

8786

Diag. Cht. No. 8553.

<p>Form 504 U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY</p> <h2 style="text-align: center;">DESCRIPTIVE REPORT</h2>	
<p>Type of Survey <u>HYDROGRAPHIC</u></p>	
<p>Field No. <u>PF-10-1-64</u> Office No. <u>H-8786</u></p>	
LOCALITY	
<p>State <u>ALASKA</u></p>	
<p>General locality <u>COOK INLET</u></p>	
<p>Locality <u>ANCHORAGE, ALASKA</u></p>	
<p><u>1964</u></p> CHIEF OF PARTY <u>H. J. SEABORG</u>	
LIBRARY & ARCHIVES	
<p>DATE <u>AUG 10 1964</u></p>	

USCOMM-DC 5087

8553
8557
8500
8502

8338

HYDROGRAPHIC TITLE SHEET

A-8786

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

PF-10-1-64

State Alaska

General locality Cook Inlet

Locality Anchorage, Alaska

Scale 1:10,000 Date of survey April 23-30, 1964

Instructions dated April 2, 1964

Vessel Motor Launches #1, #2, and #3

Chief of party H.J. Seaborg

Surveyed by C.H. Nixon

Soundings taken by echo sounder, ~~hand lead, wire~~

Fathograms scaled by Ship personnel

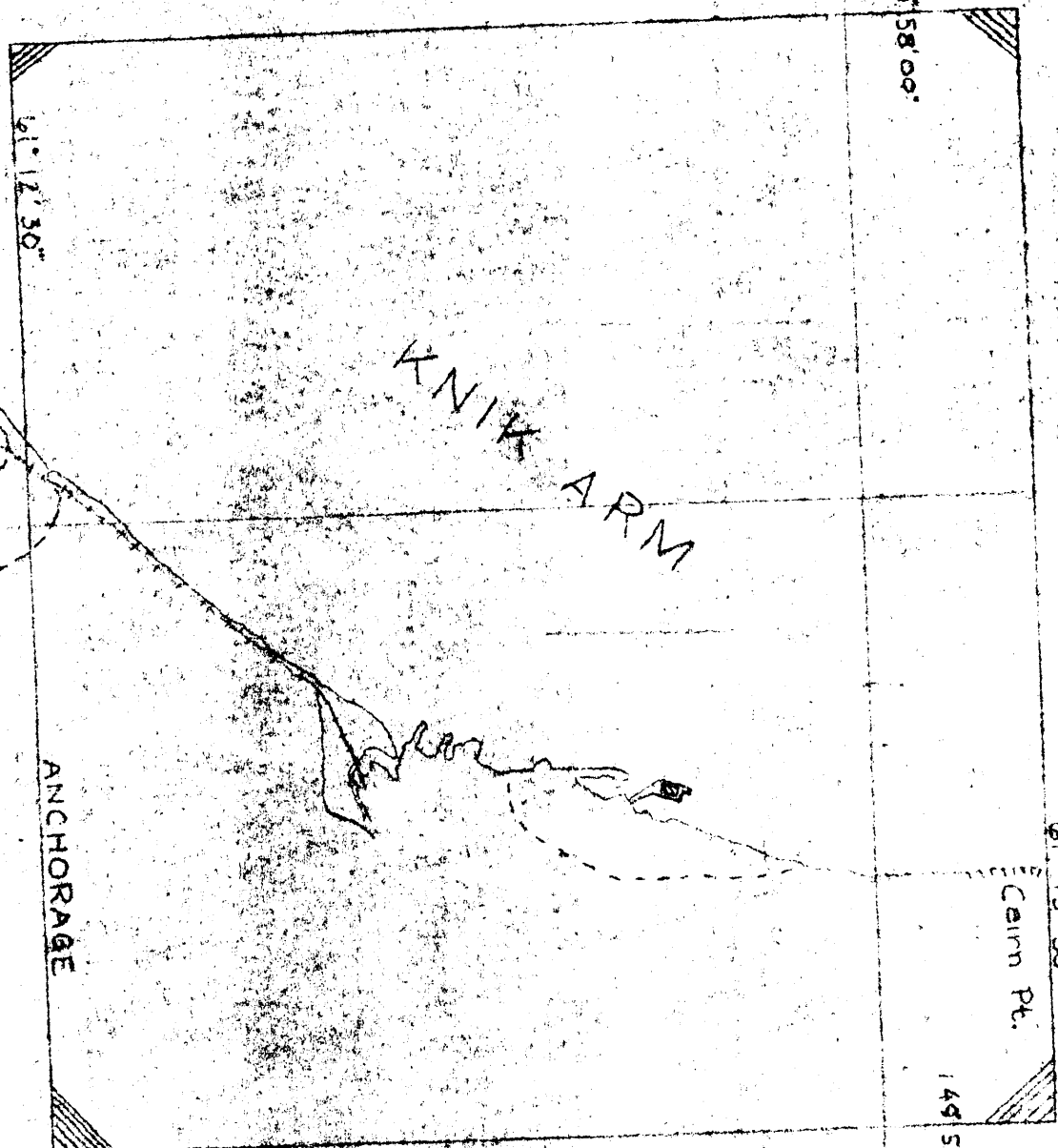
Fathograms checked by Ship personnel

Protracted by R.K. Woodruff

Soundings penciled by R.K. Woodruff

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW

REMARKS: Soundings on subplan are in feet.



$149^{\circ} 58' 00''$

$61^{\circ} 12' 30''$

KNIK ARM

ANCHORAGE

Cairn Pt.

$61^{\circ} 15' 30''$

$149^{\circ} 51' 00''$

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY (PF-10-1-64Recon.)
COOK INLET, ANCHORAGE, ALASKA

A. PROJECT:

Hydrographic survey PF-10-1-64 was performed as directed by Project Instructions-Alaska Earthquake Damage, SP-5-64, dated April 2, 1964.

B. AREA SURVEYED:

Hydrography covered the area immediately offshore from Anchorage bounded by latitudes $61^{\circ} 13' 00''$ and $61^{\circ} 15' 30''$, and longitudes $149^{\circ} 57' 30''$ and $149^{\circ} 53' 00''$. The period covered by the survey was April 23, 24, 25, and 30.

Junction was made with prior surveys:

H-8527	1960	1:10,000
H-8528	"	1:20,000
H-8203	1955	1:10,000
H-8213	"	1:20,000
H-6657	1941	1:5,000
H-6658	"	1:20,000

A junction was also made with contemporary reconnaissance survey PF-20-2-64.

C. SOUNDING VESSEL:

All soundings were obtained by PATHFINDER launches:

ML#1 - blue
ML#2 - purple
ML#3 - green

D. SOUNDING EQUIPMENT:

Raytheon Survey Fathometers, Model No. DE-723, were used by the sounding vessels engaged in this survey.

ML#1	Serial No.	143
ML#2	"	145
ML#3	"	141

Soundings were corrected for initial, draft, velocity,

and tides.

Initial corrections were determined by scanning the fathograms and applying the corrections where necessary.

The draft correction was applied from previous knowledge of launch drafts and bar checks.

Tide corrections were determined from the records from the bubbler gage at Port of Anchorage City Dock.

Velocity corrections were determined from water samples and temperatures observations taken on May 28 at 60° 49.6'N, 151° 21.2'W. A copy of the corrections obtained is included in this report.

E. SMOOTH SHEET:

The smooth sheet for this survey was projected in the field by using the mylar template provided for this purpose. The projection was checked and found satisfactory by ship personnel.

F. CONTROL:

Control was established by plotting triangulation stations and pricking topographic stations through Shoreline Manuscript T-12016 (final compilation, October 1963).

G. SHORELINE:

The shoreline shown on the smooth sheet was transferred from T-12016, however it was not inked because of the recent changes in the area and the fact that recent shoreline inspection work will supersede the October 1963 compilation. Refer to section Q.

H. CROSSLINES:

Crosslines made up 45% of the hydrography. The line run by launch #3, positions 19a through 27a, does not cross well with the other lines. The fathograms and sounding volumes were inspected for errors in reading and sounding reductions. The discrepancies could not be resolved, however, they were no larger than $\frac{1}{2}$ fathom. All other crossings on the sheet compared favorably.

I. JUNCTIONS:

Junctions with recent prior surveys, 1960 and 1955, were in good agreement.

J. COMPARISON WITH PRIOR SURVEYS:

Comparison was made with the following prior surveys:

H-8527	1960	1:10,000
H-8528	1960	1:20,000
H-8203	1955	1:10,000
H-8213	1955	1:20,000

Keeping in mind that PF-10-1-64 is a reconnaissance survey, comparisons with previous surveys were found to be very good.

K. COMPARISON WITH THE CHART:

Comparison of soundings was made with Chart 8557 (8th Ed. July 3/61, 1:40,000) on the 1:10,000 insert of Anchorage. Soundings along the City Dock have shoaled from the 35 foot dredged depth indicated by the chart. The revised soundings can be found in the subplan of the hydrographic sheet. The subplan soundings are in feet. It is recommended that these soundings supersede those presently indicated by Chart 8557.

The soundings compared favorably in all other areas.

L. ADEQUACY OF SURVEY:

This survey is considered complete and adequate for the purpose intended.

M. AIDS TO NAVIGATION:

Reference is made to Landmarks for Charts and Fixed Aids to Navigation (Form 567) dated May 2, 1964.

N. STATISTICS:

Hydrography covers approximately 11 sq. nautical miles. One oceanography station was taken on May 28.

Launch #1	Positions	96	Miles	13.7
" #2	"	55	"	6.6
" #3	"	72	"	8.3

O. MISCELLANEOUS:

None

P. RECOMMENDATIONS:

It is recommended that the soundings along the City Dock shown on this survey (subplan) supersede those of previous surveys. Additional reconnaissance hydrography is not required.

Q. REFERENCES TO REPORTS:

A report was not submitted for shoreline inspection. However, field inspected photographs were forwarded to the Division of Photogrammetry by a transmittal letter dated May 5, 1964 (transmittal Reference No. PATH-32-64). These photographs should be referred to for shoreline revision.

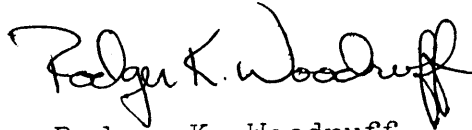
TIDE NOTE

Soundings were reduced from actual tides, provided by the Division of Tides, from the bubbler gage at the City Dock (lat. $61^{\circ} 14.4'N$, long. $149^{\circ} 53.2'W$) in Anchorage.

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

1. Velocity corrections (attached)
2. Special Report-Echo Soundings, to be submitted at a later date.

Respectfully submitted,



Rodger K. Woodruff
Ens, C&GS

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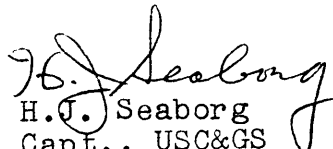
LIST OF STATIONS

<u>Station</u>	<u>Origin</u>
CAN	Topo
CITY	Anchorage, City Water Tank Apex (Steel)1941
CUP	Topo
END	Topo
GAS	Topo
KEN	Anchorage, Station KENI Tower, 1954
RED	Topo
TANK	Anchorage, Alaska R.R., Elev. tank, 1947
TIN	Topo
VAL	Topo
WAVE	Anchorage, ACS Microwave Relay Tower, 1954

APPROVAL SHEET

The field work on this survey was inspected where conditions permitted. The records and boatsheet have been examined and approved.

The Survey is considered complete and adequate for the purpose intended, checking for any major changes wrought by the March 27, 1964 earthquake. No additional work should be necessary.



H.J. Seaborg
Capt., USC&GS
Comdg., Ship PATHFINDER

USC&GSS PATHFINDER
OSS-30
H.J. Seaborg, Comdg.

VELOCITY CORRECTIONS
Cook Inlet, Alaska

To be applied to all hydrography accomplished in Cook Inlet
on Project SP-5-64 from 20 April 1964 through 20 June 1964.

Correction to Depth

0.0 fm 12 fm
-0.1 22+

Correction to Depth

0.0 feet 14 feet
-0.2 72
-0.4 106
-0.6 132+

GEOGRAPHIC NAMES
Survey No. H-8786

Name on Survey											
	A	B	C	D	E	F	G	H	K		
Anchorage											1
Cairn Pt.											2
Chester Cr.											3
Cook Inlet											4
Knik Arm											5
Ship Cr.											6
											7
											8
											9
											10
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											24
											25
											26
											27

Names approved

1-19-65

A. J. Wright

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8786

INSTRUCTIONS - This form serves to identify items of a checklist in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT	CL	R	Part III - JUNCTIONS (Continued)	CL	R
<p>Note: The verifier should first read the Descriptive Report for general information and problems.</p> <p>1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None</p>			<p>10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are SUPERSEDED.</p>		
<p>2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: -- None</p>			<p>Part IV - VOLUMES</p> <p>11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None</p>		
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>			<p>12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following: (a) rocks (b) line turns (c) position values of beginning and ending of lines (d) bar check or velocity correctors (e) time recording (f) notes or markings on fathograms (g) was reduction of soundings accurately done? (h) was scanning accurate? (i) were peaks at uneven intervals missed? (j) were stamps completed? (k) references to adjacent features</p>		
<p>Part II - SHORELINE AND SIGNALS</p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys a. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed</p>					
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>					
<p>6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None</p>					
<p>7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.</p>			<p>Part V - PROTRACTING</p> <p>13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>		
<p>Part III - JUNCTIONS</p> <p>Note: Make a cursory comparison preliminary to inking soundings in area of overlap.</p> <p>8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>			<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>		
<p>9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None</p>			<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>		

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.			26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.		
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.			27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None		
Part VI - SOUNDINGS			Part IX - BOATSHEET		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None			28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None		
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.			29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.		
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None			Part X - GENERAL		
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None			30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None		
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.			31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None		
Part VII - CURVES			32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None		
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected. 24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed Remarks Required: -- None			33. The bottom characteristics are adequately shown. Remarks Required: -- None		
25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn). Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.			Part XI - NOTES TO THE REVIEWER		
Verified by			34. Unresolved discrepancies and questionable soundings.		
			35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.		
			36. Supplemental information.		
				Date	

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8786

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS <i>Returned to the field</i>			
DESCRIPTIVE REPORT		1	OVERLAYS			
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1					
CAHIERS						
VOLUMES	4					
BOXES						

T-SHEET PRINTS (*List*)

SPECIAL REPORTS (*List*)

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

TIDE NOTE FOR HYDROGRAPHIC SHEET

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 8786

Locality: Anchorage, Alaska

Chief of Party: H. J. Seaborg


Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681): Anchorage

Height of Mean High Water above Plane of Reference is as follows:

Anchorage 27.2 feet

Remarks


Chief, Tides and Currents Branch

