

T-12038

T-12038

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-12038....  
Classification No. Final Map Edition No. 1.....

### LOCALITY

State ..... Alaska .....  
Cook Inlet  
General Locality ..... Kalgin Island to Anchorage .....  
Locality ..... Kustatan River.....

1966 TO 1976

### REGISTRY IN ARCHIVES

DATE .....



NOAA FORM 76-368  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEYT-12038  
COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 "L"		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	
66L6612 - 6617	8/14/66	07:40	1:40,000	0.5 ft. above MLLW	
66L6629 - 6632	8/14/66	08:00	1:40,000	0.3 ft. below MLLW	

REMARKS

## 2. SOURCE OF MEAN HIGH-WATER LINE:

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

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

The mean lower low water line was compiled from the above listed photographs.

## 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-12025	T-12039	T-12043	None

REMARKS

T-12038

## 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 ( <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 SURVEYT-12038  
HISTORY OF FIELD OPERATIONSI. ☒ FIELD INSPECTION OPERATION *Premarking* ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	6/66
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 ( <i>Triangulation Stations</i> ) BY LOCATED ( <i>Field Methods</i> ) BY IDENTIFIED BY	None None None
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	None

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED None		2. VERTICAL CONTROL IDENTIFIED NA	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS ( <i>Clarification of details</i> ) 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 ( <i>Sketch books, etc. DO NOT list data submitted to the Geodesy Division</i> ) 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 SURVEY

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	C. K. Townsend	Jun-July 1975
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:

☐ 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)

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-12038

## HISTORY OF FIELD OPERATIONS

1. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. E. Alderman, CAPT, NOAA	8/76
2. HORIZONTAL CONTROL	RECOVERED BY None ESTABLISHED BY None PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY NA ESTABLISHED BY NA PRE-MARKED OR IDENTIFIED BY NA	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY G. P. Kosinski/N. G. Millett IDENTIFIED BY	8/76
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input checked="" type="checkbox"/> NO INVESTIGATION	NA
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	NA
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	NA

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
	NA		NA

3. PHOTO NUMBERS (Clarification of details)

NA

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

Stack &amp; Microwave Tower P.A. Marathon Trading Bay Facility. See 76-40.

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)

Raw Field Edit Data, OPR-469-FA-76, Volume TwoField Edit Ozalid, Map T-12038Field Edit Report, Map T-12038Field Edit Fix Computations, Map T-12038Field Edit Reports, OPR-469-FA-76

NOAA FORM 76-36D  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONT-12038  
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.	11/73	Class III manuscript	None	4/16/74
Partial field edit.	3/76	Class III manuscript	None	None
Field edit applied. Compilation complete.	12/76	Class I manuscript	2/11/77	2/11/77
Final Review	7/86	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	3 landmarks 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 76-40 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	





SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT

T-12038

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.

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 future aerotriangulation.

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

Aerotriangulation was performed in the Washington office in April 1967 and January 1974.

This map was compiled at the Norfolk office in March 1974.

Field edit was performed for T-12038 during the 1975 and 1976 field seasons. Field edit data was applied at AMC in December 1976.

Final review was performed at the Atlantic Marine Center in July 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

T-12038

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

Photogrammetric Plot Report  
Cook Inlet, Alaska  
Job PH-6013  
January 1974

21. Area Covered

The area covered by this report is along the coast at West Foreland Cook Inlet, Alaska. This area is covered by four 1:20,000 scale sheets TP-12038, TP-12039, TP-12043, and TP-12044.

22. Method

One strip of 1:40,000 scale panchromatic photography was bridged by analytic methods. Sketch #1 shows the flight line of the photography and the placement of the control used in this adjustment. This strip was adjusted in April 1967 but part of the bridging photography was lost. Points were transferred from the old bridge photography to this bridge using the same photography to control the northwest end of the strip. Data for plotting the points were furnished to AMC to be plotted by manual methods.

23. Adequacy of Control

The control was adequate.

24. Supplemental Data

The data from the 1967 bridge were used to control the northwest end of the strip.

25. Photography

The photography was adequate. Ratios were ordered on January 3, 1974.

Respectfully submitted,

*Ivey O. Raborn*  
Ivey O. Raborn

Approved and forwarded:

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

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 61K 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*  
17/1-9  
Paul Hawkins

Approved by:

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

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	PH-6013	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETTIC DATUM		ORIGINATING ACTIVITY	
					COORDINATES IN FEET STATE _____ ZONE _____	NA 1927	Division, AMC, Norfolk, VA	Coastal Mapping
STATION NAME					GEOGRAPHIC POSITION $\phi$ LATITUDE $\lambda$ LONGITUDE		REMARKS FORWARD BACK	
HAY, 1909			G.P. Vol 5 P. 004		X=	$\phi$ 60 47 59.692	1847.6	(9.5)
					Y=	$\lambda$ 151 45 57.256	866.0	(41.5)
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
					X=	$\phi$		
					Y=	$\lambda$		
COMPUTED BY	R. R. White				COMPUTATION CHECKED BY		L. B. Foltz	DATE 11/14/73
LISTED BY					LISTING CHECKED BY			DATE
HAND PLOTTING BY					HAND PLOTTING CHECKED BY			DATE

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

## COMPILATION REPORT

T-12038

31. DELINATION:

Delineation was by the Wild B-8 stereoplotter using 1:40,000 panchromatic photography. The 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 stereoplotter and by office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS:

Alongshore details were delineated by the Wild B-8 stereoplotter and by office interpretation of the photographs.

36. OFFSHORE DETAILS:

None.

37. LANDMARKS AND AIDS:

No charted landmarks or aids were noted during compilation.



38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

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

40. HORIZONTAL AND VERTICAL ACCURACY:

No statement.

46. COMPARISON WITH EXISTING MAPS:

A comparison has been made with the following USGS Quadrangles: KENAI (D-5) and (D-6), ALASKA, scale 1:63,360, dated 1958.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison has been made with the following National Ocean Survey Chart: No. 8553, 13th Edition, dated February 26, 1972, scaled 1:194,154.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted by:

*C. Blood*

C. Blood

Cartographic Technician

November 28, 1973

Approved:

*Albert C. Rauck, Jr.*

A. C. Rauck, Jr.

Chief, Coastal Mapping Section

## GEOGRAPHIC NAMES

## FINAL NAME SHEET

PH-6013 (Cook Inlet)

T-12038

Bunitlana Lake

Cook Inlet

Kustatan Ridge

Kustatan River

Trading Bay

Approved by:



A. J. Wraight  
Chief Geographer

Prepared by:



Frank W. Pickett  
Cartographic Technician

## INTRODUCTION

The field edit of the Alaskan project, OPR-469-RA-75, Trading Bay, Upper Cook Inlet, was started on June 10, 1975 (J.D. 161) and completed on July 24, 1975 (J.D. 205). The manuscripts had been compiled without field inspection prior to compilation, therefore a complete and thorough field edit was done in the areas that were investigated. Work was carried out on shore and water.

Field edit began at North Foreland and continued southwest to the western edge of Trading Bay. All deletions, additions and corrections to be applied to the manuscripts appear on the T-sheets. All questions on the field edit ozalids were answered on the T-sheets. The T-sheet is an index of all field edit work performed. All field edit notes on the T-sheets which are in violet ink, are verified. Those in red ink are changes. The smooth boatsheets are also master indexes of field work accomplished. All notes on the boatsheets that are in black ink are verified, those in red ink are changes, blue ink signifies features that were not verified. Most of the field edit for this survey was accomplished by hydrographic methods due to the poor quality of the photographs for this area.

Height data on all rocks were estimated; plus or minus one foot. Times were referenced to 0° Longitude.

## ADEQUACY OF COMPILATION

The compilation of the manuscripts was adequate and complete. Compilation of the NMNL was excellent where it was possible to verify.

The MLLW line agreed extremely well with hydrography. There are a few minor discrepancies due to recent construction, these are noted in the Shoreline Summaries. All rocks and offshore features are labeled on the T-sheets.

#### POSITION CONTROL

In many areas of Cook Inlet, such as Granite Point, it is impossible to verify rocks which are on the manuscripts or newly discovered ones, due to the abundance of rocks, without D.P.'s on each rock. Therefore the field edit in this survey received permission (refer to Correspondence in the Separates following the text) and made use of the super-high frequency (SHF) Motorola Mini-Ranger III (range-range system) for position control on detached positions. The system worked satisfactorily during the survey. Mini-Ranger stations were established on existing (BOULDER, 1909) or newly established triangulation stations of third order precision, (BRUCE, GRANITE, KING.) Stations BRUCE, GRANITE, and KING were traversed (closed) with T-2 Theodolites and with a CA-1000 Tellurometer. Refer to the Horizontal Control Report, OPR-469-RA-75, for specific procedures used in establishing these stations.

Daily calibration of the Mini-Ranger system was accomplished by using three-point sextant fixes or by static calibrations which were taken next to pilings 3, 4, and 5 (stations 123, 124, 125) at the North Foreland pier. Use of a signal strength indicator along with the daily calibrations, reaffirmed baseline calibration correctors,

which were used as the correctors for the electronic hydro positioning tapes throughout the survey. Refer to the Electronic Control Report, OPR-469-RA-75, for specifics on the Mini-Ranger III system.

The Mini-Ranger console, serial number 720, and Receiver/Transmitter unit, s/n 727, connected to a 24 volt system were arranged in a tin skiff (RAINIER skiff 2128), making it possible to take D.P.'s next to the rocks.

Each D.P. contains a fix and a check fix by using Mini-Ranger rates, Mini-Ranger and sextant, or three point sextant fixes. Each D.P. was processed by using the PDP 8/e computer and complot system on board the RAINIER, (s/n 1015, DP-3 5445-7 respectfully.) Program AM 602 was used to produce master tapes and corrector tapes from information in the sounding volume, while RK 211, 212, 214 & 215 were used to plot the data on the boatsheets. Each D.P. was plotted twice, once using the fix information, and the check fix was used to confirm the position. A few discrepancies were found due to Mini-Ranger busts or misidentified signals. These were resolved by evaluating the intersection of the M/R rates, comparison of the positions to other rocks and conservative positioning. For printouts of all D.P.'s refer to the Separates following the text.

All final positions were plotted on a field edit boatsheet and then transferred to the master index T-sheet and smooth boatsheets.

The final positions on the RA-20-3B-75 boatsheet (field edit sheet), range from #28 thru #164. These correspond to positions #8028 to #8164 in the sounding volume. Only those D.P.'s which were not

duplicates of themselves nor duplicates of manuscript rocks, were kept and are listed in the Separates following the text.

#### SHORELINE SUMMARIES

##### T-12019

Field edit for OPR-469-RA-75 began at North Foreland,  $61^{\circ} 02' 58''\text{N}$ ,  $151^{\circ} 09' 33''\text{W}$ . The area southwest of there was field edited and verified, everything northeast of this point was not.

The bluff at North Foreland has been cut away ( $61^{\circ} 02' 54''\text{N}$ ,  $151^{\circ} 09' 55''\text{W}$  to  $61^{\circ} 02' 43''\text{N}$ ,  $151^{\circ} 10' 43''\text{W}$ ) and this is now the site of the Tyonek Timber Company. A large company pier is being constructed as shown on the T-sheet. The shape and length of the pier was determined by positions obtained for the supporting pilings present at the time of the survey (#8007-9, 8016-18, 8023-25, 8158-160.) This is the field editor's interpretation of how the pier will appear when finished. It is recommended that construction plans be obtained from the company office in Anchorage, Alaska. Six mooring bouys used with the construction, has also been plotted and it is recommended that these are not to be charted since they will probably be removed with the completion of the pier.

Due to the construction, North Foreland Light has been moved several times and it is still not permanently secured. A temporary position ( $61^{\circ} 02' 51.616''\text{N}$ ,  $151^{\circ} 09' 50.604''\text{W}$ ) has been obtained by traverse methods, refer to the Horizontal Control Report, OPR-469-RA-75, for further information. However, it is recommended that the light be relocated when the construction is completed.

T-12018

The dirt road located at  $61^{\circ} 01' 13''\text{N}$ ,  $151^{\circ} 19' 53''\text{W}$ , is used as an airstrip and should be charted as such. The other road at approximately  $61^{\circ} 02' 38''\text{N}$ ,  $151^{\circ} 14' 20''\text{W}$ , is not an airstrip.

The possible submerged rock (#144 - boatsheet, #8144 - sounding volume), at  $61^{\circ} 00' 24''\text{N}$ ,  $151^{\circ} 21' 13''\text{W}$ , should be charted as "sunken". Neither the depth data nor it's exact position was possible to ascertain, however there were many indications that such a hazardous rock did exist, i.e., turbulence (swirls, boils and standing waves.)

Rocks which do not contain any height and time data, were not found nor confirmed. It is possible that the rocks in the middle of Beshta Bay mud flat do exist. They were not apparent at high water, or near mid-tide, and the area was inaccessible at low water. These are only dangerous to small boats with only a foot or two of draft, but it is still recommended<sup>that</sup> they be charted to indicate that this area is foul with boulders.

T-12027

It should be noted that the settlement located at  $61^{\circ} 00' 50''\text{N}$ ,  $151^{\circ} 24' 25''\text{W}$ , is known locally as Shirleyville.

The charted airstrip near the Nikolai Creek has been moved to the gravel road along the MHWL between  $61^{\circ} 00' 51''\text{N}$ ,  $151^{\circ} 25' 54''\text{W}$  to  $61^{\circ} 00' 48''\text{N}$ ,  $151^{\circ} 27' 27''\text{W}$ .

An oil tank farm of landmark value has been built at approximately  $61^{\circ} 01' 06''\text{N}$ ,  $151^{\circ} 25' 11''\text{W}$ . The exact location was not obtained.

The MHWL has been verified northeast of  $61^{\circ} 00' 20''N$ ,  $151^{\circ} 29' 33''W$ . Due to the inaccessability of the MHWL southwest of this point, caused by the extensive mud and sand flats, this area was not field edited nor were any measurements from a photo identifiable object to the MHWL taken. Field Edit Ozalid Note 2 was unable to be fullfilled. This area extends onto T-12026, T-12025 and ends on T-12038.

The foreshore area was field edited and no rocks or dangers to navigation were found.

#### T-12026

The shoreline on this ozalid was also not verified as that mentioned under T-12027. The foreshore area was investigated at low water, no rocks were found which could be a hazard.

There were no cabins nor buildings of any landmark value found.

#### T-12025

The MHWL on this T-sheet has not been field edited (note summary for T-12027.) The foreshore area is void of any hazardous rocks, investigation was completed at low water.

#### T-12038

The unverified MHWL continues until  $60^{\circ} 50' 14''N$ ,  $151^{\circ} 47' 50''W$ . There were no rocks considered a hazard to navigation, in the foreshore area. Measurements to the MHWL were not taken.



The shoreline between  $61^{\circ} 50' 14''\text{N}$ ,  $151^{\circ} 47' 50''\text{W}$  to  $61^{\circ} 48' 50''\text{N}$ ,  $151^{\circ} 46' 45''\text{W}$ , was field edited. In the approximate vicinity of  $61^{\circ} 48' 50''\text{N}$ ,  $151^{\circ} 46' 45''\text{W}$ , there have been new additions including an airfield, an oil tank farm, a stack and a microwave tower which are of landmark value. The exact positions of these were not obtained.

$61^{\circ} 48' 50''\text{N}$ ;  $151^{\circ} 46' 45''\text{W}$  is the limit of the field edit for OPR-469-RA-75; anything south of here is unverified.

#### RECOMMENDATIONS

In the vicinity of East, West and North Foreland, there are thirteen oil platforms. It is recommended as an aid navigation that each individual platform's name be added to the chart, as an assistance to any vessels in the area and as an aid to navigation. (Refer to Oil Platforms in the Separates following the text.)

It is also recommended that the stack and microwave tower on T-12038 be located as a nonfloating aid to navigation.

Throughout this survey, electronic control was used most of the time for field edit. It is recommended that this control be used in future projects for field edit needs. The electronic control made it easier to accurately plot all D.P.'s on hazards to navigation on all the rough-field boatsheets along with the smooth sheet. This method made it possible to process the acquisition of data with greater efficiency and speed, both in the field and office verification. In maintaining the guidelines set down (see Correspondence in the Separates following the text)

electronic controlled field edit has proven valuable by increasing the speed and proficiency of data acquisition and processing. This will help to decrease the amount of time that it takes to produce a new chart after the survey has been completed.

Respectfully submitted,

*Kathryn Andreen*

Kathryn Andreen, Ltjg. NOAA

## SUPPLEMENTAL INFORMATION

TO

FIELD EDIT REPORT

OPR-469-RA-75

UPPER COOK INLET, TRADING BAY

ALASKA

## Introduction

After the submission of the Field Edit Report, OPR-469-RA-75, with the accompanying data, several questions rose concerning procedures and actual field work accomplished. With the help of this supplemental information, it is hoped that these questions will be answered.

## T-12018

Field edit procedures for locating features throughout the project relied almost entirely on hydrographic methods, i.e. electronic control and visual signals. Many features, such as rocks, could not be located on the photographs. The rocks could not be distinguished from the water, since on the photos they are the same color.

The area from North Foreland to Granite Point was combed by the field editor in a small 16' tin skiff. A Mini-Ranger console was mounted to the skiff, and connected to a 24 volt battery system with the Receiver/Transmitter unit attached to a ten-foot mast.

The area was investigated for three days by the field editor. The shoreline and foreshore area were continuously <sup>-searched-</sup> for any hazard to navigation during all phases of the tidal range. Since Cook Inlet has several days of extreme high tides (over 30 feet) and low tides (about minus five feet), it was on these days that field edit was accomplished. A detached position, i.e. the location, for each hazard was obtained during this time. (Refer to Field Edit Report, OPR-469-RA-75)

At the end of each day, two master tapes were produced to plot by computer all information received that day. One tape contained the information for the fix while the second tape was the check fix positioning. Each of the tapes was then plotted using the complot system to compare the fix and the check fix positioning of each hazard.

Any disagreement was resolved by evaluating the intersection of the M/R rates, comparison of the position to other D.P.'s and notes kept by the field editor on the approximate location of the tin skiff at the time of each D.P.

The position for each plotted D.P. was then compared to the class III manuscript. Any D.P. position which coincided with a rock on the manuscript was considered a verified position for that rock. The height and time data for these rocks were recorded on the Field Edit Ozalid (the cronoflex master index) in violet ink. To avoid duplication between verified manuscript features and the hydrographic detached positions, these rocks and height-time data were deleted from the master electronic tapes. However, all data was still contained in the raw data, field edit, sounding volume now at PMC.

All these deleted detached positions were referred to as "Reject-Manuscript Duplicate" in the D.P. Index. (Refer to the separates following the text in the Field Edit Report, OPR-469-RA-75).

After three days, the area between North Foreland and Branite Point had been thoroughly investigated for hazards to navigation and positions were obtained for all of these. The rocks on the manuscript in green ink, which do not contain height and time data, were thoroughly

search for but not found.

New rocks (i.e. rocks not shown on the class III manuscript before field edit) were transferred by the field editor to the Field Edit Ozalid (the cronoflex master index) because this ozalid was a complete index of all field edit work accomplished. The cronoflex ozalid (T-sheet) is used for the Field Edit Ozalid to avoid undue duplication. It is necessary to locate a hazard on the cronoflex ozalid before it can be transferred to a boatsheet or to the paper "discrepancy Print," To cut down the duplication from the cronoflex ozalid, to the boatsheet to the "Discrepancy Print," this film ozalid contains all field work accomplished. All questions on the "Discrepancy Print" are answered on the cronoflex ozalid. It is the field editors recommendation that a film (cronoflex) ozalid be used instead of a paper ozalid for the "Discrepancy Print" to avoid any more confusion on this matter.

All data for rocks located by hydrographic methods (electronic master tapes, daily calibrations, and raw data sounding volume) was sent to the Pacific Marine Center for verification.

T-12025, 12026, 12027, & 12038

Due to the inaccessability of the MHWL caused by extensive mud and sand flats throughout these T-sheets, it was not verified. It is the field editor's recommendation that the apparent shoreline taken from the photographs be accepted as the MHWL.

In areas of new construction since the 1966 photographs, it is understood from CDR Simmons that revisional photography will be flown to locate features of landmark value.

T-12019, 12038

Field edit was only partial accomplished on these two T-sheets. They represent the northern and southern boundaries for hydrography completed during the summer project. OPR-469-RA-75. Field edit on these sheets should be completed during the 1976 field season.

Respectfully submitted,

*Kathryn Andreen*

Kathryn Andreen, Ltjg. NOAA

Forwarded

*Thomas W. Richards*  
for Charles K. Townsend, CDR., NOAA  
Commanding

T-12018

1. Verification of those rocks which were not verified by the field editor, or by the hydrographer subsequent to edit is required, i.e., all rocks which have not been inked in black on the boat sheet. Included are rocks located in the middle of Beshta Bay mud flats since the range of tide is approximately 14 feet.
2. Copies of photogrammetric manuscripts which include field edit information should be referred to as "Field Edit Sheets" rather than "T-sheets". On future jobs, photogrammetric compilation activities have been instructed to use the designation "Discrepancy Print" rather than "Field Edit Ozalid".
3. New rocks (i.e. rocks which were not shown on the Class III manuscript copies furnished for field use) located by the field editor should not have been transferred to the "T-sheet" (Field Edit Sheet) from the "smooth boat sheet", because the field records are included as a part of the hydrographic survey records. If these rocks are to be shown on the final photogrammetric map, they should be transferred from the verified hydrographic survey sheet - to ensure that the two surveys reflect the same positions.
4. Data for computing the elevations of verified rocks (i.e., rocks shown on the Class III manuscript copies) should have been included in the hydrographic survey records so that the elevations could be computed along with the elevations of "new" rocks (the data for which was included in the hydrographic survey records). The computed elevations for "verified" rocks must be furnished to the photogrammetric compilation activity along with the field edit data - changes in rock symbolization may be required.
5. Field edit report - INTRODUCTION, heading. Red ink was used to show additions as well as corrections.

The statement "All field edit notes on the T-sheets (field edit sheets) which are in violet ink, are verified," is not clear.

Violet ink was used (1) to answer questions included on the field edit ozalids (discrepancy prints); and (2) to indicate verification of rock positions - where the information furnished by the field editor for computing rock elevations is shown in violet ink.



## FIELD EDIT REPORT

Map T-12038

Kustatan River, Alaska

August 1976

Field edit of Map T-12038 from the pipeline located at lat. 60/49/04.702N, long. 151/46/48.196W south and west was done by ENS. Neal G. Millett during August 1976. All areas north and east of the pipeline were completed by the Ship RAINIER during project instructions OPR-469-RA-75. The FAIRWEATHER field edit was compiled on the paper field edit ozalid only. The RAINIER field edit was compiled on the film field edit ozalid. The area between the apparent shoreline and the mean lower low water line from the pipeline to approximately lat. 60/47/19N long. 151/45/00W is characterized by gravel and isolated rocks and boulders. The Kustatan River area is characterized by tidal flats that consist of fine mud and standing water puddles. These conditions cause the river not to be navigable at any stage of the tide and would not allow precise verification of the featureless apparent shoreline. Inspection was done from a small boat and on foot when fixes on land were required.

METHOD

Field photographs and a copy of the field edit ozalid were examined in the field. The mean high water line for the northern areas of the map was verified by visual comparison of the beach area and the ozalid in the field. All detached positions were determined by visual three-point sextant fix with check angles utilizing the offshore platforms. Some detached positions were rejected, either as swingers or for exceeding the accuracy requirements of 1mm at the scale of the survey. Positions 226-01a and 226-02a are approximate only because of the above mentioned accuracy requirements at the scale of the survey. Heights of rocks are noted in the field edit notebook volume 2 and on the ozalid. The mean lower low water line is not presented here but appears in the hydrographic records for surveys H-9620 and H-9621.

No photographs are referenced for Map T-12038. All times are based on +9 hours from Greenwich.

ACCURACY OF COMPILATION

Compilation of this map is generally good. Note is made of the following items:

<u>File Number</u>	<u>Object</u>	<u>Location</u>
226-01a	Rock Bares 1ft.	60/48/06.993N, 151/45/34.446W
226-01b	Rock Bares 3 ft.	60/48/10.652N, 151/45/40.332W
226-01a	Pipeline Outlet	60/49/04.702N, 151/46/48.196W
226-02a	Stack P.A.	60/49/02.250N, 151/47/20.588W

<u>Fix Number</u>	<u>Object</u>	<u>Location</u>
226-03a	Microwave tower P.A.	60/49/00.1656N, 151/47/05.555E

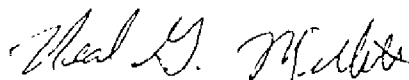
The stack and microwave tower (fixes 226-02a and 226-03a) are found on the grounds of the "Marathon Trading Bay Production Facility"; this name should appear on chart 16660.

Field inspection of this map is complete.

#### RECOMMENDATIONS

It is recommended that the map be revised in accordance with the notes on the original and in the field edit notebook, and that the map be accepted as an advance manuscript.

Respectfully submitted,



Neal G. Millett  
ENS. NOAA

REVIEW REPORT  
T-12038

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 the following contemporary Hydrographic Surveys:

H-9641, scale 1:20,000, dated January 1, 1978

H-9621, scale 1:20,000, dated June 1, 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

16662, scale 1:100,000, 1st edition, April 9, 1983.

The listed charts compared well with this manuscript.

A Final Chart Maintenance Print was prepared and forwarded to Marine Charts.

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

*J. L. Byrd, Jr.*  
James L. Byrd, Jr.  
Final Reviewer

Approved for forwarding

*Billy H. Barnes*  
Billy H. Barnes  
Chief, Photogrammetric Section

Approved

*J. H. Mearns*  
Chief, Photogrammetry Production Sec.

*Ronald K. Brewer*  
Chief, Photogrammetry Branch

Replaces C&amp;GS Form 567.

## NON-FLOATING AIDS OR LANDMARKS FOR CHARTS

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

**ORIGINATING ACTIVITY**

- ☐ HYDROGRAPHIC PARTY  
☐ GEODETIC PARTY  
☐ PHOTO FIELD PARTY  
☐ COMPILATION ACTIVITY  
☒ FINAL REVIEWER  
☐ QUALITY CONTROL & REVIEW GRP.  
☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

<input checked="" type="checkbox"/> NOT TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED	REPORTING UNIT <i>(Field Party, Ship or Office)</i> Coastal Mapping Unit AMC, Norfolk, VA	STATE Alaska	LOCALITY Cook Inlet, Kalgin Island to Anchorage	DATE Jul. 1986
---	--	-----------------	---	-------------------

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
469	PH-6013	T-12038	

**METHOD AND DATE OF LOCATION**  
(See instructions on reverse side)

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station name(s), where applicable, in parentheses.)	LAT /
		0

LATITUDE		LONGITUDE	
	"		"
D.M. Meters		° /	D.P. Meters

OFFICE	FIELD	AFFECTED
--------	-------	----------

**AFFECTED**

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. Alderman, CAPT
POSITIONS DETERMINED AND/OR VERIFIED	N. Millett
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	F. Margiotta
	C. Blood
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions*</b> require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: 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  A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75  <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75  <b>**PHOTOGRAMMETRIC FIELD POSITIONS</b> are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

### 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]