

00896

ORIGINAL

00896

NOAA FORM 76-35-

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

DESCRIPTIVE REPORT

Type of Survey Shoreline
Job No. CM-7413 Map No. TP-00896
Classification No. FINAL Edition No. 1

Field Edited Map

LOCALITY

State Alaska
General Locality Icy Bay
Locality Yahtse River

19 75 TO 19 76

REGISTRY IN ARCHIVES

DATE

TYPE OF SURVEY

- ☒ ORIGINAL
☐ RESURVEY
☐ REVISED

SURVEY TP. 00896

MAP EDITION NO. (1)

MAP CLASS I

JOB ~~PH~~ CM-7413

DESCRIPTIVE REPORT - DATA RECORD

PHOTOGRAMMETRIC OFFICE

Coastal Mapping Division
Atlantic Marine Center, Norfolk, VA

OFFICER-IN-CHARGE

Jeffrey G. Carlen, Cdr.

LAST PRECEDING MAP EDITION

TYPE OF SURVEY

- ☐ ORIGINAL
☐ RESURVEY
☐ REVISED

JOB PH- _____

MAP CLASS _____

SURVEY DATES:

19 ____ TO 19 ____

I. INSTRUCTIONS DATED

1. OFFICE

Aerotriangulation 5/17/75
Compilation 6/07/76

2. FIELD

Premarking 5/14/74
Supplement 1 4/30/75

II. DATUMS

1. HORIZONTAL:

☒ 1927 NORTH AMERICAN

OTHER (Specify)

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)

STATE

Alaska

ZONE

2

5. SCALE

1:20,000

STATE

ZONE

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: Analytic	BY LANDMARKS AND AIDS BY	D. Norman	12/75
2. CONTROL AND BRIDGE POINTS METHOD: Coradomat	PLOTTED BY CHECKED BY	Solbeck Solbeck	1/76 1/76
3. STEREOSCOPIC INSTRUMENT COMPILATION	PLANIMETRY BY CHECKED BY	R. Minton J. Byrd	6/76 6/76
INSTRUMENT: Wild B-8	CONTOURS BY	NA	
SCALE: 1:30,000	CHECKED BY	NA	
4. MANUSCRIPT DELINEATION	PLANIMETRY BY CHECKED BY	J. Roderick F. Margiotta	7/76 7/76
METHOD:	CONTOURS BY CHECKED BY	NA NA	
SCALE: 1:20,000	HYDRO SUPPORT DATA BY CHECKED BY	J. Roderick F. Margiotta	7/76 7/76
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	F. Margiotta	7/76
6. APPLICATION OF FIELD EDIT DATA	BY CHECKED BY	F. Margiotta Jim Byrd	3/77 4/77
7. COMPILATION SECTION REVIEW	BY	Jim Byrd	4/77
8. FINAL REVIEW	BY	Jim Byrd	1/79
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY	Jim Byrd	1/79
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	F.R. WATTS	3/79
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	H. K. WATTS	7-79

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYTP-00896
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-10 "C"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Yukon	<input checked="" type="checkbox"/> STANDARD
<input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN 135th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
*75C(C) 7272 thru 7276	8/04/75	12:25	1:60,000	6.5 ft. above MLLW	
**75C(C) 7261 thru 7266	8/04/75	12:12	1:60,000	6.7 ft. above MLLW	
**75C(C) 7251					

REMARKS

*Bridge and compilation photos.
 **Hydro support photos.

2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled from the above listed compilation photographs.

The mean high water line revisions requested as approximate mean high water lines by the field editor were symbolized as solid lines since the dashed line indicates unsurveyed shoreline. BW.

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

No MLLW line was compiled.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00894	No Survey	No Survey	TP-00895

REMARKS

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

TP-00896

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	6/74
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	6/75
	ESTABLISHED BY R. Melby	6/74
	PRE-MARKED OR IDENTIFIED BY L. Riggers	6/75
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 <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 NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
75C(C) 7263	JARL, 1974		
75C(C) 7264	YAHTSE, 1974 RM 1		

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)

NOAA FORM 76-36C
(3-72)

TP-00896

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	Charles K. Townsend, Cdr. H. L. Speer, Cdr. J. P. Randall, Cdr.	6-9/76
2. HORIZONTAL CONTROL	RECOVERED BY: None 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: 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: John C. Osborn, Lt. (jg)	7/76
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)

75C(C) 7261 thru 7266 . 75C(C)7251

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)

Field edit was applied to this manuscript from the following data:

Field Film Ozalid, HYDRO Sounding Volumes

Cronapaque Photos listed above

Field Edit Report, RA-10-3A-76

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00896
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.	7/08/76	Class III Manuscript Superseded	8/16/76	7/23/76
Field edit applied. Compilation complete.	3/77	Class I Manuscript	5/11/77	
Final Review	1/79	Final	1/79	

II. LANDMARKS AND AIDS TO NAVIGATION None

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____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 567 SUBMITTED BY FIELD PARTIES.
 3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:
 4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

Square Mileage for Cost Accounts

Sheet	Sq. Mi.
TP-00892	7
TP-00893	9
TP-00894	10
TP-00895	10
TP-00896	7
Total	43

60°10'00"

60°15'00"

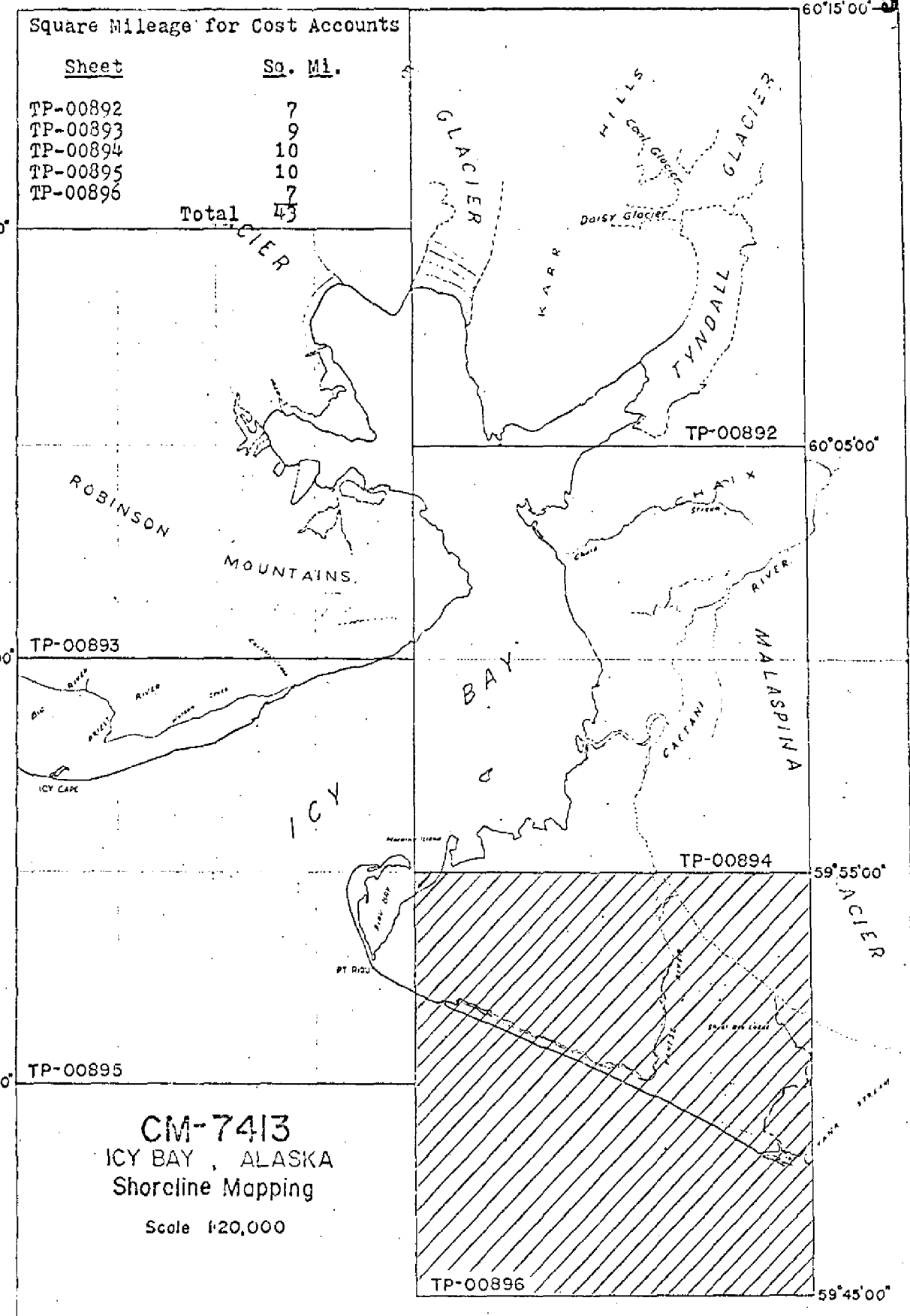
60°00'00"

60°05'00"

59°50'00"

59°55'00"

59°45'00"



CM-7413
ICY BAY, ALASKA
Shoreline Mapping

Scale 1:20,000

141°45'00"

141°25'00"

141°05'00"

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

7a

Date : September 11, 1974

Reply to Attn. of: CPM101

To : CPM
Director, Pacific Marine Center

From : R. B. Melby
Chief, PMC Field Party

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

Ref: Project Instructions Field Job CM-CM-7413, Shoreline Mapping, Icy Bay, 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.

Area: 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.

✓ Not on chart
16741 of this
condition ask

-2-

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.

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. 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.

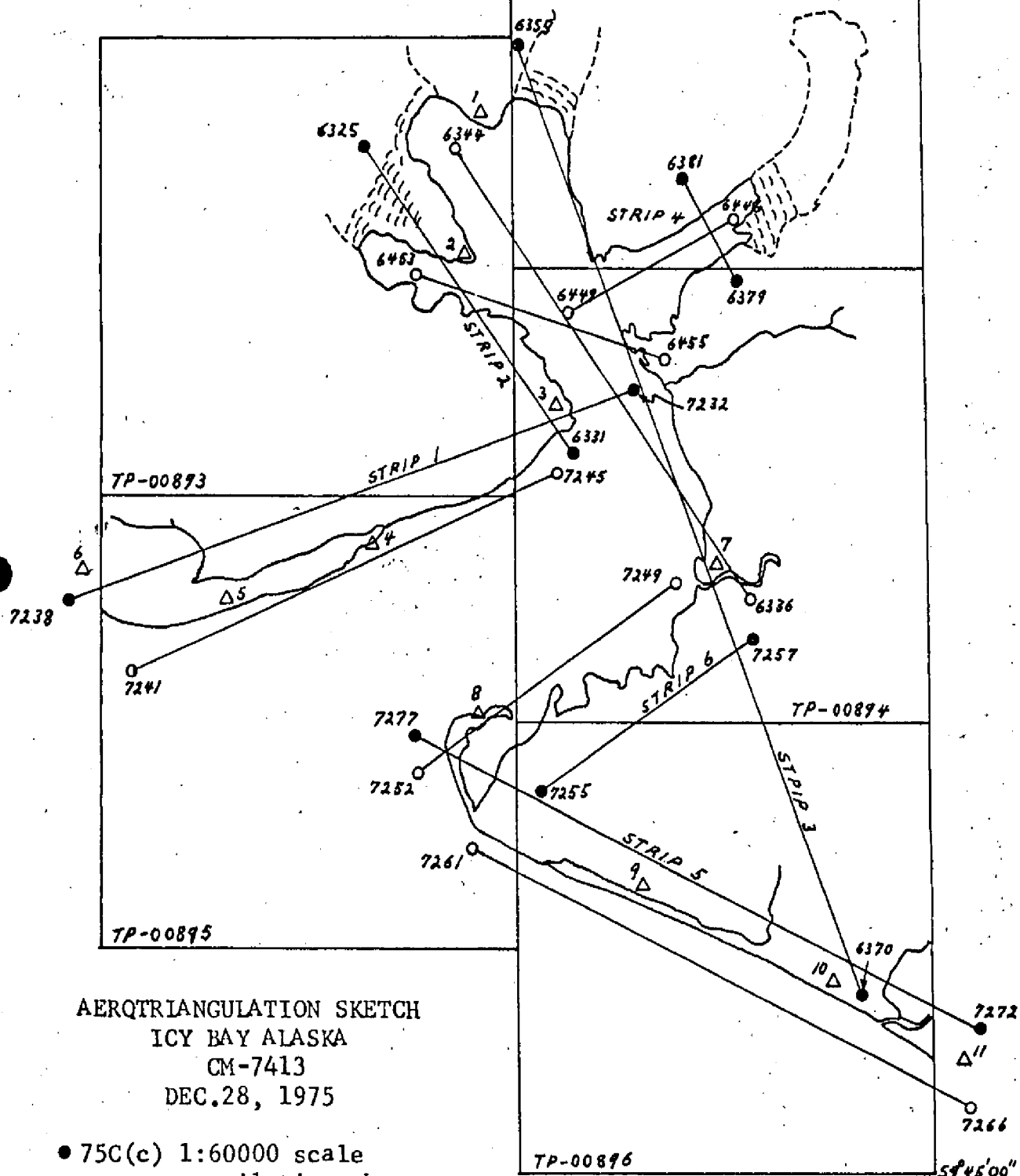
25. Photography: The photography was adequate.

Submitted by,

Don O. Norman
Don O. Norman

Approved by:

John D. Perrow, Jr.
John D. Perrow, Jr.
Chief, Aerotriangulation Section



AEROTRIANGULATION SKETCH
ICY BAY ALASKA
CM-7413
DEC.28, 1975

- 75C(c) 1:60000 scale
compilation photos
- 75C(c) 1:60000 scale
ratio photos

Fit to Control
(in feet)

Strip 1

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

Strip 2

1 GUYOT	0.0, 0.0
2 TOYUG	0.0, 0.0
3 KICHYATT	0.0, 0.0

Strip 3

1 GUYOT	-0.6, -0.6
2 TOYUG	-0.5, +0.5
3 KICHYATT	+2.7, +1.1
7 CAETANI	-1.9, -1.1
10 YAHTSE	+0.3, 0.0

Strip 5

11 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

COMPILATION REPORT

TP-00896

31. DELINEATION:

Delineation was by the Wild B-8 stereoplotter.

The 1:60,000 scale color photography was set on the Wild B-8 stereoplotter. The shoreline, interior details, and shallow limits were all delineated at that time. Points common to the color hydro-support ratios were selected and positioned to allow the confirmation of the compilation.

Photo coverage was adequate, but the stage of tide prevented compilation of the MLLW line or rocks. As the manuscript covers an uncharted area, the field editor and/or hydrographer should pay special attention to any along-shore and foreshore features not visible on the photographs.

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.

36. OFFSHORE DETAILS:

No unusual problems.

37. LANDMARKS AND AIDS:

No charted landmarks or aids were noted during compilation.

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, 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:

Joanne Roderick

Joanne Roderick
Cartographer
July 8, 1976

Approved:

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

ADDENDUM TO THE COMPILATION REPORT

TP-00896

FIELD EDIT

~~LAT.~~ Shoreline was not closed off at ~~Lat.~~ ^{LONG.} 141° 10' 30", ^{✓ DK 7/13/74}
~~Long.~~ 59° 48' 45" due to seasonal changes. Moraine Reef
at ~~Lat.~~ 141° 25' 00", ~~Long.~~ 59° 55' 00" will be delineated
by hydro survey. Chart (16741) shows five rocks between
Moraine Reef and the shoreline which were not located in
the field. Field editor showed foul line with breakers
and shallow along shoreline. This line was removed.
(Page 344, Topo Manual.)

TP-00896

49. NOTES FOR THE HYDROGRAPHER:

These are noted on the Master Film Field Edit Ozalid.

October 17, 1978

11

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7413 (Icy Bay, Alaska)

TP-00896

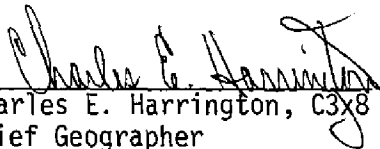
Gulf of Alaska ✓

Riou Bay ✓

Yahtse River ✓

Yana Stream ✓

Approved by:


Charles E. Harrington, C3x8
Chief Geographer

NOAA FORM 75-74
(7-75)U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

TP - 00896

1. PROJECTION AND GRIDS FPM		2. TITLE FPM		3. MANUSCRIPT NUMBERS FPM		4. MANUSCRIPT SIZE FPM	
CONTROL STATIONS							
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY FPM				6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) NA		7. PHOTO HYDRO STATIONS NA	
8. BENCH MARKS NA		9. PLOTTING OF SEXTANT FIXES NA		10. PHOTOGRAMMETRIC PLOT REPORT FPM		11. DETAIL POINTS FPM	
ALONGSHORE AREAS (Nautical Chart Data)							
12. SHORELINE FPM		13. LOW-WATER LINE NA		14. ROCKS, SHOALS, ETC. FPM		15. BRIDGES FPM	
16. AIDS TO NAVIGATION FPM		17. LANDMARKS FPM		18. OTHER ALONGSHORE PHYSICAL FEATURES FPM		19. OTHER ALONGSHORE CULTURAL FEATURES FPM	
PHYSICAL FEATURES							
20. WATER FEATURES FPM				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 FPM	
CULTURAL FEATURES							
27. ROADS FPM		28. BUILDINGS FPM		29. RAILROADS FPM		30. OTHER CULTURAL FEATURES FPM	
BOUNDARIES							
31. BOUNDARY LINES NA				32. PUBLIC LAND LINES NA			
MISCELLANEOUS							
33. GEOGRAPHIC NAMES FPM				34. JUNCTIONS FPM		35. LEGIBILITY OF THE MANUSCRIPT FPM	
36. DISCREPANCY OVERLAY FPM		37. DESCRIPTIVE REPORT FPM		38. FIELD INSPECTION PHOTOGRAPHS NA		39. FORMS FPM	
40. REVIEWER <i>F. Margiotta</i> F. Margiotta 7/19/76				SUPERVISOR, REVIEW SECTION OR UNIT <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr.			
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.							
COMPILER <i>F. Margiotta</i> F. Margiotta 3/77				SUPERVISOR <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr.			
Reviewer <i>Jim Byrd</i> Jim Byrd 4/26/77							
43. REMARKS See Form 76-36C, Item #8.							

FIELD INSPECTION

TP-00896

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.

FIELD EDIT: ICY BAY

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

"Separates Following the Text". Height data on rocks was estimated to plus or minus 1 foot and the bluffs on the manuscripts to plus or minus 10 feet for those judged less than 200 feet, and plus or minus 50 feet for those judged greater than 200 feet. All items are referenced to Greenwich Mean Time.

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, Descriptive Reports 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, discrepancies, and notes to the field editor have been completely answered with proper cross referencing.

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

The protruding rock spit at latitude $60^{\circ} 06' 30''$ N, longitude $141^{\circ} 14' 22''$ 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 laden 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 laden 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 $60^{\circ} 05' 05''$ N, longitude $141^{\circ} 20' 32''$ 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.

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

The small inlet, located at latitude $60^{\circ}05'25''\text{N}$, longitude $141^{\circ}21'16''\text{W}$, 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 $60^{\circ}07'00''\text{N}$ and $60^{\circ}06'00''\text{N}$ on the north and south respectively, and longitudes $141^{\circ}21'30''\text{W}$ and $141^{\circ}22'25''\text{W}$ 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 $60^{\circ}03'54''\text{N}$. 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 $60^{\circ}04'12''N$, longitude $141^{\circ}26'30''W$, were thoroughly searched for and shown to be non-existent. It is recommended that they be deleted. It is difficult to distinguish sediment laden ice from large rocks on the photographs.

A large delta is located at latitude $60^{\circ}04'05''N$, longitude $141^{\circ}27'00''W$. 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 $60^{\circ}04'20''N$, longitude $141^{\circ}28'48''W$ 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 $60^{\circ}04'35''\text{N}$, longitude $141^{\circ}31'20''\text{W}$. Heights of the glacier faces above the water line range from 30 to 200 feet. The region of shoreline at latitude $60^{\circ}04'35''\text{N}$, longitude $141^{\circ}31'20''\text{W}$ that is compiled as fast, is in actuality a ribbon of glacial ice heavily laden 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 $60^{\circ}05'12''\text{N}$, longitude $141^{\circ}32'01''\text{W}$. The other is located at latitude $60^{\circ}07'11''\text{N}$, longitude $141^{\circ}30'34''\text{W}$. 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 $141^{\circ}25'00''\text{W}$ and proceeded eastward around Gull Island to position $59^{\circ}56'20''\text{N}$, $141^{\circ}17'05''\text{W}$. 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 $59^{\circ}58'00''\text{N}$ on the north, $59^{\circ}57'00''\text{N}$ on the south, $141^{\circ}16'00''\text{W}$ on the east, and $141^{\circ}17'30''\text{W}$ 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 $60^{\circ}00'00''\text{N}$, and progressed southwest to the manuscript and the job limits at latitude $59^{\circ}57'35''\text{N}$. 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 (inter-section). 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 $59^{\circ}54'20''\text{N}$. 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 $59^{\circ}53'47''\text{N} \times 141^{\circ}25'52''\text{W}$ 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 $59^{\circ}58'07''\text{N}$ x $141^{\circ}38'15''\text{W}$ 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 $59^{\circ}57'25''\text{N}$ x $141^{\circ}42'00''\text{W}$ 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 $141^{\circ}25'00''\text{W}$ and continued southeast to the manuscript

and job limits at longitude $141^{\circ}05'00''\text{W}$. 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 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.
2. 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

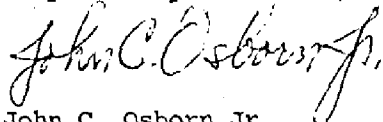
The following is a list of PDF-8/e computer programs and version dates used in the processing of the field edit sextant location package for JOB-

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

REVIEW REPORT TP-00896

SHORELINE

January 5, 1979

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

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

A comparison was made with the verified copy of H-9630. 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. No significant differences were noted.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

Submitted by:

Jim Byrd
Final Reviewer

Approved for forwarding:

Albert C. Rauch, Jr.
Chief Photogrammetric Branch, AMC

John D. Perrow, Jr.
Chief Photogrammetric Branch

for Randel C. Youngblood
Chief Coastal Mapping Division

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