7803

Diag. Chr. No. 8863-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PI-4150 Office No. H-7803

LOCALITY

State ALASKA

General locality ALEUTIAN ISLANDS

Locality NORTHEAST OF PETREL BANK

194 52

CHIEF OF PARTY

T. P. Reed

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DATE FEBRUARY 21, 1951

B-1870-1 (1)

7803

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-7803

Field No. PI-4150

State ALASKA

General locality ALEUTIAN ISLANDS

Locality NE of PETREL BANK

Scale 1:40,000 Date of survey 17 to 30 May 1950

Instructions dated See LIST OF INSTRUCTIONS page 2

Vessel Ship PIONEER

Chief of party Thos. B. Reed

Surveyed by Ship's officers

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

Fathograms scaled by Fathometer readers and Ship's officers

Fathograms checked by Ship's officers

Protracted by B. C. Stokes, Jr.

Soundings penciled by B. C. Stokes, Jr.

Soundings in fathoms ~~feet~~ x ~~or~~ ~~XXXX~~ MLLW ~~or true depths~~

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 777032

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

H-7803 (Field PI-4150)

PETREL BANK
1950

Project CS-218
Ship PIONEER
Scale 1:40,000

Season of 1950
Thos. B. Reed, Ch. of Party
Surveyed by ship's officers

A. PROJECT

The work was done in accordance with the following instructions for project CS-218.

Original Instructions dated 3 February 1938.
Amended Instructions dated 1 March 1938.
Supplemental Instructions dated 10 February 1948.
Supplemental Instructions dated 8 April 1948.
Supplemental Instructions dated 9 Feb. 1950.

B. SURVEY LIMITS AND DATES

The survey is about 44 nautical miles northeast of Semisopochnoi Island, Aleutian Islands, about 20 nautical miles northeast of the northeast tip of Petrel Bank. It extends from Long. 179° 14'W to 179° 50'W, Lat. 52° 13.5' N to approximately 52° 43' N.

This survey joins 1949 Survey H-7730 in the southwest corner, and by contemporary surveys on the southern, eastern, and western sides, as shown on the index of surveys included in this report.
Field work began on 17 May 1950 and ended 30 May, 1950.

C. VESSEL AND EQUIPMENT

All hydrography was done using the Ship PIONEER.

Type 808J Depth recorders No. 108S was used for all depths to approx. 150 fathoms. NMC-2 Fathometer No. 115 was used for all greater depths.

D TIDE AND CURRENT STATIONS

Data obtained from the portable tide gage at Constantine Harbor, Amchitka Island were used for reduction of all soundings. No time or range corrections were applied. A tide note is included in this report.

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

E. SMOOTH SHEET

The projection was made aboard the Ship PIONEER

The shoran curves were drawn aboard the Ship PIONEER

F. CONTROL STATIONS

All the triangulation stations ~~were~~ in conjunction with this survey were located by the U.S. Coast and Geodetic Survey on the North American 1927 Datum.

Shoran station SEMI was located by triangulation methods from unadjusted 1949 stations on Semisopochnoi island. Shoran station GARE was located by a combination of triangulation and traverse. Triaangulation Station West was located on the western side of Gareloi Island, and a theodolite and subtense bar traverse was run from there to GARE.

H. SOUNDINGS

Depths were obtained using the fathometers listed in paragraph C. Allsoundings were scanned from the fathograms and then verified. No squat or settlement corrections were applied. Phasing corrections were determined by meaning the differences found on the fathograms where the phases were changed. A copy of these data and results is included in this report. The velocity corrections were applied as determined and described in the special report on "Velocity Corrections", CS-218, season of 1950.

I. CONTROL OF HYDROGRAPHY

All the work on this survey was controlled by shoran observations.

J. ADEQUACY OF SURVEY

This survey is considered adequate and complete for the area covered. Junctions with adjoining surveys are satisfactory.

K. CROSSLINES

Crosslines comprise approximately ~~7%~~ 3% of the total mileage of hydrography on this sheet. The few poor crossings that do exist are probably due to the steep slopes of the bottom together with slight errors in position. (See note on approval sheet) JBR

made 3 fm. adjustment to sdgs on 1 day. Crossings adequate

M. COMPARISON WITH CHART

Chart # 8863. In every case the very shoal spots, 5-20 fathoms reported, were not found. The area of the reported 5 fathom spot at the approximate position 52° 45' N, 179° 20' W was well developed without finding less than ~~59~~ 58 fathoms. In the vicinity of the reported 13 fathom spot, position 52° 39' N, 179° 38' W, the depth was not less than ~~60~~ fathoms. The reported 12 fathom spot at position 52° 36' N 179° 35' W was well developed without finding less than 56 fathoms.

658

The reported 10 fathom spot at position 52 ° 22' N, 179° 38' W was found to be approximately 190 fathoms instead. The 230 fathom deep shown on the chart at the position 52° 40 ' N, 179° 23' W was found to have a depth of around 60 fathoms.

In contour and position the 100, 500 and 1000 fathom curves are in fair agreement considering the difference in scales between the chart and the survey . The main difference in this respect is that the pronounced finger bulge in the 500 fathom curve in the general locality of position 52° 38' N, 179° 40' W does not exist as shown; the curve actually runs more nearly across the bottom of the bulge. It is recommended that this survey supersede all previous work for this area.

U. SHORAN CORRECTIONS

Shoran corrections were computed as shown in the Shoran Summary, 1950, a copy of which is included in this report.

W. DATA INCLUDED IN THIS REPORT

The following data are included in this report.

1. Index of Surveys
2. Velocity Corrections
3. Phasing Corrections, CS-218, 1950
4. Initial Corrections
5. Shoran Summary, 1950
6. Shoran Corrections, 1950
7. Abstract of Statistics
8. Approval Sheet
9. Tide Note
10. Tide reducers

Z. TABULATION OF APPLICABLE DATA

The following special reports apply to this survey.

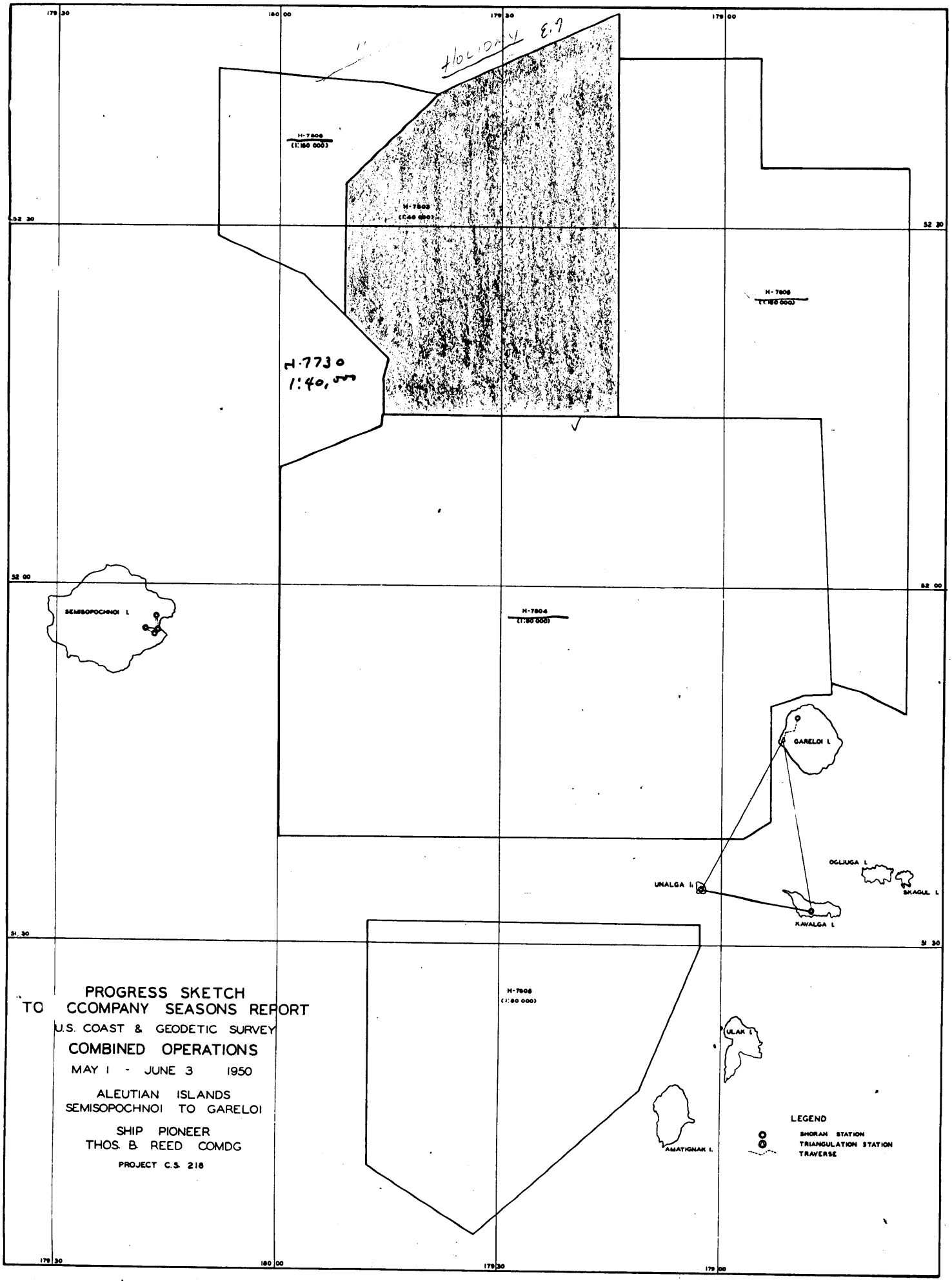
1. Velocity Corrections, CS-218, season of 1950 filed with H-7804
2. Computations for the location of shoran stations SEMI and GARE, CS-218, season of 1950

Respectfully submitted:

Barbour C. Stokes, Jr.
Ensign USC&GS

Forwarded:

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



PROGRESS SKETCH
TO CCOMPANY SEASONS REPORT
U.S. COAST & GEODETIC SURVEY
COMBINED OPERATIONS
MAY 1 - JUNE 3 1950
ALEUTIAN ISLANDS
SEMISOPOCHNOI TO GARELOI
SHIP PIONEER
THOS. B. REED COMDG
PROJECT C.S. 218

VELOCITY CORRECTIONS

1950

808-J Fath. Ship

Corr'n fms.	Depth fms.
0.0	0.0 - 4.0
0.1	4.1 - 7.5
0.2	7.6 - 11.0
0.3	11.1 - 15.0
0.4	15.1 - 18.5
0.5	18.6 - 22.0
0.6	22.1 - 26.0
0.7	26.1 - 29.6
0.8	29.7 - 34.0
1.0	34.1 - 42.0
1.2	42.1 - 48.4
1.4	48.5 - 56.9
1.6	57.0 - 64.0
1.8	64.1 - 71.9
2.0	72.0 - 79.0
2.2	79.1 - 87.4
2.4	87.5 - 94.8
2.6	94.9 - 102.0
3.0	102.1 - 120.0
3.5	120.1 - 139.0
4.0	139.1 - 156.5
4.5	157.0 - 160.0

VELOCITY CORRECTIONS

1950

Project CS-218
NMC-2 Fathometer

Corr'n fms.	Depth fms.	Corr'n fms.	Depth fms.
-0.2	24 - 107	plus 18.0	1396 - 1420
-0.5	108 - 259	plus 19.0	1421 - 1465
0.0	251 - 390	plus 20.0	1466 - 1500
plus 0.5	391 - 484	plus 21.0	1501 - 1526
plus 1.0	485 - 530	plus 22.0	1527 - 1565
plus 1.5	531 - 580	plus 23.0	1566 - 1585
plus 2.0	581 - 620	plus 24.0	1586 - 1618
plus 2.5	621 - 685	plus 25.0	1619 - 1653
plus 3.0	686 - 715	plus 26.0	1654 - 1677
plus 3.5	716 - 742	plus 27.0	1678 - 1704
plus 4.0	743 - 780	plus 28.0	1705 - 1728
plus 4.5	781 - 810	plus 29.0	1729 - 1752
plus 5.0	811 - 865	plus 30.0	1753 - 1780
plus 6.0	866 - 919	plus 31.0	1781 - 1809
plus 7.0	920 - 967	plus 32.0	1810 - 1830
plus 8.0	968 - 1020	plus 33.0	1831 - 1858
plus 9.0	1021 - 1070	plus 34.0	1859 - 1880
plus 10.0	1071 - 1118	plus 35.0	1881 - 1908
plus 11.0	1119 - 1165	plus 36.0	1909 - 1930
plus 12.0	1166 - 1204	plus 37.0	1931 - 1955
plus 13.0	1205 - 1253	plus 38.0	1956 - 1975
plus 14.0	1254 - 1289	plus 39.0	1976 - 2000
plus 15.0	1290 - 1323	plus 40.0	2001 - 2022
plus 16.0	1324 - 1358	plus 45	2023 - 2200
plus 17.0	1359 - 1395		

PHASING CORRECTIONS - FATHOMETER 808 J - No. ~~X~~ 1088

PROJECT CS - 218

SHEETS 4150, 8150 and 8250 14 May to 1 June 1950

A	B	A - B
41.5	43.0	-1.5
48.0	49.5	-1.5
47.2	47.5	-0.3
50.3	50.8	-0.5
50.4	50.0	+0.4
48.7	47.8	+0.9
53.0	53.6	-0.6
53.5	53.5	0.0
46.5	47.0	-0.5
53.0	53.0	0.0
53.5	54.0	-0.5
53.5	54.0	-0.5
	12	-4.6
		-0.38

B	C	B - C
76.0	76.0	0.0
82.0	82.0	0.0
80.0	80.8	-0.8
80.5	81.3	-0.8
74.7	75.0	-0.3
80.0	80.5	-0.5
82.0	82.8	-0.8
76.8	77.0	-0.2
86.2	86.1	+0.1
76.0	76.1	-0.1
74.5	75.3	-0.8
86.0	86.2	-0.2
80.5	80.8	-0.3
76.2	77.0	-0.8
78.0	78.8	-0.8
78.8	79.0	-0.2
85.7	86.0	-0.3
77.2	77.2	0.0
80.5	80.5	0.0
73.5	75.0	-1.5
80.5	80.0	+0.5
80.0	79.2	+0.8
78.6	78.6	0.0
81.0	80.8	+0.2
70.0	70.1	-0.1
84.0	84.0	0.0
76.3	76.9	-0.6
82.5	82.5	0.0
85.0	85.3	-0.3
75.0	74.8	+0.2
78.7	79.0	-0.3
80.0	80.0	0.0
81.8	81.7	+0.1
72.6	72.6	0.0
80.6	81.3	-0.7
77.2	77.5	-0.2
80.7	81.4	-0.7
81.3	81.8	-0.5

B	C	B - C
82.5	83.5	-1.0
78.0	78.2	-0.2
81.0	81.2	-0.2
80.0	80.5	-0.5
84.5	85.0	-0.5
75.5	75.7	-0.2
74.6	75.0	-0.4
89.5	89.0	+0.5
85.0	85.0	0.0
85.5	86.2	-0.7
	48	-13.2
		- 0.27

PHASING CORRECTIONS - PATROMETER 806 J - No. 1083

PROJECT CS - 218

SHEETS 4150, 8150 and 8250 14 May to 1 June 1950

C	D	C - D
115.5	116.8	-1.3
116.0	115.2	+0.8
106.8	105.7	+1.1
121.7	121.6	+0.1
110.0	109.0	+1.0
117.2	117.0	+0.2
108.3	109.0	-0.7
115.0	114.8	+0.2
112.3	112.0	+0.3
112.2	113.0	-0.8
107.5	108.0	-0.5
119.0	118.5	+0.5
115.2	115.3	-0.1
112.0	111.5	+0.5
116.5	116.0	+0.5
105.5	106.0	-0.5
114.6	114.8	-0.8
109.8	110.2	-0.4
116.5	117.0	-0.5
117.7	117.0	+0.7
116.7	116.2	+0.5
119.2	119.0	+0.2
109.7	109.7	0.0
122.0	122.5	-0.5
119.0	119.5	-0.5
117.5	108.5	-1.0
121.0	121.2	-0.2
	27	) -1.2
		-0.04

Final
Phase Corrections

A - Scale	-0.0
B - Scale	-0.4
C - Scale	-0.6
D - "	-0.6

INITIAL CORRECTIONS

PI - 4150 H-7803 CS - 218

808 J - No. 108S

Period - 17 - 30 May 1950

	From Pos.	To Pos.	Corr. Fm.
A day	22	22+6	0.0
	22+7	23+9	-0.2
	24	25+3	-0.4
	25+4	26+7	-0.6
	42	42+4	+2.0
	0.0 cor'n rest of day.		
B day	10	13	0.0
	13+1	18+6	-0.2
	18+7	24+5	-0.4
C day	1	36+4	0.0
	36+5	44	-0.2
	44+1	51	-0.4
	62	79	0.0
D day	1	119+3	0.0
	119+4	124+6	-0.2
	124+7	130	-0.4
	130+1	132	-0.6
	135	202+5	0.0
	202+6	204+1	+0.2
	204+2	205+6	+0.4
E day	0.0 all day		
F day	No 808 Fath. Soun.		
G day	0.0 all day		
H day	0.0 all day		
J day	6	10	+1.0

	From Pos.	To Pos.	Corr. Fm.
K day	1	2+6	0.0
	2+7	8	+0.2
	8+1	10+3	+0.4
	10+4	23+3	0.0
	23+4	23+10	-0.2
	23+11	23+16	-0.4
	23+17	24+4	-0.6
	24+5	25+1	-0.8
	25+2	25+3	-1.0

Comp. FN
Checked. EL ✓

INITIAL CORRECTIONS
PI - 4150 - NMC-2 - No. 115
H-7893

Period _____

	From Pos.	To Pos.	Corr'n		From Pos.	To Pos.	Corr'n
A day	+2.0 fathoms all day.			H day	1	54	+2.0
					55	75	+1.5
- day	+2.0 fathoms all day.				76	104	+1.5
C day	2	10	+1.5	J day	+2.0 fathoms all day.		
	10+1	24	+2.0				
	24+1	54	+1.5	K day	1	22	+2.0
	54+1	79	+2.0		28	End of day	+2.5
D day	+2.0 fathoms all day.						
E day	13+3	109	+2.0				
	110	140	+2.5				
F day	1	72+9	+3.0				
	73	99	+7.0				
G day	1	2+8	+1.0				
	6	7	+2.0				
	8	10+5	+1.0				
	12+8	21+2	+2.0				
	23+4	25	+1.0				
	26	28+6	+2.0				
	31+2	32	+2.0				
	33	34+3	0.0				
	39+7	41	+2.0				
	42	43	+2.0				
	43+1	43+2	+1.0				
	47+9	48	0.0				
	55	55+5	0.0				
	61	61+4	0.0				
	63+5	65+5	+2.0				
	67	70	0.0				
	71	73	+2.0				
	74	98	+1.0				
	101+2	151	+2.0				

Comp. FN
Checked. WNM
✓

SHORT SUMMARY - 1950 SEASON

SHIP PIONEER H-7803

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 NW side Gareloi Id., Aleutians, elevation 840 ft.
Station SEMI on east side Semisopochnoi Id., Aleutians, elevation 820 ft.
Station HILL 3.7 naut. miles NW of Nome, Alaska, elevation 380 ft.
Station QUOI 2.9 naut. miles WNW of Nome, Alaska, elevation 45 ft.
Station PILL 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 MUL 25.2 naut. miles NE of Wales, Alaska, elevation 155 ft.
Station MAL 3.0 naut. miles NNE of Wales, Alaska, elevation 50 ft.

In addition Station THEY installed by the Ship EXPLORER on the eastern end of Amchitka 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 occured 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~~ .005 mile from the average. The correction for THEY 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 checks and the angles were taken at the Launch antenna) and 2.5 miles for Launch #4. Simultaneously with the fixes the shoran 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 HAN with the only difference being in the length of coax cables (730 feet for CHUK and 82 feet for LAG and HAN). 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 shoran corrections on PRIN and CHUK (the data on CHUK used also for LAG and HAN). 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 shoran 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 HAN agreed closely-plus or minus .003 mile being the maximum from the average.

H-7803

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

STATISTICS FOR HYDROGRAPHIC SHEET H-7803

PI-4150

Ship PIONEER Project CS-218

Day	Vol. No.	Date	No. of Pos.	No. Stat. Mi.
A	1	17 May 1950	79	97.5
B	1	18 May 1950	27	23.6
C	1	23 May 1950	79	123.0
D	1,2	24 May 1950	205	290.0
E	3	25 May 1950	139	188.6
F	3,4	26 May 1950	99	126.0
G	4	27 May 1950	151	212.7
H	4,5	28 May 1950	131	160.7
J	5	29 May 1950	16	18.4
K	5	30 May 1950	79	104.0
		Totals	1005	1344.5

Area of survey, 750 sq. Statute miles

APPROVAL SHEET TO ACCOMPANY SURVEY H-7803
(Field No. PI-4150)

The hydrography on this survey was carried northward to the extreme limits of reception of shoran control. Additional work is needed at the northern end to develope completely the 100 fathom curve. It is probable that this additional work can be completed at some future date using EPI control.

See Review Par 9.

The survey is considerably deficient in crosslines. It had been planned to spend one more day on this survey for crosslines and some additional development and also to attempt to find a day whe n shoran reception could by received at a longer distance to extend hydrography at the northern end of the shoal. Because of various circumstances, however it was not found possible to accomplish the additional work before closing the field season.

See Review Par. 9.

This survey is considered adequate to disprove all charted shoal soundings in the area covered.

The survey records and smooth sheet have been inspected and are approved

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

TIDE NOTE

Project CS-218 Ship PIONEER Field Season 1950
Surveys H-7803, H-7804, H-7805, H-7806

The tide page at Constantine Harbor, Amchitka Island, Latitude 51° 24.8' north and longitude 179° 16.8' east was used for the reduction of all soundings except when float was stuck on 16-17 May and 22-23 May. At these times, reducers were computed by comparing the predicted tides against the observed tides before and after these periods.

A height of 2.5 feet on the tide staff corresponds to mean lower low water. No corrections for time or height differences were applied.

Hourly heights were obtained from the Ship EXPLORER.

TIDE CORRECTIONS PROJECT CS-218 H-7803

SHEETS PI-8150 - 8250 - 4150 and 16150
Correction soundings 1 to 101 fms.

DATE	FROM	TO	CORR'N FM.
5-12-50	1200	1500	-0.4
5-12-50	1501	2032	-0.2
5-12-50	2033	2400	-0.4
5-17-50	0610	1500	-0.2
5-17-50	1501	1815	-0.4
5-17-50	1816	2400	-0.6
5-18-50	0000	0400	-0.6
5-18-50	0401	0638	-0.4
5-18-50	0639	0900	-0.2
5-18-50	0901	1335	0.0
5-18-50	1336	1645	-0.2
5-18-50	1646	2030	-0.4
5-18-50	2031	2400	-0.6
5-23-50	0935	1642	0.0
5-23-50	1643	1910	-0.2
5-23-50	1911	2400	-0.4
5-24-50	0000	0732	-0.6
5-24-50	0733	1050	-0.4
5-24-50	1051	1410	-0.2
5-24-50	1411	1625	0.0
5-24-50	1626	1955	-0.2
5-24-50	1956	2400	-0.4
5-25-50	0000	1000	-0.4
5-25-50	1001	1335	-0.2
5-25-50	1336	1715	-0.0
5-25-50	1716	2030	-0.2
5-25-50	2031	2400	-0.4
5-27-50	0800	1935	-0.2
5-27-50	1936	2400	-0.4
5-28-50	0000	0210	-0.4
5-28-50	0211	0440	-0.2
5-28-50	0441	1000	-0.0
5-28-50	1001	1925	-0.2
5-28-50	1926	2400	-0.4
5-29-50	0000	0250	-0.4
5-29-50	0251	0425	-0.2
5-29-50	0426	1210	-0.0
5-29-50	1211	1830	-0.2
5-29-50	1831	2200	-0.4
5-29-50	2201	2400	-0.6
5-31-50	0000	0230	-0.6
5-31-50	0231	0408	-0.4
5-31-50	0409	0535	-0.2
5-31-50	0536	0700	0.0
5-31-50	0701	1225	+0.2
5-31-50	1226	1400	0.0
5-31-50	1401	1800	-0.2
5-31-50	1801	2230	-0.4
5-31-50	2231	2400	-0.6
6-1-50	0000	0355	-0.6
6-1-50	0356	0542	-0.4
6-1-50	0543	0700	-0.2
6-1-50	0701	0835	0.0
6-1-50	0836	1320	+0.2
6-1-50	1321	1520	0.0
6-1-50	1521	1750	-0.2
6-1-50	1751	1900	-0.4

TIDE CORRECTIONS PROJECT CS-218 H-7803

SHEETS PI-4150 - 8150 - 8250 and 16150

DATE	TIME From	To	CORRECTION (101 - 800 Fms.)
5-12-50	ENTIRE DAY		-0.5
5-13-50	0000	0545	-0.5
5-13-50	0546	1110	0.0
5-13-50	1111	2400	-0.5
5-14-50	0000	0550	-0.5
5-14-50	0551	1135	0.0
5-14-50	1136	2000	-0.5
5-16-50	1414	2400	-0.5
5-17-50	0000	0835	-0.5
5-17-50	0836	1327	0.0
5-17-50	1328	2400	-0.5
5-18-50	0000	0755	-0.5
5-18-50	0756	1455	0.0
5-18-50	1456	2400	-0.5
5-19-50	0000	0825	-0.5
5-19-50	0826	1630	0.0
5-19-50	1631	2400	-0.5
5-23-50	0000	0845	-0.5
5-23-50	0846	1735	0.0
5-23-50	1736	2400	-0.5
5-24-50	0000	1245	-0.5
5-24-50	1246	1800	0.0
5-24-50	1801	2400	-0.5
5-25-50	0000	1230	-0.5
5-25-50	1231	1830	0.0
5-25-50	1831	2400	-0.5
5-26-50	0000	0900	-0.5
5-27-50	0800	2400	-0.5
5-28-50	0000	0345	-0.5
5-28-50	0346	1210	0.0
5-28-50	1211	2400	-0.5
5-29-50	0000	0350	-0.5
5-29-50	0351	1330	0.0
5-29-50	1331	2400	-0.5
5-30-50	0000	0435	-0.5
5-30-50	0436	1415	0.0
5-30-50	1416	2400	-0.5
5-31-50	0000	0505	-0.5
5-31-50	0506	1515	0.0
5-31-50	1516	2400	-0.5
6-1-50	0000	0635	-0.5
6-1-50	0636	1600	0.0
6-1-50	1601	1900	-0.5
6-2-50	0600	0800	-0.5
6-2-50	0801	1550	0.0
6-2-50	1551	1700	-0.5

GEOGRAPHIC NAMES

Survey No. H-7803

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
Aleutian Islands			(" ")							2
Petrel Bank			(" "							3
										4
										5
				Names underlined in red are approved.						6
					3-6-51 in Heck					7
										8
Constantine Harbor			(location of tidegage)							9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7803

Records accompanying survey:

Boat sheets 1; sounding vols. 5; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 2 env.;

special reports, etc. 1 Smooth Sheet

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		1005
Number of positions checked		2 + (113)
Number of positions revised		(1)
Number of soundings revised (refers to depth only)		120*
Number of soundings erroneously spaced		(94)
Number of signals erroneously plotted or transferred		—
Topographic details	Time	—
Junctions	Time	2 hrs. + (24)
Verification of soundings from graphic record + inking	Time	9 hrs. + (206)

Preliminary inspection, G.F. Jordan - 8 hrs - 10-4-51

Verification - E. Numan and " - 18 hrs - 10-22-51

Verification by F.L. Kauper Total time 253 Date 9-9-52

Preliminary Reviewed by [signature] Time 25 Date 2-21-52

Review addendum by A.J. Lunday Time 42 Date 2/23

* See preliminary investigation note.

Note: Circled figures show time of verification and inking in Norfolk Processing Office.

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 8 March 1951

Division of Charts: R. H. Carstens

Plane of reference approved in 5
volumes of sounding records for

HYDROGRAPHIC SHEET 7803

Locality Petrel Bank, Aleutian Islands

Chief of Party: T. B. Reed in 1950
Plane of reference is mean lower low water, reading
2.5 ft. on tide staff at Constantine Harbor
9.9 ft. below B. M. 1 (1944)

Height of mean high water above plane of reference is 2.8 feet.

Condition of records satisfactory except as noted below:

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

U. S. GOVERNMENT PRINTING OFFICE 756675

Addendum to Review
H-7803 (1950)

Verification and inking by----------A. Kaupa
Curves inked by----------A. J. Lunday
Review addendum by----------A. J. Lunday 2/23/66
Inspected by----------R. H. Carstens

The verification of this survey has been completed. Soundings and depth curves have been completely inked and junctional soundings transferred.

Shoreline

No shoreline is shown on this offshore survey.

Junctions with Contemporary Surveys

Adequate junctions were completed with H-7972 (1952) on the north, H-7806 (1950) on the east and northwest and H-7804 (1950) on the south. Unresolved differences as great as 4 fms. occur with H-7730 (1949) on the southwest. Arc intersections on H-7730 are weak here and error in position may exist.

The comparison of soundings from H-7973 (1952), falling on central and southern portions of present survey, will be discussed in the review of that survey.

Comparison with Chart 8863 Latest Print 9/30/63

The charted hydrography originates with the present survey after preliminary verification and review and other contemporary surveys. A comparison between the charted depths and the present survey depths reveals only minor differences of one fathom.

Condition of Survey

a. Completion of verification and inking reveals that smooth plotting was well done.

b. The Descriptive Report is complete and comprehensive.

Approved:
Lorne G. Taylor
Chief, Marine Chart Division

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7803 FIELD NO. PI-4150

Alaska, Aleutian Islands, N. E. of Petrel Bank

Project No. CS-218

Surveyed in May, 1950 Scale 1:40,000

Soundings:

808 Fathometer
NMC-2 Fathometer

Control:

Shoran

Chief of Party - T. B. Reed
Surveyed by - W. Martin, R.A. Marshall, F. Natella, B.C. Stokes, A.E. Greaves, Jr., H.W. Keith, Jr., A.C. Holmes, Jr.
Protracted by - B. C. Stokes, Jr.
Soundings plotted by - B. C. Stokes, Jr.
Preliminary verification by - E. Thomas
Verified and inked by - A. Kaupa
Reviewed by - I. M. Zeskind, 21 February 1952
Inspected by - R. H. Carstens

1. Shoreline and Control

No shoreline is shown on this offshore survey.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

This is the survey of a ridge extending northeastward from Petrel Bank. The bottom in general is fairly irregular except on top of the ridge.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7806 (1950) on the northwest and east, with H-7730 (1949) on the southwest and with H-7804 (1950) on the south. Project surveys are yet to be extended to the northward. (See Addendum)

5. Comparison with Prior Surveys

H-6906 (1935) 1:150,000

This small-scale U. S. Navy reconnaissance survey covers the southwest quarter of the present survey. A comparison between the prior and present surveys reveals differences in depths of as much as 121 fms. An example of these differences occurs in lat. 52° 23.5', long. 179° 34.5', where a prior depth of 282 fms. falls in present depths of 341-403 fms. These discrepancies are attributed largely to the dead reckoning control and the improper spacing of soundings on the prior surveys. It is apparent that a shift in position of the prior soundings lines would eliminate many of these descrepancies.

The present survey is adequate to supersede the prior survey within the common area.

6. Comparison with Chart 8863 (Latest print date 8/13/51)

A. Hydrography (See Addendum)

The charted hydrography originates with the previously discussed prior survey, with the present survey prior, to verification, with a reconnaissance survey and tracklines by this Bureau shown in Chart Letters Nos. 778 (1944), 243 (1945), 111 (1947) and 129 (1947), with the U. S. Coast Guard trackline of 1935 (Bp. 36699), with H. O. Chart 5640 corrected to 1941 (Bp. 36699) and with other miscellaneous sources which are not readily ascertainable.

Differences in depths of as much as 238 fms. are noted between the charted and present depths, as for example, the 184-fm. sounding charted in lat. 52° 33.4', long. 179° 25.4', which falls in present depths of 402-422 fms. These differences are attributed largely to the dead-reckoning control and the improper spacing of soundings on the reconnaissance surveys.

The present survey supersedes the charted hydrography within the common area.

B. Aids to Navigation

There are no aids to navigation within the limits of this offshore survey.

7. Condition of Survey

a. This survey has been given only a preliminary verification in accordance with recently adopted procedure. A complete statement concerning the condition of the survey will be made after the survey has been completely verified.

b. An insufficient number of crosslines were run in the western portion of the survey (Also see approval sheet in the Descriptive Report.)

c. No soundings were obtained on lines in the vicinity of lat. 52° 37.4', long. 179° 42.0'.

d. No bottom characteristics were obtained in the area of the present survey.

e. Soundings in the shoaler depths obtained by the 808 fathometer on K day were found to be 3 fms. deeper than crossline depths of NMC-2 fathometer work on other days. A few simultaneous comparisons with NMC-2 fathometer soundings also revealed a similar discrepancy. Inasmuch as the 808 fathometer operated on the B scale only, no comparison could be made for phase differences with the A scale. However, on the PIONEER's trackline across the Bering Sea, a 3 fm. phase difference was determined for the 808 fathometer. A 3-fm. correction, therefore, has been applied to the 808-fathometer soundings on K day in order to bring the crossline depths into harmony.

8. Compliance with Project Instructions

The present survey adequately complies with the Project Instructions, except as noted in paragraphs 7b, c, and d above.

9. Additional Field Work Recommended

This is a very good survey except as noted in paragraphs 7b, c, and d above. When work is resumed in the adjoining area on the north the following should be accomplished:

a. Development of the 100-fm. curves in the vicinity of lat. 52° 47', long. 179° 18', should be extended to the northward.

b. The holiday in the vicinity of lat. 52° 37.4', long. 179° 42.0', should be sufficiently developed to adequately determine the bottom configuration.

areas developed on H-7972 (1952)

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-7803

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6/20/51	8863	Risegari	Before ~~After~~ Verification and Review Considered Shoal depths only.
12-27-55	8863	Harold Stegman	~~Before~~ After Preliminary Verification and Review completely.
5/14/57	9102	Thos. R. Wellman	~~Before~~ After Preliminary Verification and Review completely via dwg 8863 3MA
			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.