

TP-00820

TP-00820

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00820	Edition No. 1
Job No. CM-7412	
Map Classification FINAL MAP - FIELD EDITED	
Type of Survey SHORELINE	
LOCALITY	
State ALASKA	
General Locality COOK INLET, EASTSIDE CAPE KASLOF TO BARREN ISLANDS	
Locality KOYUKTOLIK BAY	
JULY 19 75 TO JUL 19 80	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY		SURVEY TP. <u>00820</u>	
DESCRIPTIVE REPORT - DATA RECORD				<input checked="" type="checkbox"/> ORIGINAL		MAP EDITION NO. <u>(-1)</u>	
				<input type="checkbox"/> RESURVEY		MAP CLASS <u>FINAL</u>	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, AMC, Norfolk, Virginia				<input type="checkbox"/> REVISED		JOB <u>RM-CM-7412</u>	
				LAST PRECEDING MAP EDITION			
OFFICER-IN-CHARGE				TYPE OF SURVEY		JOB <u>PH-</u>	
Roy K. Matsushige				<input type="checkbox"/> ORIGINAL		MAP CLASS <u></u>	
				<input type="checkbox"/> RESURVEY		SURVEY DATES:	
				<input type="checkbox"/> REVISED		19 <u></u> TO 19 <u></u>	
I. INSTRUCTIONS DATED							
1. OFFICE				2. FIELD			
Aerotriangulation - North Sect. Oct. 6, 1975				Premarking May 6, 1975			
Compilation - North Sect. May 3, 1976							
Compilation - Amend I Aug. 17, 1976							
Aerotriangulation - South Sect. Oct. 4, 1976							
Compilation - South Sect. Aug. 2, 1979							
Compilation - Amend II Jan. 14, 1977							
Compilation - Supp. March Sept. 27, 1976							
II. DATUMS							
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN				OTHER (Specify)			
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER				OTHER (Specify)			
<input type="checkbox"/> MEAN LOW-WATER							
<input checked="" type="checkbox"/> MEAN LOWER LOW-WATER							
<input type="checkbox"/> MEAN SEA LEVEL							
3. MAP PROJECTION				4. GRID(S)			
Transverse Mercator				STATE <u>Alaska</u>		ZONE <u>4</u>	
5. SCALE				STATE		ZONE	
1:20,000							
III. HISTORY OF OFFICE OPERATIONS							
OPERATIONS				NAME		DATE	
1. AEROTRIANGULATION BY				B. Thornton		Jan. 1977	
METHOD: Analytic South Sect. LANDMARKS AND AIDS BY				J. Perrow, Jr.		Jan. 1977	
2. CONTROL AND BRIDGE POINTS PLOTTED BY				B. Thornton		Jan. 1977	
METHOD: Coradomat CHECKED BY				J. Perrow, Jr.		Jan. 1977	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY				R. Kravitz		Aug. 1979	
COMPILATION CHECKED BY				F. Mauldin		Aug. 1979	
INSTRUMENT: Wild B-8				None			
SCALE: 1:20,000				None			
4. MANUSCRIPT DELINEATION PLANIMETRY BY				R. Kravitz		Aug. 1979	
CHECKED BY				F. Mauldin		Sept. 1979	
METHOD: Smooth drafted and graphic				None			
SCALE: 1:20,000				None			
HYDRO SUPPORT DATA BY				R. Kravitz		Aug. 1979	
CHECKED BY				F. Mauldin		Sept. 1979	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY				F. Mauldin		Sept. 1979	
6. APPLICATION OF FIELD EDIT DATA BY				L. Williams		Oct. 1981	
CHECKED BY				C. Blood		Mar. 1982	
7. COMPILATION SECTION REVIEW BY				C. Blood		Mar. 1982	
8. FINAL REVIEW BY				J. Byrd		May 1985	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				J. Byrd		Nov 1985	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY				P. Dempsey		Mar 1986	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				E. DAUGHERTY		MAY 86	

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

TP-00820

## COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild R.C. - 8" E 152.71 mm Wild R.C. - 10" C 152.74 mm		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE	<input checked="" type="checkbox"/> STANDARD
<input checked="" type="checkbox"/> PREDICTED TIDES <input checked="" type="checkbox"/> REFERENCE STATION RECORDS <input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				Alaska	<input type="checkbox"/> DAYLIGHT
				MERIDIAN	150th
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
75C(C) 7220-7225#	Aug. 3, 1975	11:49	1:60,000	9.7 ft. above MLLW	
75E(I) 0553-0558*	Jul. 8, 1975	14:05	1:30,000	13.18 ft. above MLLW	
75E(I) 0561-0568*	Jul. 8, 1975	14:16	1:30,000	13.05 ft. above MLLW	
75E(I) 0530-0535*	Jul. 8, 1975	13:45	1:30,000	13.35 ft. above MLLW	
75E(I) 0577-0581*	Jul. 8, 1975	14:36	1:30,000	12.58 ft. above MLLW	
75E(I) 0570-0572*	Jul. 8, 1975	14:28	1:30,000	12.72 ft. above MLLW	
75E(I) 0688-0692**	Jul. 9, 1975	09:35	1:30,000	0.79 ft. below MLLW	
75E(I) 0978-0982**	Jul. 10, 1975	10:08	1:30,000	1.48 ft. below MLLW	
75E(I) 0985-0989**	Jul. 10, 1975	10:14	1:30,000	1.20 ft. below MLLW	
76E(I) 4726-4727**	Jun. 27, 1976	09:47	1:30,000	1.00 ft. above MLLW	
76E(I) 4367 **	Jun. 26, 1976	08:38	1:30,000	0.54 ft. above MLLW	

REMARKS A tide gage was observed at Seldovia and tide corrections for Port Chatham applied to the water is 13.5 ft. above MLLW and infrared photographs. The Port Chatham Mean High Mean Tide Range is 12.0 ft.

## 2. SOURCE OF MEAN HIGH-WATER LINE:

\*\* The MHWL was compiled from office interpretation of the above listed 1:60,000 color photographs using stereo instrument methods. Compilation was supplemented by graphic methods using the MHW tide coordinated infrared (ratio) photographs.

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

\*\* The MLLW line was compiled graphically from the above listed tide coordinated MLLW infrared photographs.

## 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-00814			
TP-00816 (1:10,000)	No Survey	TP-00823	No Survey

REMARKS

TP-00820

## HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION (Premarking) ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	June 1975
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby ESTABLISHED BY None PRE-MARKED OR IDENTIFIED BY L. Riggers	June 1975
3. VERTICAL CONTROL	RECOVERED BY N.A. ESTABLISHED BY N.A. PRE-MARKED OR IDENTIFIED BY N.A.	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY None LOCATED (Field Methods) BY None IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY N.A.	

## II. SOURCE DATA

## 1. HORIZONTAL CONTROL IDENTIFIED

Paneled

## 2. VERTICAL CONTROL IDENTIFIED

N.A.

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
75C(C) 7223	ADAM, 1906		
75Z(C) 6751	FLAT ISLAND, 1956		
75C(C) 7220	CROWN, 1906		

## 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)

Project Data - 2 Forms 277 & 1 Form 77-53 (Tides Record Books)  
3 Forms 152 (CSI Cards)

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

TP-00820

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	A. Patrick	July 1980
2. HORIZONTAL CONTROL	RECOVERED BY V. Ross ESTABLISHED BY V. Ross PRE-MARKED OR IDENTIFIED BY None	July 1980 July 1980 July 1980
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 V. Ross LOCATED (Field Methods) BY V. Ross IDENTIFIED BY V. Ross	July 1980 July 1980 July 1980
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input checked="" type="checkbox"/> SPECIFIC NAMES ONLY BY <input type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY C. Hancock	July 1980
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)

NOS - 10 July 75 ER 0978-0982, 0985-0989 NOS 29 June 76 ER 4726,4727  
 NOS - 9 July 75 ER 0688-0692

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

N.A.

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

Field Edit Fix Volume for TP-820 (OPR-P114-FA-80) Vol.1 of 2 4 pages Abstract  
 Field Edit Fix Volume for TP-820 (OPR-P114-FA-80) Vol.2 of 2 Time of Field Edit  
 1 Film Ozalid Signal Overlay 1 Page 76-40 Landmarks  
 1 Master Field Edit Print 1 Pages 76-40 Aids 2 Reports  
 19 each Form 75-82A 1 Page Photogrammetric and Sextant Located Signals  
 1 Page Geodetic Stations-Signal Tape (ASCII)

NOAA FORM 76-36D  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00820  
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	Sept '79	Class III Manuscript	10/17/79	11/16/79
Field edit applied Compilation Complete	Mar '82	Class I Manuscript		
Final Review	May '85	Final Class I Map	Mar 1986	Mar 1986

## II. LANDMARKS AND AIDS TO NAVIGATION

## 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		Mar 1986	Aid for Charts
1		Mar 1986	Landmark for Charts

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: \_\_\_\_\_3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

## III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.  
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 76-40 ~~367~~ 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	

## OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET No.	Sq. Mi.	SHEET No.	Sq. Mi.
TP-00793	7	TP-00810	17
TP-00794		TP-00811	17
TP-00795		TP-00812	
TP-00796		TP-00813	
TP-00797		TP-00814	
TP-00798		TP-00815	
TP-00799		TP-00816	
TP-00800		TP-00820	16
TP-00801			
TP-00802			
TP-00803			
TP-00804			
TP-00805		TP-00823	16
TP-00806			
TP-00807			
TP-00808			
TP-00809			
		TOTAL	195

REVISED 9/23/75 R.W.D.  
6/13/79 L.F.V.

JOB CM-7412

COOK INLET, EAST SIDE  
CAPE KASLOF TO BARREN ISLANDS  
ALASKA

SHORELINE MAPPING  
SCALE 1:5,000-1:10,000-1:20,000

MARCH 1974

SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT

TP-00820

This 1:20,000 Final shoreline map is one of twenty-nine maps designated as project CM-7412, Cook Inlet, East Side, Cape Kasilof to Barren Islands, Alaska.

The purpose of this project was to provide current charting information for nautical chart maintenance and to furnish support data for hydrographic operations. This Final Map portrays the Chugach Islands and Kenai Peninsula west of longitude  $151^{\circ}41'00''$  and from latitude  $59^{\circ}10'00''$  to latitude  $59^{\circ}20'00''$ ; this area includes Port Chatham, Koyuktolik Bay, and Flat Island.

Field work prior to compilation consisted of the recovery and identification of the horizontal control necessary for the aerotriangulation of the project and establishing and monitoring tide gages while the photography was being taken for the tide coordinated infrared photographs. This activity was completed in June 1976.

Photograph coverage was adequately provided by natural color and infrared tide coordinated photographs. The RC-10 (C) camera was used to expose the natural color film required for the 1:60,000 scale aerotriangulation, compilation photographs taken August 1975. The RC-8 (E) camera was used for the infrared black and white 1:30,000 scale photographs taken June 1976. The infrared photographs were used to supplement the color compilation photography.

Analytic aerotriangulation was adequately provided by the Washington Science Center for the south part of the project January 1977. Aerotriangulation operations included ruling the base manuscript and determining ratio values for the infrared photographs.

Compilation, based upon photo interpretation, was performed by the Coastal Mapping Unit at the Atlantic Marine Center in September 1979. Refer to the compilation report, Item #31 and NOAA Form 76-36B for specific usage of the photography.

Field edit was conducted in July 1980 by hydrographic personnel assigned to the NOAA ship FAIRWEATHER. Field edit for this manuscript is complete and was applied to the manuscript by the Coastal Mapping Unit, Atlantic Marine Center in March 1982.

Final review was performed in at the Atlantic Marine Center in May 1985. A Chart Maintenance Print was prepared and forwarded to the Marine Charts Branch.

This Descriptive Report contains all pertinent information used to compile this Final Map. The original base manuscript and all related data were forwarded to the Washington Science Center for final registration.



## FIELD INSPECTION

TP-00820

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification (premarking) of the horizontal control necessary for the aerotriangulation of the project and the monitoring of tide gages for the tide coordinated infrared photographs.

Photogrammetric Plot Report  
Cape Kasilof to Barren Islands

Job CM-7412  
South ~~ART~~  
January 1977

Job index was revised June 13, 1979  
Number of sheets compiled, revised  
March 7, 1984 C.E.B.

Area Covered

The area covered by this report is the south central coastal area of Cook Inlet, Alaska, from ~~Cape Kasilof~~ <sup>Achenak Bay</sup> to Barren Island. This area is covered by ~~seven~~ <sup>six</sup> 1:20,000 scale sheets, ~~eight~~ <sup>ten</sup> 1:10,000 scale sheets, and ~~seven~~ 1:5,000 scale sheets.  
Canceled

Method

Nine strips (four 1:60,000 scale, five 1:30,000 scale) of bridging photography were measured by analytic aerotriangulation methods. The nine strips of bridging photography were controlled by field identified control including some additional points drilled and tied from the 1:60,000 scale photography to the 1:30,000 scale photography where field identified control was inadequate for a satisfactory strip adjustment.

Common points were located on the bridging photography and the tide controlled IR for ratio purposes. Tie points were used in all strips to insure an adequate junction of all strips during the strip adjustments. Ties to the compilation photography were made also.

The manuscripts are being plotted on the coradomat and will be sent upon completion.

Ratios have been ordered for the MHW and MLLW (1-6-77). A copy of this order will be included in this report.

Adequacy of Control

Several stations (Tutka-000158, Halibut Cove Light, Panel - 12101, Table Mtn., Panel-178101) were bad due to snow coverage or other reasons which made it difficult to obtain an adjustment adequate to N.M.A.S.

Strip #1, 76-C(C) 4975 thru 4987 was terminated early when flown, (planned originally to extend from sheet 801 thru 823) which gave us weak and poorly distributed control to properly check and strengthen overlapping strips.

There was a problem with the "C" camera, which was used for several of the bridging strips, that introduced a random error into the strip adjustments. This problem was bypassed by removing the correction values for film distortion in the strip adjustments.

In conclusion, with all the problems encountered and their respective errors introduced into the job, the adequacy of control overall is fair.

#### Supplemental Data

USGS quadrangles were used to provide vertical control for the strip adjustments.

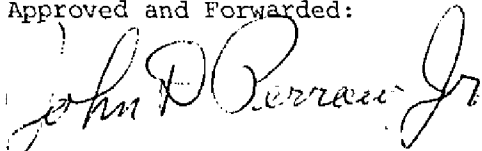
#### Photography

The coverage, overlap and quality of the photography was adequate for the job with the exception of the above mentioned "C" camera.

Submitted by:

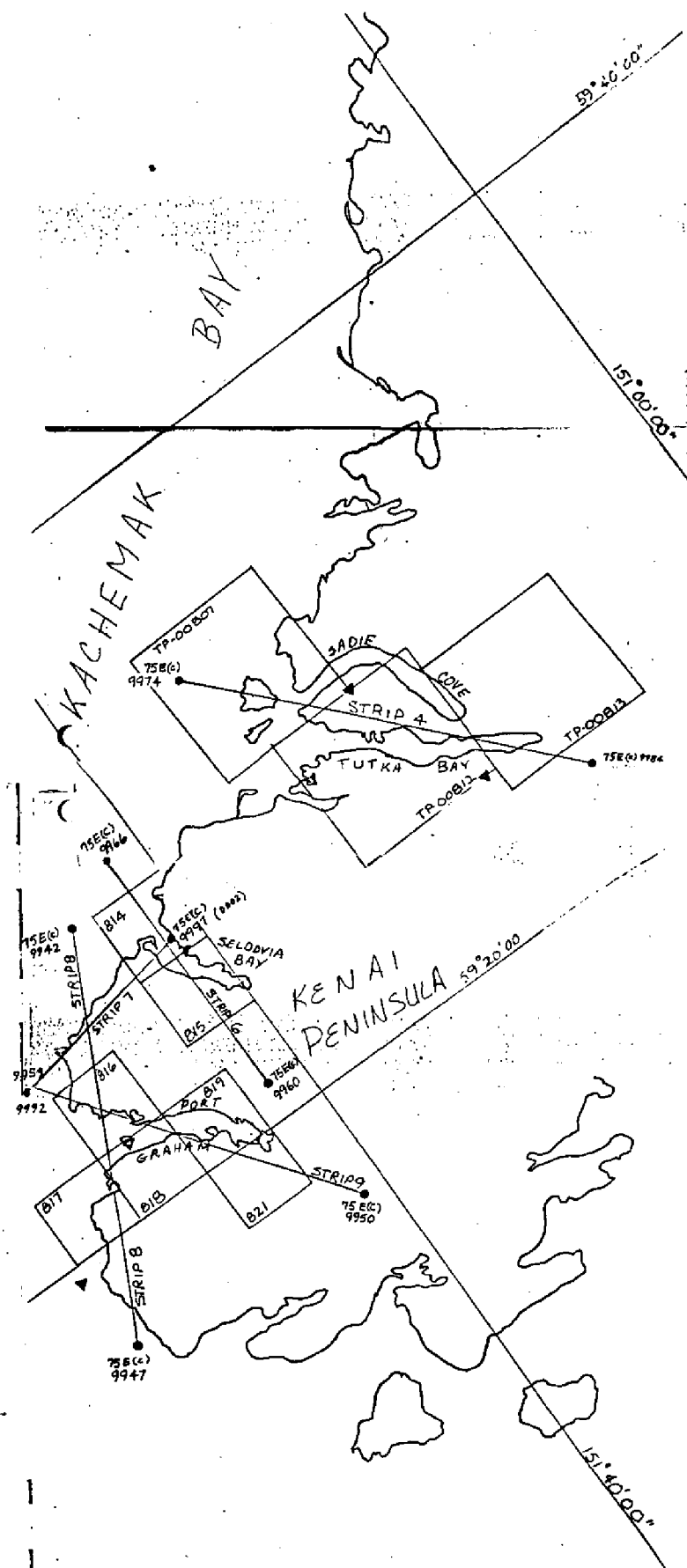
Brian Thornton

Approved and Forwarded:

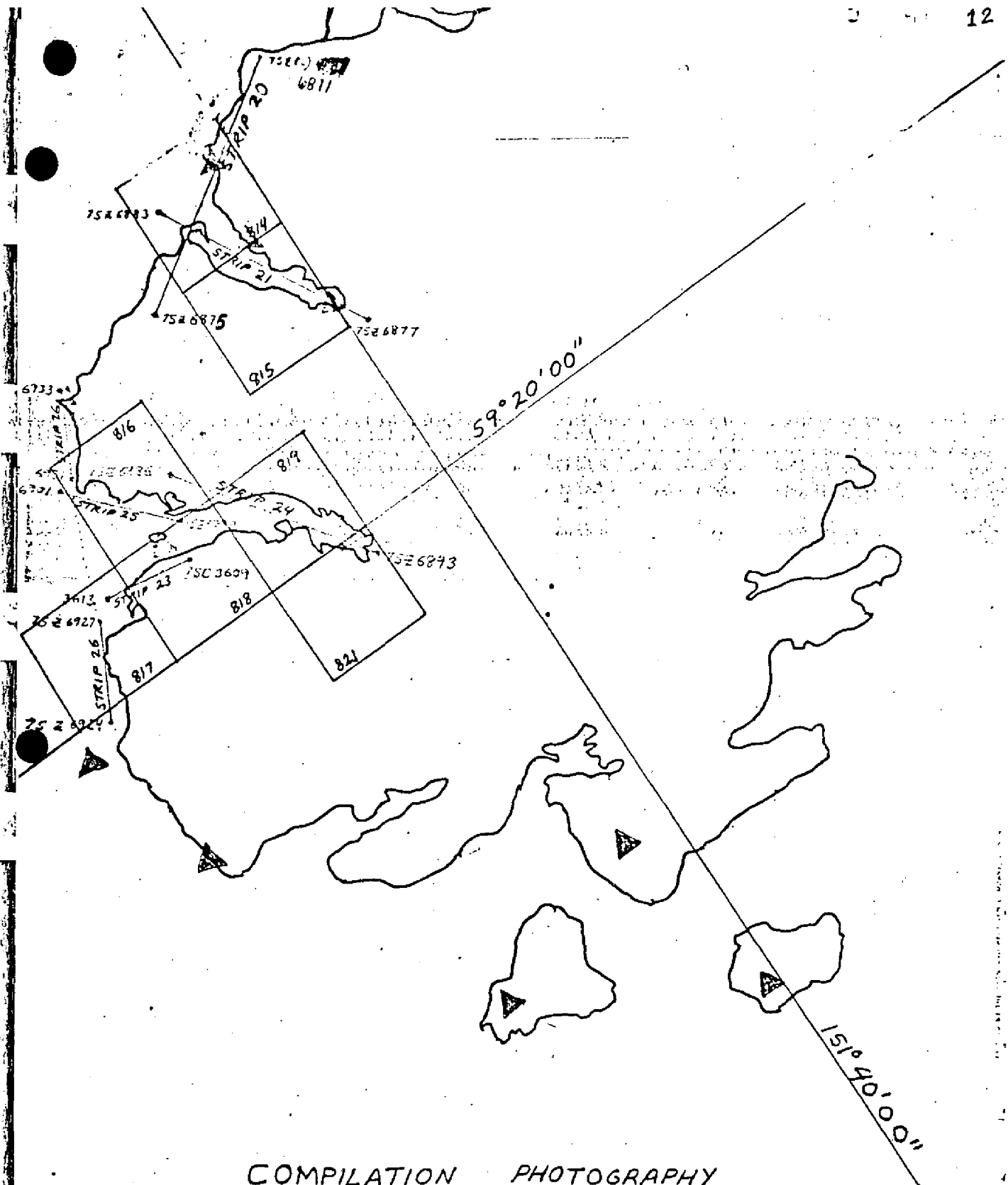


Chief, Aerotriangulation Section

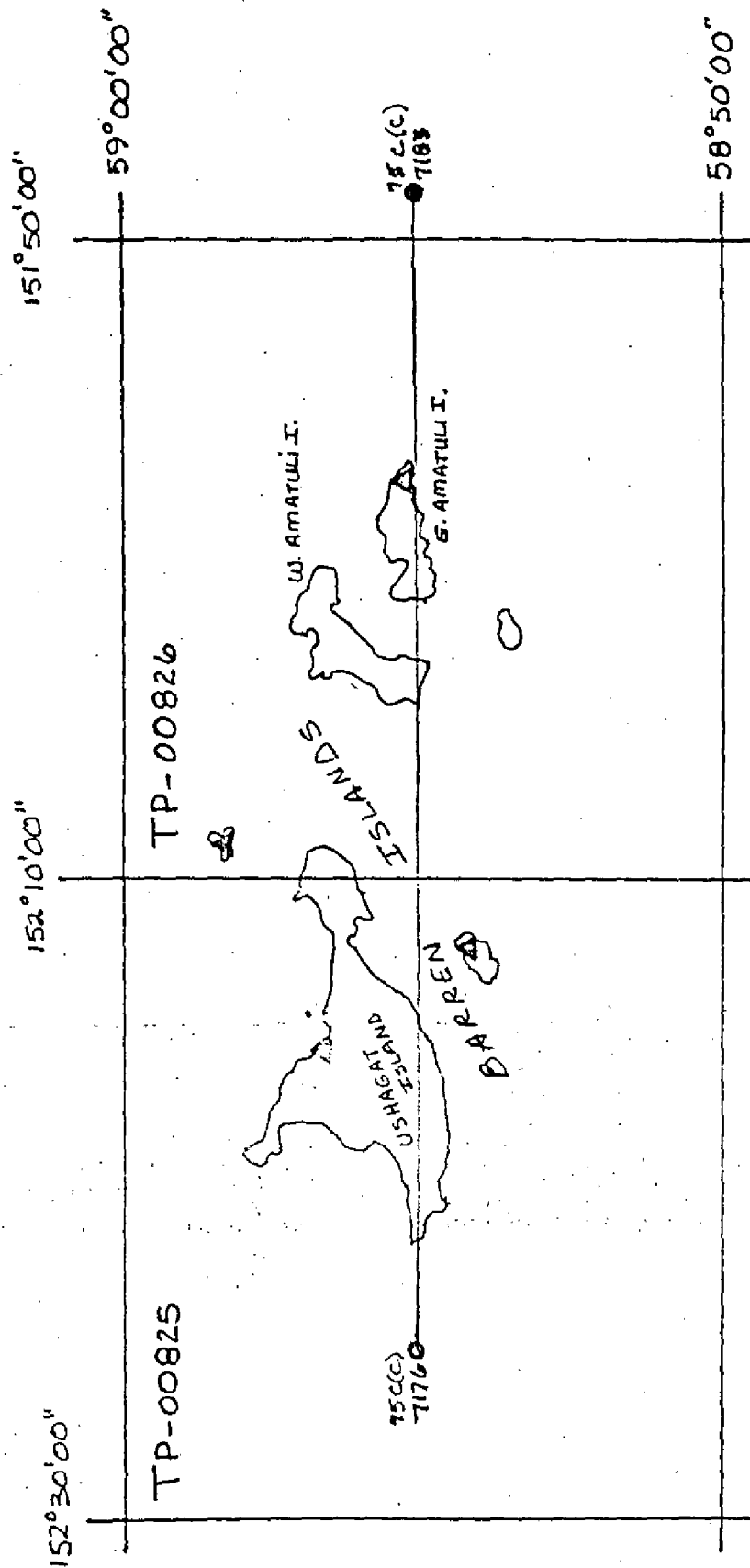
~~BRIDGING PHOTOGRAPHY  
1:60,000~~



BRIDGING PHOTOGRAPHY  
1:30,000



COMPILATION PHOTOGRAPHY  
1:15,000



BRIDGING 1:60,000

1:20,000

STRIP 12

# List and Accuracy of Control Used in Strip Adjustment

x-error y-error

Strip #1

310100 1.092 -.446

307100 -3.443 1.765

12100 .803 -1.021

984100 2.971 -.047

977101 -3.278 -.076

986101 1.253 .431

Strip #10

203100 -.543 -3.777

944100 2.985 4.840

206100 -3.549 -3.305

207100 1.142 5.249

977101 .318 -3.937

12100 -.845 1.438

Strip #12

178101 3.435 2.681

179100 1.047 -3.350

180101 -4.475 1.956

181100 .021 -1.299



# Dist and Accuracy of Control Used in Strip Adjustment

x-error y-error

Strip #11

219101	1.518	.598
221100	-3.964	.647
223100	3.269	-3.324
203100	-.840	2.100

Strip #4

975801	.001	.006
977101	-.001	-.005
985805	.001	-.003

Strip #6

206100	.000	.010
964100	.001	-.011
207100	.006	-.007

Strip #7

992112	-3.929	-1.672
941100	1.088	3.253
964100	-.570	-.973
169	-1.089	-.030

# List and Accuracy of Control Used in Strip Adjustment

4-error

y-error

Strip #8

941100	-1.785	-2.540
944100	1.521	-1.094
203100	-1.481	-.632
203802	1.826	-2.245

Strip #9

955101	-.515	1.133
944100	3.529	2.770
204803	-.118	-.672
204804	1.503	-1.036
204806	-.621	.619

NOAA FORM 76-41 (6-75)		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION									
MAP NO. TP-00820		JOB NO. CM-7412		GEODETIC DATUM N.A. 1927		ORIGINATING ACTIVITY Coastal Mapping Unit, AMC, Norfolk, VA					
STATION NAME		SOURCE OF INFORMATION (Index)		AEROTRI- ANGULATION POINT NUMBER		COORDINATES IN FEET STATE Alaska ZONE 4		GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE		REMARKS	
FLAT ISLAND, 1956	Quad. 59151 Pg. 9	No bridge number		X=	59 19 53.423						
				Y=	151 59 33.865						
FLAT ISLAND LIGHT, 1956	Quad. 59151 Pg. 9	000095		X=	59 19 53.806						
				Y=	151 59 34.030						
POINT BEDES, 1956	Quad. 59151 Pg. 17	000096		X=	59 18 48.527						
				Y=	151 59 13.374						
BEDE, 1908	Quad. 59151 Pg. 2	177		X=	59 18 23.702						
				Y=	151 58 03.751						
ADAM, 1906	Quad. 59151 Pg. 1	No bridge number		X=	59 15 23.50						
				Y=	151 58 25.42						
GAB, 1931	Quad. 59151 Pg. 9	000098		X=	59 12 45.472						
				Y=	151 52 19.508						
CROW, 1931	Quad. 59151 Pg. 6	99		X=	59 12 15.821						
				Y=	151 49 43.688						
CLAIM, 1931	Quad. 59151 Pg. 5	100		X=	59 12 09.757						
				Y=	151 48 48.343						
KELP, 1906	Quad. 59151 Pg. 13	101		X=	59 12 28.049						
				Y=	151 47 57.532						
KEYES, 1906	Quad. 59151 Pg. 13	103		X=	59 13 06.464						
				Y=	151 46 30.362						
COMPUTED BY A. C. Rauck, Jr.		DATE 6/21/76	COMPUTATION CHECKED BY J. R. Minton							DATE Nov. 5, 1976	
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.

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-00820	JOB NO. CM-7412	GEODETTIC DATUM N.A. 1927		ORIGINATING ACTIVITY Coastal Mapping Unit, AMC, Norfolk, VA	
		SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	COORDINATES IN FEET STATE Alaska ZONE 4	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE
SLIP, 1906	Quad. 59151 Pg. 20	105	X=	φ 59 11 34.652	
			Y=	λ 151 45 36.228	
LIZ, 1931	Quad. 59151 Pg. 13	106	X=	φ 59 10 43.692	
			Y=	λ 151 49 18.046	
ON, 1931	Quad. 59151 Pg. 15	107	X=	φ 59 10 30.927	
			Y=	λ 151 50 00.481	
STREAK, 1931	Quad. 59151 Pg. 21		X=	φ 59 11 36.706	
			Y=	λ 151 45 31.963	
PORT CHATHAM WEST BASE, 1906	Quad. 59151 Pg. 17	104	X=	φ 59 13 30.113	
			Y=	λ 151 44 58.363	
PORT CHATHAM MIDDLE BASE, 1906	Quad. 59151 Pg. 17	178	X=	φ 59 13 28.016	
			Y=	λ 151 44 42.154	
PORT CHATHAM EAST BASE, 1906	Quad. 59151 Pg. 17	179	X=	φ 59 13 11.864	
			Y=	λ 151 44 12.795	
CROWN, 1906	Quad. 59151 Pg. 6	220100	X=	φ 59 10 39.549	
			Y=	λ 151 44 08.347	
JACQUELINE, 1980	Field Pos.		X=	φ 59 10 49.430	
			Y=	λ 151 47 58.498	
CHROME, 1980	Field Pos.		X=	φ 59 12 40.244	
			Y=	λ 151 48 21.771	
COMPUTED BY A. C. Rauck, Jr.	DATE 6/21/76	COMPUTATION CHECKED BY J. R. Minton		DATE 11/3/76	
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.

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	CM-7412	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETTIC DATUM		COORDINATES IN FEET		GEOGRAPHIC POSITION		REMARKS
					STATE	ZONE	STATE	ZONE	$\phi$ LATITUDE	$\lambda$ LONGITUDE	
TP-00820						N.A. 1927					
						Alaska	4				
ALBERTA, 1980			Field Pos.					X=	$\phi$	59 10 41.274	
								Y=	$\lambda$	151 45 45.207	
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
								X=	$\phi$		
								Y=	$\lambda$		
COMPUTED BY	A. C. Rauck, Jr.				DATE	6/21/76	COMPUTATION CHECKED BY	J. R. Minton		DATE	11/3/76
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

TP-00820

31 - DELINEATION

Delineation was accomplished by stereo instrument and graphic compilation methods. The Wild B-8 stereoplotter with 1:60,000 scale color bridging photographs was used to delineate alongshore and interior detail, and to locate common image points to graphically control the 1:30,000 scale infrared photography. Supplemental tide coordinated infrared ratio photographs for both MHW and MLLW were used to delineate the MHW and MLLW lines.

All photographs used to compile this map are listed on NOAA Form 76-36B. Photography was adequate.

32 - CONTROL

Horizontal control was adequate. Refer to the Photogrammetric Plot Report, dated January, 1977.

33 - SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

Contours were not applicable to this project.

Drainage was compiled from interpretation of the photographs and delineated by using the Wild B-8 stereoplotter.

35 - SHORELINE AND ALONGSHORE DETAILS

Alongshore details were delineated by the Wild B-8 stereoplotter and by office interpretation of the photographs.

The mean high water line was delineated from the photographs described in item #31.

36 - OFFSHORE DETAILS

Offshore detail was compiled by instrument methods as described in item #31. Dora Reef was not visible on the photographs.

TP-00820

37 - LANDMARKS AND AIDS

Within the limits of this manuscript there was one (1) landmark and one (1) aid. The one aid is a triangulation station.

38 - CONTROL FOR FUTURE SURVEYS

None.

39 - JUNCTIONS

Refer to the Data Record Form 76-37B, item 5.

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to Photogrammetric Plot Report, dated Jan., 1977.

46 - COMPARISON WITH EXISTING MAPS

A comparison has been made with the U.S. Geological Survey Quadrangle:

Seldovia (A-5), Alaska, scale 1:63,360, dated 1953  
Seldovia (A-6), Alaska, scale 1:63,360, dated 1952  
Seldovia (B-5), Alaska, scale 1:63,360, dated 1951  
Seldovia (B-6), Alaska, scale 1:63,360, dated 1953.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison has been made with the following National Ocean Survey charts:

No. 16645, scale 1:82,662, 9th edition, dated Apr. 21, 1973  
NO. 16646, scale 1:20,000, 7th edition, dated Mar. 29, 1975  
No. 16640, scale 1:200,00, 9th edition, dated May 10, 1965.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

TP-00820

Submitted by:



Robert R. Kravitz  
Cartographic Technician  
August 22, 1979

Approved:



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



## ADDENDUM TO COMPILATION REPORT

TP-00820

This 1:20,000 scale manuscript was field edited with rock detail more appropriate for a 1:5,000 scale manuscript.

All the field edited rocks could not be shown at the 1:20,000 scale of this manuscript. Where all the edited rocks could not be shown, only the highest or most offshore rocks are shown.

The MASTER FIELD EDIT PRINT indicates the position of rocks; in most places this is in agreement with the photograph. However some of the rocks were located from photographs or Fix positions which do not agree with the positions indicated on the MASTER FIELD EDIT PRINT.

The most offshore rock off the point south of Koyuktolik Bay, Fix 9523, Fix Volume 1 is rejected with a note "visible on photo". This rock could not be identified on a photograph. If a growth of kelp covers a rock, infrared photographs may not reveal the rock, even though the rock was above the plane of water at the time the photograph was exposed. The fix position is not strong (the check angle was used to locate, with right fix angle, used to check).

Fixes 9524 and 9525 are shown as 9525. The positions are not strong. Only one rock is shown.

The SIGNAL OVERLAY was used to locate fix positions.

All rock heights were determined by the approved tide method. Rocks edited at a time not within the prepared computer readout range, were determined by hand calculation.

A computer readout listing time of each two-tenths foot of tide change was prepared for five zones on this manuscript. Note the negative sign represents a stage of tide above mean lower low water.

North of lat.  $59^{\circ}19'$  Flat Island was used.

North of Lat.  $59^{\circ}14'$  to  $59^{\circ}19'$  and east to Long.  $151^{\circ}52'$  in Koyuktolik Bay, Flat Island reduced with a ratio of .91 was used.

South of lat.  $59^{\circ}14'$  and east to  $151^{\circ}53'$  Flat Island reduced by a ratio of .88 and a time shift of minus 10<sup>minutes</sup> was used.

East of long.  $151^{\circ}53'$  east to long.  $151^{\circ}50'$  Flat Island was reduced with a ratio of .84 and a time shift of minus 15 minutes was applied.

East of long.  $151^{\circ}50'$  Port Chatham was used.

The tide station was not in operation when needed to determine edited rock height above MLLW in Koyuktolik Bay east of long.  $151^{\circ}52'$ . The rocks in this area were calculated by Mr. Mullins of the Datums and

Information Branch by telephone.

Photogrammetric or field survey methods were not indicated to establish the purple dashed line on the MASTER FIELD EDIT PRINT, which is labeled foul with kelp and rocks.

The top of Landmark Bluffs, one on the north, the other on the south side of Koyukloolik Bay, were located by intersection resection method, using photographs 75 E(I) 9080 thru 9082.

The cabin, lat.  $59^{\circ}13.5'$  and long.  $151^{\circ}44.7'$  shown on the enlarged area of Port Chatham on chart 16645, 13th edition, 1980, was verified by the field editor to be a permanent structure. This cabin is not visible on the photographs, and is not shown on the manuscript.

Fix 9559, west of Chrome, shown on the MASTER FIELD EDIT PRINT, is east of the position plotted on the manuscript from the Fix Volume. The JD 198 date was used, not the calendar date, July 15, 1980, in the Fix Volume.

March 22, 1984

## GEOGRAPHIC NAMES

## FINAL NAME SHEET

PH - 7412 (Cook Inlet, East Side - Cape Kasilof to Barren Islands, Alaska)

TP - 00820

Chatham Island

Chrome

Chrome Bay

Chugach Passage

Clam Cove

Cook Inlet

Elizabeth Island

Flat Islands

Kelp Point

Koyuktolik Bay

Magnet Rock

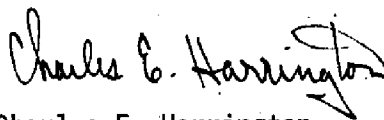
Point Adam

Point Bede

Port Chatham

Portlock

Approved by;

Charles E. Harrington  
Chief Geographer  
Nautical Charting Division

FIELD EDIT REPORT  
TP-0820  
Cook Inlet East Side  
July, 1980

Description

Flat Island at the northern extreme of this sheet is a low grassy island surrounded with rocks, ledges and thick kelp. The coastline from Point Bede to Point Adam and from Koyuktolik (Dogfish) Bay south to Chrome Bay is comparatively straight. Pebble beaches with intermittent areas foul with boulders or ledge outcroppings characterizes this coastline. There are also a number of detached rocks some of which lie well offshore. Thick kelp is found along this shore as much as 0.4 nm offshore. Koyuktolik Bay on the northshore is foul with rocks and kelp. A high bluff here is of landmark value. A wide gravel and pebble beach is found at the head of the bay. A gravel bar has formed here at the outlet to the shallow lagoon which lies east of the bay. To the south inside Chrome Bay and Port Graham there are fewer ledges and boulders but there still exists several large detached rocks and scattered kelp. A temporary logging camp existed in August of 1980 consisting of approximately 20 mobile homes located on the north shore of Port Chatham. The old cannery settlement, Portlock, on the south shore is in ruins and abandoned. High rugged peaks encircle Port Chatham. The north shore of Elizabeth Island, mountainous and uninhabited, and the shoreline south of Port Chatham are composed of beaches foul with boulders, detached rocks and ledges with a wide apron of kelp.

Method

This entire T-sheet was field edited during lower low water. Some areas were investigated at mean high water to determine the mean high water line. Due to the ruggedness of this coastline most of the field edit was conducted from a skiff. Occasionally where features could not be identified from sealevel and when conditions permitted landing, an investigation was performed on foot. Areas of investigation on foot include the beaches between Point Bede and Point Adam, the eastern end of Koyuktolik (Dogfish) Bay and the lagoon, the north shore of Port Chatham, Chrome Bay and the area of the sandy spit on the northeast side of Elizabeth Island where a change in the mean high water line was defined using sextant fixes. Several fixes had to be taken to locate features that were not visible on the photographs. In some instances because of conditions it was not possible to actually occupy the feature so instead a fix was taken at an offset position and an estimated distance and direction to the feature were recorded. Fixes were recorded in two separate volumes. Some fixes were rejected after locating the features on the photographs. Fixes from volume 2 have been transferred to volume 1 so that all retained fixes can be found in a single volume.

Adequacy and Completeness of Compilation

A great amount of the detail along this rugged coast was overlooked by the compiler and had to be added during field edit. A large number of detached rocks had to be located or identified on the photographs. Two areas where changes to the mean high water line are intended, were mistakenly depicted in red ink on the MASTER FIELD EDIT PRINT and on the photographs in Chrome Bay and east of Chatham Island.

Manuscript Accuracy

No formal accuracy tests were conducted. However by comparing photogrammetrically derived positions with sextant fix positions and also judging from the close comparison between fixes and check fixes when using photogrammetric signals, it can be stated that this manuscript is accurate.

Recommendation

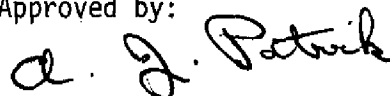
This manuscript after the Field Edit data is applied will be complete, accurate, and acceptable for charting purposes.

Submitted by:



Christopher P. Hancock  
Lt(jg)., NOAA

Approved by:



A. J. Patrick  
Capt., NOAA

REVIEW REPORT  
TP-00820  
SHORELINE

61 - GENERAL STATEMENT

See Summary included with this Descriptive Report.

62 - COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63 - COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with the following U.S.G.S. quadrangles:  
Seldovia (A-5), Alaska, scale 1:63,360, dated 1953  
Seldovia (A-6), Alaska, scale 1:63,360, dated 1952  
Seldovia (B-5), Alaska, scale 1:63,360, dated 1952  
Seldovia (B-6), Alaska, scale 1:63,360, dated 1953..

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with H-9890 dated March 15, 1983 and H-9879 dated March 11, 1983. There were no major conflicts.

Hydro sheet H-10030 was not available for comparison at time of Final Review May 13, 1985.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with Chart 16646, 1:20,000 scale, dated Sept. 26, 1981. There were no major conflicts.

A comparison was also made with the 10th edition Chart 16645, 1:82,662 scale dated March 13, 1976 and the 14th edition Chart 16645, 1:82,662 scale, dated July 30, 1983. A comparison between these two charts indicate that two offshore rocks were added to current charts from the unreviewed Class III Chart Maintenance Print submitted to Marine Charts October, 1979. The intended purpose of showing these offshore rocks on the 1979 Chart Maintenance Print was to advise the Hydrographer of potential hazard. The Hydrographer was expected to determine whether or not the rocks existed. It was never intended for charting purposes because the photointerpretation of the rocks did not render positive identification. The field investigation of the rocks revealed them to be nonexistent by the field editor at the time the hydrography was performed, July, 1980. The non-existent rocks were removed from the Final Map. These and other recommended changes are annotated on the Final Map Chart Maintenance Print.

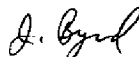
TP-00820

A Final Map Chart Maintenance Print indicating changes was prepared and forwarded to Marine Charts Branch.

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,



James L. Byrd, Jr.  
Final Reviewer

Approved for forwarding,

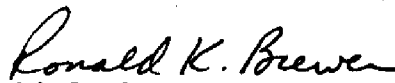


Billy H. Barnes  
Chief, Photogrammetric Section, AMC

Approved,



Chief, Photogrammetric Section,  
Rockville



Chief, Photogrammetry Branch,  
Rockville

Replaces C&amp;GS Form 567.

## NONFLOATING AIDS OR MARKS 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)

[illegible]



RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	A. Patrick
POSITIONS DETERMINED AND/OR VERIFIED	A. Patrick
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	L. Williams
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> 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	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions*</b> 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
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> 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	<b>II. TRIANGULATION STATION RECOVERED</b> 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  <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75  <b>**PHOTOGRAMMETRIC FIELD POSITIONS</b> are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	



RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	A. Patrick
POSITIONS DETERMINED AND/OR VERIFIED	A. Patrick
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW	L. Williams
ACTIVITIES	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> 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	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions*</b> 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
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>II. TRIANGULATION STATION RECOVERED</b> 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 <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <b>**PHOTOGRAMMETRIC FIELD POSITIONS</b> are dependent entirely, or in part, upon control established by photogrammetric methods.
<b>*FIELD POSITIONS</b> are determined by field observations based entirely upon ground survey methods.	

