

**7847**

**a & b**

**7847 a & b**

Diag. Cht. No. 9380 & 9400

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PL-2450 Office No. H-7847 a & b

LOCALITY

State ALASKA

General locality BERING STRAIT

Locality PRINCE OF WALES SHOAL

194 50

CHIEF OF PARTY

T. B. Reed

LIBRARY & ARCHIVES

DATE Feb. 21, 1951

FEB 21 1951

Form 537.  
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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-7848<sup>7</sup>

Field No. PI-2450

State Alaska

General locality HERING STRAIT

Locality Prince of Wales Shoal

Scale 1:20,000 Date of survey 22 July - 22 August 1950

Instructions dated 19 May 1950

Vessel Ship PIONEER

Chief of party Thos. B. Reed

Surveyed by Ship's Officers

Soundings taken by fathometer, graphic recorder, ~~and other means~~

Fathograms scaled by Fathometer Readers and Ship's Officers

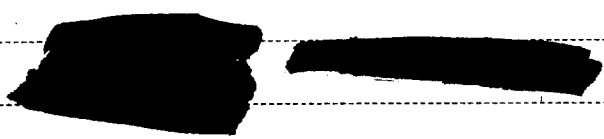
Fathograms checked by Ship's Officers

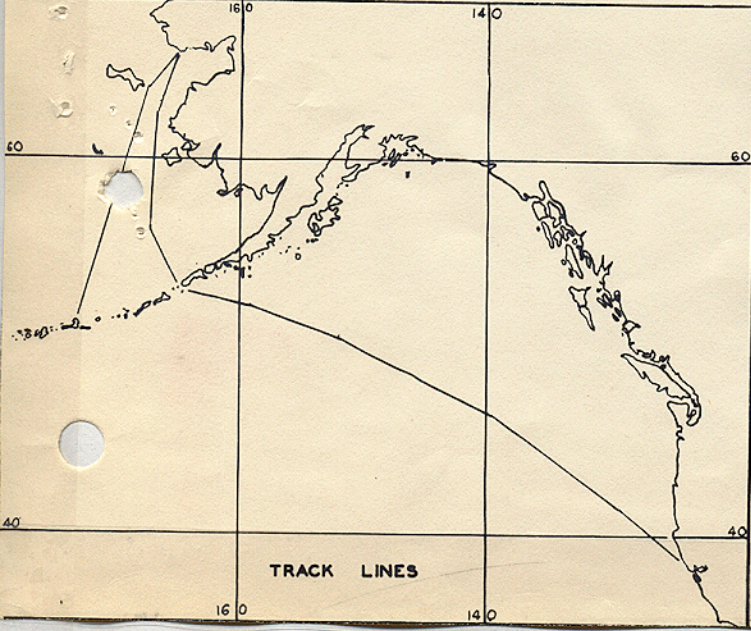
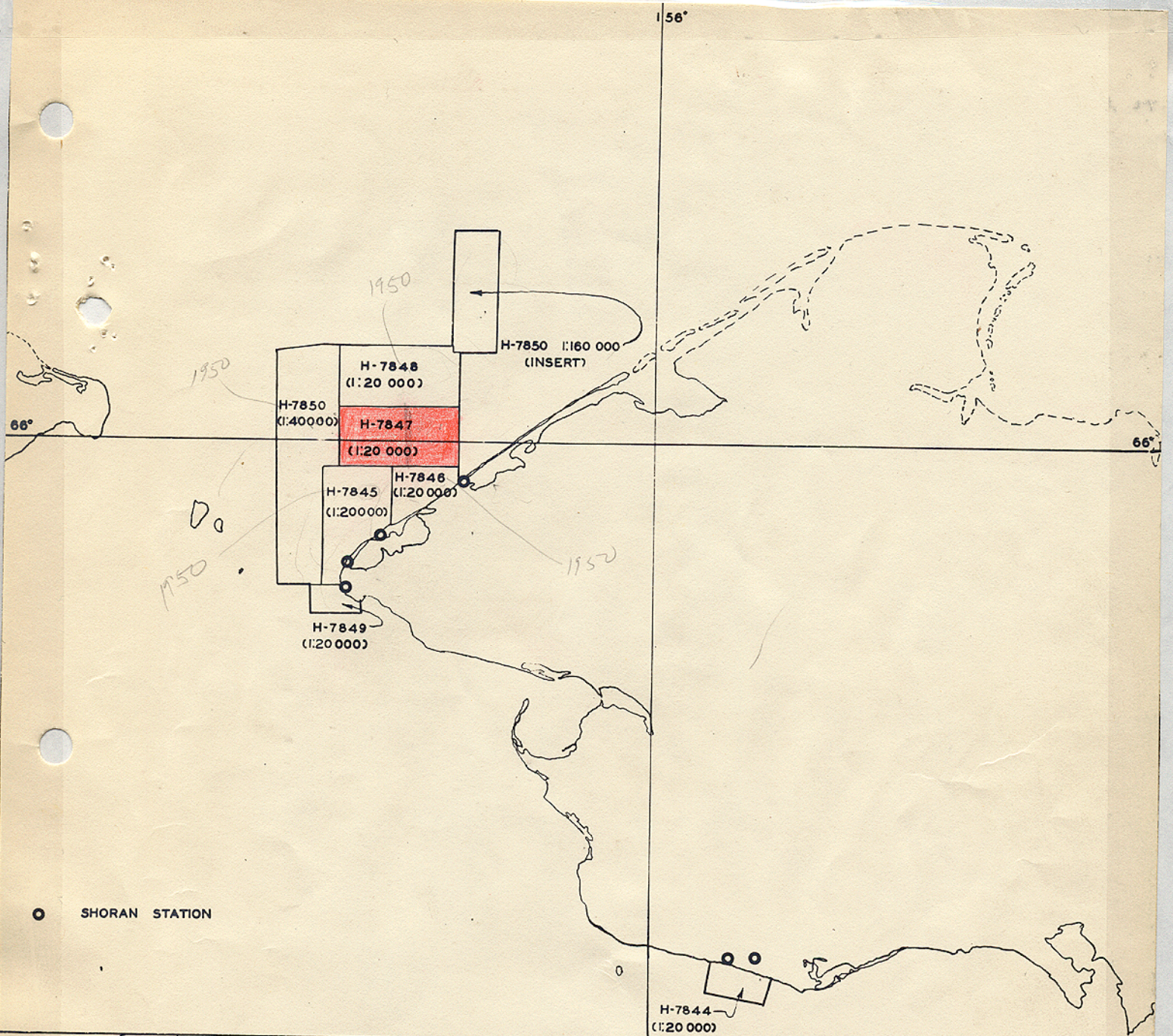
Protracted by A.E. Greaves Jr.

Soundings penciled by A.E. Greaves Jr.

Soundings in ~~XXXXXX~~ feet at ~~MLLW~~ MLLW

REMARKS:





PROGRESS SKETCH  
TO ACCOMPANY SEASONS REPORT

U.S. COAST & GEODETIC SURVEY

COMBINED OPERATIONS

9 JUNE 23 SEPT. 1950

SEWARD PENINSULA  
NOME & CAPE PRINCE OF WALES

SHIP PIONEER  
THOS. B. REED COMDG.

PROJECT C.S. 341

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

H-7847~~2~~<sup>1</sup>ab

(Field PI-2450 )

Prince of Wales Shoal, Bering Strait, Alaska

Project CS-341

Season of 1950

Ship PIONEER

Thos. B. Reed, Commanding

-----  
A. PROJECT

This work was done in accordance with the following instructions for Project CS-341.

Original Instructions dated 19 May 1950  
Amended Instructions dated 19 May 1950  
Telegram dated 1 Aug. 1950

B. SURVEY LIMITS AND DATES

This survey is located about 25 naut. miles north by east of Cape Prince of Wales. It is an offshore survey including part of Prince of Wales Shoal. The survey extends from Lat.  $65^{\circ} 55.8' N$  to Lat.  $66^{\circ} 06.0' N$  and from Long.  $167^{\circ} 19.0' W$  to Long.  $168^{\circ} 06.0' W$

Field work began on 22 July 1950 and ended on 22 August 1950

Junctions are made with contemporary surveys on all sides, *except east*  
See the enclosed Index of Surveys.

C. VESSELS AND EQUIPMENT

The bulk of the hydrography was done by the Ship PIONEER. Launches #3 and #4 operating from the ship, each worked one day, after which it was decided that the poor shoran reception encountered made further launch work infeasible.

The turning radius of the ship approximated 400 meters, depending upon the manner in which she was turned.

The following fathometers were used:

Ship PIONEER	808-J #129S, #69S
Launch #3	808-J #108
Launch #4	808-J #107

D. TIDE AND CURRENT STATIONS

Tide reducers were obtained from the portable tide gage at Loop Lagoon, Alaska. Except for 18, 19, 21 and 22 August when the gage at Port Clarence was used

A Tide Note is enclosed

No current stations were occupied within the limits of this survey.

E. SMOOTH SHEET

The projection was made and verified by Ship's Officers.

Shoran distance arcs were drawn and verified by Ship's Officers. ✓

The sheet contains only water areas, therefore no Shoran Control Stations appear.

F. CONTROL STATIONS

All of the triangulation stations used for control of this survey were located by the Coast & Geodetic Survey and are on the NA 1927 Datum. ✓

Shoran Stations PRIN, LAG, and CHUK were located by theodolite and tape traverse by Officers of the Ship PIONEER. Computations are included with the descriptive reports of graphic control surveys <sup>unrevised</sup> PI-B-50, PI-C-50 & PI-D-50. ✓

D.R. filed with H-7846 → D.R. filed with H-7849

All hydrography was shoran controlled.

G. SHORELINE AND TOPOGRAPHY

Since this sheet contains only water areas no shoreline or topography appears. ✓

H. SOUNDINGS

Depths were obtained by the fathometers listed in Paragraph C. Fathometer soundings were scaled from the fathograms and then verified. Fathometer and velocity corrections were applied. ✓

*Revisions made in Wash. Off. See Rev. par. 7*

I. CONTROL OF HYDROGRAPHY

All hydrography in this survey was shoran controlled. ✓

J. ADEQUACY OF SURVEY

The survey is considered complete and adequate, and no further work is necessary within the area. ✓

Junctions with all adjoining sheets are satisfactory. ✓

K. CROSSLINES

Crosslines comprise 8% of the total miles of hydrography on this sheet. The crossings are in good agreement. *See Review par. 7* ✓

L. COMPARISON WITH PRIOR SURVEYS

There are no prior surveys of this area.

M. COMPARISON WITH CHART

Within the area covered by this survey, Chart No. 9380 is largely inaccurate, particularly between Prince of Wales Shoal and the shoreline where several 14 fathom soundings are charted. Deepest sounding obtained in this survey was 12.5 fathoms at the extreme northern limit, while depths of 10 fathoms were recorded at the southern limit.

Charted hydrography is now revised

Prince of Wales Shoal was charted approx. 3 <sup>min.</sup> ft. West of its actual location.

N. DANGERS AND SHOALS

There are no dangers to surface navigation found in this survey.

Prince of Wales Shoal extends in a north-south direction throughout the area covered by this survey, and is from 3 to 4 mi. wide.  
*Survey covers north end of the shoal.*

~~Least depth obtained on this shoal was 27.2 feet, obtained a number of times on J Day, Ship PIONEER, in Lat. 65° 56.9' N, Long. 167° 52.2' W. and in the near vicinity.~~

~~The shoal gradually deepens to the north and the 30 foot curve extends <sup>northward</sup> <sub>76</sub> passes thru latitude 65° 58.8' N, Long. 167° 51.2' W~~

O. COAST PILOT INFORMATION

See the special report "1950 COAST PILOT NOTES" submitted by the Ship PIONEER on 20 October 1950.

P. AIDS TO NAVIGATION

There are no aids to navigation within the area covered by this survey.

Q. LANDMARKS FOR CHARTS

There are no landmarks within the area covered by this survey.

R. GEOGRAPHIC NAMES 854

No new Geographic Names were submitted for the area covered by this survey.

S. SILTED AREAS

There were no indications that any silted areas exist within the limits of this survey.

U. FATHOMETER CORRECTIONS

Abstracts of velocity, instrumental, initial corrections for the ship hydrography are included in this report.

Corrections for the launch hydrography were determined by bar checks.

W. DATA INCLUDED WITH THIS REPORT

1. Index of surveys
2. Velocity Corrections
3. Abstract of Instrumental Corrections
4. Shoran Summary, 1950
5. Shoran Corrections
6. Initial Corrections
7. Approval Sheet
8. Abstract of Statistics
9. Tide Note
10. Tide Reducers

Z. TABULATION OF APPLICABLE DATA

The following special reports apply to this survey.

1. Instrumental Corrections, CS-341, 1950 - to be submitted
2. Graphic Control Surveys, PI-D-50, <sup>PI-D-50</sup> transmitted to Portland
- with-7844 3. Velocity Corrections, CS-341, 1950 (Photogrammetric Office, 8 Jan. 1951)
4. Coast Pilot Notes - submitted 20 Oct. 1950
5. Current Data, CS-341, 1950 - to be submitted

Respectfully submitted:

*A. N. Marten* for  
Arthur E. Greaves Jr.  
Ensign USC&GS

Forwarded:

*Thos. B. Reed*

Thos. B. Reed  
CDR USC&GS  
Comdg. Ship PIONEER

**VELOCITY CORRECTIONS**

**Ship PIONEER 1950**

**To be applied to Sheets PI-2350, PI-2450, PI-2550 and  
PI-16250 from 28 July 1950 to 22 August 1950.**

DEPTH, Feet		CORR'N., Feet
From	To	
11.0	20.0	0.0
20.5	34.0	-0.2
34.5	46.0	-0.4
46.5	58.0	-0.6
58.5	70.0	-0.8
70.5	81.5	-1.0
82.0	93.0	-1.2
93.5	104.5	-1.4
105.0	116.0	-1.6
116.5	127.0	-1.8
127.5	138.0	-2.0
138.5	149.0	-2.2
Over 149.0		-2.4

DEPTH, Fms.		CORR'N., Fms
5.7	11.6	
11.7	17.4	-0.2
17.5	23.0	-0.3
23.1	28.4	-0.4

Comp. WNM  
Checked FN  
Copy Checked



**Abstract of**  
**INSTRUMENTAL CORRECTIONS, CS-341**  
**808J FATHOMETERS # 69S, 103S, 108S, & 129S**

18 July - 13 Sept., 1950  
 PI-2250, 2350, 2450, 2550, 2650, 4250 & 16250

	From 1950	To 1950	Corr.		FEET		FATHOMS	
			A	B	Corr. C	Corr. D	Corr. A	
808J 69S	4 Aug.	12 Aug.	-1.0	-1.0	-0.8	-0.4		
	13 Aug.	13 Aug.	+0.4	0.2	0.0	-0.2		
	10 Sep.	12 Sep.		-0.8	-1.2	-1.4		
103S	4 Aug.	0400 16 Aug.	-1.0	-0.6	-4.4	-9.4	0.0	
	16 Aug.	0401 13 Sep.	+0.4	+0.4	-3.6	-3.6	0.0	
108S	18 July	22 July	-1.0	-1.8	-2.4	-2.4	-0.4	
129S	18 July	20 July	+1.2	0.0	+1.2			
	27 July	0408 29 July		+0.4				
	0409 29 July	5 Aug.		-0.6				Except as noted below
	27 July	5 Aug.	-0.6		+1.4	+3.6		Except as noted below
	17 July	21 Aug.					0.0	
	15-34-30 30 July	16-59-00 30 July	+0.2	+0.2				Special corr. based on Sim. Comp. take, 1600, 30 July
	0849 1 Aug.	0909 1 Aug.		+1.4				*Arbitrary correction Survey H-7846
	0909 1 Aug.	1721 1 Aug.	+0.4	+0.4				**Arbitrary correction Survey H-7846
	0541 2 Aug.	1803 2 Aug.	+0.4	+0.4				**Arbitrary corr. H-7846

\* Correction of plus 2.0 ft. applied to mean correction  
 \*\* Correction of plus 1.0 ft. applied to mean correction

*Revisions as noted in Review*

SHORAN SUMMARY - 1950 SEASON

SHIP PIONEER

Project CS-213 Sheets PI-4150, 8150, 8250, 16150  
Project CS-341 Sheets PI-2150, 2250, 2350, 2450, 2550, 4250

The following Shoran Stations were installed and operated by the Ship PIONEER during the 1950 field season:

Station GARE on NE side Gareloi Id., Aleutians, elevation 840 ft.  
Station SEMI on east side Semisopochnoi Id., Aleutians, elevation 820 ft.  
Station HILA 3.7 naut. miles NE of Nome, Alaska, elevation 380 ft.  
Station QUON 2.0 naut. miles NE of Nome, Alaska, elevation 45 ft.  
Station PREE 0.5 naut. miles East of Wales, Alaska, elevation 770 ft.  
Station LAC 12.3 naut. miles NE of Wales, Alaska, elevation 70 ft.  
Station HUK 25.2 naut. miles NE of Wales, Alaska, elevation 155 ft.  
Station HAN 3.0 naut. miles NNE of Wales, Alaska, elevation 50 ft.

In addition Station THY installed by the Ship EXPLORER on the eastern end of Anchitka Id. (Constantine Harbor), Aleutian Ids. was used for a short time.

This season a refinement was used in taking the periodic "zero checks". The receiver was tuned to approximately 250 mcps (the normal received pulses on the ship equipment are 310 mcps) and only the high frequency output pulse from the ship transmitter was used on both the rate and drift channels (the two output frequencies of the ship equipment are 230 and 250 mcps). The various zero check readings agreed so closely that an average correction was applied for each shore station.

Prior to leaving Oakland each shore set was taken to a triangulation station approximately 29 statute miles southeast of the ship site and was calibrated against each ship set. In all cases the zero set reading was adjusted so that actual or true distance readings were observed on the ship indicators.

On the two shore installations in the Aleutian Ids. (GARE AND SEMI) it was not practicable to calibrate the observed distances against true distances due to rough seas and inclement weather. Selected fixes that occurred on the GARE\*SEMI range were abstracted and the shoran distances were compared to the true distance (computed). The average distances for the shoran failed to add to the true distance by less than .01 mile and therefore there were no corrections applied to GARE or SEMI. The zero check readings for these two stations have a run of ~~plus~~ 1.005 mile from the average. The correction for THY was obtained while plotting smooth Sheet PI-8250 to obtain a minimum jump on the sounding lines when changing the shoran stations.

Three-point fixes were used to obtain the correction for HILL and QUON. Triangulation stations were used in all cases with an average distance of 3 miles for the ship and Launch #3 (Launch #3 was in the chocks and the angles were taken at the Launch antenna) and 2.5 miles for Launch #4. Simultaneously with the fixes the shore distances were read. The true distances were obtained mathematically.

For the field work around Cape Prince of Wales the same shore equipment was used at LAG, CHUK, and MAN with the only difference being in the length of coax cables (130 feet for CHUK and 32 feet for LAG and MAN). The equipment at PRIN was not changed during the time the station was in operation. Three-point fixes on triangulation stations were used to obtain the shore corrections on PRIN and CHUK (the data on CHUK used also for LAG and MAN). The Ship and Launch were close to the station, as in the case for HILL and QUON. There were no tests made for Launch #4 (it was assumed that the test for Launch #3 would suffice as the installations were similar) as the shore equipment kept breaking down due to an inadequate power supply - an Onan Gasoline Generator was mounted on the fantail and the roll and pitch of the Launch caused excessive voltage fluctuations.

The various zero-check readings for HILL, QUON, PRIN, LAG, CHUK and MAN agreed closely - plus or minus .003 mile being the maximum from the average.

SHORAN CORRECTIONS 1950

Project CS-218, CS-341

Ship PIONEER

GARE	Ship	Plot as observed
SEMI	Ship	Plot as observed
TINY	Ship	Plot as observed
HILL	Ship, Launch #3 Launch #4	Add .03 miles Plot as observed
QUON	Ship, Launch #3 Launch #4	Add .02 miles Plot as observed
PRIN	Ship (Set #4) Ship (Set #3) Ship, (Set #3) Launch #3 & #4	Add .02 miles Add .01 miles for sheets PI 2350, 2450 & 2550 Plot as observed for sheets PI 2250, 4250 Plot as observed
CHUK	Ship (Set #4) Ship (Set #3) Ship (Set #3) Launch #3 & #4	Subtract .01 mile Subtract .02 miles for sheet PI 2350 Subtract .01 mile for sheets PI 2450 & 2550 Plot as observed
LAG	Ship Launch #3 & #4	Subtract .02 miles Plot as observed
MAN	Launch #3	Plot as observed

INITIAL CORRECTIONS  
Sheet 2450

DAY	FROM POS.	TO POS.	Corr'n Ft.
A	Throughout		-1.0 28 July
B	"		-1.0 29 July
C	"		-1.0 30 July
D	"		-0.6 1 Aug.
E	"		-0.6 2 Aug.
F	"		-1.0 5 Aug.
G	"		-0.4 11 Aug.
H	"		-0.4 12 Aug.
J	"		-0.4 (to Pos. 198) 13 Aug. -0.6 to end)
K	"		plus 9.2 16 Aug.
L	"		plus 9.4 21 Aug.
M	"		plus 9.4 22 Aug.

SHIP'S DRAFT

1201, 28 July	to	1100, 31 July	11.0 ft.
0601, 1 Aug.	to	0300, 3 Aug.	11.4
0201, 5 Aug.	to	1200, 5 Aug.	11.0
1208, 5 Aug.	to	1200, 13 Aug.	11.6
1201, 13 Aug.	to	1200, 14 Aug.	11.4
1201, 14 Aug.	to	1100, 17 Aug.	11.2
0500, 21 Aug.	to	0200, 22 Aug.	11.4

INITIAL CORRECTION

PI-2450 CS-341

22 July 1950 808-J Fathometer

Day	From Positions	To Positions	Feet Corr.	Fath.NO.					
a	1	2+2	0.0	S-108					
	2+3	4	-0.2	Launch#3					
	4+1	6	-0.4						
	7	17	0.0						
	17+1	19	-0.2						
	19+1	21	-0.4						
	22	31	0.0						
	31+1	33+2	-0.2						
	33+3	34+3	-0.4						
	34+4	40	-0.6						
	40+1	42	-0.8						
	43	58	0.0						
a	1	19	+0.2	S-107					
	20	20+4	+0.0	Launch#4					
	20+5	22+5	+0.2						
	23	29	+0.4						
	30	48	+0.2						
	48+1	70	0.0						
	Ent. H.H.K								
	Checked. A.C.H								
	<i>copy 1213</i>								

APPROVAL SHEET TO ACCOMPANY

SURVEY H-7847

(Field No. PI-2450)

The field work was supervised closely and the <sup>best</sup>~~best~~ sheet was inspected daily.

The records and smooth sheet have been inspected and approved.

The survey is considered adequate.



Thos. B. Reed  
CDR USC&GS  
Comdg. Ship PIONEER

STATISTICS FOR HYDROGRAPHIC SURVEY H-7847 (PI-2450)

Ship PIONEER

CS-341

Day Letter	Vol. No.	Date 1950	No. of Pos.	Stat. miles/Sq.St./Remarks sdg. lines/miles	
A (blue)	1	28 July	130	62.1	
B	1,2,&3	29 July	552	278.3	
C	3,4,&5	30 July	536	302.3	
D	6	1 Aug.	92	58.3	
E	6&7	2 Aug.	130	78.3	
F	7	5 Aug.	20	11.4	
G	7	11 Aug.	23	14.7	
H	7,8,&9	12 Aug.	371	249.7	
J	9&10	13 Aug.	231	169.2	
K	10	16 Aug.	12	9.1	
L	10	21 Aug.	63	47.2	
M	10	22 Aug.	16	10.9	
a (red)	11	22 July	58	21.2	Launch #3
a (green)	12	22 July	60	23.6	Launch#4
Totals	12		2294	2463	261



TIDE NOTE

Project CS-341

Ship PIONEER

Field Season 1950

Surveys H-7845, H-7846, H-7847, H-7848, H-7849, H-7850

The portable tide gage at Lopp Lagoon, Cape Prince of Wales, Alaska, (Lat.  $65^{\circ} 46'$  N, Long.  $167^{\circ} 43'$  W), was used for the reduction of all soundings with the exception of those on 18,19,21, and 22 August and 10,11,12, and 13 September. On these days the portable tide gage at Port Clarence, Alaska, (Lat.  $65^{\circ} 15.4'$  N, Long.  $166^{\circ} 50.8'$  W), was used with a time correction of plus 3 hours and a range correction of 0.5.

A height of 2.8 feet on the staff at Lopp Lagoon corresponds to mean lower low water.

A height of 2.4 feet on the staff at Port Clarence corresponds to mean lower low water.

Hourly heights from the gage at Port Clarence were obtained from the Ship EXPLORER.

Tide Reducers  
PI-2450  
Feet

Lopp Lagoon Gage

Port Clarence Gage

Lopp Lagoon Gage			Port Clarence Gage		
From	to	Corr.	From	to	Corr.
	22 July			21 Aug.	
0600	0700	0.2	1743	1800	-0.6
0701	1000	0.4	1801	1940	-0.4
1001	1130	0.2	1941	2100	-0.2
1131	1800	0.0	2101	2130	0.0
1801	2000	0.2			
	28 July			22 Aug.	
1800	2400	-0.8	0000	0100	-0.4
	29 July				
0000	2400	-0.6			
	30 July				
0000	0300	-0.6			
0301	2400	-0.4			
	1 Aug.				
1900	2130	0.2			
2130	2400	0.0			
	2 Aug.				
0000	0300	0.0			
0301	0500	0.2			
0501	0900	0.4			
0901	1000	0.2			
1001	1200	0.0			
1201	1700	-0.2			
1701	1900	0.0			
1901	2000	0.2			
	5 Aug.				
0400	0600	-0.2			
	12 Aug				
0000	0300	-0.2			
0301	0900	0.0			
0901	1230	-0.2			
1231	1400	-0.4			
1401	1600	-0.2			
1601	2000	0.0			
2001	2130	-0.2			
2131	2400	-0.4			
	13 Aug.			16 Aug.	
0001	0300	-0.6	0400	0530	-0.4
0301	0900	-0.8			
0901	0940	-1.0		11 Aug.	
0941	1100	-1.2	2200	2400	-0.4
1101	1300	-1.4			
1301	1410	-1.2			

RAC

### TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

8 March 1951

Division of Charts: R. H. Carstens

Plane of reference approved in 12  
volumes of sounding records for

HYDROGRAPHIC SHEET 7847

Locality Prince of Wales Shoal, Bering Strait

Chief of Party: T. B. Reed in 1950  
Plane of reference is mean lower low water, reading  
2.3 ft. on tide staff at Lopp Lagoon  
17.8 ft. below B. M. 1 (1950)

Height of mean high water above plane of reference is 0.3 foot.

Condition of records satisfactory except as noted below:

*E. C. McKay*  
*Section*

Chief, ~~Division of Tides and Currents.~~

GEOGRAPHIC NAMES

Survey No. H-7847

Name on Survey											
	A	B	C	D	E	F	G	H	K		
	On Chart No.	On previous survey No.	On U. S. 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>Bering Strait</u>				( " " )				USGB		2	
<u>Prince of Wales Shoal</u>				( " " )						3	
										4	
										5	
				Names underlined in red are approved.							6
				3-5-51. L. Heck							7
										8	
										9	
<u>Lopp Lagoon</u>				(location of tide gage)							10
<u>Port Clarence</u>				( " " " " )							11
										12	
										13	
										14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7847

Records accompanying survey:

Boat sheets .1...; sounding vols. .12...; wire drag vols. ....; bomb vols. ....; graphic recorder rolls ....9 env.; special reports, etc. .1 Smooth Sheet  
 .Velocity, Corr-Su H-7844 1 Complete ship shoran plotting abstract

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

Number of positions on sheet	2294
Number of positions checked	76
Number of positions revised	19
Number of soundings revised (refers to depth only)	5900*
Number of soundings erroneously spaced	326 (75% due to position change)
Number of signals erroneously plotted or transferred	none on sheet
Topographic details	Time none on sheet
Junctions	Time 6 hrs (H-7848)
Verification of soundings from graphic record	Time 15 hrs.

Verification by *C.P. Helmer* ..... Total time 381... Date 8/10/51.

Reviewed by *J.F. Jordan* ..... Time 10... Date 9/13/51.

\* 88% of revisions were the phase, squat, and arbitrary corrections determined by J.F. Jordan and applied to the volumes and smooth sheet during verification and inking. All penciled depths NOT inked were removed so their disagreement would not be cause for confusion later on.  
 2% of revisions were changes made in volumes after smooth sheet was penciled and not applied to the sheet.  
 Helmer

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7847a & b

FIELD NO. PI-2450

Alaska, Bering Strait, Prince of Wales Shoal

Project No. CS-341

Surveyed in July and August 1950

Scale 1:20,000

Soundings:

Control:

808 Fathometer

Shoran

Chief of Party - T. B. Reed

Surveyed by - R.A. Marshall, P.A. Weber, W.N. Martin,  
J.O. Phillips, H.W. Keith Jr., A.E. Greaves Jr.

Protracted by - A. E. Greaves Jr.

Soundings plotted by - A. E. Greaves Jr.

Verified and inked by - C. R. Helmer

Reviewed by - G. F. Jordan, 13 September 1951

Inspected by - R. H. Carstens

1. Shoreline and Control

This is an offshore survey which does not include the shoreline on Seward Peninsula.

The survey was controlled entirely by Shoran stations described in the Shoran Summary in the Descriptive Report.

2. Bottom Configuration and Depth Curves

The survey covers an area of smooth bottom void of any significant features other than Prince of Wales Shoal.

The depth curves are complete and adequately delineate the bottom.

3. Crosslines

The depths at sounding line crossings are in adequate agreement on the completed smooth sheet. Discrepancies existing before verification are discussed in par. 7c below.

4. Junctions

An adequate junction was effected with H-7848a and b (1950) on the north. Junctions with H-7845 (1950) and H-7846 (1950) on the south and with H-7850 (1950) on the west will be considered in the reviews of those surveys. There are no contemporary surveys on the east registered at the present time.

5. Comparison with Prior Surveys

There are no prior surveys of the area.

6. Comparison with Chart 9380 (Print of 51-8/6)

A. Hydrography

The charted hydrography originates with advance information of the present survey contained in Chart Letter No. 799 (1950). Chart 9380 is not materially effected by revisions made during smooth-plotting and verification.

B. Aids to Navigation

There are no charted aids to navigation in the area of the present survey. No new features which might be considered dangers to navigation were revealed by the survey.

7. Condition of the Survey

- a. The Descriptive Report, special reports and sounding volumes are complete and comprehensive.
- b. The survey, although accurately and neatly smooth-plotted, contained discrepancies in depths discussed below. The smooth sheet was excessively long (75 inches) and has been cut into two sections, a and b, in order to facilitate its use and to avoid excessive wear.
- c. The smooth sheet contained discrepancies amounting to as much as 10 percent of the depth, which were resolved during verification. On several lines, arbitrary corrections have been applied to the soundings where the records revealed no correction value adequate to bring the hydrography into harmony. Certain discrepancies are noted below:

- (1) Ship soundings showing 27-ft. on Prince of Wales Shoal conflicted with 30-ft. depths obtained by Launches No. 3 and No. 4. Part of this discrepancy was considered to be due to an unapplied squat and settlement correction.
- (2) On part of the work phase differences varying from minus 1.5 ft. to plus 2.2 ft. were averaged and a 0.0- ft. correction applied, incurring depth disagreements amounting to as much as 2 ft. Many individual phase-difference values have been revised and additional values obtained from the fathograms.
- (3) In several instances after a new fathogram roll was inserted the soundings on the resumed line disagreed as much as 2 ft. in the overlap with the previous soundings and with adjacent hydrography. Depth differences as great as 2 ft. occurred frequently after the fathometer had been stopped on the turn of a line.
- (4) The study made in correcting the discrepancies on this survey and the comprehensive fathometer report submitted with the records reveal that two of the fathometers used on this survey operated very erratically.

8. Compliance with Project Instructions

The survey complies adequately with the project instructions. The number of bottom characteristics obtained, however, averages one for each 30 square miles and is considered small for the scale of this original survey.

9. Additional Field Work

This basic survey provides excellent coverage of the area and no additional field work is recommended.

Examined and approved:



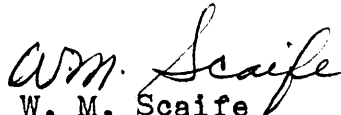
H. R. Edmonston  
Chief, Nautical Chart Branch



H. Arnold Karo  
Chief, Division of Charts



L. S. Hubbard  
Chief, Section of Hydrography



W. M. Scaife  
Chief, Division of Coastal Surveys



# NAUTICAL CHARTS BRANCH

SURVEY NO. H-7847

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/26/53	9380	N.W. Burgoyne	<del>Before</del> After Verification and Review <i>completely applied</i>
<sup>7</sup> 10/29/54	9302	GJE	<del>Before</del> After Verification and Review
2/29/56	<i>Reconstr.</i> 9380	GJE	<del>Before</del> After Verification and Review <span style="float: right;"><i>2nd</i></span>
2-11-58	9402	RKD	<del>Before</del> After Verification and Review <i>then</i> <i>Chart 9380 Reconstruction</i>
2-13-58	9400	RKD	<del>Before</del> After Verification and Review <i>then</i> <i>Chart 9402</i>
			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
			Before After Verification and Review
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			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.