7607

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Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. AR-2247 *Office No.* H-7607

LOCALITY

State ALASKA

General locality ARCTIC COAST

Locality PEARD BAY AND PT. FRANKLIN

194 7

CHIEF OF PARTY

R. W. WOODWORTH, LT. COMDR.

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DATE FEB 3 1948

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FEB 3 1948

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

H7607

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-7607~~

Field No. AR-2247

State ALASKA

General locality ARCTIC COAST

Locality PEARD BAY AND ~~PT. FRANKLIN~~ VICINITY

Scale 1/20,000 Date of survey Aug.4 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 & D. A. Jones

Soundings taken by ~~echometer~~, graphic recorder, ~~hand lead~~, ~~wire~~ and pole.

Fathograms scaled by H.G.C., J.O.B. & D.A.J.

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

Protracted by Christine N. Hillman

Soundings penciled by Christine N. Hillman

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

REMARKS: Processed in Seattle office.

U. S. GOVERNMENT PRINTING OFFICE 693010

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H-7607 (AR-2247)

Scale: 1/20,000

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

INSTRUCTION:

Project 320, dated 27 January 1947.

SURVEY LIMITS AND DATES: (40,000) 1947 (20,000) 1947

This survey joins H-7609 on the south and H-7606 on the east. The area to westward is unsurveyed. Sounding began August 4 and was completed September 12, 1947.

VESSELS AND EQUIPMENT:

The soundings were made from launches 3, 4 and 5 using fathometer 808 and NK6 as well as the sounding pole.

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 plus 1668 M. Long. 158 28 plus 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 plus 318 M. Long. 158 27 plus 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 area in general has gradual depth changes, but in narrow channels and along some sand spits and bars there are very sharp changes in the depths. This was very suddenly brought to the attention of the hydrographer once in the deep channel to Peard Bay, where the bow of the launch went aground while the fathometer was still recording 31 feet. The sand and mud stand in very steep slopes and apparently is permanently frozen except for a very thin layer. It seems that the bottom is only moved where there is a current or when there is gouging by ice.

In a number of cases along the shore the bottom and samples had as many as three distinct kinds of bottom indicating that it was deposited by the melting of the ice and was dropped in small bits. This was also true inside the bay but to a less extent.

NORTH CHANNEL:

There is a narrow channel at Point Franklin along meridian 158 47. While there are depths up to 17 feet scoured out of the narrow part of the channel, the outer approach is over a bar with a limiting depth of 7 feet, and there is an inner bar with depths of 8 feet. However, the possibility that the channel on the inner side swings close around the western sand bar is suggested by the soundings on the sheet. This feature should be examined when and if convenient.

CHANNEL SOUTH OF SEAHORSE ISLANDS:

In case of need people with local knowledge of this area can follow the curved channel skirting the south end of Seahorse Islands at almost any stage of the tide by observing the condition of the water. During surf conditions there is considerably less disturbance in the deep part of the channel. When the water is calm, the current causes a difference in the appearance of the water along mid channel from that outside the channel. It can be recognized by an experienced mariner or boatman. This is the deepest channel into Peard Bay but is not the easiest one to use.

ICE GOUGING:

Off Point Franklin the ice grounds and ploughs furrows in the bottom. On this account the mariner may find soundings varying up to a fathom or more from the charted depths. It is recommended that a note to this effect be shown on the chart to cover Point Franklin and the area along shore north of Lat. 70 50 to Point Barrow.

DANGERS:

Shallow draft boats should take note of the shoal area north of Point Franklin. The one fathom curve is a mile north of the cape, two fathom curve 1.4 miles and five fathom curve is 2 miles off. Also in the vicinity of Long. 159 04 the five fathom curve is a mile and a half off shore.

The shoal bar inside Peard Bay extending off Sta. Luis to the vicinity of Lat. 70 51 Long 159 07 was too shoal to sound in its outer end. Note that the deepest approach to Kugurua Bay passes around the north end of this bar and between the bar and the east ~~side~~ of Peard Bay.

Respectfully submitted,

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

Copy from Fathometer report.

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, one NK.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. ~~Accordingly no phase corrections were applied.~~ Tabulated by the Press Office See H-7606

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.

*For 808 Fathometer (820 fm/sec). See H-7606 for NK-6 (800 fm/sec) corrections by the verifier

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. USC&GS

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		

* See tabulation in Desc. Report H-7606 for corrections NK-6 Fathometer

H-7607

AR-2247

Seattle Processing Office Notes

PROJECTION:

Hand made on Whatman paper. Basic control is field computation of triangulation by Woodworth 1947. Datum: U. S. C. & G. S.* (astro of September 1945) There are no signals located by plane table. All subsidiary signals were located by sextant, transit and theodolite cuts recorded in five volumes of Horizontal directions and Horizontal angles as well as in the sounding records. See hydro control index which is a part of this report. Acc. No. S-2548

* BARRON DATUM

SHORELINE:

To be added when* available from photogrammetric compilation now in progress. The shoreline on the boat sheet was from a trimetregon compilation by the geological survey.

*Applied from manuscripts T-9005, T-9007

DISCREPANCIES

(Eliminated by applying speed corrections on "f" day and revising velocity corrections on basis 800fm/sec. on "a" day.

Lat. & Long.	Day Letter	Launch	Sounding	Now
70° 56.9 158° 53.0	(77-78f (61-62e	Launch 4 blue Launch 3 green	(57-~~56~~ feet (~~62~~-64 "	64-63 63-65
70° 56.2 158° 58.0	(70-71f (87-88e	Launch 4 blue Launch 3 green	(~~68-68~~ " ~~72-72~~ "	73-73 72-74
70° 56.5 158° 52.3	(12-13f (59-60e	Launch 4 blue Launch 3 green	(~~47-47~~ " ~~45-45~~ "	47-47 46-47
70° 56.9 158° 52.9	(77-78f (61-62e	Launch 4 blue Launch 3 green	(~~56-57~~ " ~~62-64~~ "	64-63 63-65
70° 57.55 158° 54.1	(19-20g (65-66e	Launch 4 blue Launch 3 green	(~~85-86~~ " ~~83-83~~ "	86-85 85-86
70° 57.8 158° 54.7	(85-86h (67e	Launch 4 blue Launch 3 green	(~~86-86~~ " ~~84~~ "	86-86 87-87

Fathometer Corrections.

Echo Corrections.
The velocity corrections were prepared by Mr. Garber from temperature and salinity observations. His fathometer report accompanies the records to Washington. a copy of the pertinent part of his report is attached hereto.

Bar tests and Phase Scale corrections.
All bar tests for each hydrographic sheet were tabulated in pencil, the work of each launch being segregated. The principal use made of this tabulation was to test the reasonableness of the corrections made from temperature and salinity curves. The tabulation showed very close agreement between A scale and B scale readings on the 808 fathograms. The differences were pretty well balanced by differences with an opposite sign. No corrections were applied to the B scale readings of any launch. For launches 4 and 5, the fathogram readings at the points where shifts were made between B and C scales or between C and D were tabulated. They are not sufficiently good, and not numerous enough to give an accurate mean. After examination of the phase differences and the quality of the profiles the scale or phase corrections on the next sheet were accepted. The penciled tabulation of the bar tests accompanies the report.

Index corrections.
All fathograms were examined for index corrections taking note of bar checks and initial lines. On profiles of Launch 5 in particular the initial line was frequently out out, even during bar checks. The gain was often varied when the ~~gain~~ initial line did not show and whole days soundings were found without the initial line showing. On Launch 4 the bar line was in error until the test on August 15, after which it was corrected. Up to this time the bar tests for six feet were 5.7 ft. deep. Corrections on account of phase or scale errors and corrections for bar line length when they occurred were combined in one figure with corrections to the initial line.

NK6 Fathometer.
This fathometer, a Bludworth, was borrowed from the Navy. This particular machine is not suitable for surveying. The vertical scale is too small for readings of the accuracy prescribed in our manual in depths under ten fathoms. The horizontal scale is too small. Wave action is not separated into waves which can be appraised. Waves make a fuzzy, indefinite line. The speed does not remain constant. There is no speed indicator. The field party recommends that when soundings with this machine disagree with soundings with the 808 fathometer that the depths with the 808 be accepted. The differences were known to the field party but they were not able to control the speed of the NK-6. In plotting the smooth sheet no such corrections have been applied in the Processing Office.

The notes on this page apply to all the Arctic Sheets of 1947.

Respectfully submitted,

Edgar E. Smith

Edgar E. Smith
Cartographic Engineer

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form No. 7
Rev. Dec. 1938

SHEET No. 1

RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

Ship or party Arctic Shore Party, R. W. Woodworth, Chief of party. August, 1947
Locality Arctic Coast of Alaska Project CS 320 Survey No.

Date 1947	Time 150 mer. h. m.	Latitude and longitude	* Depth ~~Fathoms~~ Feet	Temp. at Depth Obs. °C	Temp. at Depth Cor. °C	Specific Gravity Obs.	Specific Gravity Cor.	At Temp. Obs. °C	At Temp. Cor. °C	† Salinity	Velocity at temp. M./Sec.	Corrections Sal. M./Sec.	Corrections Pres. M./Sec.	Velocity (theoretical) M./Sec.	Therm. No.	Hydro. No.	Remarks (weather, bottom, etc.)
20 Aug.	1300	70-58.3	0	7.0		1.0232		10.0		30.3						T-1627	
		158-41.6	30	5.7													
			48	5.2		1.0239		6.8		30.6						"	
25 Aug.	1300	70-53.75	0	8.3		1.0230		8.5		29.8						T-1627	
		158-44.6	12	7.0		1.0230		9.0		29.9						"	
27 Aug.	1350	70-51.3	1	6.8		1.0229		~~7.5~~ 8.1		29.7							E-2mi. per hr. foggy
		158-41.3	11 B	7.4		1.0229		~~7.2~~ 8.0		29.7							fnc gy S
27 Aug	1500	70-52.1	0	8.0		1.0220		8.0		28.5						T-1627	
		158-57.2	20	7.0		1.0226		8.3		29.4						"	
28 Aug	1210	70-54.8	0	7.5		1.0231		8.0		29.9						T-1627	
		157-47.6	50	7.5		1.0230		7.8		29.7						"	
29 Aug	1430	70-49.0	5	5.8		1.0230		5.9		29.5							overcast snow
		159-05.4															NNW 3
1 Sept	1245	70-48.0	6	5.6		1.0192		6.8		25.0							fnc gy S and
		159-05.5															Mud

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

U. S. GOVERNMENT PRINTING OFFICE 11—11506

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DEPARTMENT OF COMMERCE
U. S. COAST AND G[illegible]TIC SURVEY
Form No. 17
Rev. Dec. 1938

SHEET NO. 2

RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

Ship or party Arctic Shore Party, R. W. Woodworth, Chief of party. September, 1947
Locality Arctic Coast of Alaska Project CS 320 Survey No.

Date 1947	Time 150 mer. h. m.	Latitude and longitude	* Depth Fathoms Feet	Temp. at Depth Obs. °C	Temp. at Depth Cor. °C	Specific Gravity Obs.	Specific Gravity Cor.	At Temp. Obs. °C	At Temp. Cor. °C	† Salinity	Velocity at temp. M./Sec.	Corrections Sal. M./Sec.	Corrections Pres. M./Sec.	Velocity (theoretical) M./Sec.	Therm. No.	Hydro. No.	Remarks (weather, bottom, etc.)
1 Sept.	0922	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 Sept.	1225	70-49.0	7	5.6		1.0198		6.2		25.5							fne gy S, & M
		159-09.5															
2 Sept.	1300	71-01.6	1	5.8		1.0233		7.3		30.1							calm, foggy
		157-19.1	19 B	5.8		1.0232		7.2		29.9							fne gy S
4 Sept.	0855	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 Sept.	1030	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. 5mi. per hr.
			30	6.7		1.0232		6.4		29.8							gy Cl and
			60 B	6.6		1.0233		6.5		29.9							fne S
5 Sept	1635	70-48.4	6	5.6		1.0229		5.6		29.4							gy M and
		158-36.2	14	5.6		1.0231		5.6		29.6							fne S

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

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form No. 417
Rev. Dec. 1938

SHEET No. 3

RECORD OF TEMPERATURES, SALINITIES, AND THEORETICAL VELOCITIES

Ship or party Arctic Shore Party, R. W. Woodworth, Chief of party. September, 1947
Locality Arctic Coast of Alaska Project CS 320 Survey No.

Date 1947	Time 150° mer.	Latitude and longitude	*Depth	Temp. at Depth		Specific Gravity		At Temp.		†Salinity	Velocity at temp.	Corrections		Velocity (theoretical)	Therm. No.	Hydro. No.	Remarks (weather, bottom, etc.)
				Obs.	Cor.	Obs.	Cor.	Obs.	Cor.			Sal.	Pres.				
	h. m.		~~Fathoms~~ Feet	°C	°C			°C	°C		M./Sec.	M./Sec.	M./Sec.	M./Sec.			
8 Sept	12 30	70-50.3	0	3.8		1.0208		4.1		26.6							
		159-02.6	14	4.0		1.0210		4.4		26.8							
8 Sept.	12 45	70-14.5	0	4.5		1.0230		4.6 ~~5.0~~		29.4							
		157-10.3	12	4.4													
			60	0.0													
			150	-1.1		1.0233		5.0		29.8							
15 Sept.	1200	70-55.8	0	2.6		1.0240		3.6		30.5							
		158-24.3	60	2.1		1.0244		4.0		31.1							
8 Sept.	1250	70-52.0	0	4.9		1.0239		4.7		30.5							overcast, NE
		157-49.3															10 mi per hr.

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

U. S. GOVERNMENT PRINTING OFFICE 11—11506

Arctic Surveys

HYDRO-CONTROL INDEX

(Listing all location data other than triangulation)

1947

HYDRO-CONTROL INDEX

Signal Name	Location Data: Date 1947	Vol./Page	Pos./Cuts	Remarks
Abe	27 Aug.	HA#5--3	1 cut.	From ~~PEARD NO. BASE.~~ Bag
	" "	" --22	1 cut.	" PEARD NO. BASE.
	" "	" --31	1 cut.	" PEARD SO. BASE.
	" "	Sdg#3--66	2 3-pt. fixes.	From Lch#4/Sheet 2147.
Bag	27 Aug.	HA#5--3	3-pt. fix.	
	" "	" --22	1 cut.	From PEARD NO. BASE.
	" "	" --31	1 cut.	" PEARD SO. BASE.
	" "	Sdg#3--66	2 cuts.	From Lch#4/Sheet 2147.
Boo	14 Aug.	HA#5--5	3-pt. fix.	
	" "	" --8	1 cut.	From 'Dub'.
	15 "	" --35	1 cut.	" 'Up'.
	18 "	" --25	1 cut.	" 'Pit'.
Cabin	17 July	HA#2--3,4,5	Ecc. dir/dist.	From KYLE.
	17 June	HA#5--17	Ecc. dir.	" KYLE.
Cat	17 June	HA#5--26	3-pt. fix.	
	5 July	HA#1--1	1 cut.	From PEARD SO. BASE.
	18 July	HA#2--11,12,13	1 cut.	" ICE.
	" "	" --15	3-pt. fix	
Dan	5 Aug.	HA#3--33	3-pt. fix.	
	" "	" --35,36	1 cut.	From GEORGE.
Dar	26 July	HA#5--12	1 cut.	From FOUL.
	27 "	" --29,30	Ecc. dir/dist.	From SEAHORSE.
Dog	18 June	HA#5--7	3-pt. fix.	
	17 July	HA#2--1,2	1 cut.	From FOX.
	" "	" --3,4	1 cut.	" KYLE.
	18 "	" --8,9	3-pt. fix.	
	" "	" --11,12,13	1 cut.	From ICE.
Dub	1 Aug.	HA#5--8	3-pt. fix.	
	" "	" --10	1 cut.	From FLINT.
	14 "	" --8	3-pt. fix.	
Duk	5 Aug.	HA#5--9	3-pt. fix.	
	6 July	HA#1--3,4	1 cut.	From POINT.
	" "	" --6	3-pt. fix.	
	7 "	" --7,8	1 cut.	From RIGHT.
Flo	4 Aug.	HA#3--44,45	3-pt. fix.	

Foul	26 July	HA/5--12	3-pt. fix.	
	27 "	" --29	1 cut.	From SEAHORSE.
	2 Aug.	" --4	1 cut.	" BIGHT.
	5 "	" --32	1 cut.	" SPIT.
	18 "	" --32	1 cut.	" SPIT.
Freeze Az.	9 Aug.	HA/4--36	3-pt. fix.	
	" "	" --38	1 cut.	From HELP.
Gab	18 June	HA/5--15	3-pt. fix.	
	5 July	HA/1--1,2	1 cut.	From PEARD SO. BASE.
	6 "	" --3,4	1 cut.	" POINT.
	19 "	HA/2--19	3-pt. fix.	
	23 "	HA/5--34	1 cut.	From TOM.
	5 Aug.	" --9	1 cut.	" Duk.
Gus	7 July	HA/1--7,8	1 cut.	From BIGHT.
	" "	" --10	3-pt. fix.	
	" "	" --11	1 cut.	From FOG.
Keg	28 July	HA/5--15	3-pt. fix.	
	29 "	" --23	1 cut.	From ORVILLE.
	31 "	" --10	1 cut.	" FLINT.
	" "	" --19	1 cut.	" LUMP.
	1 Aug.	" --33	1 cut.	" 'Tip'.
Knoll	22 April	HA/5--16	1 angle.	At 'Knoll'.
	9 May	" --14	1 cut.	From ICE.
	13 "	" --36	1 cut.	" FOX.
	15 "	" --28	1 cut.	" RISE.
	18 "	" --14	1 cut.	" ICE.
	17 July	HA/2--1,2	1 cut.	" FOX.
	" "	" --3,4	1 cut.	" KYLE.
	18 "	" --7	3-pt.fix.	
	" "	" --11,12,13	1 cut.	From ICE.
Lin	3 Aug.	HA/3--38,39	3-pt. fix.	
	4 "	" --41,42	1 cut.	From EBB.
Lip	23 May	HA/5--18	3-pt. fix.	
	" "	" --11	1 cut.	From FOG.
	12 July	HA/1--22	3-pt. fix.	
	31 "	Sdg/1--15	3-pt. fix.	By Lch/3/Sheet 4747.
	14 Aug.	" --23	1 cut.	From Lch/4/Sheet 4747.
	25 "	" --51,53	1 cut each.	" " / " "
Memorial (Rogers)	8 Aug.	HA/4--29	1 angle.	At 'Rogers Memorial'.
	" "	" --30	1 cut.	From ROGERS.
	2 Sept.	Sdg/1--48	1 cut.	" Lch/4/Sheet 4547.
	" "	" --72	1 cut.	" " / " "
	12 "	Sdg/2--30	1 cut.	" " / " "

Mul	31 July	HA/5--19,20	Ecc. dir/dist.	From LUMP.
Ned	17 June	HA/5--21	Ecc. dir/dist.	From ICE.
Nek	9 July	HA/1--13	3-pt. fix.	
	10 "	" --15	1 cut.	From KUGURUK.
	11 "	" --18	1 cut.	" DOWN.
	12 "	" --20	1 cut.	" WEIR.
	1 Aug.	HA/5--8	1 cut.	" 'Dub'.
	14 "	" --5	1 cut.	" 'Boo'.
	" "	" --8	1 cut.	" 'Dub'.
	18 "	" --25	1 cut.	" 'Pit'.
Nit	30 July	HA/3--14,15	3-pt. fix.	
	31 "	" --17,18,19	1 cut.	From HOPE.
Ore	8 Aug.	HA/4--32	3-pt. fix.	
	9 "	" --34	1 cut.	From FREEZE.
	25 "	Sdg/1--22	1 cut.	" Lch/4/Sheet 4547.
	" "	" --25	1 cut.	" " / " .
Our	29 July	HA/5--23	1 cut.	From ORVILLE.
	27 "	" --24	3-pt. fix.	
	31 "	" --10	1 cut.	From FLINT.
Pal	26 July	HA/3--6,7	3-pt. fix.	
	27 "	" --10,11	1 cut.	From HERBERT.
	25 Aug.	Sdg/1--61	1 cut.	" Lch/4/Sheet 4647.
Pit	18 Aug.	HA/5--25	3-pt. fix.	
Pole	23 July	HA/5--26	3-pt. fix.	
	" "	" --27	1 cut.	From 'Ran'.
	26 "	" --12	1 cut.	" 'Foul'.
	27 "	" --29	1 cut.	" SEAHORSE.
	5 Aug.	HA/5--32	1 cut.	" SPIT.
Ran	23 July	HA/5--26	1 cut.	From 'Pole'.
	" "	" --27	3-pt. fix.	
	27 "	" --29	1 cut.	From SEAHORSE.
	5 Aug.	" --32	1 cut.	" SPIT.
	18 "	" --32	1 cut.	" SPIT.
	27 "	" --3	1 cut.	" 'Bag'.
	" "	" --22	1 cut.	" PEARD NO. BASE.
	" "	" --31	1 cut.	" PEARD SO. BASE.
	26 "	" --12	1 cut.	" 'Foul'.
Rat	9 Aug.	HA/4--41	3-pt. fix.	
	10 "	" --44	1 cut.	From EXTRA.
Run	7 Aug.	HA/4--24	3-pt. fix.	
	" "	" --26	1 cut.	From WILL.

Saw	1 Aug.	Sdg/2--11	3-pt. fix.	From Lch/2/Sheet 2147.
	2 "	HA/5--4	1 cut.	" BIGHT.
	" "	" --11	1 cut.	" FOG.
	5 "	" --32	1 cut.	" SPIT.
	18 "	" --32	1 cut.	" SPIT.
Skull Az.	1 Aug.	HA/3--27,28	3-pt. fix.	
	3 "	" --30,31	1 cut.	From HIGH.
Suk	31 July	HA/3--21,22	3-pt. fix.	
	1 Aug.	" --24,25	1 cut.	From SKULL.
Ter	7 Aug.	HA/4--21	3-pt. fix.	
(Shelter Az.)	25 "	Sdg/1--42	1 cut.	From Lch/4/Sheet 4647.
	" "	" --44	1 cut.	" " / " .
Tip	1 Aug.	HA/5--33	3-pt. fix.	
Tom	25 July	HA/5--26	1 cut.	From 'Pole'.
	" "	" --27	1 cut.	" 'Ran'.
	" "	" --34	3-pt. fix.	
	26 "	" --13	1 cut.	From 'Foul'.
	27 "	" --29	1 cut.	" SEAHORSE.
	1 Aug.	Sdg/2--11	3-pt. fix.	" Lch/2/Sheet 2147.
	2 "	HA/5--4	1 cut.	" BIGHT.
	" "	" --11	1 cut.	" FOG.
	18 "	" --32	1 cut.	" SPIT.
	27 "	" --3	1 cut.	" 'Bag'.
	" "	" --31	1 cut.	" BEARD SO. BASE.
Up	23 May	HA/5--35	3-pt. fix.	
	1 Aug.	" --8	1 cut.	From 'Dub'.
	" "	" --10	1 cut.	" FLINT.
	15 "	" --35	3-pt. fix.	

NOTES : 1) 'HA' signifies a horizontal-angle record. All hydrographic control other than triangulation is contained in 5 such volumes. It consists of 3-point fixes and cuts obtained by transit and by sextant.

Comp.by— RMW
" —
Copy ✓ Tbc

30Sept47

STATISTICS

H-7607
AR 2247

Day	1947 Date	Vol.	Pos.	Statute Miles	Launch
a	Aug. 4	I	I08	27.4	5
b	Aug. 6	I	68	20.6	5
c	Aug. 22	I	87	II.0	5
c	Aug. 22	2	I30	27.I	5
d	Aug. 25	2	I69	5I.3	5
d	Aug. 25	3	78	20.2	5
e	Aug. 26	3	26	554	5
f	Aug. 27	3	I73	48.6	5
f	Aug. 27	4	27	8.2	5
a	Aug. 3	5	IoI	25.I	4
b	Aug. 6	5	I27	28.5	4
c	Aug. 7	5	36	II.3	4
c	Aug. 7	6	88	I5.8	4
d	Aug. 8	6	47	I3.6	4
e	Aug.II	6	97	25.5	4
f	Aug.I3	6	32	7.I	4
f	Aug.I3	7	48	I5.9	4
g	Aug.I8	7	56	I5.9	4
h	Aug.20	7	I47	40.9	4
h	Aug. 20	8	66	7.4	4
a	Aug.25	9	66	II.4	3
b	Aug.28	9	IoI	I5.I	3
c	Sept.9	9	I0	I.0	3
d	Sept.II	9	9	I.0	3
e	Sept.I2	9	II9	20.I	3
e	Sept.I2	I0	I0	I.0	3

STATISTICS

H-7607
AR 2247

Day	1947 Date	Vol.	Pos.	Statute Miles	Launch				
g	Aug.4	3	20	4.0	5	of AR2I47	H-7606		
l	Sept.II	2	3	I.0	5	of AR4747	H-7609		
l	Sept.II	3	52	9.5	5	"	"	"	
p	Sept.I2	I0	I8	3.0	3	"	"	"	
		TOTALS	2II9	494.4					
		Vertical Casts		35					

H-7607

AR-2247

Geographic Names R14

Arctic Ocean

Peard Bay

Atanik

Pt. Franklin

Seahorse Islands

Kugurua Bay

H-7607

AR-2247

TIDAL NOTE:

Peard Bay

Portable Automatic Gage

Latitude	70	49.9
Longitude	158	28.7

Peard Bay Staff

Latitude	70	48.5 17
Longitude	158	27.395

} on H-7609 (1947)

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.

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 24 February 1948

Division of Charts: H. W. MURRAY

Plane of reference approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 7607

Locality - Peard Bay, 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.~~

U. S. GOVERNMENT PRINTING OFFICE 154327

GEOGRAPHIC NAMES

Survey No.

H7607

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska		(for title)								1
Arctic Coast		" "								2
Pt. Franklin										3
Seahorse Islands										4
Peard Bay		(location of tide staff)								5
Atanik										6
Arctic Ocean									U.S.(H)	7
Chukchi Sea	(s. of line from Pt. Barrow to Wrangell I.)									8
		Names underlined in red are approved. 2/18/48 L. Heck								9
										10
										11
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										27

M 234

H7607

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7607...

Records accompanying survey:

Boat sheets ..2..; sounding vols. .10...; wire drag vols. 0....;

bomb vols. 0....; graphic recorder rolls .3.env.;

special reports, etc. .....

.....

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

Number of positions on sheet		2103.
Number of positions checked		1510.
Number of positions revised		....4.
Number of soundings revised (refers to depth only)		.1120.
Number of soundings erroneously spaced		...41
Number of signals erroneously plotted or transferred		0
Topographic details	Time	...12. hrs
Junctions	Time	...20. hrs
Verification of soundings from graphic record	Time	....30 hrs.

Verification by....W...Klein.....Total time .695.. Date 6-28-48

Reviewed by.....J. F. Jordan..... Time .17... Date 8-5-48.

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7607

FIELD NO. AR-2247

Alaska, Arctic Coast, Peard Bay and Vicinity
Surveyed in August and September, 1947 Scale 1:20,000
Project No. CS-320

Soundings:

808 Fathometer
NK-6 Bludworth Fathometer
Pole

Control:

Visual fixes on shore signals

Chief of Party - R. W. Woodworth
Surveyed by - H. G. Conerly, J. O. Boyer and D. A. Jones
Protracted by - C. N. Hillman
Soundings plotted by - C. N. Hillman
Verified and inked by - W. Klein
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-9003 and T-9007 of 1948.

The control signals originate with 1947 triangulation stations supplemented by hydrographic stations on the present survey.

2. Bottom Configuration and Depth Curves

The bottom along the coastline, in and near the inlets and in the vicinity of Point Franklin, is irregular, but is very smooth in the bay and in offshore areas. A detailed description is given on page 1 of the Descriptive Report.

The bottom is adequately delineated by the usual depth curves except for the low-water curve and portions of the 6-ft. curve in the bay.

3. Sounding Line Crossings

The soundings at crossings are in very good agreement.

4. Junctions with Adjoining Surveys

The survey adequately joins H-7606 (1947) on the east and H-7609 (1947) in Peard Bay. There are no contemporary nor prior surveys on the west and north. A comparison with charted reconnaissance soundings (small scale chart 9400) in these areas has no practical value.

5. Comparison with Prior Surveys

There are no prior surveys in this area.

6. Comparison with Special Confidential Chart, Arctic Coast No. 1

a. Hydrography

The hydrography on this special chart originates with the present survey prior to verification. Minor corrections of soundings amounting to 1 and 2 feet have been made since the chart compilation. The 12-ft. sounding charted at lat. 70° 53.02', long. 159° 08.05' has been changed to 14 feet.

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 detail in the Descriptive Report. Additional fathometer corrections applied during verification also pertain to other surveys of this 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 Recommended

This is a basic survey. It should be noted however, that depths in the lagoon at the west end of Peard Bay, and in the inshore areas of the bay were too shoal for the sounding launch. Although the survey is apparently adequate for present requirements, a few skiff soundings should be taken in these unsurveyed areas at some future date to complete the total coverage. In addition, further development of the narrow channel at Point Franklin along the 158° 47' meridian, mentioned on page 2 of the Descriptive Report, is desirable.

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. H7607

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6/28/48	9400	N.J. Oligman	Before ~~After~~ Verification and Review applied thru preliminary charts of the area - classified in file
7/49	9400	Risegari	~~Before~~ After Verification and Review
?	Arctic 1	?	~~Inspected for revisions to Chart after review~~ Before ~~After~~ Verification and Review 1/6/50
12-3-54	9462	R. K. [illegible]	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.