

T-12013

T-12013

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-12013
Classification No. Final Map Edition No. .1.....

LOCALITY

State Alaska
General Locality Cook Inlet
Locality West Point

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 XX <u>T-12013</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final Map</u> JOB PH. <u>6013</u>	
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	
Compilation, Supplement 1 Aerotriangulation Compilation, Supplement 3 Compilation, Supplement 4		Field Supplement 1	
9/15/66 4/26/67 9/11/67		1/17/63 6/06/66 8/08/66	
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 checked="" 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 METHOD: Stereoplanigraph LANDMARKS AND AIDS BY		P. Hawkins Apr 1967	
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Manual CHECKED BY		J. Harris 2/63 - J. Steinberg C. Bishop 2/63 - R. White Apr 1967	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY		L. Graves 2/63 - A. Shands D. Williams 2/63 - R. Smith Apr 1967	
INSTRUMENT: Kelsh Plotter SCALE: 1:20,000		CONTOURS BY NA CHECKED BY NA	
4. MANUSCRIPT DELINEATION PLANIMETRY BY METHOD: Smoothdrafted CHECKED BY		L. Graves 2/63 - R. Pate C. Bishop 2/63 - R. Pate Apr 1967	
SCALE: 1:20,000		CONTOURS BY NA CHECKED BY NA	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		D. Williams 2/63 - R. Pate R. Pate Apr 1967	
6. APPLICATION OF FIELD EDIT DATA BY		I. Perkinson Jul 1975	
7. COMPILATION SECTION REVIEW BY		A. C. Rauck, Jr. Aug 1975	
8. FINAL REVIEW BY		A. C. Rauck, Jr. Aug 1975	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		J. Byrd/C. Blod May 1986	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		J. Byrd Sept 1986	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		P. Dempsey E. L. DAUGHERTY Dec 1986	

NOAA FORM 76-36B
(3-72)T-12013
COMPILATION SOURCESU. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 "L" and RC-5 "W"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC X (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	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
60 W 1330	8/30/60	09:54	1:30,000	22.4 ft. above MLLW	
66 L 6675-6677**	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.

The High Water 1960 photography was used to compile the Fire Island area and the 1966 photography was used to compile the northside of Cook Inlet shore.

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

The mean lower low water lines were compiled from the 1966L photographs which were taken after the 1964 earthquake. These lines were compiled graphically from ratio prints. Centers were not shown on the manuscript. The MLLW line 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-12001	T-12014	T-12021	T-12012

REMARKS

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYT-12013
HISTORY OF FIELD OPERATIONS1. ☒ FIELD INSPECTION OPERATION *Premarking* ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	1966
2. HORIZONTAL CONTROL RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	A. C. Weymann, III	1966
	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)

T-12013

HISTORY OF FIELD OPERATIONS

I. ☒ 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	
	<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: ☐ 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

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HISTORY OF FIELD OPERATIONS

1. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	K. W. 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 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: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

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

- 1 Field Edit Ozalid
- 1 Form 76-40
- 1 Field Edit Report

NOAA FORM 76-36C
(3-72)

T-12013
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.	4/67	Class III manuscript	None	5/15/73
Field edit applied. Compilation complete.	8/75	Class I manuscript	None	11/7/77
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: _____

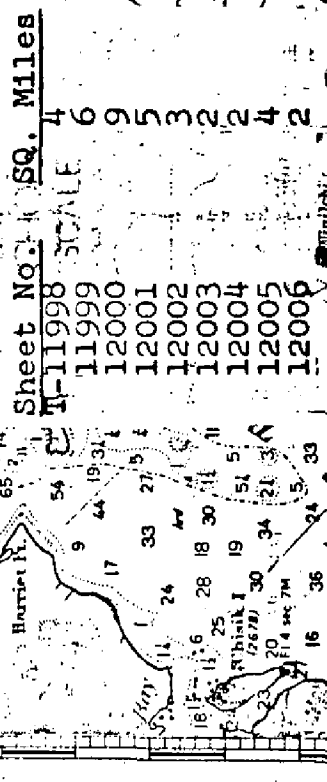
III. FEDERAL RECORDS CENTER DATA

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)

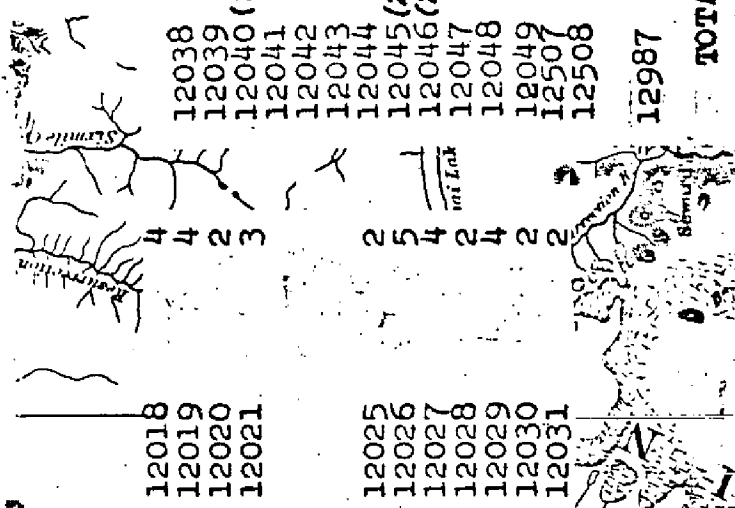
SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL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

REVISED 3-14-76 PWNV
REVISED 3-11-77 RG.



First editions of T-12040,
T-12045, T-12046 and T-12049
were prepared specifically
to support hydrography by the
PATHFINDER in 1961 (pu-501).

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



SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

T-12013

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.

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

A history of the field recovery and premarking of the control or the bridging of the control is not available for the 1960 photography.

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.

The Fire Island area was photographed in August 1960 with the RC-5 "W" camera using panchromatic film. The Cook Inlet north shore area was photographed August 1966 with the RC-8 "L" camera using panchromatic film.

Aerotriangulation was performed in the Washington office in April 1967.

The Fire Island area was compiled at the Portland office in February 1963. The Cook Inlet north shore area was compiled in the Norfolk office in April 1967.

Field edit was performed in August 1963 and July 1974. Field edit data was applied at AMC in August 1975.

Final review was performed at the Atlantic Marine Center May 1986. A Chart Maintenance Print was prepared and forwarded to the Marine Charts Branch.

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

FIELD INSPECTION 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. 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 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
PH

Paul Hawkins

Approved by:

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

COMPILATION REPORT

T-12013

31. DELINEATION

Delineation was by the Kelsh stereoplotter. Photography was adequate. The mean lower low water lines were compiled in the northern area from 1966 photography.

32. CONTROL

Refer to the Photogrammetric Plot Reports dated January 1963 and April 13, 1967.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are not applicable to the project. 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.

36. OFFSHORE DETAILS

None.

37. LANDMARKS AND AIDS

Final field edited forms were forwarded to the Rockville, Maryland office.

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 Reports dated January 1963 and April 1967.

46. COMPARISON WITH EXISTING MAPS:

A comparison was made with the following USGS Quadrangle: TYONEK (A-1), scale 1:63,360, dated 1953.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following National Ocean Survey Chart: 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:

Albert C. Rauck, Jr. For
L. Graves -
R. Pate -
Cartographic Technicians
February 1963
April 1967

Approved:

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

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6013 (Cook Inlet)

T-12013

Cook Inlet

Fire Island

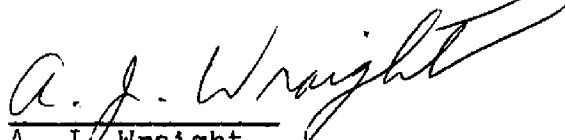
Fire Island Moose Reservation

Shelter Bay

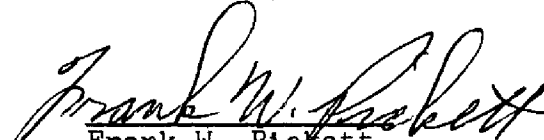
Susitna Flats

West Point

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.

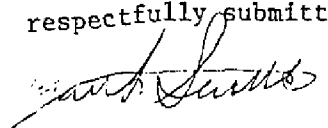
T-12003, T-12004, T-12005

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 LTJG, NOAA

REVIEW REPORT
T-12013

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 Survey H-9444, 1:20,000 scale, dated April 10, 1978. There were no major conflicts.

65. COMPARISON WITH NAUTICAL CHARTS

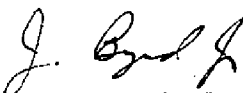
A comparison was made with the following NOS Charts:
16664, scale 1:40,000, 18th edition, January 16, 1982
16660, scale 1:194, 154, 22nd edition, May 8, 1982.

The listed charts 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.


Chief, Photogrammetry Branch

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.

[illegible]