

7608

Diag'd. on diag. ch. No. 9400 & 9495

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. AR-4547 & AR-4618 Office No. H-7608

LOCALITY

State ALASKA

General locality ARCTIC COAST

Locality SKULL CLIFF TO BARRON VILLAGE

194 7

CHIEF OF PARTY

R. W. WOODWORTH, LT. COMDR.

LIBRARY & ARCHIVES

DATE FEB 3 1948

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PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

7608



FEB 3 1948

Form 537  
(Ed. June 1946)

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

H7608

HYDROGRAPHIC TITLE SHEET

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

REGISTER No. H-7608

Field No. AR-4547 & AR-4647

State ALASKA ✓

General locality ARCTIC COAST ✓

Locality SKULL CLIFF TO BARRROW VILLAGES ✓

Scale 1/40,000 Date of survey Aug. 22 to Sept. 12, 1947

Instructions dated 27 January 1947

Vessel Shore Party

Chief of party R. W. Woodworth, Lt. Comdr.

Surveyed by H. G. Conerly, J. O. Boyer

Soundings taken by fathometer, graphic recorder, hand lead, wire

Fathograms scaled by H.G.C. & J.O.B.

Fathograms checked by H.G.C., J.O.B., D.A.J. & E.E.S.

Protracted by L. W. Eason

Soundings penciled by L. W. Eason

Soundings in ~~fathoms~~ feet at ~~MHW~~ MLLW ✓

REMARKS: Processed in Seattle Office.

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\_\_\_\_\_

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H-7608 (AR-4547 & AR-4647)

SKULL CLIFF TO BARROW VILLAGE

ARCTIC COAST OF ALASKA

Scale: 1/40,000

Chief of Party: R. W. Woodworth, Lt. Comdr.

INSTRUCTIONS:

Project 320. Instructions dated 27 January 1947.

SURVEY LIMITS & DATES:

Lat. 70° 50' to Lat. 71° 20' extending four to five miles off shore. It joins H-7069 on the northeast and H7609 on the southwest. There are no previous surveys to seaward. Sounding began August 22 and was completed September 12, 1947. Launches 4 and 5 were used to make the survey, sounding with 808 fathometers.

TIDES:

A portable automatic gage was set up inside the spit a mile east of the north entrance to Peard Bay at Lat. 70° 49' + 1668 M. Long. 158° 28' + 431 M. It was built on a tripod in the bay. It was disturbed a couple of times during the season by storms and ice. A staff was maintained at the camp on the spit a mile and three quarters south of the automatic gage at Lat. 70° 48' + 318 M. Long. 158° 27' + 588 M. It was read continuously during all hydrography. Check levels were run to this staff almost daily, and always after a storm or a visitation by ice.

BOTTOM:

The depth changes are gradual except for furrows gouged out by ice. The bottom seems to be permanently frozen except for a thin layer which melts and is subject to changes caused by current or by drift ice.

From a point approximately 10 miles NE of the east end of Peard Bay to Barrow village there is evidence of a large amount of ice gouging. This shows on the fathogram as very irregular bottom and it is sometimes 10 to 15 feet from the peak to the bottom of the cut. Most of it is in depths up to 15 fathoms but there is some evidence in 20 fathoms. Before the ice breaks up there are very large pressure ridges in the whole area. In some places the ice piles up close to 100 feet high. It is not known what will be the final effect of the gouging on the bottom. But it is certain that in this area ships should expect depths 5 to 8 feet less than shown on the sheet.

It is recommended that a note be placed on the chart to warn of possible depth changes from gouging by ice.

In a number of cases the bottom samples had as many as three different kinds of material indicating that it was deposited in small bits by the melting ice.

REFRACTION:

When ice is in the area very abnormal refraction can be expected at any time. At all times whether there is ice in the area or not a large amount of refraction can be expected. When traveling, an object may be close enough to see under normal conditions, but will not be seen until the observer gets a good bit closer. At other times the object can be seen at a much greater distance than under ordinary conditions.

CURRENT:

Except in strong NE wind there is a current of 1 to 2 knots setting along shore to northeast. There is a big eddy circulating clockwise in the bight northeast of Pt. Franklin. It extends about 20 miles northeast of Pt. Franklin and rotates the water for about five or six miles off shore.

SKULL CLIFF:

This is a long cliff about 30 to 60 feet high extending along the shoreline in the southern half of AR-4647. For more exact location see photographs.  
H-7608

Respectfully submitted,

H. G. CONERLY, LIEUT.  
U. S. C. & G. S.

FATHOMETER CORRECTIONS  
C.S. PROJECT NO. CS-320 ARCTIC COAST OF ALASKA  
R.W. Woodworth Chief of Party  
July September, 1947

General

Due to lack of time, the members of the Arctic Field Party were unable to compute and furnish fathometer corrections for the 1947 hydrographic work. These corrections were computed by Lt. Comdr. H.F. Garber of the Northwestern District Office in conjunction with the Seattle Processing Office. The reducers were entered and checked by the Seattle Processing Office.

Equipment Used

A total of four launches, nos. 2, 3, 4 and 5 were used in the hydrographic work. These were equipped with portable depth recorders which were shifted among the various launches as occasion demanded. Two 808-A, nos. 555 and 735, <sup>(N-7200)</sup> one ~~HE-7~~, no. 345 and one ~~Bludworth~~ type fathometers were used for sounding. Pole soundings were taken in very shoal depths.

Determination of Corrections

An abstract of all bar checks was drawn up for study. Due to rough water, the bar checks at depths greater than one or two fathoms were irregular, so that it was not feasible to obtain corrections by straight bar check comparison even though the water was comparatively shoal. Accordingly it was decided to break down the corrections into velocity and index components.

Phase corrections were indeterminate. Generally the bar depths on the "A" and "B" scales read the same, with occasional "A" scale readings both greater and less than the "B" scale. No information was available between the "B" and "C" scale readings. } Tabulated by the Proc. Office  
~~Accordingly no phase corrections were applied. Phase corrections on lower part of survey were applied by the verifier.~~

Velocity Corrections

All temperature and salinity observations were plotted on graph paper and a mean curve drawn for the season. As only one value was obtained for depths greater than 60 ft., it was necessary to draw a single curve for the season to have the deeper water corrections throughout the work.

Velocity corrections were determined in accordance with the procedure outlined in paragraph 5615 of the Hydrographic Manual.

Index Corrections

Index corrections presented quite a problem. The initial settings on each fathometer varied greatly from day to day so that no mean value could be worked out. Consequently, each fathogram was examined independently, and an index correction applied to make the soundings agree with the bar checks at 6 or 12 feet. The initial setting on the fathogram was carefully watched, and any variation during the day was applied to the index correction. The erroneous lengths of the lines supporting the bars were taken into account in computing the true bar depths.

After applying velocity, index, and bar line corrections, the fathometer soundings agreed within reasonable limits to the bar depths.

Conclusion

When time permits, it is more feasible for the hydrographic parties to determine the fathometer corrections rather than the Processing Offices. The hydrographer is more familiar with the peculiarities of a particular instrument, and field conditions in general.

Respectfully submitted,

*Harry F. Garber*  
Harry F. Garber  
Lt. Comdr. USCGS

VELOCITY CORRECTIONS - 820 fm/sec.  
 ARCTIC SHORE PARTY PROJECT OS-320  
 Season of 1947

R.W. Woodworth Chief of Party

to apply to

Hydrographic Sheets, Field Nos. Arc-2147, 2247, 4547, 4647 and 4747.

Corrections entered to 0.5 ft.		Corrections entered to 0.2 ft.	
Depth ft.	Correction ft.	Depth ft.	Correction ft.
2 - 11.5	0.0	2 - 4.5	0.0
12 - 33.5	-0.5	4.6 - 14	-0.2
34 - 54.5	-1.0	14.1 - 22.7	-0.4
55 - 71.5	-1.5	22.8 - 31.7	-0.6
72 - 86.5	-2.0	31.8 - 40.4	-0.8
87 - 99.5	-2.5	40.5 - 48.4	-1.0
100 - 112	-3.0	48.5 - 56.0	-1.2
112.5 - 124.5	-3.5	56.1 - 63.0	-1.4
125 - 136.5	-4.0		
137 - 147.5	-4.5		
148 - 159	-5.0		
159.5 - 170.5	-5.5		
171 - 181.5	-6.0		
182 - 192.5	-6.5		
193 - 203.5	-7.0		
204 - 214.5	-7.5		
215 - 225.5	-8.0		
226 - 236.5	-8.5		



H-7608

AR-4547 & AR-4647

Processing Office Notes

PROJECTION:

This is hand made on Whatman paper. The triangulation is by Woodworth 1945 and 1946, field computations. The datum is U.S.C.&G.S. (Astronomical of September 1945) There are no planetable signals. For sextant, transit and theodolite cuts see five volumes of horizontal angle and horizontal direction books. \* BARROW DATUM  
Acc. No. S-2548

SHORELINE:

To be added from photogrammetric sources when available (Applied - see Review)

DESCREPANCIES

Lat. & Long.      Position      Depth (ft.)

✓ 71° 06.5'              49e              93  
157° 20.0'              54 $\frac{1}{2}$ g              99

*Discrepancies eliminated by phase corrections (1 to 4 ft)  
and index corrections (1 to 1.5 ft) - 204~~5~~*

Follow the "g" line across.

It seems to run deeper than  
crossed lines by 2 to 8 ft.

71° 17'              20a              86  
156° 54.5

Note this sounding standing  
in 100 ft. depths. Apparently  
okay. ✓

Respectfully submitted,

*E. E. Smith*

E. E. SMITH  
Cartographic Engineer  
U. S. C. & G. S.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED  
TO BE ~~DELETED~~ } STRIKE OUT ONE

Seattle, Washington 10 December, 1947

I recommend that the following objects which have (~~have not~~) been inspected from seaward to determine their value as landmarks be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing by Don Jones, Lieut. USCGS

Ralph W. Woodworth Chief of Party

STATE Arctic Coast, Alaska			POSITION				METHOD OF LOCATION AND SURVEY	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE		LONGITUDE							
			° ' "	D. M. METERS	° ' "	D. P. METERS						
TOWER *	Loran Tower, 625-foot steel tower	(Tow)	71-00	1441.3	157-17	454.8	Barrow 1945	Trig.	Aug. 1947			9400
MONUMENT	Will Rogers memorial, 12-foot high	(Mem)	71-09.25		157-03.9		Barrow 1945	Offshore	Aug. 1947			9400
RADAR SCREEN	Screen on 100-foot bluff known as Skull Cliff.	(Rad)	70-54	1441.8	157-37	581.4	Barrow 1945	Trig.	June 1947			9400
RADAR SCREEN	Screen on one of group of sand dunes.	(Dar)	70-54	45.9	158-52	566.5	Barrow 1945	Trav.	July 1947			9400
BEACON	Tripod on small, prominent island	(SPIT)	70-53	410.9	158-42	172.2	Barrow 1945	Trig.	June 1947			9400
BEACON	Tripod on large sand dune	(Tall)	70-53	850.7	158-58	110.3	Barrow 1945	Trig.	June 1947			9400
	* NOT TO BE CHARTED on 9495											
	+ CHARTED ON 9495											

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by

RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

Ship or party Arctic Shore Party, R. W. Woodworth, Chief of party. August, 19  
Locality Arctic Coast of Alaska Project CS 320 Survey No. \_\_\_\_\_

Date 19 <u>47</u>	Time <u>150</u> mer.	Latitude and longitude	Depth <u>feet</u>	TEMP. AT DEPTH		SPECIFIC GRAVITY		AT TEMP.		Salinity	Velocity at temp. M./Sec.	CORRECTIONS		Velocity (theoretical) M./Sec.	Therm. No.	Hydro. No.	Remarks (weather, bottom, etc.)
				Obs.	Cor.	Obs.	Cor.	Obs.	Cor.			Sal.	Pres.				
<u>20 Aug</u>	<u>13 00</u>	<u>70-58.3</u>	<u>0</u>	<u>7.0</u>		<u>1.0232</u>		<u>10.0</u>		<u>30.3</u>							<u>T-1627</u>
		<u>158-41.6</u>	<u>30</u>	<u>5.7</u>													
			<u>48</u>	<u>5.2</u>		<u>1.0239</u>		<u>6.8</u>		<u>30.6</u>							"
<u>25 Aug</u>	<u>13 00</u>	<u>70-53.75</u>	<u>0</u>	<u>8.3</u>		<u>1.0230</u>		<u>8.5</u>		<u>29.8</u>							<u>T-1627</u>
		<u>158-44.6</u>	<u>12</u>	<u>7.0</u>		<u>1.0230</u>		<u>9.0</u>		<u>29.9</u>							"
<u>27 Aug</u>	<u>13 50</u>	<u>70-51.5</u>	<u>1</u>	<u>6.8</u>		<u>1.0229</u>		<u>8.1</u>		<u>29.7</u>							<u>E- 2mi. per hr.</u> <u>foggy foggy S</u>
		<u>158-41.3</u>	<u>113</u>	<u>7.4</u>		<u>1.0229</u>		<u>8.0</u>		<u>29.7</u>							
<u>27 Aug</u>	<u>15 00</u>	<u>70-52.1</u>	<u>0</u>	<u>8.0</u>		<u>1.0220</u>		<u>8.0</u>		<u>28.5</u>							<u>T-1627</u>
		<u>158-57.2</u>	<u>20</u>	<u>7.0</u>		<u>1.0226</u>		<u>8.3</u>		<u>29.4</u>							"
<u>28 Aug</u>	<u>12 10</u>	<u>70-54.8</u>	<u>0</u>	<u>7.5</u>		<u>1.0231</u>		<u>8.0</u>		<u>29.9</u>							"
		<u>157-47.6</u>	<u>50</u>	<u>7.5</u>		<u>1.0230</u>		<u>7.8</u>		<u>29.7</u>							"
<u>29 Aug</u>	<u>14 30</u>	<u>70-49.0</u>	<u>5</u>	<u>5.8</u>		<u>1.0230</u>		<u>5.9</u>		<u>29.5</u>							<u>Overcast snow</u> <u>NW 3</u>
		<u>159-05.4</u>															
<u>1 Sept</u>	<u>12 45</u>	<u>70-48.0</u>	<u>6</u>	<u>5.6</u>		<u>1.0192</u>		<u>6.8</u>		<u>25.0</u>							<u>foggy S and</u> <u>had</u>
		<u>159-05.5</u>															

\* If depth recorded is bottom indicate thus: 965 B  
† Express in parts /1000. If by titration indicate thus: 34.15 T



## RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

Ship or party Arctic Shore Party, Chief of party R.W. Woodworth, September, 19 47  
 Locality Arctic Coast of Alaska Project CS 320 Survey No. \_\_\_\_\_

Date 19 <u>47</u>	Time <u>180</u> mer.		Latitude and longitude	Depth feet <u>600B</u>	TEMP. AT DEPTH		SPECIFIC GRAVITY		AT TEMP.		† Salinity	Velocity at temp. M./Sec.	CORRECTIONS		Velocity (theoretical) M./Sec.	Therm. No.	Hydro. No.	Remarks (weather, bottom, etc.)	
	h.	m.			Obs.	Cor.	Obs.	Cor.	Obs.	Cor.			Sal.	Pres.					
					°C	°C			°C	°C			M./Sec.	M./Sec.	M./Sec.				
1 Sep	09	22	70-49.3	6	5.9		1.0230		6.0		29.5							Lt gy M	
			158-34.2	12	5.9		1.0230		6.0		29.5								
				18	5.9		1.0233		5.9		29.9								
2 Sep	12	25	70-49.0	7	5.6		1.0198		6.8		25.5							fne gy S & M	
			159-09.5																
2 Sep	13	00	71-01.6	1	5.8		1.0233		7.5		30.1							calm, foggy	
			157-19.1	19B	5.8		1.0232		7.8		29.9								fne gy S
4 Sep	08	55	70-50.0	6	5.7		1.0230		5.7		29.5							fne S and	
			158-33.0	14	5.7		1.0230		5.6		29.5								gy M
4 Sep	10	30	71-13.4	1	6.6		1.0232		6.6		29.8							Rain and fog	
			156-59.0	12	6.6		1.0232		6.5		29.8								E. 5 mi. per
				30	6.7		1.0232		6.4		29.8								hr. gy Cl and
				60B	6.6		1.0233		6.5		29.9								
5 Sep	16	35	70-48.4	6	5.6		1.0229		5.6		29.4							gy M and fne S	
			158-36.2	14	5.6		1.0231		5.6		29.6								

\* If depth recorded is bottom indicate thus: 965 B  
 † Express in parts /1000. If by titration indicate thus: 34.15 T

## RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

Ship or party **Arctic Shore Party**, Chief of party **R. W. Woodworth**,  
 Locality **Arctic Coast of Alaska**, Project **CS 320**, **September**, 19 **47**,  
 Survey No. \_\_\_\_\_

Date 19 <b>47</b>	Time <b>150</b> mer. h. m.	Latitude and longitude	Depth feet <small>in fathoms</small>	TEMP. AT DEPTH		SPECIFIC GRAVITY		AT TEMP.		† Salinity	Velocity at temp. <small>M./Sec.</small>	CORRECTIONS		Velocity (theoretical) <small>M./Sec.</small>	Therm. No.	Hydro. No.	Remarks (weather, bottom, etc.)
				Obs. °C	Cor. °C	Obs.	Cor.	Obs. °C	Cor. °C			Sal.	Pres.				
<b>8 Sep</b>	<b>12 30</b>	<b>70-50.3</b>	<b>0</b>	<b>3.8</b>		<b>1.0208</b>		<b>4.1</b>		<b>26.6</b>							
		<b>159-02.6</b>	<b>14</b>	<b>4.0</b>		<b>1.0210</b>		<b>4.4</b>		<b>26.8</b>							
<b>8 Sep</b>	<b>12 45</b>	<b>70-14.5</b>	<b>0</b>	<b>4.5</b>		<b>1.0230</b>		<b>4.6</b>		<b>29.4</b>							
		<b>157-10.3</b>	<b>12</b>	<b>4.4</b>													
			<b>60</b>	<b>0.0</b>													
			<b>150</b>	<b>-1.1</b>		<b>1.0233</b>		<b>5.0</b>		<b>29.8</b>							
<b>15 Sep</b>	<b>12 00</b>	<b>70-55.8</b>	<b>0</b>	<b>2.6</b>		<b>1.0240</b>		<b>3.6</b>		<b>30.5</b>							
		<b>158-24.3</b>	<b>60</b>	<b>2.6</b>		<b>1.0244</b>		<b>4.0</b>		<b>31.1</b>							
<b>8 Sep</b>	<b>12 30</b>	<b>70-52.0</b>	<b>0</b>	<b>4.9</b>		<b>1.0239</b>		<b>4.7</b>		<b>30.5</b>							
		<b>157-49.3</b>															<b>Overcast, NE 10mi. per hr.</b>

\* If depth recorded is bottom indicate thus: 965 B  
 † Express in parts/1000. If by titration indicate thus: 34.15 T

H-7608

AR-4547 & AR-4647

Geographic Names 8/14/47

Arctic Ocean

Barrow

Skull Cliff

H-7608

AR-4547 & AR-4647

TIDAL NOTE:

Peard Bay

Portable Automatic Gage

Latitude 70° 49.9'

Longitude 158° 28.7'

Peard Bay Staff

Latitude 70° 48.5'<sup>17</sup>

Longitude 158° 27.4'<sub>5</sub>

The automatic gage was set up inside the spit a mile east of the entrance to Peard Bay. It was disturbed once or twice during the season by storms and ice.

The staff was maintained at the camp on the spit a mile and three quarters south of the automatic gage. It was read continuously during all hydrography. Check levels were run to this staff almost daily and always after a storm or visitation by ice.

Hourly heights were furnished by the Washington office. The staff reading of MLLW was 4.1 feet. The values so obtained were plotted in curves from which tide reducers were taken.

STATISTICS

AR-4547 - H-7608 (MIS-30 STATISTICS)

Day	Date	Vol. No.	No. Pos.	Stat. Mie	Launch No.
a	8/28/47	1	23	11.2	5
b	9/1/47	1	24	11.3	5
c	9/2/47	1	31	13.2	5
d	9/3/47	1	39	14.7	5
e	9/4/47	1	32	11.3	5
f	9/8/47	1	32	15.0	5
g	9/12/47	1	45	18.4	5
a	8/22/47	2	24	11.4	4
b	8/25/47	2	41	12.0	4
c	8/29/47	2	29	11.2	4
d	9/2/47	2	38	11.8	4
<i>blue</i> e	9/3/47	2	37	11.7	4
f	9/4/48	2	41	12.0	4
g	9/8/47	3	25	8.6	4
h	9/9/47	3	29	7.4	4
i	9/12/47	3	<u>39</u>	<u>10.6</u>	4
			529	191.8	

AR-4647 - 7608

a	8/28/47	1	63	28.6	5
b	9/1/47	1	58	28.5	5
c	9/2/47	1	61	26.4	5
d	9/3/47	1	54	22.3	5
d	9/3/47	2	8	3.2	5
e	9/4/47	2	69	28.0	5
f	9/8/47	2	63	28.2	5
g	9/12/47	2	81	36.4	5
h	9/15/47	2	77	28.2	5
a	8/22/47	3	71	29.3	4
b	8/25/47	3	90	30.9	4
c	8/29/47	3	34	9.2	4
c	8/29/47	4	58	21.0	4
d	9/2/47	4	86	30.0	4
e	9/3/47	4	84	30.7	4
f	9/4/47	5	101	30.6	4
g	9/8/47	5	126	30.5	4
h	9/12/47	5	37	11.2	4
h	9/12/47	6	118	33.1	4
i	9/14/47	6	<u>90</u>	<u>27.8</u>	4
			<u>1429</u>	<u>514.1</u>	
			1958	705.9	



## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

24 February 1948

Division of Charts: H. W. MURRAY

Plane of reference approved in  
9 volumes of sounding records for

HYDROGRAPHIC SHEET 7608

Locality - Barrow Village, Arctic Coast, Alaska

Chief of Party: R. W. Woodworth in 1947  
Plane of reference is mean lower low water, reading  
4.1 ft. on tide staff at Peard Bay (North Side)  
4.9 ft. below B. M. 1 (1947)

Height of mean high water above plane of reference is .6 ft.

Condition of records satisfactory except as noted below:

*E. C. McKay*  
*Section*  
Chief, ~~Division of Tides and Currents.~~

GEOGRAPHIC NAMES

Survey No.

**H7608**

Name on Survey

	A	B	C	D	E	F	G	H	K
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
<u>Alaska</u>			(for title)						1
<u>Arctic Coast</u>			(for title)						2
<u>Skull Cliff</u>									3
<u>Barrow</u>								USGS	4
<u>Arctic Ocean</u>									5
<u>Chukchi sea</u> (south of line from Pt. Barrow to Wrangell I.)								USGS	6
									7
									8
									9
									10
<u>Peard Bay</u>			(location of tide staff)						11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

Names underlined in red are approved  
2/18/48. L. Heck

H7608

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7608...

Records accompanying survey:

Boat sheets .4...; sounding vols. .9...; wire drag vols. 0...; bomb vols. .9...; graphic recorder rolls 4.env.; special reports, etc. ....

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

Number of positions on sheet 1958
Number of positions checked 192
Number of positions revised 18
Number of soundings revised (refers to depth only) 1027
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred 1
Topographic details Time 6
Junctions Time 14
Verification of soundings from graphic record Time 20
Verification by H.L. Curtis (104 hr) R.E. Elkins (103 hr) Total time 287 Date 6-10-48
Reviewed by J.F. Jordan Time 19 Date 8-5-48

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7608

AR-4547

FIELD NO. AR-4647

Alaska, Arctic Coast, Skull Cliff to Barrow  
Surveyed in August and September, 1947      Scale 1:40,000  
Project No. CS-320

Soundings:

Control:

808 Fathometer

Visual fixes on shore signals

Chief of Party - R. W. Woodworth  
Surveyed by - H. G. Conerly and J. O. Boyer  
Protracted by - L. W. Eason  
Soundings plotted by - L. W. Eason  
Verified and inked by - H. L. Curtis and R. E. Elkins  
Reviewed by - G. F. Jordan, August 5, 1948  
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline is from air photographic manuscripts T-8998, T-8999, T-9000, T-9001, T-9004, T-9005 and T-9010 of 1947.

The control signals originate with 1945 and 1947 triangulation stations supplemented by hydrographic stations of the present survey.

2. Bottom Configuration and Depth Curves

The generally smooth bottom along the coastline in this area is gouged by ice packs and eroded by currents. The resulting irregularities amount to as much as 6 ft. in depth and are subject to change with movements of the ice packs. A note to this effect appears on the charts.

Inasmuch as these irregularities are wide-spread and unstable, the depth curves have been somewhat generalized on this small-scale survey and are adequate for charting purposes.

3. Sounding Line Crossings

The soundings at crossings are in very good agreement.

4. Junctions with Adjoining Surveys

Adequate junctions were made with H-7069 (1945) on the north and H-7609 (1947) on the south. In the area overlapped by H-7069, parts of three lines on that survey were rejected where indefinite, unapplied phase corrections resulted in questionable, shoaler soundings.

5. Comparison with Prior Surveys

There are no prior surveys in this area.

6. Comparison with Special Confidential Charts, Arctic Coast No. 2 and No. 3

Chart 9445 (Print date of June 1, 1946)

a. Hydrography

Hydrography on Chart 9445 is from overlapping survey H-7069 (1945) previously considered in par. 4 above; hydrography on the two special charts is from the present survey before verification. The only revisions necessary to bring the above charts into substantial agreement with the present survey are the following:

- (1) The 70-ft. sounding charted at lat.  $71^{\circ} 03.0'$ , long.  $157^{\circ} 29.7'$ , is actually 80 feet.
- (2) The two 120-ft. soundings and adjacent soundings charted in the vicinity of lat.  $71^{\circ} 18.4'$ , long.  $156^{\circ} 53.0'$ , are from the adjoining survey H-7069 and have been rejected (See par. 4, above).

b. Aids to Navigation

No aids to navigation are charted in this area.

7. Condition of the Survey

- a. The Descriptive Report and sounding records are complete and comprehensive.
- b. The survey was adequately smooth-plotted.
- c. Fathometer corrections are discussed in the Descriptive Report. Additional fathometer corrections applied during verification also pertain to other surveys of the project and are discussed in the review of H-7606 (1947).




8. Compliance with Project Instructions

The survey adequately complies with the project instructions.

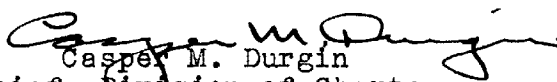
9. Additional Field Work

This is a basic survey and no additional field work is recommended.

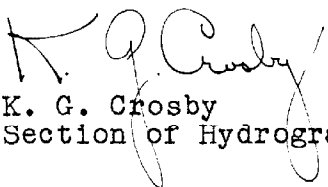
Examined and approved:



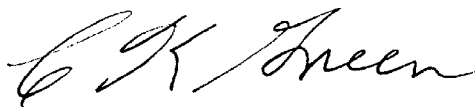
I. E. Rittenburg  
Chief, Nautical Chart Branch



Casper M. Durgin  
Chief, Division of Charts



K. G. Crosby  
Chief, Section of Hydrography



C. K. Green  
Chief, Division of Coastal Surveys

# NAUTICAL CHARTS BRANCH

SURVEY NO. H7608

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
May 20/48	Prelim. Chart "C"	H. F. Stegman	Before <del>After</del> Verification and Review (Sheet in process of verification)
June 28/48	9400	H. F. Stegman	Before <del>After</del> Verification and Review Hydro applied thru chart "C" above - now classified "Confidential"
7/49	9400	Risegari	<del>Before</del> After Verification and Review
1/3/50	Arc. 3	H. F. Stegman * G. H. G.	* Inspected and corrected major changes after review Before <del>After</del> Verification and Review
?	Arc. 2	?	{ Before <del>After</del> Verification and Review Inspected after review for major changes of corr. <span style="float: right;">LHC 1/3/50</span>
1/24/50	9445	R. D. Goodrich	<del>Before</del> After Verification and Review
2/1/50	9495	R. D. Goodrich	Applied thru chart 9445 in common area <del>Before</del> After Verification and Review
12-7-54	9464	R. K. De Landau	<del>Before</del> After Verification and Review
12-14-54	9462	R. K. De Landau	<del>Before</del> After Verification and Review
12-16-54	9463	R. K. De Landau	<del>Before</del> After Verification and Review
Apr '55	9403	H. E. MacEwen	after V & R thru chart 9464
10-11-55 <del>9495</del>	9495	R. K. De Landau	After V & R thru charts 9462, 9463 & 9464. To reconstruction

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.