

T-12021

T-12021

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-12021
Classification No. Final Map Edition No. .1.....

LOCALITY

State Alaska
Cook Inlet
General Locality .. Kalgin Island to Anchorage ...
Locality Possession

1966 TO 1974

REGISTRY IN ARCHIVES

DATE

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division Atlantic Marine Center, Norfolk, VA		SURVEY PH T-12021 MAP EDITION NO. (1) MAP CLASS Final Map JOB PH.6013	
OFFICER-IN-CHARGE Jeffrey G. Carlen, CDR		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation 9/15/66 8/13/73 Compilation, Supplement 3 4/26/67 Compilation, Supplement 5 3/20/73 Compilation, Amendment 1 to Supplement 5 4/5/73 Compilation, Amendment 2 to Supplement 5 1/31/74		Field 6/6/66 Supplement 1 8/8/66 Field 3/30/73	
II. DATUMS			
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify)	
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> 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 BY P. Hawkins METHOD: Stereoplanigraph LANDMARKS AND AIDS BY 4/67			
2. CONTROL AND BRIDGE POINTS PLOTTED BY J. Steinberg METHOD: Manual CHECKED BY D. Johnston 5/67			
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY L. O. Neterer, Jr. COMPILATION CHECKED BY R. Pate 5/67			
INSTRUMENT: Kelsh Plotter SCALE: 1:20,000 CONTOURS BY N.A. CHECKED BY N.A.			
4. MANUSCRIPT DELINEATION PLANIMETRY BY L. O. Neterer, Jr. CHECKED BY C. Bishop 5/67			
METHOD: Smoothdrafted CONTOURS BY N.A. CHECKED BY N.A.			
SCALE: 1:20,000 HYDRO SUPPORT DATA BY L. O. Neterer, Jr. CHECKED BY C. Bishop 5/67			
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY C. Bishop 5/67			
6. APPLICATION OF FIELD EDIT DATA BY I. Perkinson 8/75			
CHECKED BY F. Margiotta 8/75			
7. COMPILATION SECTION REVIEW BY F. Margiotta 8/75			
8. FINAL REVIEW BY J. Byrd/C. Blood 5/86			
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY J. Byrd 9/86			
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 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-12021
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8"L" and RC-5"W"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR X(P) PANCHROMATIC (I) INFRARED		ZONE Alaska	<input checked="" type="checkbox"/> STANDARD
<input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN 150th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
66 L 6723-66 L 6725	8/14/66	09:23	1:40,000	0.2 ft. above MLLW	
60 W 1330	8/30/60	09:54	1:30,000	22.4 ft. above MLLW	

REMARKS

The MHWL of Fire Island was compiled from the 1960 photographs.

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 LINE~~ OR MEAN LOWER LOW-WATER LINE:

*The mean lower low water line was compiled from the above listed mean lower low water photos. The MLLWL was not delineated for Fire Island.

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-12013	No Survey	T-12031	T-12020

REMARKS

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

T-12021

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION *Premarking* ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	1966
2. HORIZONTAL CONTROL	RECOVERED BY A. C. Weymann, III	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 (<i>Triangulation Stations</i>) BY None	
	LOCATED (<i>Field Methods</i>) BY None	
	IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE BY <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

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 ☒ 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*)

None

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

T-12021

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	A. Wardwell	1961
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	NA NA NA
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None 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 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: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> 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)

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-12021
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	K. Jeffers	5/74 - 8/74
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	NA NA NA
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	G. Stroble None 8/74
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	BY
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	G. Stroble 8/74
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)

66L-6225

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)

- 1 Field Edit Ozalid
- 1 Field Edit Report
- 1 Report on Landmarks and Aids

NOAA FORM 76-36C
(3-72)

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONT-12021
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.	5/67	Class III manuscript	None	5/15/73
Field edit applied. Compilation complete.	8/75	Class I manuscript	2/11/77	2/11/77
Final Review	5/86	Final Map		

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		2/6/78	Aid for charts

2. ☒ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: February 6, 19783. ☐ 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: _____

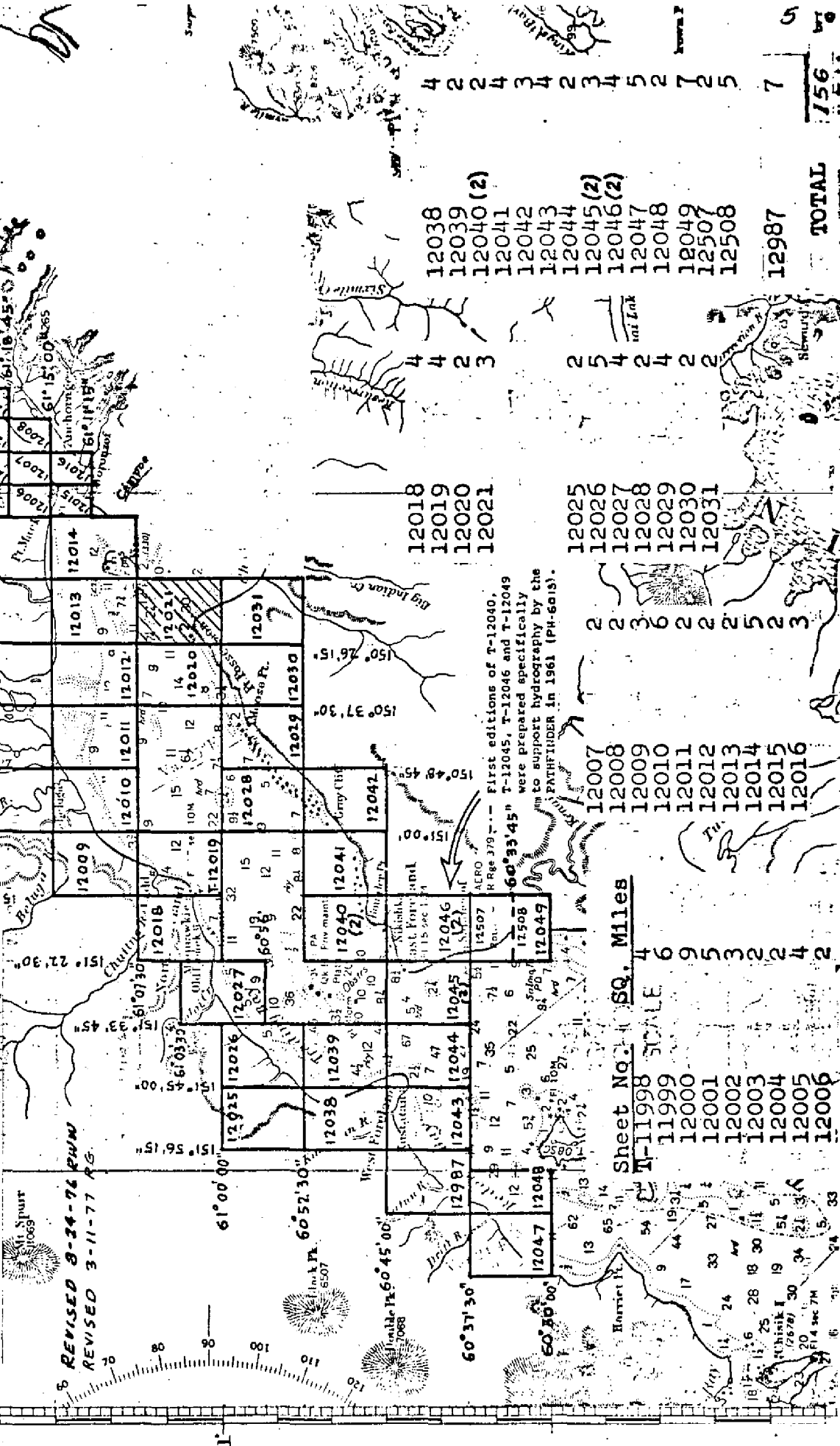
IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

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	

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

REVISED 3-24-76 RWN
 REVISED 3-11-77 PG.

5000
 10000
 15000
 20000
 25000
 30000
 35000
 40000
 45000
 50000
 55000
 60000
 65000
 70000
 75000
 80000
 85000
 90000
 95000
 100000



First editions of T-12040, T-12045, T-12046 and T-12049 were prepared specifically to support hydrography by the PATHFINDER in 1961 (PH-6013).

Sheet No.	SQ. Miles
T-11998	4
11999	6
12000	9
12001	5
12002	3
12003	2
12004	2
12005	4
12006	2

12018	4
12019	4
12020	2
12021	3
12038	2
12039	5
12040 (2)	4
12041	2
12042	4
12043	2
12044	2
12045 (2)	2
12046 (2)	2
12047	2
12048	2
12049	2
12507	2
12508	2
12987	7
TOTAL	156

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12021

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-12021 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 for horizontal control for future aerotriangulation.

This area was photographed in August 1966 with the RC-8 "L" camera using panchromatic film at 1:40,000 scale. The photography was used for bridging and compilation and for hydrographic support.

Bridging was performed in the Washington office in April 1967.

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

Field edit was performed for T-12021 during the 1974 and 1977 field seasons. Field edit data was applied at AMC in August 1975.

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.

7

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 interspersed 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.	

-(2)-

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 helicopter 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 cover 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 gradation 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. 60WL400.

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 photogrammetrically, 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

-(4)-

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
7/1/77

Paul Hawkins

Approved by:

John D. Perrow, Jr.
John D. Perrow, Jr.

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. T-12021	JOB NO. PH-6013	GEODETTIC DATUM NA 1927		ORIGINATING ACTIVITY Division, AMC, Norfolk, VA		REMARKS FORWARD BACK	
STATION NAME POSSESSION, 1909	SOURCE OF INFORMATION (Index) Unadjusted Field 1966	AEROTRI- ANGULATION POINT NUMBER	COORDINATES IN FEET STATE _____ ZONE _____		GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE		
			X=		ϕ 61 02 16.368	506.6 (1350.5)	
			Y=		λ 150 23 43.419	651.8 (248.9)	
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
			X=		ϕ		
			Y=		λ		
COMPUTED BY C. H. Bishop		DATE 4/21/67	COMPUTATION CHECKED BY Frank Margiotta		DATE 4/25/77		
LISTED BY		DATE	LISTING CHECKED BY		DATE		
HAND PLOTTING BY		DATE	HAND PLOTTING CHECKED BY		DATE		

COMPILATION REPORT

T-12021

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 Kelsh stereoplotter 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 and the Mean Lower Low Water line was compiled from the mean lower low water photography.

36. OFFSHORE DETAILS:

None.

37. LANDMARKS AND AIDS:

One charted aid to navigation could not be identified or located from the photographs.

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 Quadrangles: TYONEK (A-1) and (A-2), ALASKA, scale 1:63,360, dated 1952 and 1951, revised 1964.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following National Ocean Survey Chart: No. 8553, 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:

Lowell O. Neterer, Jr.

L. O. Neterer, Jr.
Cartographic Technician
May 1967

Approved:

Albert C. Rauck, Jr.

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

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6013 (Cook Inlet)

T-12021

Chickaloon Bay

Cook Inlet

Grand View

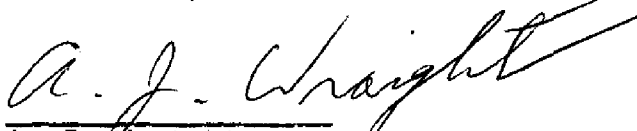
Kenai National Moose Range

Point Possession

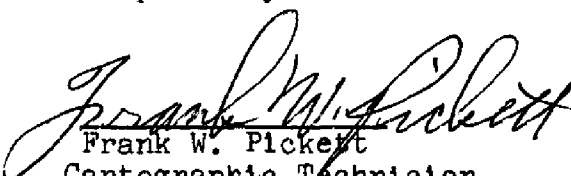
Possession

Turnagain Arm

Approved by:


A. J. Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

FIELD EDIT REPORT

OPR-469-RA-1974

UPPER COOK INLET, KNIK ARM

ALASKA

T-12000 thru T-12008

T-12012 thru T-12016

T-12021

T-12031

TP- 00515

NOAA Ship RAINIER

CDR K. William Jeffers

Commanding

INTRODUCTION

Field edit was completed on selected "minus tide days" during the period from mid-May through the end of August. Work was carried out on shore and land.

Field edit was started in the Port of Anchorage and continued north up Knik Arm to Latitude $61^{\circ}22.0'$, the northern limit of shoreline control. Field edit was completed on the north side of Cook Inlet westward to Longitude $150^{\circ}37.0'$. Shoreline around Fire Island was inspected on the northwest side from North Point to West Point. Approximately 3 miles of shoreline were inspected in the immediately vicinity of Pt. Possession.

Photographs used in the field edit are from jobs CM-7310 and PH-6013. Height data on all rocks was estimated. Times were referenced to 0° Longitude.

Adequacy of Compilation

All rocks and offshore features are labeled on the field edit ozalids, and wherever possible, verified on the field photos. Compilation of the MHWL was excellent on the manuscripts. Verification of MLLW was done by launch hydrography and is clearly delineated on the boat-sheets.

Shoreline Summaries

T-12000, T-12001, T-12002, T-12012, T-12013 (Northern Half), T-12014 (Northern Half)

This group of manuscripts includes the northern part of Cook Inlet from Susitna River to Pt. Mackenzie. The area is one of extensive mud flats. One discrepancy was noted on the shoreline junction between T-12002 (1966 shoreline manuscript) and T-12006 (1973 shoreline manuscript). The 1973 shoreline manuscript extended the shoreline up to the forest edge. The MHWL is along a marsh that extends south from the forest edge. Therefore the shoreline was adjusted to follow the MHWL along the marsh.

T-12013 and T-12014 (southern Half)

The shoreline in this area covers Fire Island. The shoreline of Shelter Bay is muddy. The northern side of the island has a rocky beach with some detached rocks, none extending more than a quarter mile off shore. The southern and eastern side of Fire Island was not field edited, therefore, the Field Edit Ozalids should be returned to the RAINIER as soon as possible.

T-12021 and T-12031

The vicinity of Point Possession is foul with offshore rocks. The west side of Pt. Possession is very foul with rocks extending out 3/4 mile. This area was not completely field edited, therefore, the manuscripts and field edit ozalids should be returned to the RAINIER as soon as possible.

T-12006, T-12015, T-12016, TP-00515

This area includes Anchorage Harbor and the area extending westward to Pt. Mackenzie and Pt. Woronzof. The southern shore is primarily mud flats, almost entirely free of offshore rocks. The northern shore has many offshore rocks awash at MLLW. TP-00515 is a 1:5,000 scale inset of Anchorage Proper. Pier heights and additional data are recorded on the Field Edit Ozalid.

T-12007, T-12008

Lower Knik Arm-- The east and west shore are foul with many rocks and boulders awash at MLLW.

T-12003, T-12004, T-12005

This area includes upper Knik Arm to the extent of the 1973 photo coverage. The east and west shores are mud with very few dangerous rocks.

Recommendations

Much of the area included in this survey project lacked good photo support. The 1973 photo support in Knik Arm and Anchorage Harbor was excellent, however, the 1966-1967 coverage westward into Cook Inlet was very sparse. Of special concern is the fact that the T-sheet and flight-line index showed many flight lines of photos which were never received and would have aided our field operations considerably. If these flights lines or even parts of them are not available, a complete inventory should be supplied for our records.

respectfully submitted,

Garth Stroble
(Garth Stroble LTJG, NOAA

PH-6013
T-~~12012~~
12021

AIDS TO NAVIGATION AND
LANDMARKS FOR CHARTING

NOAA SHIP RAINIER

OPR-469-RA-1974

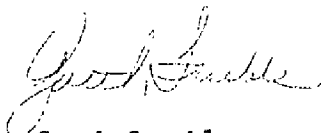
21 October, 1974

K. William Jeffers
Commanding


According to section 7-18 of the Hydrographic Manual, Publication 20-2, Aids to Navigation and Landmarks for Charting shall be submitted as a special report. Since all the the information in this report is directly related to field edit operation, I feel this report could be incorporated in the Field Edit Report.

The chart letters and NOAA forms 76-40 included are self-explanatory and need no further explanation. The forms and letters were prepared as per sections 7.6 and 8, respectively, of the Coast Pilot Manual, Edition 3, 1969.

For further information on the locations of Aids to Navigation, refer to Geodetic Control Report, OPR-469-RA-1974.



Garth Stroble
LTJG, NOAA



K. William Jeffers
CDR, NOAA, Commanding

REVIEW REPORT
T-12021

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

A comparison was made with Hydrographic Surveys:
H-9445, 1:20,000 scale, date unknown
H-9444, 1:20,000 scale, April 10, 1978.

There were no major conflicts.

65. COMPARISON WITH NAUTICAL CHARTS

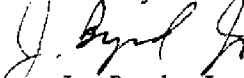
A comparison was made with the following NOS chart:
16660, scale 1:194,154, 22nd edition, May 8, 1982.

The chart compared well with this manuscript.

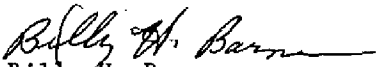
66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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


Submitted by

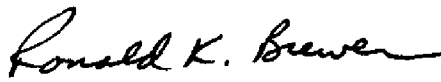

James L. Byrd, Jr.
Final Reviewer

Approved for forwarding


Billy H. Barnes
Chief, Photogrammetric Section

Approved


Chief, Photogrammetry Production Sec.


Chief, Photogrammetry Branch

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Garth, Stroble
POSITIONS DETERMINED AND/OR VERIFIED	Garth, Stroble
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	Frank Margiotta
	Charles Blood

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<p>OFFICE</p> <p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</p> <p>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.</p> <p>EXAMPLE: 75E(C)6042 8-12-75</p>	<p>FIELD (Cont'd)</p> <p>B. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</p> <p>EXAMPLE: P-8-V 8-12-75 74L(C)2982</p>
<p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED</p> <p>Enter the applicable data by symbols as follows:</p> <p>F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant</p> <p>A. Field positions* require entry of method of location and date of field work.</p> <p>EXAMPLE: F-2-6-L 8-12-75</p>	<p>II. TRIANGULATION STATION RECOVERED</p> <p>When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.</p> <p>EXAMPLE: Triang. Rec. 8-12-75</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</p> <p>Enter 'V-Vis.' and date.</p> <p>EXAMPLE: V-Vis. 8-12-75</p>

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

