NOAA FORM 76-35

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

DESCRIPTIVE REPORT

Type of SurveyShoreline
Job No. CM-7413 Map No. TP-00895
Classification No EINAL Edition No 1
Field Edited Map
LOCALITY
State Alaska
General LocalityIcy Bay
Locality Riou Bay
19 75 TO 19 76
REGISTRY IN ARCHIVES
DATE

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-762-901

NOAA FORM 76-36A U. S. DEPARTMENT OF COMMERCE (3-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	TYPE OF SURVEY SURVEY	тр- <u>00895</u>
THE TANK OF THE STATE OF THE ATMOSPHERIC ADMIN.	ORIGINAL MAPEDIT	٦ .
		, , , , ,
DESCRIPTIVE REPORT - DATA RECORD	RESURVEY MAP CLA	ss Final
	REVISED JOB	PAR <u>CM-7413</u>
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division	LAST PRECEEDING MAP ED	ITION
Atlantic Marine Center, Norfolk, VA	TYPE OF SURVEY JOB	РН
OFFICER-IN-CHARGE	☐ ORIGINAL MAP CLA ☐ RESURVEY SURVEY	DATES:
T 00 0 0 7 01.	REVISED 19_TO	•
Jeffrey G. Carlen, Cdr.	' —	
I. INSTRUCTIONS DATED 1. OFFICE	2, FIELD	
Aerotriangulation 11/17/75 Compilation 6/07/76	Premarking	5/14/74
Compilation 6/07/76	Supplemental	4/30/75
	·	
II. DATUMS		
1. HORIZONTAL: X 1927 NORTH AMERICAN	OTHER (Specify)	
	OTHER (Specify)	
∭ MEAN HIGH-WATER ☐ MEAN LOW-WATER	(5,000)	
2. VERTICAL: MEAN LOWER LOW-WATER		
MEAN SEA LEVEL		
3. MAP PROJECTION	4. GR(D(S)	
Transverse Mercator	Alaska ZONE	2
5. SCALE	STATE ZONE	
1:20,000		
III. HISTORY OF OFFICE OPERATIONS		
OPERATIONS 1. AEROTRIANGULATION BY	D. Norman	12/75
I. AEROTRIANGULATION BY METHOD: Analytic LANDMARKS AND AIDS BY	Da Norman	_~/ 12
2. CONTROL AND BRIDGE POINTS PLOTTED BY	Solbeck	1/76
метнор: Coradomat снескер ву	Solbeck	1/76
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY	J. R. Minton	6/76
COMPILATION CHECKED BY INSTRUMENT: Wild B-8 CONTOURS BY	A. L. Shands	6/76
INSTRUMENT: WILD D-8 CONTOURS BY SCALE: 1:30,000 CHECKED BY	NA NA	
4. MANUSCRIPT DELINEATION PLANIMETRY BY	F. Margiotta - C. Blood	6-7/76
CHECKED BY	A. Rauck	6-7/76
CONTOURS BY	NA NA	
CHECKED BY	NA F Mangiette - C Blood	6-7/76
scale: 1:20,000 HYDRO SUPPORT DATA BY	F. Margiotta - C. Blood A. Rauck	6-7/76
CHECKED BY 5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY	A. Rauck	6-7/76
ВУ	D. Butler	3/77
6. APPLICATION OF FIELD EDIT DATA CHECKED BY	L. O. Neterer, Jr.	4/77
7. COMPILATION SECTION REVIEW BY	L. O. Neterer, Jr.	4/77
8. FINAL REVIEW BY	Jim Byrd	12/78
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH 10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY	Jim Byrd	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY	1) Duloki	3/79
NOAA FORM 76-36A SUPERSEDES FORM C& GS 181 SERIES	5	1-17

SOUTH

No Survey

NORTH

REMARKS

5. FINAL JUNCTIONS

TP-00893

EAST

TP-00894

TP-00896

WEST

No Survey

	TP- HISTORY OF F		PERATIONS	AND ATMOSPHER	ENT OF COMMER IC Administrat IAL Océan surv
. [X] FIELD INSPECTI	ON OPERATION	FIELD E	DIT OPERATION		
	OPERATION		NAI	ME	DATE
. CHIEF OF FIELD PA	ARTY	·	R. Mell		6/71
	RECOVER	PED BY	R. Meli		6/7/
2. HORIZONTAL CONT			R. Mell		6/7/
El HOMEON TO THE	PRE-MARKED OR IDENTIFI	-	L. Rigg		6/75
	RECOVER		NA NA	5~-~	-/
3. VERTICAL CONTRO		<u> </u>	NA		
	PRE-MARKED OR IDENTIFE	 	NA		1
······································	RECOVERED (Triangulation Station		None		+
4. LANDMARKS AND	LOCATED (Field Method	·	None		
AIDS TO NAVIGATIO	ON IDENTIFI		None		
	TYPE OF INVESTIGATION				-
5. GEOGRAPHIC NAME	S COMPLETE				
INVESTIGATION	SPECIFIC NAMES ON	NLY BY			}
	X NO INVESTIGATION				
6. PHOTO INSPECTION	CLARIFICATION OF DETAIL	AILS BY	None		
7. BOUNDARIES AND L			NA		
II. SOURCE DATA					
I. HORIZONTAL CONT	ROL IDENTIFIED	2.	NA NA	ROL IDENTIFIED	
PHOTO NUMBER	STATION NAME	Р	HOTO NUMBER	STATION DE	SIGNATION
750 7235 C. 750 7238 S.	ATSON, 1974 ARSON, 1974 TOR, 1974 UNT, 1974				
3. PHOTO NUMBERS (C	Clarification of details)				
None					
4. LANDMARKS AND A	IDS TO NAVIGATION IDENTIFIED			•	
None					
PHOTO NUMBER	OBJECT NAME	P	PHOTO NUMBER	OBJECT	NAME
5. GEOGRAPHIC NAME	S: REPORT X NONE		BOUNDARY AND	LIMITS: REPO	ORT X NONE
7. SUPPLEMENTAL MA		, l -			- (2)
None					
	ORDS (Sketch booke, etc. DO NOT list dat	ata submitted	to the Geodesy Divi	sion)	
	-				

٠	NOAA	FORM	76-36C

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

TP-00895

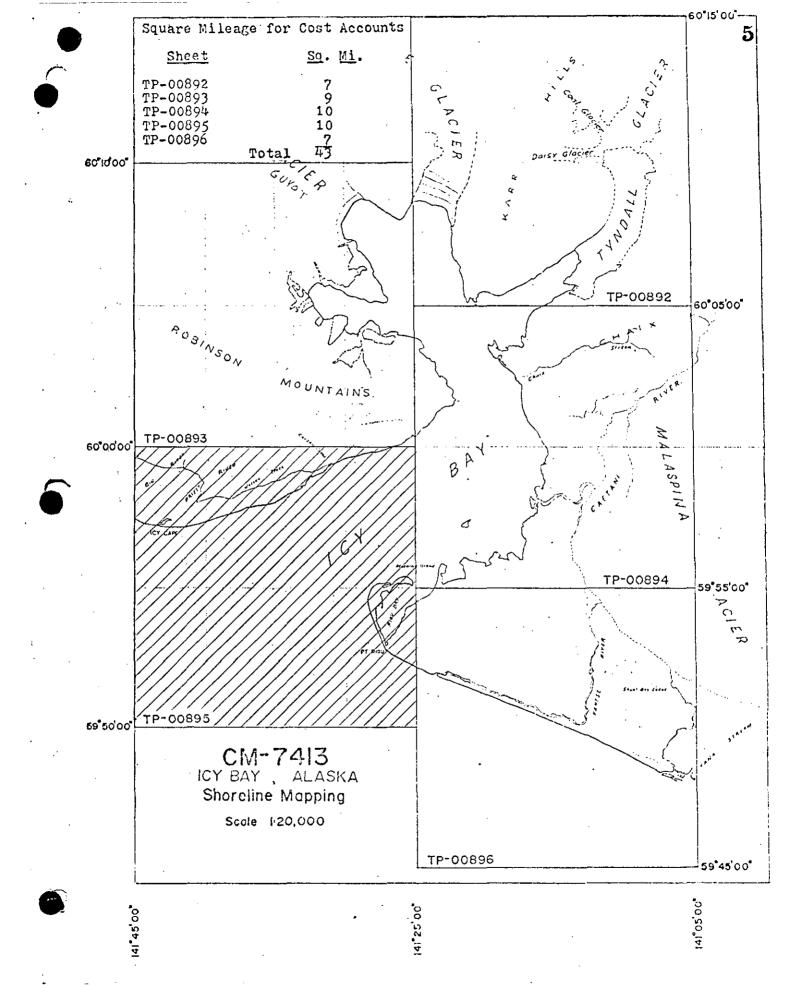
HISTORY OF FIELD OPERATIONS							
I. FIELD INSP	ECTION OPER	ATION T FIEL	D EDIT (PERA	TION		
	OPE	RATION			N	AME	DATE
1. CHIEF OF FIEL	D PARTY		Char B. J. I	r: RE	eer ndai	Cownsend, Cdr.	6-9/76
		RECOVERED BY	<u> </u>	<u>No</u>			
2. HORIZONTAL C	ONTROL	ESTABLISHED BY	<u> </u>	No			ů.
		PRE-MARKED OR IDENTIFIED BY	 		ne		
		RECOVERED BY		NA			
3. VERTICAL CON	ITROL	ESTABLISHED BY		NA			····
		PRE-MARKED OR IDENTIFIED BY	ļ	NA			
		COVERED (Triangulation Stationa) BY	71		ne	0 0 2	n /n/
4. LANDMARKS AT AIDS TO NAVIG		LOCATED (Field Methods) BY	Lt.	<u>(jg)</u>		C. Osborn	7/76
		IDENTIFIED BY	Lt.	(jg)	<u>J.</u>	C. Osborn	7/76
		TYPE OF INVESTIGATION					
5. GEOGRAPHIC N		COMPLETE					
11112311041101	•	SPECIFIC NAMES ONLY					
		X NO INVESTIGATION	+.	<i>/</i> • • •			n /n/
6. PHOTO INSPEC		CLARIFICATION OF DETAILS BY	Lt.			C. Osborn	7/76
7. BOUNDARIES A	ND LIMITS	SURVEYED OR IDENTIFIED BY	<u>.</u>	N A	<u> </u>	<u> </u>	
II. SOURCE DATA 1. HORIZONTAL C	ONTROL IDEA	ITIEIEN	12 45	BTICAL	CON	TROL IDENTIFIED	
	ON I NOE IDEI	THED			CON	TROE IDERTIFIED	
None			N.	A			
PHOTO NUMBER		ST A TION: NAME	PHOT	D NUME	BER	STATION DESIG	NATION
							·
3. PHOTO NUMBE	RS (Clarification	on of details)					
75C(C) 72.	42 thru 7	245, 7251 and 7261					
4. LANDMARKS A	ND AIDS TO N	AVIGATION IDENTIFIED					
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			+				· · · · · ·
75G(C)7242	ICY BAY	LIGHT				,	
5. GEOGRAPHIC	IAMES.		4 80	UNDAR		NIMITE: DEPOS	- (V)
7. SUPPLEMENTA		REPORT X NONE	6. BO	ONDAN	TANL	D LIMITS: REPOR	T 🛣 NONE
None	L MAPS AND	- CANS					
Field edi Fie	t was app ld Film O	tch books, etc. DO NOT list data submi lied to this manuscript zalid, Cronapaque Photos umes, 1 Field Edit Repor	from List	the 1	foll	owing data:	

NOAA FORM 76-36D (3-72)

TP-00895

RECORD OF SURVEY USE

I MANUSC	RIPT COPIES						
I. MANUSC		MPILATION STAGES			DATE MANUSCRI	PT FORWARDED	
	DATA COMPILED	DATE		MARKS	MARINE CHARTS	HYDRO SUPPORT	
	ation complete, g field edit.	7/76	Class III Manuscript 8/16/76 7/23				
	Field edit applied. Compilation complete. 3/77 Class I Manuscript				5/11/77		
Final	Review	12/78	Fi	na l	1/79		
	ARKS AND AIDS TO NAVIGA		DATA BRANCH				
NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED		REI	MARK5		
1		6/3.7/77	Aid				
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=	REPORT TO MARINE CHART				_		
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1, [7]	BRIDGING PHOTOGRAPHS;	T DUPLICATE	BRIDGING REPO	ят: ГУП сомешт	ER READOUTS.	•	
	CONTROL STATION IDENT			• Lake	BY FIELD PARTIES.		
3. X	SOURCE DATA (except for G		port) AS LISTED I	IN SECTION II, NOA	A FORM 76-36C.		
4. 🗌	DATA TO FEDERAL RECO					<u>-</u>	
IV. SURVI	SURVEY NUMBER	hall be completed ex		o edition is registere	TYPE OF SURVEY		
SECOND	TP	(2) PH		□ R		SURVEY	
EDITION	DATE OF PHOTOGRAP		_		MAP CLASS	_	
	SURVEY NUMBER	JOB NUMBE	<u> </u>		TYPE OF SURVEY	FINAL	
THIRD		(3) PH		∏ _R ı		SURVEY	
EDITION	DATE OF PHOTOGRAPS			_	MAP CLASS		
						FINAL	
	SURVEY NUMBER	JOB NUMBE	R		TYPE OF SURVEY		
FOURTH	TP		ELD EDIT	l n	EVISED RES	BÜRVÉY	
EDITION	Daile C. Frio Tourna	DATE OF FI	220 2011		MAP CLASS	De	



SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORTS

TP-00892 thru TP-00896

Project CM 7413 covers Icy Bay, Alaska from YANA STREAM Northwest to ICY CAPE including Guyot, Yahtse and Tyndall Glaciers.

There were five maps assigned in this project, TP-00892 thru TP-00896 all at scale 1:20,000. The purpose of these maps were to provide contemporary shoreline data in the support of hydrographic operations and to aid in nautical chart revision.

Field work prior to compilation consisted of two parts. September 1974 season entailed the establishment of Horizontal and Vertical control in order to meet aerotriangulation requirements. The 1975 field season consisted of paneling horizontal control stations in advance of the aerial photography.

The area was flown in July and August 1975 with the "c" camera on color film at 1:60,000 scale.

Analytic aerotriangulation was performed at the Washington Science Center in December 1975.

The maps were compiled and hydro support ratios were prepared at AMC in June and July 1976.

Field edit was completed in September 1976. It was applied to the map at AMC in March thru May 1977.

Final Review was performed at AMC in Oct. 78 - Jan. 1979. The original base manuscript and all pertinent data was forwarded to the Washington Science Center for final registration.



U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL OCEAN SURVEY Pacific Marine Center

Date : September 11, 1974 Reply to Attn. of: CPMLO1

To : CPM

Director, Pacific Marine Center

 $\mathcal{C}(\mathcal{B}, \mathcal{M}_{\mathcal{B}}(\mathcal{C}))$ From : R. B. Melby

Chief, PMC Field Party

Subject: Project Report, Icy Bay, Alaska (1974)

Project Instructions Field Job CM-CM-7413, Shoreline Mapping, Icy Bay, Ref: Alaska, dated May 14, 1974

General: The horizontal control and tidal observations were made this field season. Premarking for aerial photography is scheduled for the 1975 field season.

The Pacific Marine Center Photo Party, with the support of two men from the National Geodetic Survey, performed all phases of the field work with the logistical support of a helicopter on contract from Evergreen Helicopters.

Housing and rations were obtained at the Gulf Timber Co., a logging operation located on the northwest shore of Icy Bay in the vicinity of Watson Creek. Arrangements were made through Mr. Sam Susano, South-Central Timber Development Co., 255 East Fireweed, Anchorage, Alaska 99503, telephone (907) 279-1493. Mr. W. L. Slagle is the camp boss of the Gulf Timber Co. Gulf Timber Co. is a contractor of the South-Central Timber Co.

There is a gravel landing strip near the camp site which is used for mail and supply planes.

Icy Bay is a dog-leg shaped bay about 18 miles long and about 6 miles wide. Its mouth junctions with the Gulf of Alaska and terminates at the Guyot Hills and the Guyot Glaciers. Near the mouth of the Bay the shores are heavily wooded, and as one progresses northward in the Bay the land becomes more rugged and barren due to the recently retreating glaciers.

Guyot Glacier is quite active, dumping large amounts of ice into the Bay to the extent that the upper 4 miles of the Bay are almost a solid mass of floating ice bergs. Tyndall Glacier is rather inactive, and little ice is being dropped into the Bay. Depending on the wind and currents, at times the lower part of the Bay becomes relatively ice free, and at other times the floating ice is rather heavy. Riou Bay remained relatively ice free.

Horizontal Control: Three old horizontal control stations were recovered in the area. All three had been established or reoccupied by a geodetic field party in 1959. All new control was extended from these stations. AMBER 1922 and RIDGE 1922 r'59 were used as the starting base with TYNDALL (USGS) 1959 as the check angle station.

A combination of triangulation and traverse was observed using the Tellurometer Model CA 1000 microwave distance measuring instruments to determine the distances and the Wild T-2 theodolites to observe the horizontal and vertical angles. Second order Class II, triangulation, and traverse specifications as listed in the publication "Classification Standards of Accuracy and General Specifications of Geodetic Control Surveys" (1974) were employed.

Twenty-four monumented horizontal control stations were established. Eighteen were occupied, two were intersection stations, and four were short traverse stations. Twenty-two lines were measured with the tellurometer.

Vertical Control: Two tide stations were established using the bubbler-type tide gages, and both stations recorded a 30-day series. One was located at the log dump at the mouth of Carson Creek, and the other was situated on the south shore of the fiord leading to the Tyndall Glacier. None of the bench marks established at previous tide stations were recovered. The proposed tide station site at the south tip of the Guyot Hill was ice bound by the constantly shifting pack ice. Very little of the shoreline is conducive to tide gage installations, either the bubbler or the ADR type. Both tidal stations are tied to the horizontal control network through stations CARSON and Tidal B.M.1 (Tyndall Glacier).

Other Control: Two horizontal control stations were located at the request of Mr. Claire J. Byrnes, Continental Oil Co., Ponca City, Oklahoma, on a reimbursable agreement. The stations were used as calibration stations for offshore, electronic navigation systems and were incorporated in the horizontal control network.

FIELD INSPECTION

TP-00895

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

Photogrammetric Plot Report Icy Bay, Alaska CM-7413 December 28, 1975

- 21. Area Covered: This report pertains to five sheets in the vicinity of Icy Bay, Alaska. The sheets covered are TP-00892 thru TP-00896. All are 1:20.000 scale.
- 22. $\underline{\text{Method}}$: Five strips of color photography at 1:60,000 scale were bridged by analytic aerotriangulation methods. The strips were adjusted to ground in the Alaska, zone 2 state plane coordinate system.

Points were established for setting one model (strip 4) of 1:60,000 scale photography. Points were also established for determining ratios of 1:60,000 scale offshore photography. Points for compilation were plotted by the Coradomat. Ratios were ordered.

- 23. Adequacy of Control: The control was adequate.
- 24. Supplemental Data: No supplemental data was used.
- 25. Photography: The photography was adequate.

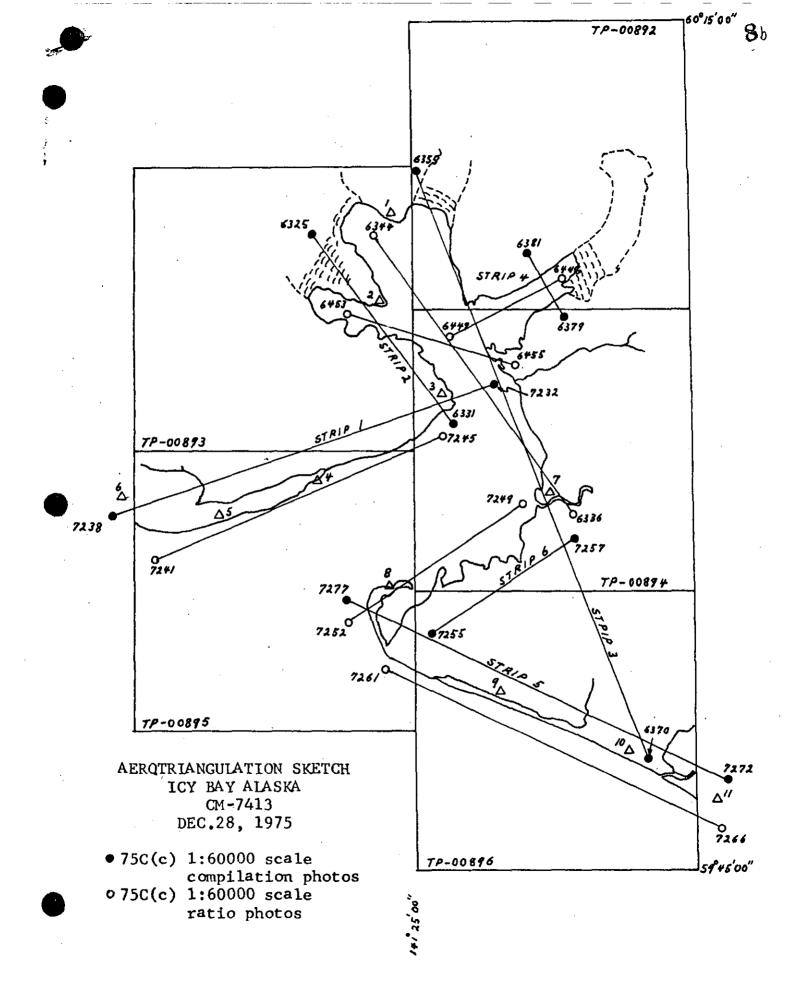
Submitted by,

Dor O. Norma

John D. Perrow, Jr.

Object Assessments and testing of

Chief, Aerotriangulation Section



Fit to Control (in feet)

S	tr	i	Ď	ı
•		٠,	_	۰

3 KICHYATT 4 CARSON	+0.2, +0.4 -1.6, -1.2
5 WATSON	+1.2, -1.2
6 STOR	- 1.0, 0.2

Strip 2

I GUYOT		0.0,	0.0
2 TOYUG		0.0,	0.0
3 KICHYATT		0.0,	0.0

Strip 3

I GUYOT		-0.6, -0.6
2 TOYUG	•	-0.5, +0.5
3 KICHYATT		+2.7, +1.1
7 CAETANI	•	-1.9, -1.1
IO YAHTSE	•	+0.3, 0.0

Strip 5

+1	YANA	-1.3,	+0.4
10	YAHTSE	+3.0,	-1.0
9	JARL	-2.2,	+1.0
8	RUNT	+0.5,	-0.4

Strip 6

9	JARL		-2.7,	+6.7
8	RUNT		-4.0,	+2.1
7	CAETANI	•	-0.4,	-0.8

NOAA FORM 76-41 (6-75)				1	NAL OCEANIC AN	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	OF COMMERCE
		DESCRIPTIV	DESCRIPTIVE REPORT CONTROL RECORD	JRD			
MAP NO. TP-00895	JOB NO. CM-7413	[3	GEODETIC DATUM NA 1927 Transverse Mercator Divisi	ator	ORIGINATING A Division,	originating activity Coastal Division, AMC, Norfolk,	Mapping Virginia
STATION NAME	SOURCE OF	AEROTRI-	COORDINATES IN FEET STATE ALASKA	GEOGRAPHIC	POSITION LATITUDE	ASE ASE	REMARKS
	(Index)	NUMBER	ZONE 2		LONGITUDE	FORWARD	BACK
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CARSON, 1974	P. 2	つりまくぐさ	=ĥ	171 م	31 57.069	885.0	(45.5)
MATEON 107	Field	001986	=X	ф 59	57 32,577	1008.2	(878.7)
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1027	Field	001446	<i>=</i> χ	ф 59	54 51.951	1607.8	(249.1)
# C1 6 1 10 11	P. 3	201	=ĥ	141	26 42.758	664.5	(268.0)
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COMPUTED BY A. C. Rauck, Jr.		2/01/76	COMPUTATION CHECKED BY F	. Mauldin		- 1	6/14/76
LISTED BY A. C. Rauck, Jr.		PATE /76		F. Mauldin		- 1	6/14/76
HAND PLOTTING BY Coradomat		DATE	HAND PLOTTING CHECKED BY			DATE 6/1.	9/14/16
		SUPERSEDES N	SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE	H IS OBSOLETE	 		<i>\delta</i>

TP-00895

31. <u>DELINEATION</u>:

Delineation was by the Wild B-8 stereoplotter. Photo coverage and clarity was adequate.

32. CONTROL:

See the attached 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 the Wild B-8 stereoplotter and by office interpretation of the photographs.

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 used in the Wild B-8 plotter.

36. OFFSHORE DETAILS:

No unusual problems; but, as there were no low water photographs available, much of the foreshore area will require investigation and location by the field editor.

37. LANDMARKS AND AIDS:

Compilation office prepared work copies of Forms 76-40 were forwarded to the field editor for verification, location and/or deletion.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

See the attached Form 76-36B, Item #5 of the Descriptive Report concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY:

Refer to Photogrammetric Plot Report.

46. COMPARISON WITH EXISTING MAPS:

A comparison has been made with the following USGS Quadrangles: Topographic Series, ICY BAY, ALASKA, scale 1:250,000, dated 1961; and ICY BAY (D-2 and D-3), ALASKA, scale 1:63,360, dated 1959.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison has been made with the following National Ocean Survey Charts: No. 16016, scale 1:969,756, 13th edition, dated June 28, 1975; and No. 16741, scale 1:40,000, 5th edition, dated June 1, 1974.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted by:

Frank Margiotta

Cartographic Technician

June 1976

Approved:

Albert C. Kauch. y.

Chief, Coastal Mapping Section, AMC

ADDENDUM TO THE COMPILATION REPORT

TP-00895

It was noticed that the field editor's interpretation of the MHWL on the photos was not the same as the measurements he submitted from the actual MHWL to what is termed the brush or forest-beach interface. It was confirmed by phone and by sending the photo's back to Lt. (J. G.) Osborn that the distances were measured in meters and mistakenly recorded in feet. This problem was solved and the revisions were made accordingly directly from the photographs.

Respectfully submitted:

David Butler

Cartographic Technician

March 10, 1977

3

An uncompiled rock spit was located in the area near latitude 60°05'06"N, longitude 141°20'52"W. The surrounding water is shallow and hazardous. Refer to notes on the Master Field Edit Sheet.

The small inlet, located at latitude 60°05'25"N, longitude 141°21'16"W, is actually a rock and gravel indentation in the surrounding shoreline, with a pond that varies in size, set back approximately 30 meters from the shoreline.

A large delta exists in the region bounded by latitudes 60 07'00"N and 60 06'00"N on the north and south respectively, and longitudes 141 - 21'30"W and 141 22'25"W on the east and west respectively. The delta is more extensive than previously compiled and is so shown on the Master Field Edit Sheet. The southeastern portion of this region contains sand flats landward from the MHWL that are so laced with runoff waters that the sand is in suspension and may be considered quicksand.

TP-00893

Shoreline verification for this manuscript began on July 28, 1976 at the junction with TP-00894 at latitude 60°03'54"N. Work was completed during ship recon hydro operations in the upper Icy Bay region on September 15, 1976, at the junction with TP-00892. As with all work in upper Icy Bay, progress was slow and dependent on ice conditions. Field edit is complete and thorough for TP-00893.

Investigations for non-floating aids to navigation and landmarks for charts were carried out. There are none being submitted for charting purposes. Refer to "Separates Following the Text", Form 76-40's. Questions,

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7413 (Icy Bay, Alaska)

TP-00895

Carson Creek

Claybluff Point ~

Crested Point (

Gulf of Alaska ~

Icy Bay ~

Icy Cape

Moraine Reef '

Point Riou 🕝

Priest Creek River

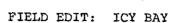
Riou Bay

Watson Creek '

Approved by:

Charles E. Harrington Chief Geographer

(7 –7 5)	PHO		RIC OFFICE REVIEW - 00895	NO/ NATIONAL OCEAN SURVI
1. PROJECTION AND GRIDS	2 TITLE	.,	3. MANUSCRIPT NUMBERS	4. MANUSCRIPT SIZE
ACR	ACR		ACR	ACR
CONTROL STATIONS			*	<u> </u>
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY		6. RECOVERAS OF LESS TH (Topographic	SLE HORIZONTAL STATIONS AN THIRD-ORDER ACCURACY	7. PHOTO HYDRO STATIONS
ACR		(Lopographic	NA.	· NA
8, BENCH MARKS	9. PLOTTING	OF SEXTANT	10. PHOTOGRAMMETRIC PLOT REPORT	11. DETAIL POINTS
NA	NA.	A	ACR	ACR
ALONGSHORE AREAS (Nautica	l Chart Data)	· · · · · · · · · · · · · · · · · · ·		
12. SHORELINE	13. LOW-WATE	RLINE	14. ROCKS, SHOALS, ETC.	15. BRIDGES
ACR		OR	ACR	ACR
To NAVIGATION	17. LANDMARI	cs	18. OTHER ALONGSHORE PHYSICAL FEATURES	19. OTHER ALONGSHORE CULTURAL FEATURES
ACR	A	CR	ACR	ACR
PHYSICAL FEATURES	·			· · · · · · · · · · · · · · · · · · ·
20. WATER FEATURES		21. NATURAL	GROUND COVER	22. PLANETABLE CONTOU
ACR		<u> </u>	NA	NA
23. STEREOSCOPIC INSTRUMENT CONTOURS	24. CONTOUR	S IN GENERAL	25. SPOT ELEVATIONS	26. OTHER PHYSICAL FEATURES
NA .	N	A	NA	ACR
CULTURAL FEATURES 27. ROADS	1 20 200 200		130 PAU POARS	120 07470 014 747
27. ROADS	28. BUILDING	,	29. RAILROADS	30. OTHER CULTURAL FEATURES
ACR	A	CR	ACR	ACR
BOUNDARIES 31. BOUNDARY LINES			32. PUBLIC LAND LINES	
	NΑ			NA .
MISCELLANEOUS				
33. GEOGRAPHIC NAMES	<u> </u>	34. JUNCTION	S	35. LEGIBILITY OF THE MANUSCRIPT
ACR]	ACR	ACR
36. DISCREPANCY OVERLAY	37. DESCRIPT	IVE REPORT	38. FIELD INSPECTION PHOTOGRAPHS	39. FORMS
ACR	A	CR	ACR	ACR
alluf C Rau A. C. Rauck, Jr.	ch. g.) 6/14/76	SUPERVISOR, REVIEW SECTION Albert C. Reuck 1	on or unit
41. REMARKS (See attached she		, ,, 10	,	
FIELD COMPLETION ADDITIO		TIONS TO THE A	MANUSCRIPT	
	s furnished by t	he field complet	tion survey have been applied	to the manuscript. The manu
COMPILER David But	tler Daid B	itte3/07/77	SUPERVISOR La RA	unde 1
Reviewer L. O. Ne	terer, Jr.	4/27/77	Albert C. Rauck, J	inch. J.
43. REMARKS Foull	relie &			
See Form 76-	-36C, Item	#8, FIELD 1	INSPECTION.	
•				•



JOB CM-7413

OPR-524-RA-76

MANUSCRIPT NO. TP-00892-00896

CHARLES K. TOWNSEND

CDR., NOAA

R.L. SPEER

CDR., NOAA

J.P. RANDALL

CAPT., NOAA

COMMANDING OFFICERS



INTRODUCTION AND METHODS

Field Edit for Icy Bay, Job CM-7413; OPR-524-RA-76, commenced on June 26, 1976 and was completed on September 15, 1976. One field unit performed the majority of all work while two units were used on occasion for the remainder of field work. The largest portion of shoreline verification and field edit location work was accomplished by walking the shoreline. The remainder from small boats paralleling the beach. Field edit is complete and thorough for five 1:20,000 scale manuscripts that cover Icy Bay.

Field edit operations began on the inshore side of Riou Spit and in Riou Bay on TP-00895 in order to facilitate commencement of hydrographic survey operations on H-9630. Work then progressed eastward on TP-00894 along the southern shore of Icy Bay thence around Gull Island and its surrounding shoals. This field edit was completed immediately to allow hydrographic survey operations to begin on H-9634. Field edit work then shifted back and forth between various sections of the shoreline dependent upon weather, sea, and ice conditions in the bay. The extensive floe ice and pack ice along the shoreline of TP-00892 and TP-00893 made work on these manuscripts piecemeal. Field edit is complete for these and the other three manuscripts. Rocks and foul areas were located and delineated by three point sextant fixes along the southern shore of manuscripts TP-00894 and TP-00895. A separate data package for this work is submitted as a separate part of the field edit data package. In conjunction with shoreline verification and location of dangers to navigation, questions from the Master Field Edit Sheet relating to the locations of fixed aids to navigation

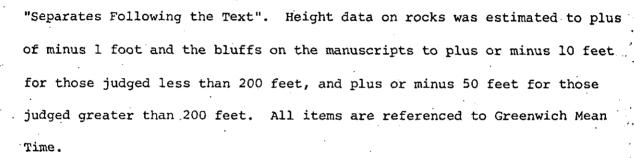


and landmarks for charts were thoroughly investigated. One aid was located by geodetic observations during the first month of RAINIER combined operations.

All deletions, additions, and corrections to the final shoreline appear on the Master Field Edit Sheets and on the processed cronapaque photographs. With the exception of the field edit sextant location work, the Master Field Edit Sheets index all field edit work carried out. All discrepancies and questions listed on the Master Field Edit Sheets are completely and thoroughly answered on the Master. Proper references are included for each question answered. A reference to the sextant location package is also included on each manuscript where sextant work was performed. SPECIAL VIOLET ink field notes on the Master Field Sheets are items that have been verified by field edit. The photograph number for each item is given as a reference. SPECIAL RED ink was used on the Masters to indicate changes or additions found during field edit. Position or location references are included. Finally, those field notes inked in green are deletions from the manuscripts. References are included. All notes on the Master Field Edit Sheets which are verified on the cronapaque photographs include the description or an explanation of the feature verified and the photo number on which the item was located. All shoreline information on the smooth boatsheets for H-9630, H-9634, H-9649, and H-9635 which was verified by the field edit was inked in black. Changes, which include deletions, and (or) additions were inked in SPECIAL RED. Blue, the smooth boatsheet color for unverified items, was not used due to the completeness of verification of all manuscripts.

For a reference of photograph number - T-sheet Manuscripts, refer to





ADEQUACY OF COMILATION

The compilation of the manuscripts for JOB CM-7413 were complete and adequate. Compilation of the MHWL was good. Numerous minor changes found by field edit are noted on the Master Field Edit Sheets and on the processed cronapaque photographs. The MLLWL was compiled where possible by hydrographic survey operations and is not discussed in this report. For further information on survey operations, <u>Descriptive Reports</u> H-9630, H-9634, H-9635, H-9649 should be consulted.

TP-00892

Field edit commenced on this manuscript on August 3, 1976, and was completed on September 15, 1976. The heavy brash ice in this upper portion of Icy Bay made shoreline work a section by section undertaking. Field edit is complete and thorough for TP-00892.

All non-floating aids to navigation and landmarks for chart investigations have been completed for this manuscript. None are being submitted. Refer to "Separates Following the Text"; Form-76-40's. Questions, discrepencies, and notes to the field editor have been completely answered with proper cross referencing.

The river delta, located at latitude 60° 05' 35"N, longitude 141° 13' 30"W, forms a more extensive delta than was previously compiled. The MHWL has been shifted seaward accordingly.

The protruding rock spit at latitude 60° 06' 30"N, longitude 141° 14' 22"W, was thoroughly searched for and verified to be non-existent. The recommendation is for deletion. Field observation was frequently required to determine on the photographs the difference between large rocks and dirt ladened pieces of glacial ice.

The seaward limits of the glaciers that are covered by this manuscript are generally accurate. The height of the glacier faces ranges from 80 to 160 feet above the water line. No changes were noted to the seaward limits of Tyndall Glacier. The center is heavily ladened with sediment. This sediment covered ice could be easily mistaken for fast rocky shoreline and bluffs. Two minor changes were made to the seaward limit of Yahtse Glacier (refer to Master Field Edit Sheet).

Bluffs cover an extensive portion of this manuscript. These bluffs have been annotated on the Master Field Edit Sheet. The bluffs are continuous. There is no single point that would serve as a landmark; however, they do define the entire Tyndall Glacier fiord and it is recommended that the bluffs be charted.

The small island located at latitude 60°05'05"N, longitude 141°20'32"W was verified. The region between the island and the mainland is foul with small rocks, and to transit is dangerous. Two rocks were located in the general vicinity of the island, The rocks present a definite hazard to small boat navigation.

3

An uncompiled rock spit was located in the area near latitude 60°05'06"N, longitude 141°20'52"W. The surrounding water is shallow and hazardous. Refer to notes on the Master Field Edit Sheet.

The small inlet, located at latitude 60°05'25"N, longitude 141°21'16"W, is actually a rock and gravel indentation in the surrounding shoreline, with a pond that varies in size, set back approximately 30 meters from the shoreline.

A large delta exists in the region bounded by latitudes 60 07'00"N and 60 06'00"N on the north and south respectively, and longitudes 141 - 21'30"W and 141 22'25"W on the east and west respectively. The delta is more extensive than previously compiled and is so shown on the Master Field Edit Sheet. The southeastern portion of this region contains sand flats landward from the MHWL that are so laced with runoff waters that the sand is in suspension and may be considered quicksand.

TP-00893

Shoreline verification for this manuscript began on July 28, 1976 at the junction with TP-00894 at latitude 60°03'54"N. Work was completed during ship recon hydro operations in the upper Icy Bay region on September 15, 1976, at the junction with TP-00892. As with all work in upper Icy Bay, progress was slow and dependent on ice conditions. Field edit is complete and thorough for TP-00893.

Investigations for non-floating aids to navigation and landmarks for charts were carried out. There are none being submitted for charting purposes. Refer to "Separates Following the Text", Form 76-40's. Questions,

discrepancies, and notes to the field editor have been completely answered.

Proper source referencing is included.

The majority of the upper bay covered by this manuscript is bluff lined. All information can be referenced on the Master. Except for breaks at glacier faces and large runoff deltas, the bluffs are continuous in nature but varying in height. No portion of the bluffs is distinctive enough for submission as a landmark for charts on the form 76-40's. The bluffs do distinguish the entire upper shoreline of the bay and it is recommended that they be delineated. Reference the Master and corresponding Processed Cronapaque Ratios.

The questionable rocks located at latitude 60°04'12"N, longitude 141°26'30"W, were thoroughly searched for and shown to be non-existant. It is recommended that they be deleted. It is difficult to distinguish sediment ladened ice from large rocks on the photographs.

A large delta is located at latitude 60°04'05"N, longitude 141°27'00"W. The delta is more extensive than that compiled on the manuscript and the MHWL has been shifted seaward. The composition of this delta is fine sand and gravel, and the shoreline and near shore gradient was steeper than other deltas inspected. Thus a compiled shallow region was not deemed necessary.

The small island at latitude 60°04'20"N, longitude 141°28'48"W was verified. With the exception of a small depositional beach on the southeast corner, there were no adjustments to the compiled MHWL.

The seaward limits of the four sections of Guyot Glacier that are covered by this manuscript are accurate and only one minor revision was necessary

at latitude 60°04'35"N, longitude 141°31'20"W. Heights of the glacier faces above the water line range from 30 to 200 feet. The region of shore—line at latitude 60°04'35"N, longitude 141°31'20"W that is compiled as fast, is in actuality a ribbon of glacial ice heavily ladened with sediments Its dirty color makes it appear as fast rocky shore.

Isolated glacial ice remnants occur in two locations on this manuscript. One is centered at latitude 60°05'12"N, longitude 141°32'01"W.

The other is located at latitude 60°07'11"N, longitude 141°30'34"W. Heavy braided runoff to the bay comes from both. These remnants will likely melt away and expose rock and gravel shore (refer to the Master Field Edit Sheet).

The small building shown in the southeast region on the manuscript is present but is not suitable as a landmark for charting purposes. No form 76-40 is being submitted. It is a small camper's cabin and is obscured from the shore and seaward. It should continue to be shown on the chart as a small cabin as it does exist and may serve as a shelter.

TP-00894

Shoreline verification for this manuscript began at the junction with the small section of TP-00896 at longitude 141°25'00"W and proceeded eastward around Gull Island to position 59°56'20"N, 141°17'05"W. Field edit was undertaken initially to allow for the commencement of hydrographic survey operations on H-9634. The remainder of the verification of the shoreline for this manuscript was piecemeal due to varying ice, sea, and weather conditions in the bay. All investigations for non-floating aids to navigation and landmarks for charts have been completed. None are submitted for this manuscript.

Location of rocks and delineation of foul limits using three point sextant fixes was accomplished for the southern shore of this manuscript and for Gull Island and its surrounding shoals. It is recommended that they be accepted for charting purposes (refer to the Field Edit Sextant Location Package, containing field sounding volumes, visual master and corrector tapes for automated plotting, geographic position computations for each fix, and plotted boatsheets with position numbers).

Numerous minor revisions were made to the compiled MHWL, foreshore features, and inshore details. The most pronounced changes occurred in the area just south of the Caetani and New Yahtse River Deltas bounded by the following: Latitude 59°58'00"N on the north, 59°57'00"N on the south, 141°16'00"W on the east, and 141°17'30"W on the west. This region is highly affected by tide action (refer to the Master Field Edit Sheet for more information on changes in compilation).

TP-00895

Shoreline verification for this manuscript began on Riou Spit and continued south then east around Riou Bay. This edit was undertaken first to allow for the commencement of hydrographic survey operations. Later in the summer shoreline edit was resumed on this manuscript at its junction with TP-00894 at latitude 60 00 00 N, and progressed southwest to the manuscript and the job limits at latitude 59 57 35 N. Field edit is complete and thorough for this manuscript.

All investigations for non-floating aids to navigation and landmarks for charts have been completed. One aid is being submitted for charting

purposes. Icy Bay Light along the north central shore of the bay was located as per instruction by third order geodetic survey methods (intersection). For further information reference the separates of this report and Horizontal Control Report; OPR-524-RA-76.

Location of rocks, dead heads, and delineation of foul areas using three point sextant fixes was accomplished from Riou Spit to the manuscript limits at latitude 59 54'20"N. It is recommended that the sextant delineated foul areas supersede the photo delineated foul areas when the sextant delineated foul areas are the seaward of the two. The Field Edit Sextant Location Data Package contains field sounding volumes, visual master and corrector tapes for automated plotting, geographic position computations for each fix, and plotted boatsheets with position numbers.

The rock compiled at geographic position 59°53'47"N x 141°25'52"W is actually an exposed portion of a man made spit. It was probably used for landing craft and barges transporting supplies to the now abandoned mining operations just inshore. It is recommended that this feature be charted as a rock spit.

The MHWL of Riou Spit is constantly changing due to erosion and deposition of glacial sediment. Minor revisions were made by field edit to the MHWL and to the shallow and foul breaker zone of Riou Spit. It is recommended that these changes be accepted for charting purposes.

The north shore of TP-00895 shows numerous but minor revisions to the compiled MHWL and offshore shallow and foul areas. Reference the Master Field Edit Sheet. It is recommended that all field changes be accepted for charting purposes.

The pier at Icy Bay Logging Camp landing is earth filled and log lined to allow heavy machinery to transfer logs to waiting barges. Two small buildings are located at the head of the loading jetty. The entire area is covered with logs piled and waiting transport.

The "parking area" compiled at position 59°58'07"N x 141°38'15"W was investigated. It is not a parking lot but a gravel trailer court that serves as the Icy Bay Lumber Camp headquarters and residences. Permanent buildings are noted and referenced on the Master Field Edit Sheet. The gravel landing strip just west of the logging camp was also verified. It is recommended that all features be charted as noted on the Master Field Edit Sheet.

The region of the chart compiled as Guyot Bay at position 59 57'25"N x 141°42'00"W is not a small bay on the northern side of Icy Bay. It is now a mud and sand flat with a small stream running from east to west then south into Icy Bay. During periods of heavy runoff, the stream floods, covering the entire flat. It is recommended that this region be delineated as shown on the Master Field Edit Sheet. The conditions found during the field inspection are believed to prevail during the majority of the year.

The small charted building on the north side of the above mentioned flats was investigated. It was found to be a small abandoned miner's shack. It is not visible from sea and should not be charted as a landmark. It should be charted as it does exist and could serve as a shelter.

TP-00896

Shoreline verification for this manuscript began at the junction with TP-00895 at longitude 141°25'00"W and continued southeast to the manuscript



and job limits at longitude 141°05'00"W. All investigations of non-floating aids to navigation and landmarks for charts have been completed. None are being submitted for this manuscript (refer to "Separates", form 76-40's). Field edit is complete for this manuscript.

Location of rocks and delineation of foul limits using three point sextant fixes was accomplished for the portion of this manuscript covering Riou Bay. It is recommended that they be accepted for charting purposes and that the sextant delineated foul areas supersede the photo delineated foul areas when the sextant delineated foul areas are seaward of the two (refer to the Field Edit Sextant Location Package, containing field sounding volumes, visual master and corrector tapes for automated plotting, geographic position computations for each fix, and plotted boatsheets with position numbers).

The remaining shoreline shows a general shift seaward of the MHWL from that compiled on the manuscript. Changes and references are noted on the Master Field Edit Sheet. This shoreline is composed of fine sand.

The Yahtse River parallels a sand ridge before breaking through to the Yahtse River parallels a sand ridge before breaking through to the Yahtse Gulf of Alaska. Behind the ridge the river has formed an aggraded area that during part of the tidal cycle pools and acts as an interior drainage.

During the lower tides the river erodes the aggraded area forming new and continually shifting braided channels that rejoin in a single channel before entering the Gulf.

The mouth appears as depicted except for a minor revision to the MHWL and the second outlet shown no longer exists. Though not observed it is likely the outlets are altered considerably by major storms. There is no build-up of river deposits at the mouth. It is recommended that the area be charted with the changes as annotated.

ADDITIONAL INFORMATION

Location of rocks, deadheads, and delineation of foul areas was accomplished as an integral part of the field edit for JOB CM-7413. Three point sextant fixes with check angles were taken. The area covered by sextant work includes portions of TP-00894, TP-00895, and TP-00896, and extends from Riou Spit around Riou Bay and east to the southeast corner of Icy Bay. Gull Island and its surrounding shoals are also included in the area covered by sextant location and delineation work. This area was chosen for this special consideration because it is shoaler and more complex in nature than the remainder of the bay and it is an area of anticipated development.

A separate field edit sextant location package is being submitted as a part of the overall field edit data package. The package includes the following items:



- 1. Field sounding volumes containing all positions. Descriptions and small drawings to aid compilation are included.
- Visual Master and Corrector Tapes with corresponding printouts for all final positions, separated by Julian Days.
- 3. Plotted 1:10,000 position boatsheets for RA-10-3A, 3B, 4A-76.
- 4. Geographic position computations for each fix. Position numbers are noted, and latitudes and longitudes computed are annotated by the corresponding position number in the field sounding volume.
- 5. Printouts of special tapes (Boatsheet Parameters) that would be of assistance in data interpretation and processing are also included.

It is recommended that all these rock and deadhead positions be accepted for charting purposes. Foul areas delineated by sextant fixes should be accepted in all cases over the photogrammetrically delineated foul areas where they fall further to seaward (reference the package for complete information). For copies of printouts of the Visual Master and Corrector Tapes, and the geographic position computations, refer to the "Separates following the text".

DATA PROCESSING

The following is a list of PDP-8/e computer programs and version dates used in the processing of the field edit sextant location package for JOB-

CM-7413:	RK 201:	GRID, SIGNAL, AND LATTICE PLOT	7/12/75
	RK 212:	VISUAL STATION TABLE LOAD	4/01/74
	RK 215:	VISUAL NON-REAL TIME PLOT	8/16/74
	RK 300:	UTILITY COMPUTATIONS	2/10/76
•	AM 602:	ELINORE - LINE ORIENTED EDITOR	5/21/75



RECOMMENDATIONS

Field Edit Manuscripts were received at various dates during the survey. It is recommended that every possible effort be made to send the complete package at one time. This aids both in continuity and in planning of field work. No further recommendations are deemed necessary.

Respectfully submitted;

John C. Osborn Jr.

LTJG; NOAA

4 | PHOTO FIELD PARTY |X COMPILATION ACTIVITY | FINAL REVIEWER | QUALITY CONTROL & REVIEW GRP. | COAST PILOT BRANCH (See reverse for responsible personnel) AFFECTED 16016 16741 531 ORIGINATING ACTIVITY HYDROGRAPHIC PARTY METHOD AND DATE OF LOCATION (See instructions on reverse side) F-3-6-L 7/12/76 FIELD U.S. DEPARTMENT OF COMMERCE 3/77 DATE OFFICE been inspected from seaward to determine their value as landmarks.

SURVEY NUMBER | DATUM D.P. Meters 01.09 LONGITUDE Icy Bay 1927 35 FOR CHARTS 141 ۰ POSITION 58.28 D.M. Meters LOCALIT 1804 LATITUDE NA 57 59 Alaska Record reason for defetion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses STATE TP-00895 NONFLOATING AIDS REPORTING UNIT (Field Perry, Ship or Office) Coastal Mapping Div. DESCRIPTION The following objects HAVE X HAVE NOT CM-7413 ICY BAY LIGHT JOB NUMBER Replaces C&GS Form 567. X TO BE CHARTED TO BE DELETED TO BE REVISED NOAA FORM 76-40 (8-74) OPR PROJECT NO. 524 CHARTING NAME LIGHT



REVIEW REPORT TP-00895

SHORELINE

December 27, 1978

61. GENERAL STATEMENT:

See Summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Not applicable.

COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

A comparison was made with verified copies of H-9630 and H-9635. No significant differences were noted.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with Chart 16741, 1:40,000 scale 6th Ed. May 28/77.

Chart 16741 shows rock ($\underline{10}$) at Lat. 59059.50' Long. 141029.95'. This rock was shown on the Class III manuscript but was removed from the Class I since the field editor recommended deletion.

ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This map complies with Project instructions, and meets the requirements for Bureau Standards and National Standards of Map Agcuracy.

Submitted by:

Approved for forwarding:

Chief Photogrammetric Branch, AMC

PROJECT CM-7413 MATERIALS ON FILE

FEDERAL RECORDS CENTER

Field Edit Photographs
Bridging Photographs
Field Edit Ozalids (Discrepancy Prints)
Project Completion Report
Three Field Edit Position Plots

BUREAU ARCHIVES

Registered Copy of Each Map

GEODESY

Geodetic Records Control Station Identification Cards Recovery Cards

MARINE CHART DIVISION

Chart Maintenance Print For Each Map Forms 76-40

OFFICE OF GEOGRAPHER

Geographic Name Standards

REPRODUCTION DIVISION

Negative of Each Map