

7931

7931

Diag. Cht. No. 8252-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PA-1151 Office No. H-7931

LOCALITY

State Southeast Alaska

General locality Peril Strait

Locality Bear Bay And Deep Bay

194 51

CHIEF OF PARTY

Riley J. Sipe

LIBRARY & ARCHIVES

DATE JUNE 2, 1952

JUN 2 1952

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. 7931

Field No. Pa. 1151

State Southeast Alaska ✓

General locality Peril Strait ✓

Locality Bear Bay and Deep Bay ✓

Scale 1/10 000 ✓ Date of survey 16 August to 9 October 1951 ✓

Instructions dated 14 April 1947 and 14 March 1950

Vessel PATTON

Chief of party Riley J. Dipe ✓

Surveyed by Charles A. Schoene and Julian W. Flint ✓

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

Fathograms scaled by E. Hildahl

Fathograms checked by J. W. Flint

Protracted by Christine N. Hillman

Soundings penciled by Christine N. Hillman

Soundings in fathoms <sup>in fathoms</sup> ~~at~~ <sup>MLW</sup> ~~MLLW~~ ✓

REMARKS: *and are based on a velocity of sound of 800 fms/sec.*

Edges of sheet in poor  
condition when received.  
G.F.U.

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY NO. H-7931 (PA-1151)

PERIL STRAIT - S. E. ALASKA

SCALE 1:10,000 - 1951

U. S. C. & G. S. S. PATTON \* R. J. SIPE COMMANDING

A. PROJECT:

Project CS-247, Revised Instructions dated 14 April 1947. ✓

Project CS-247, Revised Instructions dated 14 March 1950. ✓

B. SURVEY LIMITS AND DATES:

The limits of this survey include Peril Strait from a line:  
Liesnoi Island - Mountain Head northward to a line: Arthur Island - Yellow Pt.,  
also Bear Bay and Deep Bay. ✓

Fieldwork was accomplished during the period from 16 August  
to 9 October 1951. ✓

This survey makes a junction <sup>on the south</sup> with survey H-7930 on a scale of  
1:5,000 executed in 1951. <sup>and on the north with H-7986 (1952)</sup> ~~There are no other junctions.~~ ✓ Review, par. 4.

C. VESSEL AND EQUIPMENT:

All hydrography was done in Launch No. 92 operating from the  
"PATTON" except that most of the bare rocks were located from a dory. Launch  
No. 92 has a turning radius of approximately 30 meters. ✓

All of the sounding was done with portable 808A fathometer  
No. 51, supplemented by hand lead soundings on shoals. Bottom characteristics  
were obtained by hand lead. ✓

D. TIDE AND CURRENT STATIONS:

The Bear Bay Tide Station was used for the reduction of all soundings on this survey with no time or range corrections. No current stations were occupied within the limits of this survey. Reference is here made to letters from the Commanding Officer to the Director, dated 17 August and 11 October 1951.

E. SMOOTH SHEET:

The smooth sheet is to be constructed and plotted by the Seattle Processing Office.

F. CONTROL STATIONS: *See List of Signals, pg. 12*

The original triangulation in this area was executed by E.K.M. in 1895. The original triangulation has been supplanted by a scheme of second-order triangulation executed in 1951 beginning with the line SHOAL<sub>2</sub> - MOUNTAIN<sub>2</sub> and extending northward to the line FOWL - FETCH in the vicinity of Rapids Pt. Supplemental schemes of triangulation were extended into Bear Bay and Deep Bay.

The triangulation records, computations, and report have been forwarded to the Washington Office. Copies of the List of Geographic Positions have been furnished the Processing Office.

The majority of the <sup>topographic stations</sup>~~hydrographic signals~~ were located by theodolite cuts from triangulation stations and their geographic positions computed.

A number of topographic signals in the two bays to the eastward of longitude 135°-33'-45" were located by planetable on Graphic Control Sheet "A" 1951. *(designated for destruction after review of present survey)*  
*(Desc. Report of G.C. sheet attached to D.R. of pres. survey)*  
A few signals were located by sextant cuts plotted directly

F. CONTROL STATIONS (Continued):

on the boat sheet. All of the control stations are considered to be located with sufficient accuracy for the purpose of this survey. *See Review, par. 7c.*

G. SHORELINE AND TOPOGRAPHY: *See Review, par. 1.*

The shoreline detail for the boat sheet was transferred from Preliminary Shoreline Manuscript RS-386, scale 1:10,000. In general the shoreline shown on the manuscript was found to be accurate and it was very helpful to the hydrographic party. The following discrepancies were noted. The low-water line in the vicinity of signals VAL & DEBIT in Bear Bay is misplaced. The small island in Deep Bay, Latitude  $57^{\circ}-26^{\prime}.1$ , Longitude  $135^{\circ}-36^{\prime}.2$  is misplaced and should move to the northeast. The low-water line in the north end of Deep Bay in Latitude  $57^{\circ}-27^{\prime}.0$ , Longitude  $135^{\circ}-37^{\prime}.9$  is misplaced. The low-water line on the N. E. side of Big Island, vicinity of signal "PIN" is drawn out too far from shore. *LWL corrected on registered survey.*

H. SOUNDINGS, BAR CHECKS, AND FATHOMETER CORRECTIONS:

Soundings were taken by 808A Fathometer No. 51 operated entirely on the fathom scale, supplemented by hand lead soundings on rocks and shoals.

In accordance with the Directors' letter, dated 21 June 1951, the fathometer was operated at 800 fathoms per second. Bar checks were taken three times a day. All bar checks were taken at a depth of two fathoms and a small initial correction of +0.2 fathom was applied to all fathometer soundings. No other velocity corrections were applied. No corrections were applied to the hand lead soundings except for tide.

I. CONTROL OF HYDROGRAPHY:

The sounding lines were controlled by three-point fixes on hydrographic signals and no unusual or substandard methods were used.

J. ADEQUACY OF SURVEY:

This survey is considered to be complete and should supersede all prior surveys for charting purposes. \* This survey makes a satisfactory junction with survey H-7930, scale 1:5,000 executed in 1951. There is adequate overlap between the two surveys and the depth curves can be drawn satisfactorily. *\* Review, par. 4.*

K. CROSS LINES:

Cross lines run were about 8% of the regular system of lines exclusive of development. The soundings at the crossings are generally in good agreement and no important discrepancies were noted. The crossings should be further examined after the smooth sheet is plotted. *Review, par. 2*

L. COMPARISON WITH PRIOR SURVEYS:

There are two prior surveys in this area: No. H-2243, scale 1:5,000, date 1895; and No. H-2242, scale 1:10,000, date 1895. The 1951 survey is generally in good agreement with the two prior surveys, but a number of rocks and shoals were found on the new survey that were missed originally. These shoals and rocks were missed because the area was not adequately covered by the original surveys.

The sounding of  $7\frac{1}{2}$  fms. <sup>(*7 1/2 fms. on chart*)</sup> Latitude  $57^{\circ}-26.33'$ , Longitude  $135^{\circ}35'.05$ , shown on H-2242 is believed to be erroneous. ✓ It is recommended that it be deleted from the chart. *Review, par. 5.*

The sunken rock symbol shown in the entrance to Deep Bay: Latitude  $57^{\circ}-26'.05$ , Longitude  $135^{\circ}35'.45$  is no longer needed. This spot was

L. COMPARISON WITH PRIOR SURVEYS (Continued):

thoroughly developed with fathometer and hand lead, and a least depth obtained of 3.<sup>3</sup>/<sub>8</sub> fms. by hand lead on Position ~~65~~<sup>45-46</sup> u. Shoaler soundings were obtained to the south as the lines approached the day beacon. It is recommended that the sunken rock symbol be deleted from the chart, and replaced by the soundings obtained on this survey. *Concur; has been removed from chart.*

The sounding of 6<sup>3</sup>/<sub>4</sub> fms.: Latitude 57°-26'.70, Longitude 135°-35'.1<sup>8</sup>/<sub>8</sub> shown on H-2242 is evidently erroneous. It is not shown on the present chart. *Review, par. 5*

Sunken rock symbols: Latitude 57°-26'.60, Longitude 135°-35'.52 have been verified as a rock awash (Bares 2 ft. at MLLW) and by zero soundings. It is recommended that these symbols be removed from the chart.

The sunken rock symbol: Latitude 57°-26'.74, Longitude 135°-35'.0<sup>2</sup>/<sub>8</sub> shown on Survey H-2242 and the Chart was neither proved nor disproved by the new survey. It is recommended that it be retained as a matter of safety. *Disregard - See Review, par. 5.*

The sunken rock symbol: Latitude 57°-26'.47, Longitude 135°-35'.64 shown on Survey H-2242 and the chart was verified by some shoal soundings of 1 and 2 fathoms. It is recommended that it be retained.

The sunken rock symbol: Latitude 57°-25'.97, Longitude 135°-34'.93 was neither verified or disproved. It is recommended that it be retained as a matter of safety. *(Falls on outer edge of ledge symbolization on present survey)*

M. COMPARISON WITH CHART:

This survey has been compared with USC&GS Chart No. 8248, print date 47-1/6, scale 1:40,000, and the agreement is generally good.

53-6/8

The following discrepancies are discussed:

- A. The sunken rock, "PD" in Deep Bay, Latitude 57°-26'.50, Longitude

M. COMPARISON WITH CHART:(Continued):

135°-37'.37, was disproved by the new survey. ✓ It is recommended that it be deleted from the chart. *Not presently charted*

B. The rock in the entrance to Deep Bay: Latitude 57°-25'.82, Longitude 135°-35'.46, bare ~~20~~<sup>19</sup> ft. at MLLW, is charted as a rock awash. According to Survey H-2242 and also the new survey it should be shown as a bare rock. It is recommended that it be charted as a bare rock with an elevation of 6 ft. above MHW. ✓

C. The channel east of Bear Bay Island with a charted depth of 2½ and 3 fathoms has been disproved by the new survey. From the soundings obtained on the new survey and from visual observations part of this channel becomes almost bare at extreme low tides. It is recommended that this channel be deleted from the chart. *(chart revised accordingly)* ✓

D. The area north of Bear Bay Island is incorrectly shown on the chart both as to topography and hydrography. Several rocks and shoals were found in this area which do not appear on the chart. It is recommended that the original survey be completely disregarded in this area. *(chart revised from present survey)* ✓

N. DANGERS AND SHOALS:

A. A shoal was found east of Liesnoi Island: Latitude 57°-25'.~~17~~<sup>3</sup>, Longitude 135°-36'.13 with a least depth by hand lead of 2.6 fms. on position 23 v, and a least depth by fathometer of ~~2.7~~<sup>2.5</sup> fms. on position 22 v. <sup>39-40 b</sup> It is recommended that the shoalest depth be charted. *(presently charted)* ✓

B. Two rocks were located: Latitude 57°-24'.92, Longitude 135°-35'.30, position 197 k and 198 k, which are not shown on the original survey or the chart. They should be charted with the rock awash symbol. *one rk. awash now charted* ✓

C. The charted 1 fathom shoal: Latitude 57°-24'.94, Longitude 135°-35'.41 was verified by a hand lead sounding of 0.5 fathom on position 9 v. The Tide



N. DANGERS AND SHOALS (Continued):

was low and the bottom plainly visible when this sounding was taken and it is believed to be the least depth on this shoal. *chart 1/2 fm. sdg.* ✓

D. A rock was found east of Bear Bay Island, Latitude  $57^{\circ}-25'.43$ , Longitude  $135^{\circ}-33'.95$ , position 9 a, bare 7 Ft. at MLLW. It should be charted as a rock awash. *(presently charted)* ✓

E. A rock was found east of Bear Bay Island: Latitude  $57^{\circ}-25'.50$ , Longitude  $135^{\circ}-33'.80$ , position 8 a, bare  $10\frac{1}{2}$  Ft. at MLLW. It should be charted as a rock awash. *(not presently charted)* ✓

F. A group of three rocks was found north of Bear Bay Island, positions 5 a, 6 a, & 7 a, Latitude  $57^{\circ}-25'.8$ , Longitude  $135^{\circ}-33'.9$ . These rocks bare from 3 to 5 Ft. at MLLW and should be charted as rocks awash. *(one rk. awash new charted)* ✓

G. A small uncharted ~~island or~~ rock was found north of Bear Bay Island: Latitude  $57^{\circ}-25'.74$ , Longitude  $135^{\circ}-34'.10$ . At low water it is connected to the larger charted island to the north. Altho an elevation was not obtained on this rock by the hydrographic party, it is recommended that it be charted as a bare rock. *see bed sheet: (presently charted as a bare rock) uncor. 2 ft. MLLW (shown as \*(15) on smooth sheet)* ✓

H. A shoal was found north of Bear Bay Island: Latitude  $57^{\circ}-25'.80$ , longitude  $135^{\circ}-34'.34$ , with a least depth by hand lead of 4.1 fms. on position 16 x, and a least depth by fathometer of 4.1 fms. on position 42 w minus 15 seconds. ✓

I. A shoal was found: Latitude  $57^{\circ}-25'.87$ , Longitude  $135^{\circ}-34'.45$ , with a least depth by hand lead of 6.6 fathoms on position 91 y, and a least depth by fathometer of 6.2 fathoms on position 74 y plus 20 seconds. It is recommended that the shoalest depth be charted. *(not presently charted)* ✓

N. DANGERS AND SHOALS (Continued):

J. A shoal was found: Latitude  $57^{\circ}-26'.02$ , Longitude  $135^{\circ}-34'.34$ , with a least depth by fathometer of ~~5.4~~ <sup>5.3 - (pos. 115-116c)</sup> fathoms and by hand lead of 5.5 fms. on position 97 u. It is recommended that the shoalest sounding be charted. (not charted)

Two other shoals were found just south of this, with about  $5$  fms. on them, which should be charted as they are near the main channel. (~~5.3 & 5.6~~) ( $5\frac{1}{4}$  charted)

K. The charted  $4\frac{1}{2}$  fathom sounding off the end of Big Island: Latitude  $57^{\circ}-26'.05$ , Longitude  $135^{\circ}-34'.7\frac{7}{8}$  was verified on the new survey by a hand lead sounding of ~~3.4~~ <sup>3.2</sup> fms. on position 154 ea day and a fathometer sounding of 3.2 fms. on ~~pos. 127~~ position 127 ea plus. It is recommended that the shoalest sounding be charted. ( $3\frac{1}{4}$  now charted)

L. The charted  $5\frac{3}{4}$  fathom sounding off the end of Little Island: Latitude  $57^{\circ}-25'.56$ , Longitude  $135^{\circ}-35'.30$  was verified by a hand lead sounding of 3.7 fathoms on position 29 v and a fathometer sounding of 3.7 fathoms on position 6 u plus. It is recommended that the 3.7 fms. be charted. ( $3\frac{1}{2}$  now charted)

M. A shoal was found in the entrance to Deep Bay: Latitude  $57^{\circ}-25'.88$ , Longitude  $135^{\circ}-35'.50$  with a least depth by fathometer of 0.3 fathoms on position 167 j plus 10 seconds. A thorough investigation was made of this area by hand lead and a least depth found of 2.1 fms on position 1 w, the bottom being plainly visible. It is believed that the fathometer sounding of 0.3 fathoms was on kelp. It is recommended that the ~~hand lead~~ <sup>Fathometer 1.9 at pos. 1w</sup> sounding of ~~2.1~~ fms. be charted.

N. The charted  $4\frac{1}{2}$  fathom sounding in Deep Bay: Latitude  $57^{\circ}-26'.0\frac{6}{10}$ , Longitude  $135^{\circ}-35'.88$  was verified by a hand lead sounding of 3.8 fms. and a fathometer sounding of 3.7 fms., position 122 t. It is recommended that the ~~hand lead~~ sounding of ~~3.8~~ <sup>7</sup> fms. be charted. ( $3.7$  (fathometer) also obtained on pos. 119t)

N. DANGERS AND SHOALS (Continued):

O. Two rocks, previously uncharted, were located off the northwest end of Little Island. The rock, <sup>awash</sup> located on position 18 H bares 12 ft. at MLLW, ~~and should be charted as a bare rock, elevation 2 ft. above MLLW.~~ The other rock, position 215 j, bares 7 ft. at MLLW and should be charted as a rock awash.

P. A detached rock, previously uncharted, was located in Deep Bay on position 223 j. It bares 3 Ft. at MLLW and should be charted as a rock awash.

Q. The sounding of  $6\frac{1}{4}$  fms. on survey H-2242 off the west end of Big Island: Latitude  $57^{\circ}-26'.43$ , Longitude  $135^{\circ}-36'.20$  was verified as a shoal on position 27 y with a hand lead sounding of 4.2 fathoms and a fathometer sounding of 4.3 fathoms. It is recommended that the hand lead sounding of 4.2 fathoms be charted.

R. A previously uncharted shoal was found north of Big Island: Latitude  $57^{\circ}-26'.50$ , Longitude  $135^{\circ}-34'.27$  with a least depth by hand lead of 8.7 fms. on position 232 da, and a least depth by fathometer of ~~7.9~~ <sup>8.0</sup> fms. on position 28 da plus 35 seconds. It is recommended that the shoalest sounding be charted. *(8 fms. charted)*

S. A shoal was found: Latitude  $57^{\circ}-26'163$ , Longitude  $135^{\circ}-34'.18$  with a least depth by fathometer of ~~10.8~~ <sup>10.4</sup> fms. on position 75 ea plus 30 seconds. No hand lead soundings were taken on this shoal. It is recommended that the shoalest sounding be charted in place of the 13 fms. sounding now charted in this area.

T. A previously uncharted shoal was found south of Yellow Point: Latitude  $57^{\circ}-26'.77$ , Longitude  $135^{\circ}-33'.80$  with a least depth by fathometer of 3.9 fms. on position 191 da and by hand lead of 3.9 fms. on position 192 da. *3 3/4 charted*

U. A shoal was found: Latitude  $57^{\circ}-25'.24$ , Longitude  $135^{\circ}-35'.53$ , with a least depth by hand lead of 13.6 fms. on position 46 x and by fathometer of 13 fms. on position 30 x plus 15 seconds. it is recommended that the shoalest fathometer sounding be charted. ~~12.5~~ <sup>12</sup> fms. Pos. 18-19 r.

N. DANGERS AND SHOALS (Continued):

V. A shoal was found in Deep Bay: Latitude  $57^{\circ}-26'.05$ , Longitude  $135^{\circ}-35'.6^2$  with a least depth by hand lead of 3.8 fms. on position 28 w and by fathometer of 3.8 fms. on position 15 w plus. ( $3\frac{3}{4}$  charted)

Another shoal was found about 100 meters to the north: Latitude  $57^{\circ}-26'.10$ , Longitude  $135^{\circ}-35'.60$  with a least depth by hand lead of 7.2 fms. and by fathometer of 7 fms. on position 17 aa day. It is recommended that the shoalest sounding be charted. *This is actually on the slope of the 3.8-fm. shoal above*

W. A thorough development was made of the charted  $2\frac{1}{4}$  fathom shoal south-east of Arthur Island: Latitude  $57^{\circ}-26'.78$ , Longitude  $135^{\circ}-34'.51$ . The shoalest depth obtained was ~~1.8~~ <sup>2.0</sup> fathoms by fathometer on position ~~65~~ <sup>64</sup> ea and ~~0.4 fms. by hand lead on position 69 ea~~ at pos. 65 ea. The fathometer sounding of 1.8 fms. was probably on kelp and should be questioned. It is recommended that this shoal ~~continue to~~ be charted as ~~2~~ <sup>2</sup>/<sub>4</sub> fathoms. ~~Plotted 1.8? Fathogram obscure~~

X. An uncharted shoal was found N. E. of Bear Bay Island: Latitude  $57^{\circ}-25'.93$ , Longitude  $135^{\circ}-33'.50$ , with a least depth by hand lead of 0.6 fathom on position 162 aa and by fathometer of 0.6 fathom on position 159 aa. and 0.4 fms Pos. 13-14 z. (*presently charted as  $\frac{1}{4}$  fms.*)

O. COAST PILOT INFORMATION:

Coast pilot information for this area will be furnished in a separate report.

P. AIDS TO NAVIGATION:

The positions of fixed aids to navigation will be reported on form 567.

There were no floating aids to navigation in the area covered by this survey.

Q. LANDMARKS FOR CHARTS:

There are no prominent landmarks in this area. A special report will not be submitted. ✓

R. GEOGRAPHIC NAMES: *as y*

There are no recommended changes in geographic names in this area. A special report will not be submitted. ✓

U. MISCELLANEOUS:

The small bay to the northeast of Bear Bay Island and eastward of Longitude 135°-33.45" was surveyed on a scale of 1:5,000 using a separate boat sheet No. PA-1151 "B". The hydrographic signals for this part of the survey were located by planetable on Graphic Control Sheet "A" <sup>\*</sup> 1951, scale 1:5,000. A separate set of volumes was not used for this part of the survey. It is recommended that this hydrography be plotted as an insert on the smooth sheet at a scale of 1:5,000.

*PA-A-51*

*-sent to Portland Photo. office*

*\* To be destroyed after verification & review of pres. survey*

Z. TABULATION OF APPLICABLE DATA:

Level record - Bear Bay	Forwarded W. O.	10 August 1951.
Tide Marigrams - Bear Bay	"	18 " "
Tide Marigrams - Bear Bay	"	10 October 1951.
Triangulation Report and Records	"	8 November 1951. <i>945 977 1951</i>

Form 567 - Nonfloating Aids - To be forwarded Washington Office.  
Coast Pilot Notes --- To be forwarded Washington Office.

Respectfully Submitted,  
*Charles A. Schoene*  
Charles A. Schoene  
LCDR (USC&GS)

Approved and Forwarded

Riley J. Sipe  
CDR. USC&GS  
Commanding Ship "PATTON"

## LIST OF HYDROGRAPHIC SIGNALS

SHEET H-7931 (PA-1151)

PERIL STRAIT - 1951

Hydro Name	Source	Hydro Name	Source	Hydro Name	Source
ABE	b	HIS	b	SOL	d
ABLE	a, CABLE 1951	HUT	b	SON	a, MASON 1951
ACE	c	ICE	b	TAIN	a, MOUNTAIN <sub>2</sub> 1950
AIM	b	INK	a, DRINK 1951	TAP	b 1950
ART	a, ARTHUR <sub>2</sub> 1951	JAW	a, JAW <sub>2</sub> 1951	TAX	b
BIB	b	JUG	b	TIN	c & d
BIG	b	KAPOK	a, KAPOK 1951	TOM	b
BOB	b	KEY	c	TOY	b
BOX	b	LAN	a, LANCE 1951	USE	b
BUS	b	LIES	a, LIESNOI <sub>2</sub> 1951	VAL	b
CAB	b	LIP	b	VAN	c
CON	c	LIT	a, LITTLE 1895-1951	VIM	b
CRY	c	MEN	a, MENTO 1951	WAG	b
CUT	c	MET	d	WHO	b
DAW	c	MID	a, MIDDLE <sub>2</sub> 1951	WIG	c
DEB	a, DEBIT 1951	MOO	b	YEL	a, YELLOW <sub>2</sub> 1951
DEEP	a, Deep Bay Entrance Day Beacon	NEW	c	YES	b
DIP	c	*NIT	b	YET	c
DOG	b	NON	b	ZAG	b
EGG	d	NUB	c & d	ZOO	b
ELO	a, ELOPE 1951	OAK	c		
ERA	b	ODD	b		
ERG	c & d	PEG	c		
FAR	b	PEP	b		
FEZ	b	PIE	b		
FISH	c	PIN	b		
FOWL	a, FOWL 1895-1951	POINT	a, POINT 1951		
FOX	a, FOX <sub>2</sub> 1951	RAG	c		
FRO	b	REX	a, REX <sub>2</sub> 1951 <sup>Vol. III, Pt. 911</sup>		
FUN	c	RIM	b		
GAD	b	ROB	a, ROB <sub>2</sub> 1951		
GAS	b	ROI	a, SIROI <sub>2</sub> 1951		
GREEN	a, GREEN 1951	SAL	c		
HAT	c	SET	b		
HEAR	a, HEART 1951	SHE	a, SHE <sub>2</sub> 1950		
HER	B	SIR	b		

## CODE:

- a - Triangulation  
 b - Theodolite Cuts Computed  
 c - \*Graphic Control Sheet "A" 1951. (PA-A-51)  
 d - Sextant Cuts Plotted on Boat Sheet.  
 (Cuts recorded on Page 5, Volume 1, Sheet H-7930, PA-05251)  
 \* to be destroyed after review of pres. survey

\* NIT was replotted using the theodolite angles between D and a NIT. See verification rpt.  
 New position: LAT: 57° 26' 1110 m J.E.G.  
 LONG: 135° 36' 640 m 6-29-55

A new G.P. was computed by Cdr. Jarman and will be entered in the t-report.  
 New G.P.:  $\phi$  57° 26' 1109.99 m,  
 $\lambda$  135° 36' 641.9 m, which  
 agrees with the theod. 2 pos. as shown on S.S.  
 J.E.G. 7.12.55

ABSTRACT OF BAR CHECKS

SHEET H-7931 (PA-1151)

PERIL STRAIT - 1951

Day Letter	Depth Fms.	Date	Day Letter	Depth Fms.	Date	
b	1.70	8-21	s	1.70	9-12	
	1.90			1.70		
	1.80			1.90		
c	1.80	8-22	t	1.80	9-13	
	1.80			1.70		
	1.80			1.60		
d	1.80	8-23	u	1.70	9-14	
	1.80			1.60		
	1.80			1.80		
e	1.70	8-24	v	1.80	9-18	
	1.90			1.80		
	1.80			1.65		
f	1.80	8-27	w	1.80	9-19	
	1.65			1.65		
	1.70			1.75		
g	1.70	8-28	x	1.80	9-20	
	1.80			1.70		
	1.70			1.75		
h	1.80	8-29	y	1.80	9-21	
	1.80			1.80		
	1.75			1.80		
j	1.80	8-30	z	1.80	9-25	
	1.80			1.80		
	1.80			1.80		
k	1.70	8-31	aa	1.75	9-27	
	1.80			1.80		
	1.80			1.70		
l	1.80	9-4	ba	1.85	10-1	
	1.80			1.80		
	1.80			1.75		
m	1.70	9-5	ca	1.80	10-2	
	1.70			1.85		
	1.70			1.80		
n	1.70	9-6	da	1.80	10-3	
	1.80			1.80		
	1.80			1.80		
p	1.80	9-7	ea	1.65	10-4	
	1.80			1.70		
	1.80			1.80		
q	1.70	9-10	Sum #	137.79		
	1.80			Mean =		1.77
	1.65					
r	1.80	9-11				

Correction = + 0.23 fms. Computed CAS  
 ✓RJS

H 7931  
Pa 1151

Peril Strait.

The projection was made by hand on Whatman paper, scale of principal projection 1/ 10,000/ A small projection on 1/5,000 scale was made for the survey of Baby Bear Bay. The shoreline is to be added when the photogrammetric compilation is ready. *See Review, par. 1.*

Rocks and shoals have been pointed out with arrows and explained with copious notes. They have been discussed by the field party so thoroly that they need no further comment. The minor corrections that have been made in the descriptive report are for the differences between boatsheet and smooth sheet plotting.

*Edgar E. Smith*  
Edgar E. Smith 5/20/52  
Cart. Engr.

*Overlay tracings show<sup>ing</sup> add'l development on important shoals are filed with the fathograms*



H 7931  
Pa 1151

Peril Strait, Southeast Alaska.

List of geographic names  
penciled on smooth sheet.

Peril Strait

Baranof Island

Chichagof Island

Liesnoi Island

Little Island

Big Island

Arthur Island

Bear Bay Island

Deep Bay

Bear Bay

Baby Bear Bay (Field Party)

Middle Point

Yellow Point

Point Siroi

Grasstop Rock

HYDROGRAPHIC SURVEY H-7931 (PA-1151)

TIDE NOTE

The tide station at Bear Bay: Latitude  $57^{\circ} 25' .14$ , Longitude  $135^{\circ} 35' .06$  was used for the reduction of all soundings on this survey with no correction for time and range. Hourly heights on 24 August 1951, when the Bear Bay gage was not operating, were furnished by the Washington Office.

The plane of MLLW corresponds to a reading of 4.7 ft. on the tide staff. This value was determined by the Washington Office by comparison with observed tides at the Sitka primary station. Reference letter of 17 October 1951 from Acting Director, No. 36kh.

STATISTICS FOR HYDROGRAPHIC SURVEY NO. H-7931 (PA-1151)

PERIL STRAIT - 1951

Day	Date	Vol. No.	No. Pos.	Stat. Miles	Hand Lead Soundings
a	16 August	1	9 ✓	---	---
b	21 "	1	105 ✓	10.9	---
c	22 "	1	189 ✓	21.7	---
d	23 "	1	53 ✓	6.9	---
e	24 "	2	128 ✓	15.3	---
f	27 "	2	45 ✓	5.3	---
g	28 "	2	55 ✓	5.0	---
h	29 "	2	107 ✓	8.8	---
j	30 "	2 & 3	223 ✓	18.9	---
k	31 "	3	198 ✓	15.5	---
l	4 September	3 & 4	160 ✓	13.8	---
m	5 "	4	80 ✓	6.9	---
n	6 "	4	60 ✓	6.2	---
p	7 "	4	43 ✓	4.0	---
q	10 "	4	35 ✓	2.8	---
r	11 "	4	65 ✓	5.3	---
s	12 "	5	107 ✓	10.0	---
t	13 "	5	123 ✓	10.8	5
u	14 "	5	177 ✓	10.9	16
v	18 "	6	52 ✓	2.5	24
w	19 "	6	65 ✓	3.2	21
x	20 "	6	49 ✓	2.3	26
y	21 "	6	92 ✓	6.0	11
z	25 "	6 & 7	147 ✓	10.4	---
aa	27 "	7	165 ✓	8.1	36
ba	1 October	7	142 ✓	12.1	---
ca	2 "	8	289 ✓	23.8	---
da	3 "	8 & 9	233 ✓	20.6	11
ea	4 "	9	217 ✓	15.5	23
fa	9 "	9	16 ✓	---	16
TOTAL		9	3429 ✓	283.5	189

Total Area = 4.0 Square Statute Miles

GEOGRAPHIC NAMES

Survey No. H-7931

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>Southeastern Alaska</u>										1
<u>Baranof Island</u>									R.F.N.	2
<u>Chichagof Island</u>									R.F.N.	3
<u>Peril Strait</u>										4
										5
<u>Pt. Siroi</u> ✓										6
<u>Bear Bay</u> ✓										7
										(location of tide staff)
<u>Bear Bay Island</u> ✓										8
<u>Baby Bear Bay</u> ✓										9
<u>Middle Point</u> ✓										10
<u>Yellow Point</u> ✓										11
<u>Arthur Island</u>										12
<u>Big Island</u> ✓										13
<u>Deep Bay</u> ✓										14
<u>Grasstop Rock</u> ✓										15
<u>Little Island</u> ✓										16
<u>Liesnoi Island</u> ✓										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined  
in red are approved  
6-16-52. L.H. Tech

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7931...

Records accompanying survey:

Boat sheets .2...; sounding vols. .9...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls .4 Eny;  
 special reports, etc. 1. Smooth Sheet; 1. Descriptive Report; 2. Overlay Tracings;  
 1. Envelope Small Overlays Attached; \* *filed with fathograms*.....

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

Number of positions on sheet	.....	3428
Number of positions checked	.....	210
Number of positions revised	.....	24 <i>(22 of these were due to signal relocation)</i>
Number of soundings revised (refers to depth only)	.....	31
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	1 *
Topographic details	Time	..... 30
Junctions	Time	..... 8
Verification of soundings from graphic record	Time	..... 8
Verification by <i>O. Svendsen</i> .....	16	4-6-55
Verification by <i>J.E. GEARHART</i> .....	Total time <u>282</u>	Date <u>6-29-55</u>
	<i>298 hrs</i>	
Reviewed by <i>J.A. Dinamore</i> .....	Time <u>4.4</u>	Date <u>5 Aug. 1955</u>

*Position computed for 0 Nit in error, Plotted by cuts.*

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

Graphic Control Sheet  
~~TOPOGRAPHIC TYPE SHEET~~

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

REGISTRY No. ....

Field No. PA - A - 51 .....

Scale 1:5,000 .....

State Alaska ..... General locality Peril Strait .....

Specific locality Bear Bay Island - Middle Point .....

Dates: Survey began 19 August 1951 ..... Completed 20 August 1951 .....

Photography....., Supplemented by ground surveys to .....

Project No. CS-247 ..... Instructions dated 14 April 1947 .....

Vessel } or FATTON ..... Chief of party Riley J. Sipe .....

Party } .....  
Field work by Riley J. Sipe ..... Office work by E. L. Jones & Julian A. Flint .....

Final inking by Julian A. Flint .....

Ground elevations } in feet above { M. H. W.  
Treetop elevations } or { .....

Contours } by { Planetable } Interval ..... ft.  
Approximate contours } Multiplex }  
Form lines } .....

REMARKS .....

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

DESCRIPTIVE REPORT  
To Accompany  
GRAPHIC CONTROL SHEET NO. PA-A-51  
Ship PATTON Riley J. Sipe, Comdg.  
1951

Project: CS-247

Date of Instructions: 14 April 1947; Supplemental, 14 March 1950

Purpose: To provide control for hydrographic surveys.

Locality: Bear Bay Island, Peril Strait, Alaska

Limits: Latitude  $57^{\circ}25'.0$  to  $57^{\circ}27'.0$ , Longitude  $135^{\circ}32'.5$  to  $135^{\circ}35'.5$ .  
The area for which graphic control on this sheet was located is a small unnamed bay on the east side of Peril Strait between Bear Bay Island and Middle Point.

Method: The hydrographic control was located by Cdr. Riley J. Sipe by standard plane table methods with, in most cases, three or more intersecting cuts. There were no planetable traverses. The following triangulation stations were used in the graphic control:

Middle Pt. Lt., 1951	Cable, 1951
Rex 2, 1951	Debit, 1951
Mento, 1951	

Shoreline: Due to the urgent need for hydrographic control by the hydrographic party short sections of the shoreline were not rodded at each planetable setup as is the usual procedure.

Although this area is covered by 9-lens aerial photographs no shoreline inspection was accomplished due to other field operations of a higher priority.

Offshore Features: All rocks awash of navigational importance were located by sextant fixes by the hydrographic party, recorded in the hydrographic volumes and plotted on Sheet H-7931, except for one rock located by planetable cuts and shown on this graphic control sheet.

Recoverable Topographic Stations: None were established due to the close spacing of triangulation stations. The stations located by graphic control were all of a temporary nature consisting mostly of white washes.

Landmarks for Charts: None.


Aids to Navigation: Aids for the 1951 project area were submitted to the Washington Office on 5 December 1951. There were no aid falling within the area surveyed on this sheet.

Coast Pilot Information: There are no recommended changes. A special report covering the 1951 project area submitted on 5 December 1951.


Magnetic Meridian: Since transit magnetometer observations were made at triangulation stations JAW 2, 1951 and MASON, 1951, in the general area of this sheet, no magnetic meridians were obtained with a declinatoire.

Geographic Names: There are no recommended changes in the geographic names shown on Chart 8248. A special report for the 1951 project area was not submitted.

Report Writing and Sheet Inking: Due to the sudden transfer, on 8 November 1951, of the topographer, Cdr. Riley J. Sipe, this report was written from notes furnished by the topographer. The sheet was carefully inked by Ens. Julian W. Flint who was on the hydrographic party which sounded in this area.

  
E. L. Jones  
Cdr., C&GS

Approved 17 December 1951:

  
E. L. Jones, Cdr., C&GS  
Comdg. Ship PATTON

*The signals and other information of value have been transferred to hydrographic survey H-7931 (1951). The graphic control sheet is of no further value so will be destroyed.*

*J. A. Winsmore*  
8 Aug. 1955



DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7931

FIELD NO. PA-1151

S. E. Alaska, Peril Strait, Bear Bay and Deep Bay

Project No. CS-247

Surveyed - Aug.- Oct., 1951

Scale 1:10,000

Soundings:

Control:

808 Fathometer

Sextant fixes on  
shore signals

Hand lead

Chief of Party - R. J. Sipe  
Surveyed by - C. A. Schoene and J. W. Flint  
Protracted by - C. N. Hillman  
Soundings plotted by - C. N. Hillman  
Verified and inked by - J. E. Gearhart  
Reviewed by - T. A. Dinsmore 5 Aug. 1955  
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with the reviewed manuscripts of air-photographic surveys T-9899, T-9900 and T-9901 of 1950-52.

The origin of the signals is given in the Descriptive Report.

2. Sounding Line Crossings

Considering the irregularities in the bottom, depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. Where steep slopes occur, intermediate depth curves have been omitted in order to show the charting curves more clearly.

The bottom for the most part drops rapidly from the low-water line to depths of 10 fms. Numerous ledges and offlying shoals contribute to the irregularities in the bottom.

4. Junctions with Contemporary Surveys

The junctions with H-7986 (1952) on the north and H-7930 (1951) on the south will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys

a. H-1627 (1884), 1:20,000

The information on this early reconnaissance survey is scanty and unreliable. A comparison with the present survey would serve no useful purpose.

b. H-2242 (1895), 1:10,000      H-2243 (1895), 1:5,000

The present survey falls within the area covered by these prior surveys. A comparison of the prior and present surveys reveals no appreciable changes in depths. However, the present survey discloses many shoals and much critical information not shown by the widely spaced sounding lines on the prior surveys. The more thorough coverage of the present survey also defines the bottom configuration more completely and clearly.

The following discrepancies with the prior surveys are noted:

(1) The 7 $\frac{1}{2}$ -fm. sounding charted in lat.  $57^{\circ}26.36'$ , long.  $135^{\circ}35.06'$ , from H-2242 should be disregarded. Falling in depths of 12-14 fms. on both the prior and present surveys, the prior sounding is considered to be out of position and should actually fall about 60 meters south-westward (inshore) where comparable depths were obtained on the present survey. ✓

(2) The 6- $\frac{3}{4}$ -fm. sounding (not charted) in lat.  $57^{\circ}26.70'$ , long.  $135^{\circ}35.18'$ , on H-2242 should be disregarded. Falling in 13-fm. depths on the present survey, the prior sounding is considered to be out of position and should actually fall on the slope about 75 meters northeastward where comparable depths were obtained on the present survey.

(3) The sunken rock symbol charted in lat.  $57^{\circ}26.74'$ , long.  $135^{\circ}35.02'$ , from H-2242 should be disregarded. The rock awash and ledge closeby on the west and the 1.4-fm. sounding slightly northeastward on the present survey are considered adequate for charting the dangers to navigation in this inshore locality. ✓

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

6. Comparison with Chart 8248 (Latest print date 6/8/53)

A. Hydrography

Charted hydrography originates principally with the prior surveys supplemented by partial application of the present survey prior to verification and review. Minor revisions have been made to smooth-sheet depths during verification and review of the present survey.

The rock awash charted in lat.  $57^{\circ}25.60'$ , long.  $135^{\circ}35.60'$ , from the present survey prior to verification and review should be disregarded. The pseudo feature apparently resulted from erroneous compilation of a kelp symbol on the smooth sheet. Present smooth-sheet depths in the above locality are 5-8 fms.

It is noted that the 1.2- and 4.1-fm. soundings in lat.  $57^{\circ}25.93'$ , long.  $135^{\circ}33.97'$  and lat.  $57^{\circ}25.80'$ , long.  $135^{\circ}34.34'$ , respectively, on the present survey are not charted. Other critical depths of lesser importance also remain uncharted. The present survey entirely supersedes the charted information.

B. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

(a) The sounding records and Descriptive Report are complete and comprehensive.

(b) The smooth plotting was neat and accurately done. The shoreline was added to the smooth sheet in the Washington Office.

(c) The position of signal NIT was moved southward three millimeters on the smooth sheet, affecting some sounding lines by as much as six millimeters. The computed position as furnished to the Processing Office and the Photogrammetric Office, is in disagreement with the boat sheet and the theodolite angles and should be disregarded. The Division of Photogrammetry has been notified of the revision so that the change may be made on T-9899.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is an excellent basic survey and no additional field work is required.

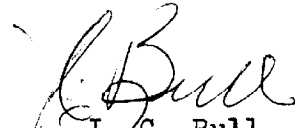
Examined and Approved:



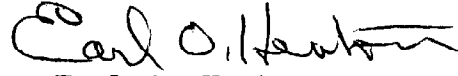
H. R. Edmonston  
Chief, Nautical Chart Branch



E. R. McCarthy  
Acting Chief, Chart Division



J. C. Bull  
Chief, Hydrography Branch



Earl O. Heaton  
Chief, Division of Coastal Surveys

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~XX~~

18 June 1952

Division of Charts: R. H. Carstens <sup>6 Feb.</sup>

Plane of reference approved in 9  
volumes of sounding records for

HYDROGRAPHIC SHEET 7931

Locality Peril Strait, Alaska

Chief of Party: R. J. Sipe in 1951

Plane of reference is mean lower low water, reading

4.7 ft. on tide staff at Bear Bay

12.0 ft. below B. M. 2 (1951)

Height of mean high water above plane of reference is 12.8 feet.

Condition of records satisfactory except as noted below:

*E. C. McKay*

Section of Tides

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

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-7931

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5 Mar 53	8248	Janeat H. Reel	Before <del>After</del> Verification and Review <i>added critical soundings.</i>
7/13/56	8252	N.W. Burgoyne	<i>partially Applied</i> <del>Before</del> After Verification and Review
7-19-60	8248	<i>E.W. Burgoyne</i>	<del>Before</del> After Verification and Review <i>Completely applied.</i>
9-19-60	8252	<i>E.W. Burgoyne</i>	<del>Before</del> After Verification and Review <i>Completely applied thru 8248</i>
	8248	D.J. Keenan	Before After Verification and Review <i>Re-examined for Reconstruction 2/25/74</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
			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

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.