keauhou Bay Entrance Directional Light (On same structure as Keauhou Bay Light)							
DAYBEACON	Keauhou Bay Range Rear Daybeacon (On same structure as Keauhou Bay Light)							

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

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- ☐ QUALITY CONTROL & REVIEW GRP.
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

☒ TO BE CHARTED
☐ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): Coastal Mapping Div. AMC Norfolk, VA

STATE: Hawaii

LOCALITY: Keauhou Bay Hawaii, West Coast

DATE: April 1980

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

OPR PROJECT NO.:

JOB NUMBER: PH-6401

SURVEY NUMBER: T-12543

DATUM: Old Hawaiian

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
CHURCH	Blue church approx.. 25' high	19 35	03.45	155 58	11.15		L-P-5 Oct 15, 1972 63 (S) 8068	19327

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	S. Hollinshead	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	S. Hollinshead	FIELD ACTIVITY REPRESENTATIVE
	I Perkinson	OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

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

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

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

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

FORM C&GS-8352
(3-28-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. PH-6401, T-12543

INSTRUCTIONS

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

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