T-12010

T-12010

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. ..... PH-6013 ..... *Map No.* ..... T-12010 .....

Classification No. Final Map *Edition No.* ..... 1 .....

LOCALITY

State ..... Alaska .....

General Locality ..... Cook Inlet
Kalgin Island to Anchorage .....

Locality ..... Mouth of Beluga River .....

.....

1966 TO 1977

REGISTRY IN ARCHIVES

DATE .....

☆ U.S. GOVERNMENT PRINTING OFFICE: 1972-761-152

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

DESCRIPTIVE REPORT - DATA RECORD

TYPE OF SURVEY: [X] ORIGINAL [ ] RESURVEY [ ] REVISED

SURVEY TP. T-12010

MAP EDITION NO. (1)

MAP CLASS Final Map

JOB PH- 6013

PHOTOGRAMMETRIC OFFICE: *Coastal Mapping Division, Atlantic Marine Center, Norfolk VA*

OFFICER-IN-CHARGE: Jeffrey G. Carlen, Cdr.

LAST PRECEEDING MAP EDITION

TYPE OF SURVEY: [ ] ORIGINAL [ ] RESURVEY [ ] REVISED

JOB PH- _____

MAP CLASS _____

SURVEY DATES: 19__ TO 19__

I. INSTRUCTIONS DATED

1. OFFICE	2. FIELD
Aerotriangulation 09/15/66 Compilation Supplement 3 4/26/67 Compilation Supplement 4 9/11/67	Supplement 1 - August 8, 1966 Field June 6, 1966

II. DATUMS

1. HORIZONTAL: [X] 1927 NORTH AMERICAN — OTHER (Specify)

2. VERTICAL: [X] MEAN HIGH-WATER [ ] MEAN LOW-WATER [X] MEAN LOWER LOW-WATER [ ] MEAN SEA LEVEL — OTHER (Specify)

3. MAP PROJECTION: Polyconic

4. GRID(S): STATE Alaska; ZONE 4

5. SCALE: 1:20,000 — STATE; ZONE

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: Stereoplanigraph	BY	P. Hawkins	04/67
	LANDMARKS AND AIDS BY		
2. CONTROL AND BRIDGE POINTS METHOD: Manual	PLOTTED BY	L. O. Neterer, Jr.	07/67
	CHECKED BY	R. R. White	07/67
3. STEREOSCOPIC INSTRUMENT COMPILATION INSTRUMENT: Kelsh Plotter SCALE: 1:20,000	PLANIMETRY BY	L. O. Neterer, Jr.	07/67
	CHECKED BY	R. E. Smith	07/67
	CONTOURS BY	NA	
	CHECKED BY	NA	
4. MANUSCRIPT DELINEATION METHOD: Smoothdrafted SCALE: 1:20,000	PLANIMETRY BY	L. L. Graves	07/67
	CHECKED BY	R. E. Smith	07/67
	CONTOURS BY	NA	
	CHECKED BY	NA	
	HYDRO SUPPORT DATA BY	L. L. Graves	07/67
	CHECKED BY	R. E. Smith	07/67
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	R. E. Smith	07/67
6. APPLICATION OF FIELD EDIT DATA	BY	I. Perkinson	01/78
	CHECKED BY	C. Blood	01/78
7. COMPILATION SECTION REVIEW	BY	C. Blood	01/78
8. FINAL REVIEW	BY	C. Blood/J. Byrd	05/86
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY	J. Byrd	09/86
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	P. Dempsey	Oct 1986
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	E. L. DAUGHERTY	Dec '86

NOAA FORM 76-36A — SUPERSEDES FORM C&GS 181 SERIES

* U.S. G.P.O. 1972-769382/582 REG.#6

NOAA FORM 76-36B
(3-72)

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

T-12010

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S)	TYPES OF PHOTOGRAPHY LEGEND	TIME REFERENCE
Wild RC-8 "L"	(C) COLOR (P) PANCHROMATIC X (I) INFRARED	ZONE: Alaska — [X] STANDARD MERIDIAN: 150th — [ ] DAYLIGHT

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

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
66L6651 - 66L6653	8/14/66	08:14	1:40,000	1.6 ft. above MLLW
66L6667 - 66L6668	8/14/66	08:42	1:40,000	2.6 ft. above MLLW

REMARKS

2. SOURCE OF MEAN HIGH-WATER LINE:

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

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

The mean lower low water line was compiled from 66L photography and is very approximate.

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
T-11998	T-12011	No Survey	T-12009

REMARKS

NOAA FORM 76-36B
(3-72)

* U. S. GOVERNMENT PRINTING OFFICE: 1974-768-078

NOAA FORM 76-36C
(3-72)

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

T-12010

HISTORY OF FIELD OPERATIONS

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

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		A. Wardwell	4/61 - 7/61
2. HORIZONTAL CONTROL	RECOVERED BY	G. Saladin	4/61 - 7/61
	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: [ ] COMPLETE [ ] SPECIFIC NAMES ONLY [X] NO INVESTIGATION — BY		
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None	
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)*

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

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

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

7. SUPPLEMENTAL MAPS AND PLANS

None

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

None

☆ U.S. GPO: 1977-765-092/1105 Region 6

NOAA FORM 76-36C
(3-72)

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

T-12010

HISTORY OF FIELD OPERATIONS

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

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		R. Melby	1966
2. HORIZONTAL CONTROL	RECOVERED BY	W. Bradly	1966
	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 [ ] COMPLETE [ ] SPECIFIC NAMES ONLY [X] NO INVESTIGATION — BY		
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

PHOTO NUMBER	STATION NAME

2. VERTICAL CONTROL IDENTIFIED

NA

PHOTO NUMBER	STATION DESIGNATION

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 [X] NONE

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

7. SUPPLEMENTAL MAPS AND PLANS

None

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

None

NOAA FORM 76-36C
(3-72)

*U.S. GOVERNMENT PRINTING OFFICE: 1974 - 768-078

NOAA FORM 76-36C
(3-72)

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

T-12010

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION ☒ FIELD EDIT OPERATION

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		B. I. Williams	July 1977
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 ☐ COMPLETE ☐ SPECIFIC NAMES ONLY ☒ NO INVESTIGATION — BY		
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	R. Crowell	July 1977
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)*

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE

6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

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

Field edit data volume
Field edit ozalid, Map T-12010

NOAA FORM 76-36C
(3-72)

*U.S. GOVERNMENT PRINTING OFFICE: 1974 - 768-078

NOAA FORM 76-36D
(3-72)

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

T-12010

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.	7/67	Class III manuscript	None	5/15/73
Field edit applied. Compilation complete.	1/78	Class I manuscript	2/1/78	2/1/78
Final Review	5/86	Final May		

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. [X] BRIDGING PHOTOGRAPHS; [X] DUPLICATE BRIDGING REPORT; [X] 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: _____

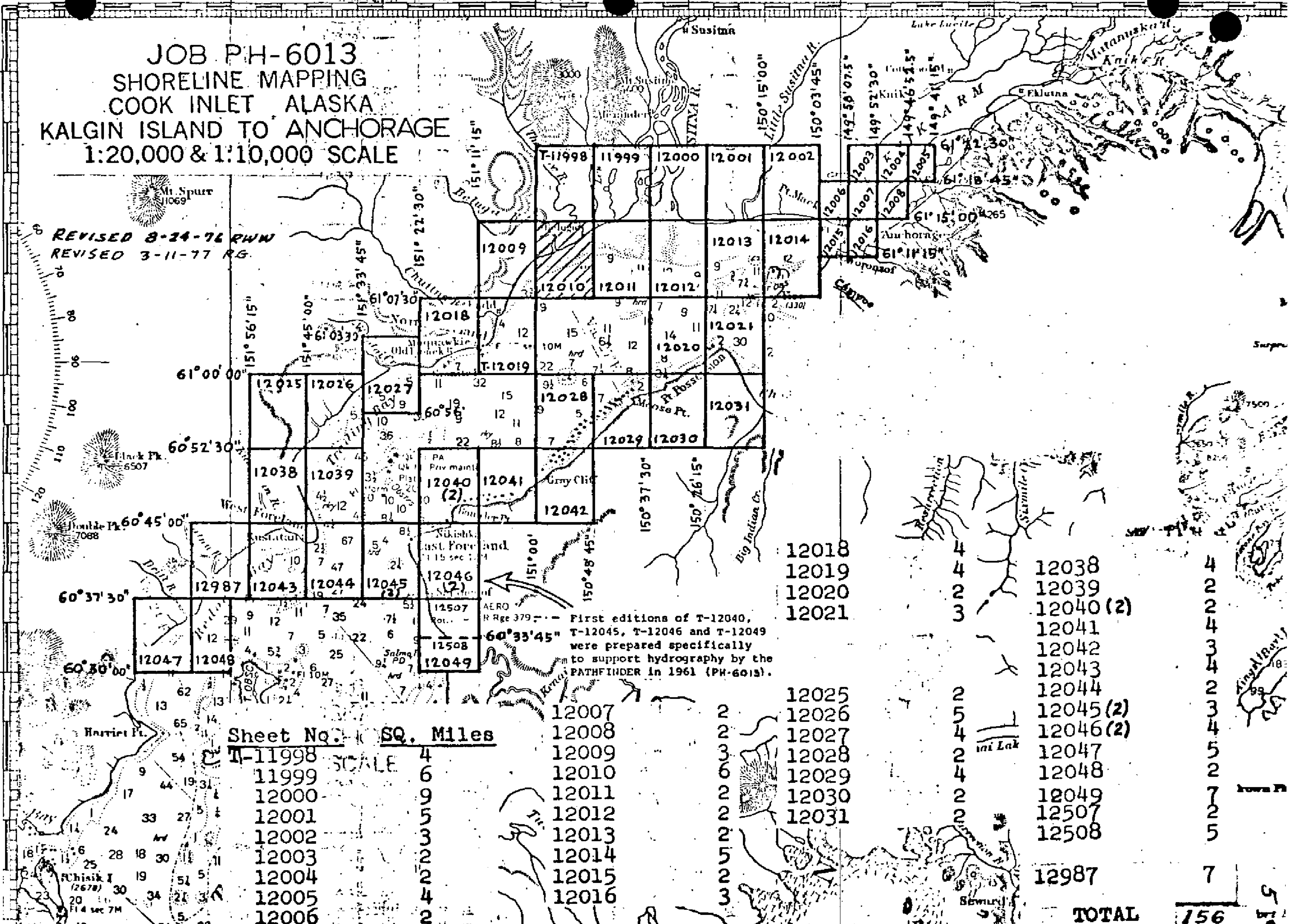
IV. SURVEY EDITIONS *(This section shall be completed each time a new map edition is registered)*

	SURVEY NUMBER	JOB NUMBER	TYPE OF SURVEY
SECOND EDITION	TP - _____ (2)	PH - _____	☐ REVISED ☐ RESURVEY
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS ☐II. ☐III. ☐IV. ☐V. ☐FINAL
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH- _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS ☐II. ☐III. ☐IV. ☐V. ☐FINAL
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS ☐II. ☐III. ☐IV. ☐V. ☐FINAL

NOAA FORM 76-36D

☆U. S. GOVERNMENT PRINTING OFFICE: 1973--778075/1077 REGION NO. 6

JOB PH-6013
SHORELINE MAPPING
COOK INLET ALASKA
KALGIN ISLAND TO ANCHORAGE
1:20,000 & 1:10,000 SCALE



Sheet No.	SQ. Miles
T-11998	4
11999	6
12000	9
12001	5
12002	3
12003	2
12004	2
12005	4
12006	2
12007	2
12008	2
12009	3
12010	6
12011	2
12012	2
12013	2
12014	5
12015	2
12016	3
12018	4
12019	4
12020	2
12021	3
12025	2
12026	5
12027	4
12028	2
12029	4
12030	2
12031	2
12038	4
12039	2
12040 (2)	2
12041	4
12042	3
12043	4
12044	2
12045 (2)	3
12046 (2)	4
12047	5
12048	2
12049	7
12507	2
12508	5
12987	7
TOTAL	156

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12010

This 1:20,000 scale Final shoreline map is one of 44 maps designated as project PH-6013 Cook Inlet, Kalgin Island to Anchorage, Alaska. T-12010 was compiled from photography taken after the 1964 earthquake.

The purpose of this map was to provide contemporary shoreline in support of hydrographic operations and to aid in chart revision.

Field work prior to compilation in the 1961 field season consisted of recovery of horizontal control and limited field inspection. Field work in 1966 consisted of premarking of horizontal control for aerotriangulation.

This area was photographed in August 1966 with the RC-8 "L" camera using panchromatic film at 1:40,000 scale.

Bridging was performed in the Washington office in April 1967.

This map was compiled at the Norfolk office in July 1967.

Field edit was performed for T-12010 during the 1977 field season. Field edit data was applied at AMC in July 1978.

Final review was performed at the Atlantic Marine Center in May 1986.

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 REPORT

COOK INLET, ALASKA

PROJECT SP-1-61 1961

USC&GS Ship PATHFINDER Arthur L. Wardwell, CAPT., Comdg.

MANUSCRIPTS:-

12049, 12046, 12045, 12040, 12031, 12032, 12026, 12027, 12028, 12020, 12021, 12022, 12017, 12015, 12016, 12014, 12013, 12008, 12007, 12006, 12003, 12004, 12005, 12002, 12001, 12000, 12012, 11999, 12011, 11998, 12010, 12009, 12019, 12018, 12023, 12025, 12024, 12029, 12030, 12035, 12034, 12033, 12037, 12036

AERIAL FIELD INSPECTION:-

Areas inspected were as follows: Manuscripts No. 12049, 12046, 12045, 12040, Kenai to Boulder Point, all shoreline and alongshore features.

Balance of above listed manuscripts were used only for horizontal control identification.

The area is primarily moderately timbered with spruce, fir, alder and bear claw above the mean high water line. Shoreline varies from fine black silt at the mouth of the Kenai River mouth to large fragmented boulders at Boulder Point. Most of the beachline is sand and shingle inter spersed with boulders of varying sizes. Numerous underground springs and some small creeks discharge small quantities of silt and water and are subject to constant change.

The area was inspected by cruising alongshore by launch and by walking the beach and bluff line. Foul areas now indicated on Chart No. 8553 are adequate. Two primary foul areas were noted as follows:

Kenai River Mouth
East Foreland to Moose Point

Quality of photographs was excellent. Areas of shadow were limited to the shoreline east of East Foreland and upper Knik Arm. No attempt was made to sketch in the mean high water line. Enough open areas in shadowed areas are available to adequately delineate mean high water line.

HORIZONTAL CONTROL:-

Four additional second-order triangulation stations were established between Kenai and East Foreland to supplement existing control in the area of hydrography. They were identified as follows:

AUDRY 1961	Manuscript No.	12049	Photo No.	1397
LOUISE 1961	"	" 12049	"	" 1402
BOO 1961	"	" 12045	"	" 1420
HELEN 1961	Traverse from East Foreland Light 1960.			

Additional horizontal control recovery was made in upper Cook Inlet in accordance with project instructions. All stations were searched for and approximately 75 percent were recovered. Most of the stations not recovered are considered lost. It is recommended that the next vessel assigned to this project be given a Tellurometer. Simple traverse between recovered triangulation stations would adequately control presently un-controlled flight lines.

In many cases the listed triangulation station was not recovered and a U.S. Engineers' triangulation station was used as a substitute. It appears that the U.S. Engineers could not recover listed C&GS control and substituted their own stations.

Great assistance was rendered by the 5040 Air Transport Squadron at Elmendorf AFB in furnishing heliocopter service. Three days of flying enabled personnel to cover shoreline control stations over the greater part of upper Cook Inlet.

If additional control is required in the vicinity of Elmendorf AFB, use can be made of triangulation now being observed by a C&GS geodetic party. Triangulation station DORF 1961 (in the vicinity of LOOP 2) is to be set in the roof of a building on the base. By use of the description written by the observing party, an accurate office identification can be made.

Triangulation not plotted on the Photo Index was identified where it was on photographs. This control was established by G.W.M. in 1959 and H.G.C. in 1960.

VERTICAL CONTROL:-

None recovered or established.

CONTOURS AND DRAINAGE:-

No contouring was attempted.

Primary drainage features are the Kenai, Matanuska, Little Susitna, Susitna, Beluga, Kustitan, and Drift Rivers. Tidal sweep keeps some of the rivers from building up deltaic features. An extremely flat foreshore on the Matanuska, Little Susitna, Susitna and Beluga rivers give rise to wide deltas that change seasonally. Many small streams discharge around Cook Inlet but have no apparent seasonal change.

WOODLAND COVER:-

The major portion of the area is wooded and interspersed with muskeg and open grassy areas. These are easily identifiable on the photographs. In areas of increasing cultural activity, the woodland oover is being removed. No attempt was made to indicate these areas.

SHORELINE AND ALONGSHORE FEATURES:-

The mean high water line is adequately delineated on manuscripts 12049, 12046, 12045, 12040. In the area of photo hydro signals IVY and EGG, east of East Foreland, the mean high water line is as follows:

IVY 30 meters inside MHW
EGG on piles at MHW

-(3)-

Most of the shoreline signals are located at MHW along the beach. Many of the fishing huts set on piles at the base of the bluff were used as signals.

No attempt was made to delineate the low water line. Hydrography in the area should be satisfactory.

The foreshore area is primarily sand, small stones and boulders. The normal gradiation from stones at MHW to sand at MLW exists in all areas, except south of the Kenai River. In this area a heavy layer of silt is found in the tide zone.

OFFSHORE FEATURES:-

All offshore features are located by the hydrographer.

LANDMARKS AND AIDS:-

There are two fixed aids to navigation within the limits of the hydrographic project:

EAST FORELAND LIGHT
KENAI RIVER ENTRANCE RANGE

Both are located on Chart No. 8553.

One floating aid is also located on Chart No. 8553. Another can buoy is maintained by the oil company and is located just north of the pier.

One landmark for charts is recommended in the Descriptive Report for SP-1-61. This landmark is identified as follows:

KENAI TANK 1959, located by G.W.M. and identified on Photo No. 60W1400.

BOUNDARIES, MONUMENTS AND LINES:-

None shown.

OTHER CONTROL:-

Photo hydro signals were located in accordance with standard instructions. Signal IVY was found in error and relocated photogrammentrically, then verified by hydrographic cuts. Final location is shown on manuscript 12045.

Final location of photo hydro signals will remain in their relative position with the shoreline. Final compilation will cause a datum shift which will move both hydrography and signals the same relative amount.

DATUM DIFFERENCES:-

Radial plotting of photo identified control stations was made in the field. The following discrepancies were noted between plot positions and geographic positions.

EAST FORELAND LIGHT 1960	Lat.	-13.8 meters
	Long.	-75.4 meters
BOULDER (USE)	Lat.	-37.0 meters
	Long.	-45.2 meters
KENAI CHURCH STEEPLE 1909	Lat.	-15.3 meters
	Long.	-23.6 meters

CULTURAL FEATURES:-

Numerous fishing shacks are located along high water line in the area of hydrography. These huts are subject to damage by winter storms and are in a constant state of transition. No attempt was made to locate current huts.

The Nikiski Oil Pier was under construction at the time of photography. The completed dimensions are available from a blueprint of the structure submitted with descriptive report for Project SP-1-61.

Respectfully submitted,

Robert E. Williams,
Lieut. Comdr., C&GS

Gerald C. Saladin
Gerald C. Saladin
LTJG, C&GS

Arthur L. Wardwell
Arthur L. Wardwell,
Captain, C&GS
Comdg., Ship PATHFINDER

PHOTOGRAMMETRIC PLOT REPORT
Job PH-6013
Cook Inlet, Alaska

April 13, 1967

21. Area Covered

The area covered by this report extends from the Redoubt Bay-East Foreland area to Anchorage, Alaska. Included in this area are T-sheets 11998 thru 12001, 12009 thru 12012, 12018, 12019; 12021, 12025 thru 12030, 12038, 12039, 12042 thru 12044, 12047, 12048 and 12987.

22. Method

Five strips were bridged on the C-8 and C-5 stereoplanigraph. Strip #1 (66-L-6602 thru 6623) was adjusted on four triangulation stations with tie points used as checks. Strip #2 (66-L-6629 thru 6634) was adjusted on two triangulation stations plus tie points from Strip #1. Strip #3 (66-L-6641 thru 6653) was adjusted on three triangulation stations plus ties. Strip #4 (66-L-6667 thru 6677) was adjusted on three triangulation stations plus ties. Strip #9 (66-L-6713 thru 6725) was adjusted on three triangulation stations.

23. Adequacy of Control

The control, being premarked, was very good insofar as being able to see it clearly; however, in several cases, the 1:40,000 scale photography completely missed the stations. It should be noted that all strips were adjusted with minimum control, and as such, no positive proof can be provided that the adjustments are correct other than by means of tie points and residuals of adjustment. The tie points and residuals do indicate a good adjustment on all strips. Strip #4 had to be terminated at station SIT 1966 due to lack of control beyond this point. (Port McKenzie could not be seen on the 1:40,000 scale photography.) Attempts were made to provide a tie point for the terminal station on the east end of this strip by bridging three models south of Anchorage, dropping points onto Strip #4. This met with complete failure. Strip #6 had to be terminated on the southern end at station GRAY CLIFF 1909 since the station at East Foreland was not covered by the 1:40,000 scale photography.

24. Supplemental Data

Local USGS quads were used to provide vertical control used in the bridging adjustment.

The coverage of 1966 photography falls short of being sufficient to show the shallow mud areas which are near lower-low water level in the area of the Susitna River Delta. To provide for the delineation of the limiting line of this feature, scale points have been selected which are common to 61M photography which does show the limiting line. Ratios of these photographs will be provided for the graphic delineation of the limiting line only. The compiler should select whatever additional points are necessary for correct delineation. A holiday exists on some of the shoreline along Strip #9. A flight of 60W photography provides coverage and three ratio photos were provided for compilation of this area.

All points on the bridged plates were drilled by PUG methods. Plate 66-L-6719 was broken after bridging. A new plate was provided but it does not contain any drilled points. It is suggested that the models on either side be compiled and pass points be dropped on this plate for compilation.

25. Photography

Photography was adequate as to definition and overlap but was not adequate as to coverage. The 1:40,000 scale photos did not cover either the shoreline or the marked control on the east end of Strip #4 or the southwest end of Strip #9. A portion of the shoreline along the part of Strip #9 which was bridged also lacks coverage.

Submitted by:

Paul Hawkins

Approved by:

John D. Perrow, Jr.

NOAA FORM 76-41
(6-75)

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

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	GEODETIC DATUM	ORIGINATING ACTIVITY
T-12010	PH-6013	NA 1927	Coastal Mapping Division. AMC, Norfolk, VA

STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI-ANGULATION POINT NUMBER	COORDINATES IN FEET STATE ____ ZONE ____	GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE	REMARKS FORWARD	BACK
BELUGA, 1909	1966 Unadjusted Field		x=	ϕ 61 12 43.368	1342.4	(514.8)
			y=	λ 150 53 29.231	436.4	(459.4)
			x=	ϕ		
			y=	λ		
			x=	ϕ		
			y=	λ		
			x=	ϕ		
			y=	λ		
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			y=	λ		
			x=	ϕ		
			y=	λ		
			x=	ϕ		
			y=	λ		

COMPUTED BY C. H. Bishop	DATE 4/21/67	COMPUTATION CHECKED BY F. Margiotta	DATE 4/18/77
LISTED BY C. H. Bishop	DATE 4/21/67	LISTING CHECKED BY F. Margiotta	DATE 4/18/77
HAND PLOTTING BY C. H. Bishop	DATE 4/22/67	HAND PLOTTING CHECKED BY	DATE

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT

T-12010

31. DELINATION:

Delineation was by the Kelsh Plotter, using 1:40,000 scale panchromatic photographs. Photography was adequate.

32. CONTROL:

See Photogrammetric Plot Report dated April 13, 1967.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are inapplicable.

Drainage was delineated by the Wild B-8 and Kelsh stereoplotters and by office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS:

Alongshore details were delineated by the Kelsh stereoplotter and by office interpretation of the photographs.

The Mean High Water Line was delineated from the photographs.

The Mean Lower Low Water line was compiled from the 1966 L photography.

36. OFFSHORE DETAILS:

None.

37. LANDMARKS AND AIDS:

No charted landmarks or aids were located 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 the Photogrammetric Report dated April 13, 1967.

46. COMPARISON WITH EXISTING MAPS:

A comparison was made with the following USGS Quadrangle: TYONEK (A-3), ALASKA, scale 1:63,360, dated 1958.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following National Ocean Survey Chart: 8353, scale 1:194,154, 7th Edition, dated May 17, 1965.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

Albert C. Rauck Jr. FOR
L. Graves
Cartographic Technician
July 1967

Approved:

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

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6013 (Cook Inlet)

T-12010

Beluga River

Cook Inlet

Cottonwood Beach

Lewis River

Sealy Lake

Theodore River

Approved by:

A. J. Wraight
Chief Geographer

Prepared by:

Frank W. Pickett
Cartographic Technician

Field Edit Report
Number Three Bay to Miller Creek
Tyonek to Ivan River
OPR-469-FA-77

GENERAL

This report covers the following manuscripts:

T-11998 T-11999 T-12009 T-12010 T-12011 T-12019
T-12020 T-12028 T-12029 T-12030 T-12041 T-12042

Field work is essentially complete on all maps.

The northern shore between North Foreland and Shorty Creek is characterized by sand and gravel beaches, backed by dirt bluffs in some areas, with small mud flats in the vicinity of the Tyonek Timber Company pier and Shorty Creek which are exposed at low tides. The rest of the northern shore is low and gently sloping with marshy areas above high water and extensive mud flats exposed at low tide.

The entire southern shore is littered with rocks and boulders, often to considerable distances from shore. Beach areas are sand and gravel with occasional areas of mud flats, not as extensive as found on the northern shore. Dirt bluffs line most of the beach.

A total of 153 fixes were taken to locate significant features along 44 nautical miles of shoreline. Each was assigned a number with the format DDD-FF, where DDD represents the julian day of the fix and FF represents the sequential fix number for that day.

All fix information is recorded in the field edit data volume. Fix times are given in Greenwich mean time. All height information is noted on the master field edit ozalid. Information on all signals and stations used for control is included with this report. Deletions are noted in green ink, additions and changes in red ink, verifications in violet ink. All are noted on the master field edit ozalid.

METHOD

Field edit along the southern shoreline was done by LTJG Neal Millett and ENS Robert Crowell during the month of June, 1977. Work was performed at low tidal stages using a 17 foot skiff equipped with a Mini-ranger console and transceiver. Copies of the field edit ozalids and corresponding photographs were examined in the field. General features, including the mean high water line, were verified by visual comparison of the field edit ozalid

and the areas concerned.

Detached positions and heights were obtained on the more significant rocks. Control for fixes was by range-range and range-azimuth. In several instances sextant angles were also taken. Heights were estimated by comparison to a boathook of known length.

Field edit along the northern shoreline was done by LTJG Neal Millett and ENS Robert Crowell during the month of July, 1977. Initial field edit was done by helicopter at a low tidal stage. Copies of the field edit ozalids and corresponding photographs were examined in the field. Verification of general features, including the mean high water line, was done by visual comparison of the field edit ozalid and the area concerned. No control was used for this phase.

Follow-up field edit was done in those areas where detached positions were needed. Work was done using a 29 foot launch equipped with Raydist electronic positioning equipment. Control for fixes was a combination of range-range, used to locate the launch, and visual. Three lines of position were determined to each object by taking horizontal sextant angles from the launch. The position of the launch was provided by the Raydist system. Heights were estimated by comparison to nearby objects of known size.

ADEQUACY OF COMPILATION

Compilation of the maps is generally adequate. Not all existing rocks on the southern shore were located due to their large numbers. Photography at low tidal stages would best accomplish this.

MAP ACCURACY

The positions of horizontal control stations as they plotted on the maps were compared to surrounding features, in some cases by measurement. These comparisons generally gave good results. Fix accuracy, as indicated by check fixes, was good.

RECOMMENDATIONS

It is recommended that the maps be revised as noted on the master field edit ozalid and then be accepted as advanced manuscripts. Improved photography, both in coverage and quality, would aid all stages of field edit.

INDIVIDUAL MANUSCRIPTS

Details specific to each manuscript are included in the following individual reports.

Map T-12010
Beluga River, N of

METHOD

Follow-up field edit was performed and the offshore rock, noted from the air, was located.

ADEQUACY OF COMPILATION

Compilation of this map is generally adequate and field inspection is complete.

MAP ACCURACY

No checks on horizontal accuracy, except check fixes, were performed. Accurate verification of the mean high water line would be impractical due to the gentle slope of the beach area and the extreme tidal range.

LANDMARKS

The radio towers shown on USGS quad sheet A-3 were not located due to time limitations. Their usefulness as landmarks is rather limited due to their distance from the water. Their location would be somewhat involved due to the sparseness of control in the area.

Submitted by:

Robert B Crowell
LTJG, NOAA

Approved by:

Bruce I Williams
Commanding Officer
NOAA Ship Fairweather

REVIEW REPORT
T-12010

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

Not applicable.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

The contemporary Hydrographic Survey for the area of this map was not available for comparison at the time of Final Review.

65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS chart:
16660, scale 1:194,154, 22nd edition, May 8, 1982.

The chart compared well with this manuscript.

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

Approved

Chief, Photogrammetric Production Sec.

Ronald K. Brewer
Chief, Photogrammetry Branch

[illegible]
(8-22-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. ______________

INSTRUCTIONS

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

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

CHART	DATE	CARTOGRAPHER	REMARKS
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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