

TP-00719

TP-00719

NOAA FORM 76-35 (3-76)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00719	Edition No. 1
Job No. CM-7215	
Map Classification: Final	
Field Edited Map	
Type of Survey: Shoreline	
LOCALITY	
State Hawaii	
General Locality Kaneohe Bay, Oahu Island	
Locality Kaneohe	
19 75 TO 19 76	
REGISTRY IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.					
DESCRIPTIVE REPORT - DATA RECORD		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED </td> <td style="width: 50%;"> SURVEY TP. <u>00719</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>PH-CM-7215</u> </td> </tr> </table>		TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED	SURVEY TP. <u>00719</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>PH-CM-7215</u>		
TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED	SURVEY TP. <u>00719</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>PH-CM-7215</u>						
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division Atlantic Marine Center, Norfolk, Virginia OFFICER-IN-CHARGE Jeffrey G. Carlen, Cdr.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">LAST PRECEDING MAP EDITION</th> </tr> <tr> <td style="width: 50%;"> TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED </td> <td style="width: 50%;"> JOB <u>PH-</u> MAP CLASS <u> </u> SURVEY DATES: 19 <u> </u> TO 19 <u> </u> </td> </tr> </table>		LAST PRECEDING MAP EDITION		TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	JOB <u>PH-</u> MAP CLASS <u> </u> SURVEY DATES: 19 <u> </u> TO 19 <u> </u>
LAST PRECEDING MAP EDITION							
TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	JOB <u>PH-</u> MAP CLASS <u> </u> SURVEY DATES: 19 <u> </u> TO 19 <u> </u>						
I. INSTRUCTIONS DATED							
1. OFFICE		2. FIELD					
Aerotriangulation October 6, 1975 Compilation January 7, 1976		Premarking April 16, 1973 Premarking Supplement I August 18, 1975					
II. DATUMS							
1. HORIZONTAL: ☐ 1927 NORTH AMERICAN		OTHER (Specify) Old Hawaiian Datum					
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) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">STATE</td> <td style="width: 50%;">ZONE</td> </tr> <tr> <td>Hawaii</td> <td>3</td> </tr> </table>		STATE	ZONE	Hawaii	3
STATE	ZONE						
Hawaii	3						
5. SCALE 1:10,000		STATE ZONE Hawaii 3					
III. HISTORY OF OFFICE OPERATIONS							
OPERATIONS		NAME	DATE				
1. AEROTRIANGULATION BY METHOD: Analytic LANDMARKS AND AIDS BY		R. Kelly	Dec 1975				
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Coradomat CHECKED BY		Solbeck	Dec 1975				
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: Wild B-8 SCALE: 1:7,500 and 1:15,000 CONTOURS BY CHECKED BY		Jim Byrd	Jan 1976				
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY METHOD: Smooth Draft CONTOURS BY CHECKED BY SCALE: 1:10,000 HYDRO SUPPORT DATA BY CHECKED BY		D. Butler	Jan 1976				
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		L. Neterer, Jr.	Jan 1976				
6. APPLICATION OF FIELD EDIT DATA BY		F. Mauldin	Aug 1976				
7. COMPILATION SECTION REVIEW BY		A. L. Shands	Sep 1976				
8. FINAL REVIEW BY		A. L. Shands	Apr 1978				
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		A. L. Shands	Apr 1978				

TP-00719
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE	☒ STANDARD ☐ DAYLIGHT
☒ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☐ TIDE CONTROLLED PHOTOGRAPHY				Hawaii	
				MERIDIAN 150th	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
75TNHY 3283(P) - 3286(P)	12/03/74	10:29	1:15,000	0.8 ft. above MLLW	
75TNHY 3402(P) - 3404(P)	12/04/74	09:20	1:15,000	1.5 ft. above MLLW	
75TNHY 3780(P) - 3784(P)	1/17/75	10:14	1:15,000	0.6 ft. above MLLW	
75TNHY 3765(P) - 3768(P)	1/17/75	10:05	1:15,000	0.7 ft. above MLLW	
75TNHY 3758(P) - 3759(P)	1/17/75	10:00	1:15,000	0.7 ft. above MLLW	
75TNHY 3851(P) - 3852(P)	1/28/75	11:13	1:30,000	0.2 ft. above MLLW	
75TNHY 3864(P) - 3265(P)	1/28/75	11:37	1:30,000	0.2 ft. above MLLW	
75TNHY 3794(P) - 3796(P)	1/17/75	10:51	1:30,000	0.5 ft. above MLLW	

REMARKS

Subordinate tide station - Moku O Loe, Oahu.
Reference tide station - Honolulu, Hawaii.

MHW = 1.6 ft.

2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled from the above listed photographs,
~~75TNHY 3852, 3866 and 3795.~~ A.L.S.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The mean lower low water line was not 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

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00718	TP-00720	No Survey	No Survey

REMARKS

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	9/75
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	9/75
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY R. Melby	9/75
3. VERTICAL CONTROL	RECOVERED BY NA	
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
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 ☒ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
75TNHY 3853	STATE SURVEY 4-32, 1969		
75TNHY 3865	PAHU, 1910		
75TNHY 3866	STATE SURVEY 4-24, GROUCHO, 1969		

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

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

7. SUPPLEMENTAL MAPS AND PLANS

None

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

3 Forms 76-53

1 Form 76-61A

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	C. Townsend	3/4/76
2. HORIZONTAL CONTROL	RECOVERED BY J. Osborn	3/4/76
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY NA	
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY J. Osborn	3/4/76
	LOCATED (Field Methods) BY J. Osborn	3/4/76
	IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION ☐ COMPLETE ☐ SPECIFIC NAMES ONLY ☒ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY J. Osborn	3/4/76
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

NA

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

75TNHY(P) 3284, 3285, 3758, 3759, 3766 thru 3768, 3781, 3782, and 3784.

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)

4 Forms 76-40

1 Field edit report OPR-419 RA-76

1 Field edit ozalid

TP-00719
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 1976	Class III Manuscript Superseded	1/30/76	1/30/76
Field edit applied. Compilation complete.	Aug 1976	Class I Manuscript	9/30/76	
Final Review	Apr 1978	Final	Apr 1978	

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1 1		10/04/76	Aids to be charted.
2 2		10/04/76	Aids to be deleted.
3 3		10/04/76	Landmarks to be charted.
			A new listing is submitted to supersede the 76-40 forms forwarded on 10-4-76.

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: October 4, 19763. ☐ 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 ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

OFFICIAL MILEAGE FOR COST ACCOUNT

Sheet
Number

Square
Miles

TP-00718	2
TP-00719	6
TP-00720	6
TOTAL	14

TP-00718

TP-00720

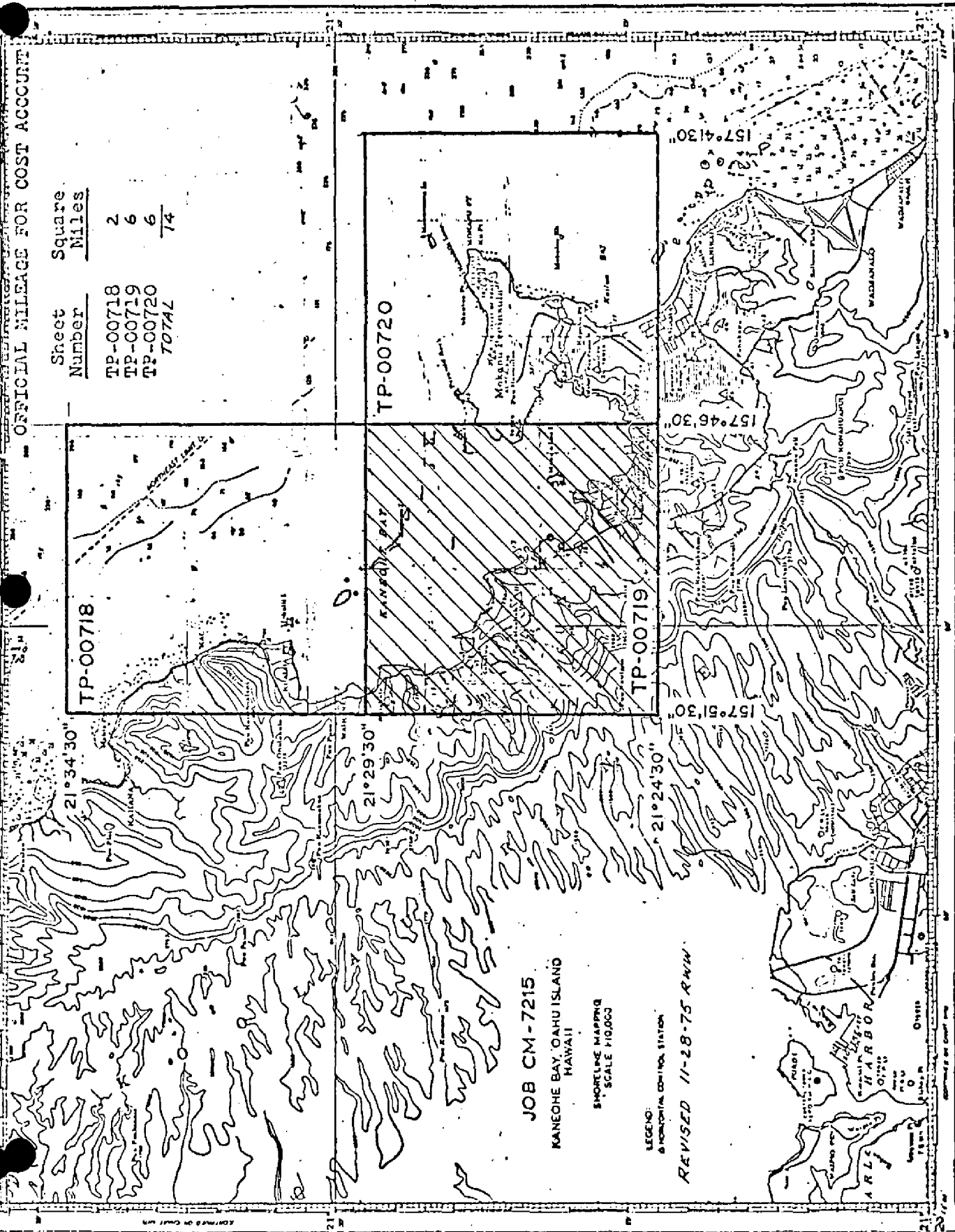
TP-00719

JOB CM-7215
KANEHOE BAY, OAHU ISLAND
HAWAII

SHORELINE MAPPING
SCALE 1:10,000

LEGEND:
O HORIZONTAL CONTROL STATION

REVISED 11-28-75 RWN



SUMMARY TO ACCOMPANY DESCRIPTIVE REPORTS

TP-00718 THROUGH TP-00720

The maps included in this summary comprise all of Project CM-7215, Kaneohe Bay, Oahu Island, Hawaii. Each is a 1:10,000 scale standard shoreline map, the purpose of which is to provide shoreline and alongshore data in support of hydrographic operations and for nautical chart compilation.

The area covered is that of Kaneohe Bay extending from just below Mahie Point on the north southward to and including the Mokapu Peninsula. This project originally consisted of ~~nine~~^{ten} 1:5,000 scale maps (TP-00718 through TP-00727) covering about the same area. All instructions and correspondence dealing with map scale make reference to the 1:5,000 scale maps with the exception of the compilation instructions. The compilation instructions make reference only to the three 1:10,000 scale maps TP-00718 through TP-00720. These are the only maps compiled for the project.

Apparently, it was decided around November, 1975 to cancell all 1:5,000 scale maps in the project and replace them with 1:10,000 scale maps. Documents authorizing this change, however, are not available to this reviewer at this time.

Field work prior to compilation was limited to the recovery and identification of horizontal control necessary for bridging. It was begun under orders dated April 16, 1973. However, the photography obtained at that time was not suitable for compilation. This part of the job was redone in September, 1975.

Photography was flown by a private contractor in December, 1975 and January, 1976. It was flown with panchromatic film at 1:15,000 and 1:30,000 scale. Coverage was not extended to allow the delineation of the southern shoreline of Kailua Bay. The quality was excellent.

Bridging was done at the Washington Science Center in December, 1975. All maps were compiled at the Atlantic Marine Center using the Wild B-8 stereoplotter.

Field edit was performed in March, 1976 and applied to the maps in September, 1976 at the Atlantic Marine Center. Final Review also took place at the Atlantic Marine Center in April, 1978.

The original base map and all pertinent data is forwarded to the Washington Science Center for reproduction and final registration.

FIELD INSPECTION

TP-00719

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for bridging of the project.

Photogrammetric Plot Report
Kaneohe Bay, Oahu Island, Hawaii
Job CM-7215
December 1975

21. Area Covered: This report covers three 1:10,000 sheets, TP-00718, TP-00719, and TP-00720 of Kaneohe Bay, Oahu Island, Hawaii.

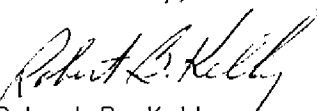
22. Method: Three strips of 1:30,000 photography and one strip of 1:15,000 photography were bridged by analytic aerotriangulation methods and adjusted to ground on the Hawaii State Plane Coordinate System, Zone three. The attached two sketches shows the placement of horizontal control, bridging photographs, and photographs to be used for compilation. Bridge points were drilled on the 1:15,000 scale photography and measured on 1:30,000 scale bridging photography for ratioing photographs to be used in compilation. Ratios were ordered and sheets were plotted on the Coradomat.

23. Adequacy of Control: The horizontal control provided was adequate except for Pahu, 1910 home station which could not be seen. All other control held within the accuracy required by National Standards of Map Accuracy at 1:10,000.

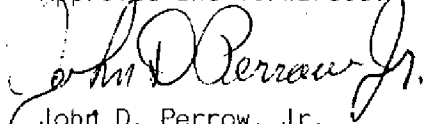
24. Supplemental Data: Local shoreline and U.S. Geological Survey quadrangles were used to provide elevations for vertical adjustments of bridges.

25. Photography: RC-8 black-and-white film positives were adequate as to coverage, overlap, and definition.

Submitted by,


Robert B. Kelly

Approved and forwarded:


John D. Perrow, Jr.
Chief, Aerotriangulation Section

OFFICIAL MILEAGE FOR COST ACCOUNT

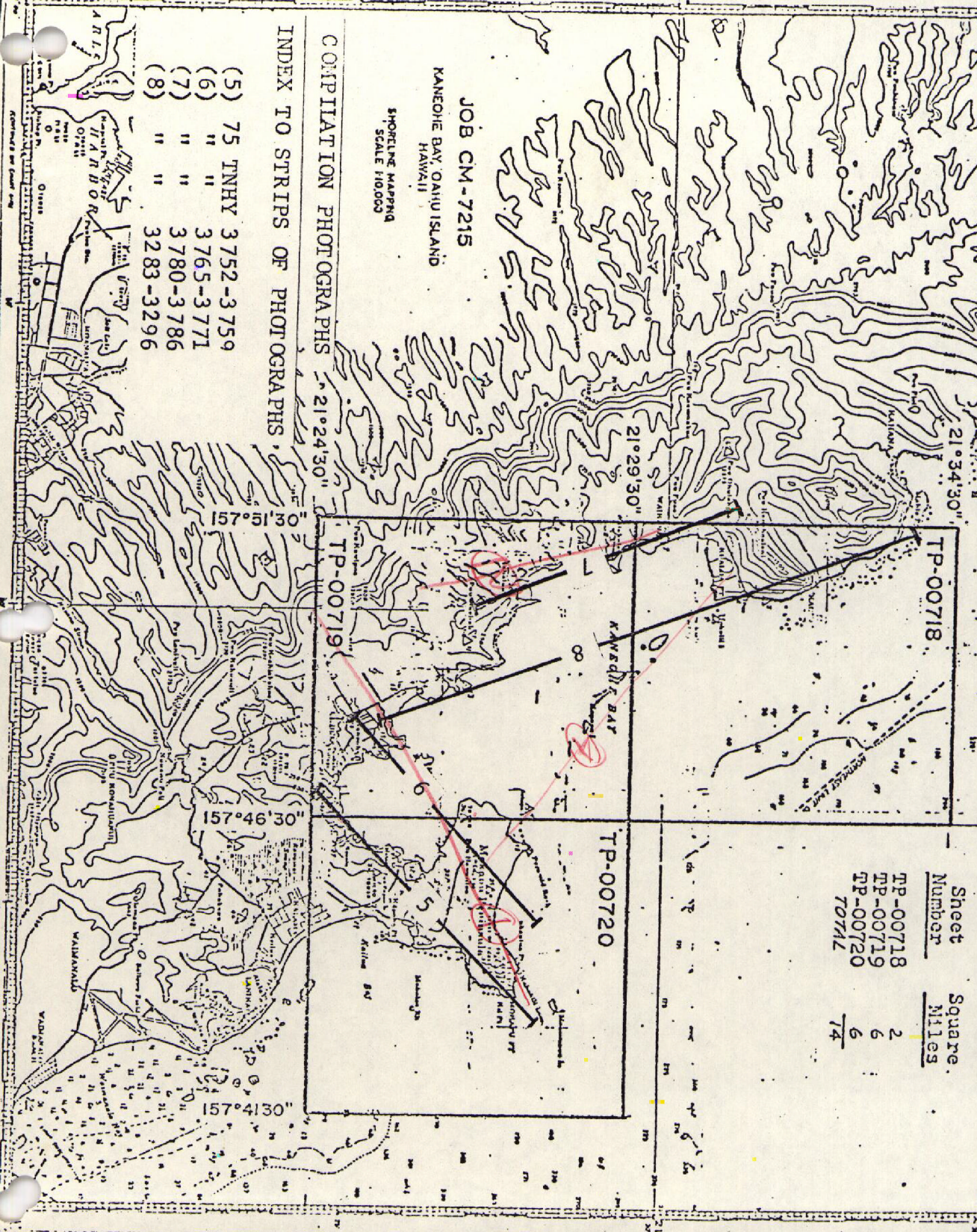
SHEET Number	Square Miles
TP-00718	2
TP-00719	6
TP-00720	6
TOTAL	14

JOB CM-7215
KANEHOE BAY, OAHU ISLAND
HAWAII
SHORELINE MAPPING
SCALE 1:10,000

COMPILATION PHOTOGRAPHS 21°24'30"

INDEX TO STRIPS OF PHOTOGRAPHS

- (5) 75 TNHY 3752-3759
- (6) " " 3765-3771
- (7) " " 3780-3786
- (8) " " 3283-3296



<u>Sheet</u> <u>Number</u>	<u>Square</u> <u>Miles</u>
TP-00718	2.
TP-00719	6
TP-00720	6
<u>TOTAL</u>	<u>14</u>

TP-00718

21° 34' 30"

TP-00720

К. А. М. Д. И. В. А. Р.

TP-00719

COMPILATION PHOTOGRAPHS 21°24'30"

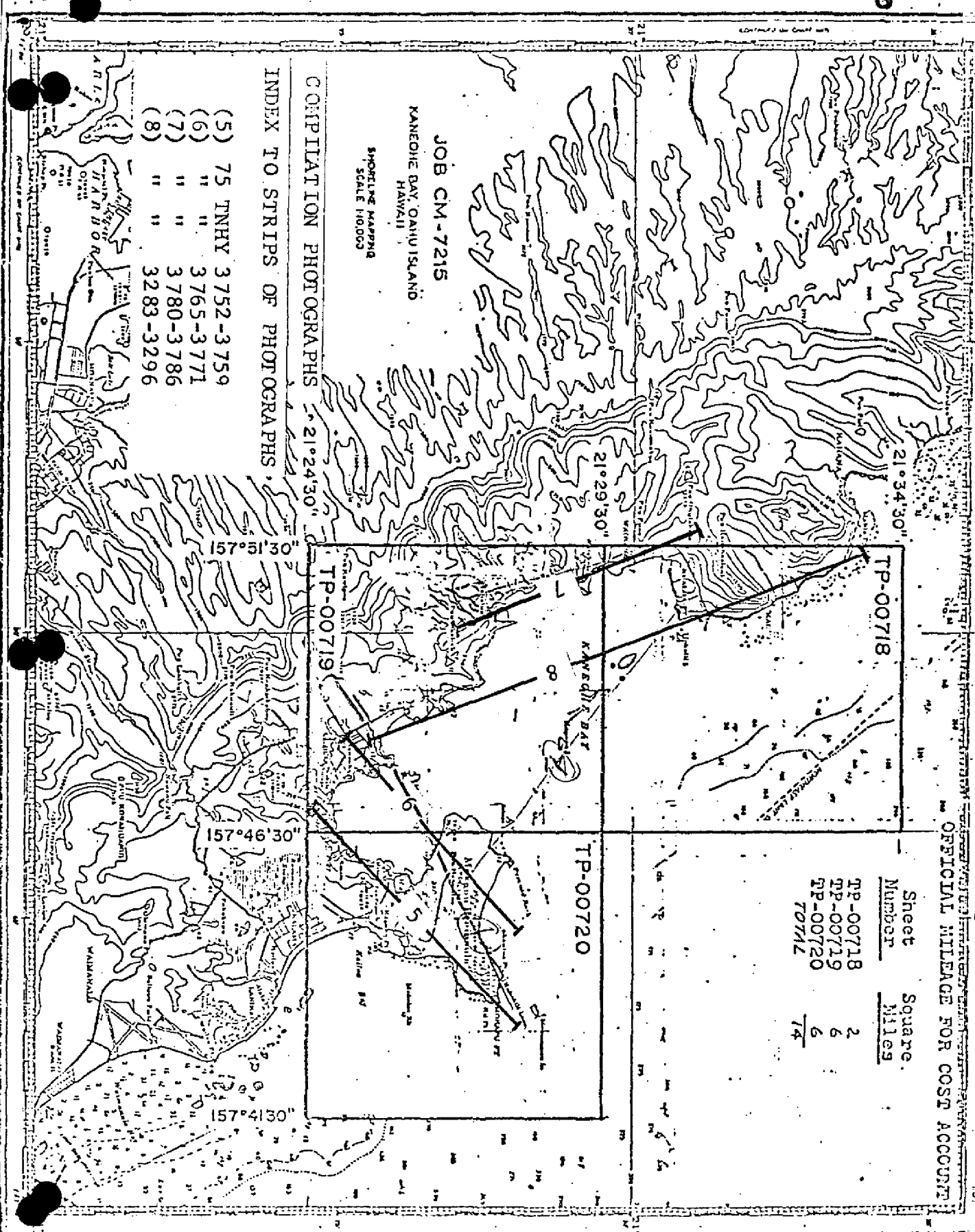
JOB CM-7215

KANEHOE BAY, OAHU ISLAND,
HAWAII

SHORTLINE MAPPING SCALE 1:10,000

INDEX TO STRIPS OF PHOTOGRAPHS

(5)	75	TNHY	3 752-3 759
(6)	"	"	3 765-3 771
(7)	"	"	3 780-3 786
(8)	"	"	3 283-3 296



DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	STATION NAME	JOB NO. CM-7215	GEODETTIC DATUM Old Hawaiian		AEROTRI- ANGULATION POINT NUMBER	SOURCE OF INFORMATION (Index)	COORDINATES IN FEET Hawaii		GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE		ORIGINATING ACTIVITY Division, AMC, Norfolk, Virginia		REMARKS	
			STATE ZONE	3			φ	λ	FORWARD	BACK				
	STATE SURVEY 4-32, 1969	Quad 211573 P. 1002	x=				φ	21 27	46.63790	1435.4	4.3 A.L.S.			
			y=				λ	157 50	38.79589	1117.0			(409.9)	
	STATE SURVEY 4-27, 1969	Quad 211573 P. 1007	x=				φ	21 26	50.27977	1546.4			(298.9)	
			y=				λ	157 48	45.10695	1298.9			(428.8)	
	BENCH MARK B4, 1969	Quad 211573 P. 1009	x=				φ	21 26	08.34123	256.5			(1588.8)	
			y=				λ	157 48	43.67297	1257.7			(470.1)	
	STATE SURVEY 4-26, 1969	Quad 211573 P. 1020	x=				φ	21 25	49.96590	1536.7			(308.6)	
			y=				λ	157 48	36.01305	1037.1			(690.8)	
	PAHU, 1910	Quad 211573 P. 1016	x=				φ	21 25	32.56045	1001.4			(843.9)	
			y=				λ	157 47	46.67886	1344.3			(383.6)	
	STATE SURVEY 4-18, 1969	Quad 211573 P. 1027	x=				φ	21 24	42.54644	1308.5			(536.8)	
			y=				λ	157 47	05.96686	171.9			(1556.2)	
	STATE SURVEY 4-24 GROUCHO, 1969	Quad 211573 P. 1012	x=				φ	21 24	58.26924	1792.1			(53.2)	
			y=				λ	157 49	30.18452	869.3			(858.8)	
	HEEIA, 1872	Quad 211573 P. 1006	x=				φ	21 26	52.95421	1628.6			(216.7)	
			y=				λ	157 49	31.36004	903.0			(824.6)	
			x=				φ							
			y=				λ							
			x=				φ							
			y=				λ							
COMPUTED BY	A. C. Rauck, Jr.		DATE	1/09/76			COMPUTATION CHECKED BY	F. Mauldin	DATE	1/10/76				
LISTED BY	A. C. Rauck, Jr.		DATE	1/07/76			LISTING CHECKED BY	F. Mauldin	DATE	1/07/76				
HAND PLOTTING BY	David Butler		DATE	1/28/76			HAND PLOTTING CHECKED BY	J. Roderick	DATE	1/28/76				

COMPILATION REPORT

TP-00719

31. DELINEATION:

Delineation was by the Wild B-8 stereoplotter, using 1:15,000 scale and 1:30,000 scale panchromatic photography. Coverage and quality were adequate.

The 1:30,000 scale photography was used to delineate offshore details not covered by the 1:15,000 scale photographs.

32. CONTROL:

See the Photogrammetric Plot Report, dated December, 1975.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are not applicable to the project. Drainage was delineated by office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS:

The shoreline and all alongshore details were delineated by office interpretation of the photographs.

36. OFFSHORE DETAILS:

Many offshore coral reefs were compiled to be verified by the hydrographer. The coverage and quality of photography was adequate.

37. LANDMARKS AND AIDS:

Appropriate copies of Forms 76-40, Landmarks and Nonfloating Aids to Navigation, were forwarded to the field editor and hydrographer.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

See ~~the~~ Form 76-36B, Item #5 of this Descriptive Report concerning junctions. A.L.S.

40. HORIZONTAL AND VERTICAL ACCURACY:

No Statement.

46. COMPARISON WITH EXISTING MAPS:

A comparison has been made with USGS Quadrangle KANEOHE, HAWAII, scale 1:24,000, dated 1968.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison has been made with Chart 19359, scale 1:15,000, dated September 28, 1974, 6th edition.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

Albert C. Rauck, Jr. For
David P. Butler
Cartographic Aid
January 28, 1976

Approved:

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

April 20, 1978

11

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7215 (Kaneohe Bay, Hawaii)

TP-00719

Ahu o Laka Island (The Sand Bar)	Keaahala Stream
Heeia	Kealohi Point
Heeia Kea Small Boat Harbor	Kekepa Island (Turtle Rock)
Heeia Pond	Kokokahi
Heeia Stream	Mokapu Peninsula
Kahaluu	Moku o Loe Island (Coconut Island)
Kahaluu Landing	Pacific Ocean
Kahaluu Pond	Pohakea
Kaneohe	Puohala Village
Kaneohe Bay	Puu Maelieli
Kaneohe Stream	Puu Pahu
Kapapa Island	Waiahole Stream
Kawa Stream	

Approved by:


Charles E. Harrington, C3x8
Chief Geographer

PHOTOGRAMMETRIC OFFICE REVIEW
TP - 00719

2

1. PROJECTION AND GRIDS LON	2. TITLE LON	3. MANUSCRIPT NUMBERS LON	4. MANUSCRIPT SIZE LON
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY LON	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) LON		7. PHOTO HYDRO STATIONS NA
8. BENCH MARKS NA	9. PLOTTING OF SEXTANT FIXES NA	10. PHOTOGRAMMETRIC PLOT REPORT LON	11. DETAIL POINTS LON
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE LON	13. LOW-WATER LINE LON	14. ROCKS, SHOALS, ETC. LON	15. BRIDGES LON
16. AIDS TO NAVIGATION ALS	17. LANDMARKS LON	18. OTHER ALONGSHORE PHYSICAL FEATURES LON	19. OTHER ALONGSHORE CULTURAL FEATURES LON
PHYSICAL FEATURES			
20. WATER FEATURES LON	21. NATURAL GROUND COVER NA		22. PLANETABLE CONTOURS NA
23. STEREOSCOPIC INSTRUMENT CONTOURS NA	24. CONTOURS IN GENERAL NA	25. SPOT ELEVATIONS NA	26. OTHER PHYSICAL FEATURES LON
CULTURAL FEATURES			
27. ROADS LON	28. BUILDINGS LON	29. RAILROADS LON	30. OTHER CULTURAL FEATURES LON
BOUNDARIES			
31. BOUNDARY LINES NA		32. PUBLIC LAND LINES NA	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES LON	34. JUNCTIONS LON		35. LEGIBILITY OF THE MANUSCRIPT LON
36. DISCREPANCY OVERLAY LON	37. DESCRIPTIVE REPORT LON	38. FIELD INSPECTION PHOTOGRAPHS NA	39. FORMS LON
40. REVIEWER L. O. Neterer, Jr.		SUPERVISOR, REVIEW SECTION OR UNIT Albert C. Rauck, Jr.	
1/29/76			
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			

NOAA FORM 76-35

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

DESCRIPTIVE REPORT

Type of Survey FIELD EDIT: KANEHOE BAY
Job No. CM 7215 Map No.
Classification No. Edition No.

LOCALITY

State HAWAII
General Locality OAHU
Locality KANEHOE BAY
.....

19 76 TO 1976

REGISTRY IN ARCHIVES

DATE

FIELD EDIT: KANEONE BAY

OPR-419-RA-76

MANUSCRIPT NO. TP-00718-00720

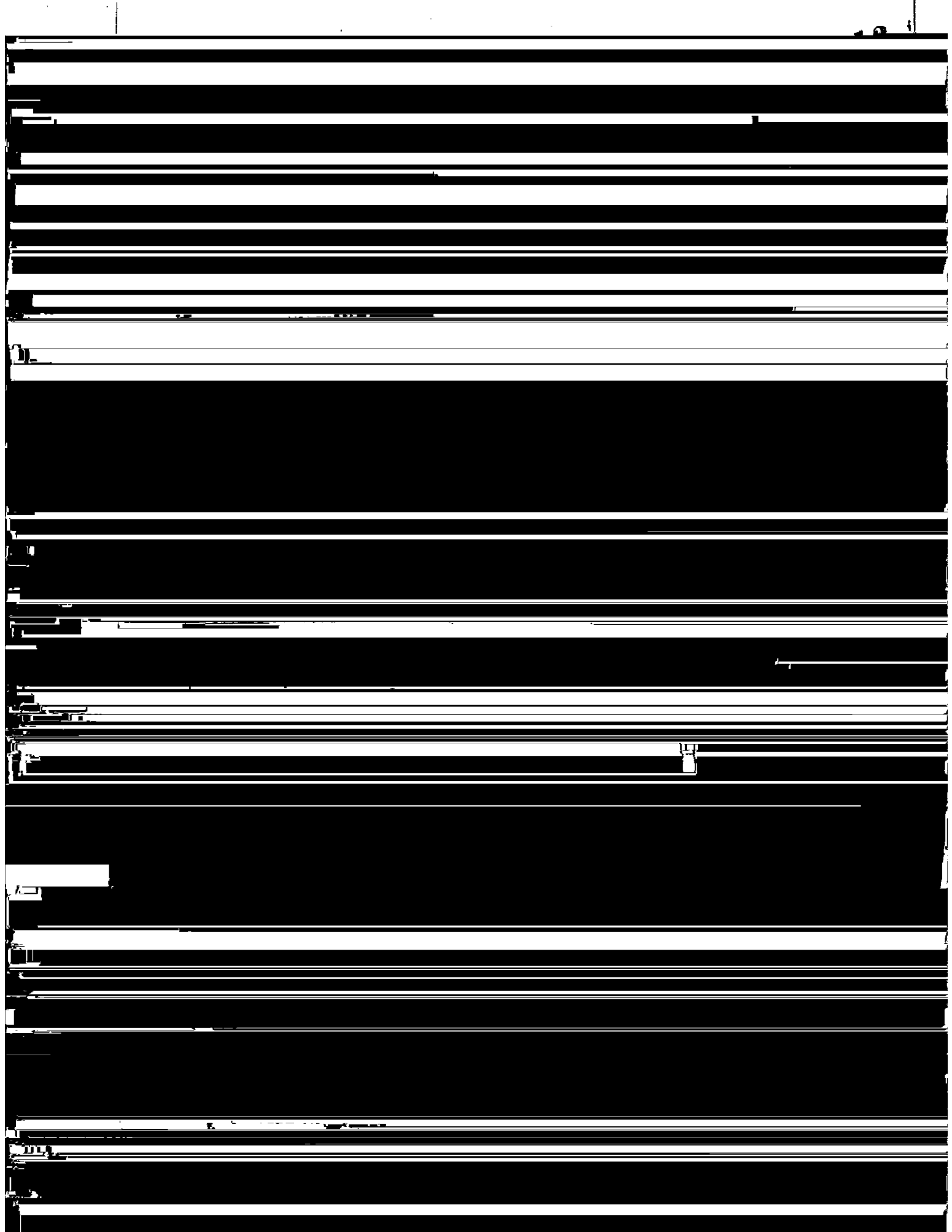
CHARLES K. TOWNSEND
CDR., NOAA
COMMANDING OFFICER

INTRODUCTION AND METHODS

Field Edit for the RAINIER's spring project, OPR-419-RA-76 began March 1st and was completed April 15, 1976. Normally only one field unit performed field edit but on occasion, early in the project, two field units operated simultaneously. The field edit was accomplished by walking, driving GSA vehicles, and in RAINIER skiffs. Field edit is complete and thorough for the three manuscripts that cover Kaneohe Bay.

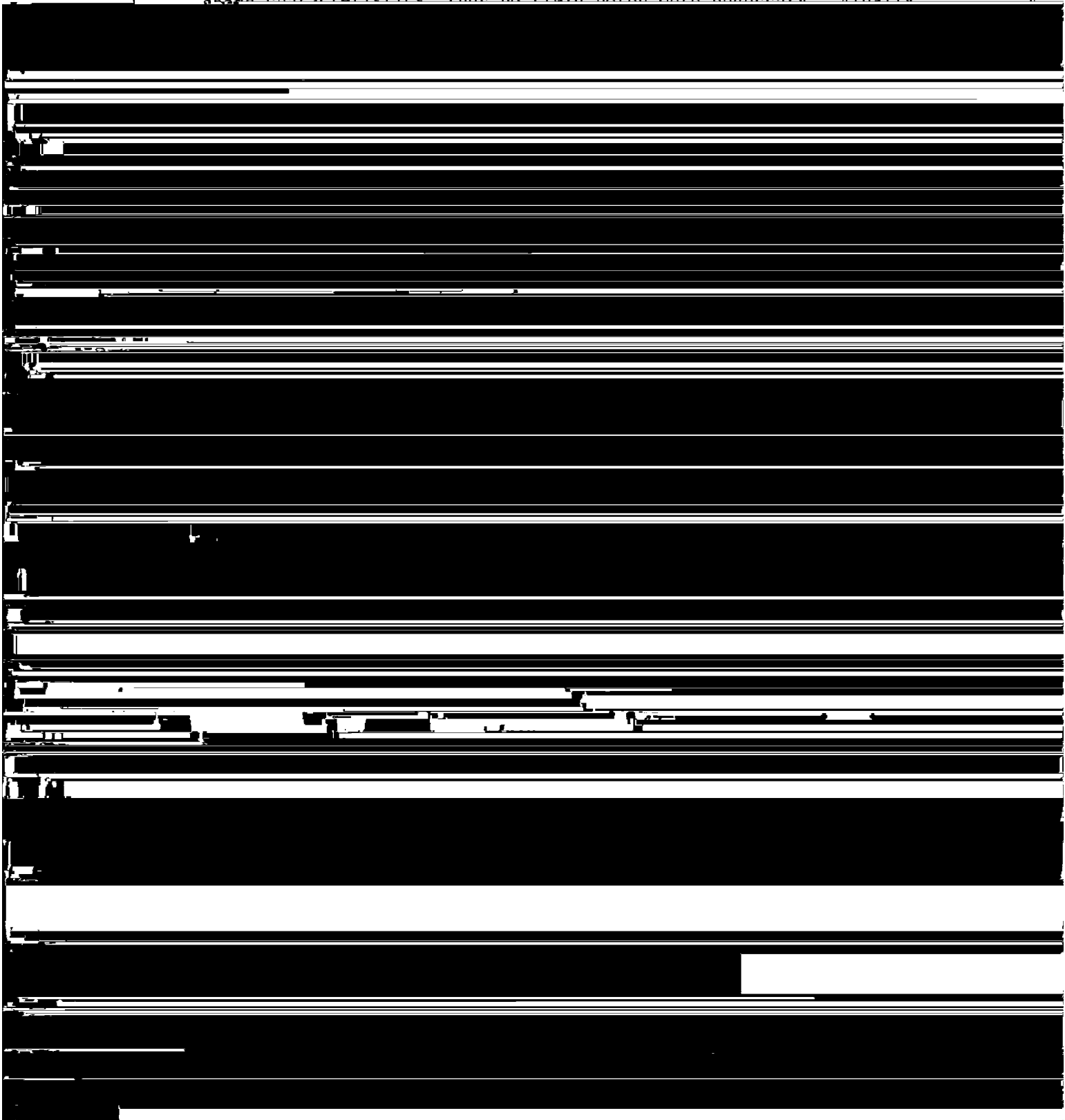
Field Edit operations began first in south Kaneohe Bay area on T-Sheet TP-00720 in order to facilitate commencement of hydrographic operations there. Simultaneous with these operations, field edit was begun at the southern edge of T-Sheet TP-00718 and moved northward to completion. After completing the initial photogrammetric support for hydrography on TP-00720, field edit progressed on this sheet around Mokapu Peninsula to the limits of the manuscript. Finally, the field work at the junction of TP-00720 & TP-00719 was undertaken and this work moved north to the junction with TP-00718. Questions from the Master Field Edit Sheets requiring geodetic locations were accomplished on all T-Sheets at the outset of the field edit.

All deletions, additions, and corrections to the final shoreline manuscript appear on the Master Field Edit Sheets and on the processed cronapaque photographs. The Master Field Edit Sheets are indices of all field edit work carried out. All discrepancies and questions listed on the Master Field Edit Sheet and film and paper ozalids are completely and thoroughly answered on the Master. Proper references are included. Special violet ink field notes on



the pipe be retained in its present location.

The region of piers and rip-rap beach between Latitudes $21^{\circ} 31' 15''$ and $21^{\circ} 32' 00''$ was inaccurately compiled. The shoreline is correct, however in the lower portion of this latitude span, the piers are in actuality rock groins extending approximately 8 feet out from the MHWL. The upper portion of this latitude span shows no discrepancies in either shoreline compilation or foreground characteristics, thus no field notes were necessary. Finally



small boat channel which is cut or dredged through coral reef at approximate position $21^{\circ} 27' 25''$ N, $157^{\circ} 49' 40''$ W. These fixed ruins appear from their location to mark the channel. Their fixed nature warrants charting, and they can be used as an aids to navigation in this area.

The "T" shaped object at the far northern tip of Kahaluu Landing is in actuality a sea wall that has been filled, landscaped, and has a boat landing and covered storage added on its western side. The whole structure is a major portion of a large estate on the point. A small earth filled and landscaped circular seawall that can be interpreted as an island was located and verified 20 meters to the west of the tip of the "T".

A large foul area, within the limits of the main shoreline reef, was verified at approximate location, $21^{\circ} 28' 34''$ N, $157^{\circ} 50' 45''$ W. There are numerous small rocks baring, awash, and submerged within the limits defined on the Master Field Edit Sheet. An acceptable number were photo identified, and form an outline for the foul area. Further to the northeast, along the shoreline, a rocky region awash was verified seaward from a point of land just to the right of a stream outflow, at approximate position $21^{\circ} 29' 15''$ N, $157^{\circ} 50' 45''$ W.. This presents a hazard to small boat navigators who presently moor a short distance up the stream. Small skiffs were observed tied up in the stream, but none were seen to actually make the transit past the rocky region awash.

The Master Field Edit Sheet position of Ahu-O-Laka Island, $21^{\circ} 28' 19''$ N, $157^{\circ} 49' 10''$ W, is grossly inaccurate. Three point sextant fixes were taken at high tide at the water line of Ahu-O-Laka and another island off the tip of the Kaneohe Marine Corps Air Station runway. Geographic positions were computed for each sextant fix. Ahu-O-Laka is actually two small sand islands at high water and is situated in the center of a large sandy reef area. The region between the two portions of island is submerged 1 to 2 feet at high tide. The island near the MCAS runway does not cover as extensive an area as is shown on the Master Field Edit Sheet or on the existing chart. Representative 3 point sextant fixes were also taken on Kapapa Island to verify its geographic position and that of the ledge on the western tip of the island. For further information refer to the Master Sheet and to the "Separates Following the Text".

All Aero Obstructions Lights as well as other non-floating aids to navigation and landmarks that required information as per instructions in the notes to the field editor have been completely answered. Refer to the Master Field Edit Sheet and to the "Separates Following the Text" for position information and Form 76-40's. For a more detailed discussion of survey methods used for location, Horizontal Control Report: Kaneohe Bay, OPR-419-RA-76, can be referenced.

On TP-00719 as on TP-00718, the reef delineation showed good agreement when manuscript and photography were compared.

For further information on the coral reef survey methods used for delineation, refer to Descriptive Reports: H-9593 and H-9594, OPR-419-RA-76.

TP-00720: Shoreline verification began by ENS OSBORN and Mr. MELBY at the tip of the Kaneohe MCAS runway. First priority was to finish the inside bay shore to the junction with TP-00719. Once this was accomplished, field edit continued around the northern shoreline past Pyramid Rock and around Mokapu Point, then southward to the manuscript limits in Kailua Bay at approximate position $21^{\circ} 25' 25''$ N, $157^{\circ} 44' 48''$ W. Field edit is complete on this manuscript.

The mooring pier at Kaneohe Bay Yacht Club at Latitude $21^{\circ} 25' 15''$ N, $157^{\circ} 46' 15''$ W is back with earth that is grown over. The MHWL was verified along this pier and is noted on the Master Field Edit Sheet. It should be charted as shown.

Two small islands that previously were not charted or compiled were verified to exist along the eastern shore of the inner bay region. The approximate locations are 1) $21^{\circ} 25' 28''$, $157^{\circ} 46' 04''$ W and 2) $21^{\circ} 25' 14''$ N, $157^{\circ} 46' 05''$ W. Both are earth in composition with small mangrove growths. They should not however be considered as mangrove islands.

A small boat wreck was discovered and verified in the small bay that comprises the Marine Corps Air Station Marina, at approximately $21^{\circ} 26' 35''$ N, $157^{\circ} 45' 52''$ W. It is in very shallow water and appears to be no serious danger to navigation in the Marina. It should however, be charted for completeness.

The waters north of Pali Kilo are an extremely heavy surf zone. Boat investigations here were inconclusive due to the areas inaccessibility. The region was visually inspected from the shoreline south of Pyramid Rock where the height gave a good vantage point. A breaker and foul area was outlined from this vantage point. The region is extremely foul with submerged rocks and boulders. It should be charted as such. This area is a definitely a dangerous area for all vessel traffic. Survey operations could not be undertaken due to its foul and dangerous nature.

All the shoreline surrounding Ulupau Crater is foul with ledges baring and awash plus regions of beach and rock shoreline. Specific rocks in the entire region were adequately searched for and either not found or not photographically identified. It is recommended that the ledges identified on the Master Field Edit Sheet and cronapague photographs be charted and that specific rocks be retained. It is believed that they are portions of the ledges that extend the highest above the waterline.

A sewer outfall is under construction on the eastern shore of the Mokapu Peninsula at approximate position $21^{\circ} 27' 12''$ N, $157^{\circ} 43' 40''$ W. For final information on its position for charting purposes contact LT Robert Braddock, Assistant Public works Officer, Kaneohe, M.C.A.S., Phone 808-257-2521. The outfall will be of definite landmark value for both large and

small scale charts of Oahu and the northern islands in general.

All non-floating aids to navigation and landmarks for charts have been thoroughly researched and answered for this manuscript. For further information, refer to the Master Field Edit Index and the "Separates Following the Text". Reference the Horizontal Control Report; Kaneohe Bay, OPR-419-RA-76, for a discussion of the geodetic surveying techniques used for location of aids and landmarks.

Except for a small discrepancy at approximate position $21^{\circ} 26' 15''\text{N}$, $157^{\circ} 45' 37''\text{W}$ that is noted on the Master Field Edit Sheet and referenced photograph, the coral reef delineation shows good agreement with actual field observations. For further reef information, reference Descriptive Report: H-9593, OPR-419-RA-76.

ADDITIONAL INFORMATION

Visual Hydrography and photo located signals were a necessary part of the Kaneohe Bay portion of OPR-419-RA-76 to obtain adequate reef delineation in regions too shallow for electronic survey craft. Separate film ozalids for photogrammetrically located signals have been submitted. Information contained on the ozalids are: the number of the signal on the Master List, the photographs used for each ray transferred, and a reference to the "Separates Following the Text", PHOTO SIGNAL COMPUTATIONS. Field computations such as: the meters forward and backward that were scaled, conversion to seconds, and latitude and longitude computations will be found in these separates. Signal locations are listed on the Master Field Edit Sheet, and referenced to the Photo Signal Film Ozalid.

DATA PROCESSING

Position information for the Ahu-O-Laka, Runway, and Kapapa Island location was logged in visual hydrographic format and punched on paper tape. Geographic positions were computed using the ships PDP8/e computer. Data being submitted include visual master and corrector tapes for automated plotting, printouts of the tapes, and printouts of the geographic position computations for each 3 point sextant fix taken. A list of computer programs used follows:

RK 300 UTILITY COMPUTATIONS
Version 2/10/76

AM 602 "ELINORE" (EXTENDED LINE ORIENTED EDITOR)
Version 5/22/76

RECOMMENDATIONS

Hydrographic survey data must be used in conjunction with photographic analysis to obtain coral reef delineation. "Walk Hydro" was done over each reef to obtain sounding coverage, and

electronic survey vessels circled and transversed reefs to the extent that was permitted by safety. Coupling the two information sources will not only give excellent delineation but will facilitate the development of adequate depth curves along the steeply sloping sides of the reefs.

Photograph quality was generally very good. Clarity and contrast facilitated good identification for shoreline verification and photo identification of visual signals. Coverage was lacking in some areas however. Excessive area gaps between certain photograph pairs forced six(6) visual signals to be located with only two positioning rays. There were three areas where lacking coverage existed. The first which has already been discussed earlier in this report was the lack of photo coverage for the islands in central Kaneohe Bay. The second was the North-South shoreline on TP-00718. A change in Hydrographic Project Instruction's project limits eliminated the need for photo picked signals in this area. Signals 310 and 316 were picked on the upper limits of TP-00719 using only two rays and they form the boundary of another region of limited coverage. When photo picking with two rays, every attempt was made to locate signals that were easily identifiable and provided strong intersection for the positioning rays. This was accomplished in all cases. However, it is recommended that either future photographs taken be provided for field work, especially, where photo identified signals are going to be used for hydrography.

Respectfully submitted:

John C. Osborn Jr.

John C. Osborn Jr.
ENS., NOAA

TYPE OF ACTION
OBJECTS INSPECTED FROM SEAWARD
POSITIONS DETERMINED AND/OR VERIFIED
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES
OFFICE 1. OFFICE IDENTIFIED Enter the number a day, and year) of identify and locat EXAMPLE: 75E(C)60 8-12-75
FIELD 1. NEW POSITION DETERMINED Enter the applicable F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection
A. Field positions location and date EXAMPLE: F-2-60 8-12-75
*FIELD POSITIONS are determined based on entire

Replaces C&GS Form 567.

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

LANDMARKS FOR CHARTS

☒ TO BE CHARTED (Field Party, Ship or Office)		REPORTING UNIT <i>Coastal Mapping Div.</i>		STATE <i>HAWAII</i>	LOCALITY <i>Kaneohe Bay, Oahu</i>	DATE <i>June 1978</i>	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 REVISED		☐ TO BE DELETED		The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.				
OPR PROJECT NO. <i>419</i>	JOB NUMBER <i>CM-7215</i>	SURVEY NUMBER <i>TP-00719</i>		DATUM <i>Old Hawaiian</i>		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED <i>19359</i>

OPR PROJECT NO.		JOB NUMBER	SURVEY NUMBER	DATUM	Old Hawaiian				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	CM-7215	TP-00719	419	POSITION				OFFICE	FIELD	
					LATITUDE		LONGITUDE				
					° /	D.M. Meters	° /	D.P. Meters			
AERO	F.R. Obst. Lt.				21 25	49.887	157 47	45.079		F-3-6-L March 1976	19359
AERO	F.R. Obst. Lt.				21 25	32.733	157 47	46.732		"	"
AERO	F.R. Obst. Lt.				21 26	11.660	157 47	26.090		"	"
AERO	F.R. Obst. Lt. (Outside map project limits)				21 24	27.800	157 46	29.680		"	"
AERO	F.R. Obst. Lt. (Outside map project limits)				21 24	855	157 46	855		"	"
AERO	F.R. Obst. Lt.				21 24	23.611	157 46	51.399		"	"
AERO	F.R. Obst. Lt.					58.926		22.813		"	"
AERO	F.R. Obst. Lt.				21 26	1812	157 49	657		"	"
AERO	F.R. Obst. Lt.				21 27	23.997		01.112		"	"
AERO	F.R. Obst. Lt.				21 27	738	157 50	32		"	"
AERO	F.R. Obst. Lt.					18.299		58.451		"	"
AERO	F.R. Obst. Lt.				21 27	563	157 49	1683		"	"
AERO	F.R. Obst. Lt.					08.550		51.877		"	"
AERO	F.R. Obst. Lt.				21 27	263	157 49	1494		"	"
AERO	F.R. Obst. Lt.				21 27	00.814	157 49	39.909		"	"

TYP

OBJECTS INSPECT

POSITIONS DETERM

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AND REVIEW GROU
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*FIELD PO
vations

Replaces C&GS Form 567.

NONFLOATING AIDS [REDACTED] 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 (If field party, ship or office) Coastal Mapping Div., Rockville, Md.	STATE HAWAII	LOCALITY Kaneohe Bay, Oahu	DATE June 1978	☐ PHOTO FIELD PARTY ☐ COMPILATION ACTIVITY ☐ FINAL REVIEWER ☒ QUALITY CONTROL & REVIEW GRP. ☐ COAST PILOT BRANCH
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The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.
(See reverse for responsible personnel)

The following objects HAVE ☒ HAVE NOT ☐ been inspected from serial

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM	METHOD AND DATE OF LOCATION (See instructions on reverse side)	CHARTS
419	CM-7215.	TP-00719	Old Hawaiian POSITION		

POSITION

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	LATITUDE		LONGITUDE		OFFICE	FIELD	AFFECTED
		°	'	°	'			
		°	'	°	'			
				D.M. Meters	D.P. Meters			

DESCRIPTION

Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses.

LIGHT	Kaneohe Passage Range Front Light	21 26	16.558	157 48	28.010	74 TNHY 3284 Dec. 3, 1974	F-3-6-L March 1976	19357 19359
LIGHT	Kaneohe Passage Range Rear Light	21 26	05.143	157 48	37.298	74 TNHY 3284 Dec. 3, 1974	" "	" "
1/2 NAUT. ML. RANGE MARK	Pole with Sign, South Front Range	21 25	23.837	157 46	30.768		" "	19359

[illegible]

OBJECTS INSPE	
POSITIONS DET	
FORMS ORIGIN AND REVIEW G ACTIVITIES	
OFFICE I. OF	
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*FIELD vation	

REVIEW REPORT
TP-00719

SHORELINE

April 17, 1978

61. GENERAL STATEMENT:

See Summary, page 6 of this Descriptive Report.

In some instances the field editor indicates the existence of apparent shoreline with a single leader drawn to a point on the shoreline. He also failed to give the back limits of marsh and mangrove areas. The office compiler was required, therefore, to determine the extent of these features by interpreting the photographs.

The mean lower low water line shown on the Class I map was removed during final review. These lines were copied from boatsheets supplied by Pacific Marine Center. There were differences between the shapes of these lines (zero curves) and the image of offshore features visible on the photographs.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not Applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Not Applicable.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with H-9593 (RA-10-1-76) and H-9594 (RA-10-2-76). No significant differences were found.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart 19359, 1:15,000 scale, 6th edition dated September 24, 1974. The position and shape of the shoreline in several small areas is significantly different on the chart than on the map. The position and shape of all offshore islands with the exception of Moku O Loe Island are different on the chart than on the map. There is a break in the dike or wall around Heeia Pond. A pond and pier ruins shown on the chart near lat. $21^{\circ}25.6'$, long. $157^{\circ}48.2'$ are not visible on the photographs.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

Submitted by:

A. L. Shands

A. L. Shands
Final Reviewer

Approved for forwarding

Bill H. Barnes

for Jeffrey G. Carlen, Cdr.
Chief, Coastal Mapping Division, AMC

Approved:

Bill H. Barnes

Chief, Photogrammetric Branch

John D. Perreault Jr.

J. Carlen
Chief, Coastal Mapping Division