

8389

Diag. Cht. No. 8551-3.

Proj 270

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. BO 1157 Office No. H 8389

LOCALITY

State Alaska

General locality Prince William Sound

Locality Dangerous Passage

19 57

CHIEF OF PARTY

Fred Natella

LIBRARY & ARCHIVES

DATE

~~1958~~
MAR 25 1958

COMM-DC 61300

8389

* SEE NOTE TO REVISION

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

*Device for interval
of ship edge defining
current and developing
ridge was entirely too
great*

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 8389

Field No. BO 1157

State Alaska

General locality Prince William Sound

Locality Dangerous Passage, Entrance to Icy Bay

Scale 1:10,000 Date of survey August-September, 1957

Instructions dated 28 December, 1954, 10 February, 1955, 28 November, 1955

Vessel Ship BOWIE and Launch CS 92

Chief of party Fred Natella

Surveyed by F. Natella, L. F. Woodcock, J. F. May, O. Beeman

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

Fathograms scaled by F. Srebalus, D. Thompson

Fathograms checked by O.B. and H.D.L.

Protracted by O. Beeman

Soundings penciled by O. Beeman

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

REMARKS:

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.....
.....

85

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY SHEET H 8389 (Field Number BO 1157)
Dangerous Passage, Prince William Sound, Alaska

Project 12770

1957

Scale: 1:10,000

Fred Natella
Fred Natella, L. F. Woodcock, J. F. May, O. Beeman

Chief of Party
Hydrographers

A-Project:

This survey was done in accordance with instructions for project CS 277 dated 28 December, 1954, revised instructions for project 1277 dated 10 February, 1955, and supplemental instructions 1277 dated 28 November, 1955, and 6 January, 1956.

B-Survey limits and dates:

This survey extends north to Lat. $60^{\circ} 18.6'$ where it joins a previous survey of Dangerous Passage. It is limited at the western end by a line running from Lat. $60^{\circ} 14.75'$ Long. $148^{\circ} 19.4'$ to Lat. $60^{\circ} 13.75'$ Long. $148^{\circ} 18.2'$. This is the junction with Survey 1257 done in 1957. *H-8390*
It is limited at the southern end by a line extending from Lat. $60^{\circ} 15.0'$ Long. $148^{\circ} 11.0'$ to Lat. $60^{\circ} 14.5'$ Long. $148^{\circ} 08.6'$. This is the junction with Survey 1256 of Whale Bay accomplished in 1956. *H-8388*
It is limited at the eastern end by a line extending from Lat. $60^{\circ} 14.5'$ Long. $148^{\circ} 08.6'$ to Lat. $60^{\circ} 16.7'$ Long. $148^{\circ} 07.5'$. This is the junction with Survey 1156 accomplished in 1957. Hydrography was accomplished from 8/6 to 9/7/57.

C-Vessel and Equipment:

Hydrography was accomplished by Ship BOWIE and Launch CS 92 operating from Ship BOWIE. Whaleboat 169 was used to collect bottom samples. Fathometers 57-24, 57-25, and 163 of the 808J type and 185-2 of the Edo type were used for this project.

D-Tide and Current Stations:

Two portable tide stations were maintained by Ship BOWIE Personnel in conjunction with this survey. One gauge was located in Icy Bay at Lat. $60^{\circ} 14.9'$ Long. $148^{\circ} 19.2'$. This gauge was operated from 8/6/57 through 9/8/57. A second gage located on Chenega Island at Lat. $60^{\circ} 16.9'$ Long. $148^{\circ} 06.9'$ was maintained from 19 June to 9 September, 1957. A range factor of $-0.9'$ for high tides and a -5 minutes time corrections for high and low was applied to predicted tides (Cordova) for boat sheet soundings. No current observations were made. All soundings east of Long. $148^{\circ} 13'$ were reduced using the Chenega Gauge. All soundings west of Long. $148^{\circ} 13'$ were reduced using the Icy Bay Gauge.

E-Smooth Sheet:

The projection was made by hand by the Seattle Processing Office. All other work was done aboard Ship Bowie by ship's Personnel. Signals were taken from advanced blue line prints from the Washington, D. C. office. Triangulation was plotted by geographic positions.

F-Control Stations:

Control for this survey was obtained from triangulation, graphic control, photo cuts, and hydrographic signals. Graphic control was accomplished in 1951. Triangulation was accomplished in 1933. Photo signals were obtained from manuscripts 9138, 9139, 9140, and 9141. Hydrographic signals were obtained by taking three sextant cuts from adjacent triangulation, topographic, and photo stations. In some instances a three point fix plus a check angle was taken from the station. A list of signals and their origin will be found following this report.

G-Shoreline and Topography:

Shoreline and topographic details were obtained from blue line prints of manuscripts 9138, 9139, 9140, and 9141. Dashed shoreline on these manuscripts was filled in by field inspection of photographs for HML and by plane table using the manuscript or tracings as the sheet.

H-Soundings:

Soundings were taken with the 808j type fathometer to depths of 180 fathoms. Edo type fathometer was used for greater depths. Several displaced positions were taken with the leadline. Adequate bar checks were taken during this survey. However, vertical casts were of little value for comparison due to the irregularity of the bottom. An initial correction of plus one fathom for the draft of the ship was used. Initial correction for launch work was derived from the bar checks. Vertical cast depths were not plotted due to the irregularity and also because they were not needed to supplement echo depth soundings. Phase comparisons were made aboard Ship Bowie and were used as the basis for phasing corrections to soundings. Bar check and phase summaries are attached to this report.

I-Control of Hydrography:

Hydrography was controlled throughout by three point fixes taken with USN hydrographic sextants. Some horizontal adjustment was made for b and c day (launch) for inshore positions between Fus and Nor. Adjustment was made on the basis of time, course, angles and the boat sheet. It was assumed this discrepancy would come out when the advanced manuscript was received but this failed to rationalize the error. The difficulty is believed to be caused by the weakness of the inshore fix.

J-Adequacy of Survey:

This survey is considered complete and adequate to supercede prior surveys in this area. Inshore work extending to at least the 75 fathom curve was accomplished with Launch 92. In general, 75 meter line spacing was used for the launch work. Deep water hydrography was done by Ship Bowie running 150 meter lines. All shoal indications were fully developed. Junction with BO 1257 and BO 1157 accomplished in 1957 and BO 1256 (Whale Bay) accomplished in 1956 was satisfactory and depth curves can be drawn. (These three surveys are 1:10,000)

A minimum of depth curves were drawn due to the precipitous submarine topography in this area. Only 10, 20, 30, 50, and 100 fathom curves were delineated on the smooth sheet.

K-Crosslines:

Junctions of ship work and launch work are poor at depths over 70 fathoms. Largest error at crossing, however, is less than 4% and is generally less than 2%. This discrepancy was not noted in the field because the differences were small enough to be eliminated in the reduction of soundings. However, reduction failed to rationalize the difference. The ship soundings are consistently 3 to 4 fathoms shoaler than the launch soundings on the C, D, and E scale of the 808 fathometer. Crossings on the A and B scale are good. This would indicate an error in the phase correction between the B and C scale on one of the fathometers. However, careful check reveals all phase comparisons to be adequate and correct. It must also be noted that phase comparisons were not made in conjunction with this survey due to the inavailability of flat locations but were made when the ship was underway to port. Phase comparisons are attached to this report.

All discrepancies will not be listed here as they can be easily investigated by perusal of the smooth sheet. The following are indicative of the whole sheet. Ship positions 1-14 C show excellent crossings with launch work on the A and B scale. All crossings at depths under 70 fathoms in the area around Lat. $60^{\circ} 18'$ Long. $148^{\circ} 11.5'$ are good. The discrepancy can best be noted in three areas. The first is just south of Lat. $60^{\circ} 15'$ and Long. $148^{\circ} 09'$. There is a comparatively flat bottom at this position which the two fathometers fail to record as the same depth. The error is about 3 fathoms in 170 or 1.7%. The same error is found just SW of Verdant Island where the error is from 3 to 4 fathoms in 150 fathoms. The highest error, percentage wise, is at the junction of soundings at Lat. $60^{\circ} 15.5'$ and Long. $148^{\circ} 17'$. Here the difference is 2 to 3 fathoms in 83 fathoms or approximately 3%. In all locations where launch work crossed prior launch work or the ship ran crosslines on their previous work there were excellent crossings.

Some soundings were not plotted due to the congestion in certain areas. All soundings not plotted were marked NP in the sounding volume.

The most adequate explanation for the above listed discrepancy can be found from two sources. In some areas Standard Edo and 808 soundings were recorded simultaneously aboard Ship Bowie. Vol. I, A day, Page 43 (ship's work) gives indication that the 808 fathometer 57-24 is sounding shoaler than the true depth if phasing corrections are applied. Due to the irregularity of the bottom vertical casts were of little value and often varied as much as 10%. However, certain vertical casts taken in relatively flat areas have been selected and show some consistency. Selecting positions 2D, 5D, 9D, 16D, and 26D, indicates a difference of 3.2 fathoms between the vertical cast and the reduced sounding from the 808. These soundings are all on the C scale.

Ver.
see also
H-8388

Ph. Corr.
agree with
Col. R. Survey
of 1958

It is recommended that the launch work be accepted as the correct value and where selected for charting a correction of 3 fathoms be added to smooth sheet soundings on the C, D, or E scale taken from the Ship Bowie.

L-Comparison to Prior Survey:

Comparison with prior survey H5409, 1:20,000, 1933 was very satisfactory in light of the advances in surveying practice since that date. The rock at approximately Lat. $60^{\circ}17.5'$ Long. $148^{\circ}13.9'$ was not seen awash although shoal indications were noted in this area. The important feature in this area is the extensive shoal extending beyond subject rock.

M-Comparison with Chart:

Comparison was made with Chart 8515 printed 3/24/52. Comparison was excellent with only one discrepancy noted. This was described in L-Comparison to Prior Survey. It will be noted that a large part of the survey is in waters hitherto unsurveyed.

N-Dangers and Shoals:

Only one danger was found that was not previously charted. It constitutes little danger to navigation due to its proximity to the shore. It is a rock awash at low water located at Lat. $60^{\circ}15.10'$ Long. $148^{\circ}18.32'$. (Position ln, 9/7/57.)

Because of difference in scale the rocks and reefs in the southern part of the cove on the southwest cove of Chenega Island were difficult to compare with the prior survey. However, because of our extensive development of this area at low water it is recommended our survey supercede the existing survey of this area.

O-Coast Pilot Information:

No Coast Pilot Information has been submitted at this date.

F-Aids to Navigation:

There are no aids to navigation in this area.

Q-Landmarks for charts:

No additions or deletions are recommended.

R-Geographic Names:

None are recommended.

Z-Tabulation of Applicable Information: Attached to this Report:

1. List of signals
2. Statistics
3. Summary of bar checks
4. Phase comparisons
5. Tidal note

Respectfully submitted,

Ogden Beeman
Ogden Beeman, Ens. C&GS

Approved and Forwarded

Fred Natella

Fred Natella, Cdr. C&GS
Commanding, Ship Bowie

Signal used on H 8389 (BO 1157)

Signal Name			Origin
Abe	Photo	037	T-9141
Ace	Photo	004	T-9139
Act	Hydro		Vol. 3, pg. 2
Age	Photo	837	T-9139
Aid	"	828	"
Ale	"	835	"
Amp	"	577	"
Ark	"	660	T-9141
Axe	Hydro		Vol. 1, pg. 3
Bar	Photo	307	T-9138
Baron	Triangulation		1933
Bat	Photo	336	T-9139
Bat	"	010	"
Bay	"	311	T-9138
Bed	"	512	T-9139
Berg	Triangulation		1933
Big	Photo	579	T-9139
Cab	Hydro		Vol. 3, pg. 2
Cat	Photo	321	T-9138
Cliff	Triangulation		1933
Cod	Topographic		T-9139
Cow	Photo	325	T-9138
Cry	Hydro		Vol. 1, pg. 3
Day	Photo	520	T-9139
Doc	Hydro		Vol. 3, pg. 2
Dog	Photo	322	T-9138
Dolt	Topographic		T-9140
Dot	"		T-9139
Dud	Photo	363	"
Duke	Triangulation		1933
Duz	Photo		T-9139
Eat	Photo	169	T-9139
Egg	"	362	"
Ego	Topographic		"
Fat 269 999	Photo	171	T-9139
Fox	"	658	T-9141
Fug	"		T-9139
Fus	"	360	T-9139
Gad	Photo	357	T-9139
Gage	Hydro		Vol. 1, pg. 3
Card	Topographic		T-9139 (station Garb)
Gay	Photo	173	"

Hag	Photo	304	T-9140
Hag	"	539	T-9139
Hal	"	824	T-9141
Hat	"	593	"
Her	"	206	T-9140
His	"	852	T-9139
Hit	"		T-9141
Hog	"	302	T-9140
Hub	"	583	T-9139
Icy	Triangulation	1933	
Jap	Photo	538	T-9139
Jax	"	849	"
Jax	Hydro		Vol. 1, pg. 3
Jim	Photo	333	T-9139
Kid	Photo	537	T-9139
Kop	"	848	"
Lad	Photo	536	T-9139
Lip	"	656	T-9141
Log	"		T-9139
Low	"	831	"
Lux	"	847	"
Mad	Hydro		Vol.1, pg. 3, Sheet 1257
Man	Photo	534	T-9139
Mar	Photo	585	"
Max	Hydro		Vol. 3, pg. 3
Mel	Photo	826	T-9141
Met	Topographic		T-9139
Mix	Photo	846	"
Nan	Hydro		Vol. 3, pg. 3
Nat	Photo	532	T-9139
Nigger	Triangulation	1933	
Nipy	Topographic		T-9139 (1951)
Nix	Photo	298	T-9140
Nod	Photo	216	T-9138
Non	"		T-9141
Nor	"	845	T-9139
Oak	Photo	530	T-9139
Car	Hydro		Vol. 3, pg. 2
Oath	Topographic		T-9139 (1951)
Obe	Photo		"
Ora	"	613	"
Ore	"	331	"
Orion	Triangulation	1933	
Owl	Triangulation	1957	T-9141

Fad	Photo	526	T-9139
Faw	"	592	T-9141
Fawn	Topographic		T-9139 (1951)
Fas	Photo	838	"
Fig	"	237	T-9140
Fin	"	844	T-9139
Fin	"	834	"
Fit	"	314	T-9140
Fly	Triangulation	1957	T-9141
Full	Topographic		T-9139
Quad	Topographic		T-9138 1951
Ram	Photo	522	T-9139
Rat	"	843	"
Red	"	335	"
Roc	Topographic		"
Rub	Triangulation	1957	T-9141
Sad	Hydro		Vol. 1, pg. 3
Sag	Photo	521	T-9139
See	"	300	T-9140
Shale	Triangulation		1933
She	Photo	502	T-9139
She	Photo	320	T-9138
Sin	Triangulation	1957	T-9141
Sis	Hydro		Vol. 3, pg. 2
Sit	Photo	842	T-9139
Six	"	586	"
Sob	R.M. 1, 1933		Triangulation Station Sober
Sot	Hydro		Vol. 1, pg. 3
Sun	Photo		T-9141
Tar	Triangulation	1957	T-9141
Tap	Hydro		Vol. 1, pg. 3
Tip	Photo	840	T-9139
Tri	"		"
Try	"	503	"
Tut	"	504	"
Ute	Photo	589	T-9139
Vet	Photo	506	T-9139
Vex	"	313	T-9140
Village	Triangulation		1933
Von	Hydro		Vol. 3, pg. 2
Wax	Photo	012	T-9139
Wed	Photo	507	"
Wine	Topographic		T-9141 1951
Yank	Topographic		T-9140
You	Photo	508	T-9139

Zag
Zig

Hydro
Photo 510

Vol. 3, pg. 2
T-9139

Statistics to accompany H 8389 (BO 1157)

Date	Day Letter	Volume	Positions	N. Miles	S. Miles	Bottom Samples
8/6/57	a	1	233	26.4	30.4	
8/7	b	2-3	261	36.0	41.4	
8/8	c	3-4	235	31.0	35.6	
8/9	d	4-5	235	29.5	34.0	
8/10	e	5	193	19.0	21.9	
8/11	f	6	251	33.8	38.9	
8/12	g	7-8	251	38.0	43.7	
8/13	h	8-9	255	38.3	44.0	
8/14	i	9-10	230	34.7	39.9	
9/6	k	10	100	11.2	12.9	
8/25	l	10	14			14
8/24	m	10	15			15
8/7	n	10	1			
Total; Launch Work			<u>2574</u>	297.9	342.7	29
8/12/57	A	1	180	49.5	56.5	
8/13	B	1-2	205	59.6	68.1	
8/14	C	2-3	156	34.1	39.0	11
8/15	D	3	<u>37</u>	<u>5.7</u>	<u>6.0</u>	<u>12</u>
Total: Ship Work			578	148.9	169.6	23
Combined Total			3152	446.8	512.3	52

PHASE CORRECTIONS FATHOMETER 57-24

<u>A</u>	<u>B</u>	<u>Diff</u>	<u>B_n</u>	<u>G</u>	<u>Diff</u>	<u>C</u>	<u>D</u>	<u>Diff</u>
47.5	48.8	-1.3	85.2	86.7	-1.5	122.1	123.2	-1.1
48.0	49.0	-1.0	85.4	86.8	-1.4	122.4	123.3	-0.9
47.7	49.0	-1.3	85.5	87.0	-1.5	122.7	123.7	-1.0
47.7	48.8	-1.1	73.0	74.3	-1.3	122.8	123.8	-1.0
47.6	48.8	-1.2	73.0	74.3	-1.3	122.9	123.8	-0.9
47.6	48.8	-1.2	73.1	74.2	-1.1	123.0	124.0	-1.0
47.6	48.8	-1.2	73.4	74.7	-1.3	123.1	124.0	-0.9
47.6	48.8	-1.2	73.5	74.8	-1.3	123.0	123.9	-0.9
47.7	48.8	-1.1	73.6	75.0	-1.4	123.0	123.7	-0.7
		<u>-1.2</u>	73.7	75.0	-1.3			<u>-1.0</u>
			73.7	75.0	-1.3			
			86.2	88.2	-2.0			
			86.2	88.0	-1.8			
			86.0	87.9	-1.9			
			86.0	87.7	-1.7			
			86.0	87.7	-1.7			
			85.8	87.3	-1.5			
			85.5	87.2	-1.7			
			85.5	87.3	-1.8			
					<u>-1.5</u>			

<u>D</u>	<u>E</u>	<u>Diff</u>
152.7	152.9	-0.2
152.7	152.9	-0.2
152.7	152.6	-0.1
152.6	152.6	0.0
52.6	152.6	0.0
152.6	152.6	0.0
150.2	150.2	0.0
150.2	150.2	0.0
150.5	150.4	-0.1
149.6	149.8	-0.2
		<u>-0.0</u>

PHASE CORRECTIONS FATHOMETER 57-24

<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
-1.2	-2.7	-3.7	-3.7

PHASE CORRECTIONS FATHOMETER 57-25

<u>A</u>	<u>B</u>	<u>DIFF</u>	<u>B</u>	<u>C</u>	<u>DIFF</u>	<u>C</u>	<u>D</u>	<u>DIFF</u>
52.3	53.0	-0.7	41.2	41.8	-0.6	120.0	120.3	-0.3
52.4	53.4	-1.0	41.3	42.2	-0.8	120.0	120.7	-0.7
52.6	53.4	-0.8	41.5	42.7	(-1.2)R	120.1	120.8	-0.7
52.7	53.5	-0.8	42.0	42.7	-0.7	119.8	120.8	-1.0
52.8	53.6	-0.8	42.0	42.9	-0.9	120.0	119.7	R(0.3)R
52.9	53.7	-0.8	42.0	42.9	-0.9	119.4	120.0	-0.6
52.8	53.7	<u>-0.9</u>	42.6	43.7	(-1.1)R	119.8	120.1	-0.3
		<u>-0.8</u>	43.8	44.4	-0.6	119.8	120.3	-0.5
			45.0	46.0	-1.0	120.0	120.8	-0.8
			44.0	44.7	-0.7	120.2	120.9	<u>-0.7</u>
			44.2	45.0	-0.8			-0.6
			44.3	45.0	-0.7			
			44.3	45.0	-0.7			
			44.6	45.3	-0.7			
			45.5	46.5	<u>-1.0</u>			
					<u>-0.8</u>			

<u>D</u>	<u>E</u>	<u>Diff</u>
147.5	148.0	-0.5
148.0	148.5	-0.5
148.6	148.9	-0.3
148.7	149.1	-0.4
149.0	149.2	-0.2
149.3	149.5	-0.2
149.5	149.6	-0.1
149.7	149.9	-0.2
149.7	149.9	-0.2
149.7	150.0	-0.3
150.0	150.0	0.0
150.0	150.2	-0.2
150.0	150.2	<u>-0.2</u>
		<u>-0.3</u>

PHASE CORRECTIONS

<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
-0.8	-1.6	-2.2	-2.5

PHASE CORRECTIONS FATHOMETER S-111

<u>A</u>	<u>B</u>	<u>DIFF</u>	<u>B</u>	<u>C</u>	<u>DIFF</u>	<u>C</u>	<u>D</u>	<u>DIFF</u>
40.5	42.0	(-1.5)R	86.0	88.0	-2.0	111.6	112.0	-0.4
40.5	42.5	-2.0	86.2	88.0	-1.8	110.5	111.1	-0.6
40.8	42.5	-1.7	86.1	88.2	-2.1	110.5	110.9	-0.4
41.0	43.2	-2.2	86.5	88.2	-1.7	110.5	111.0	-0.5
41.0	43.2	-2.2	86.2	88.4	-2.2	110.5	111.0	-0.5
41.1	43.5	-2.4	87.0	88.4	-1.4	110.2	110.6	-0.4
41.3	43.0	-1.7	87.0	89.0	-2.0	109.6	109.9	-0.3
41.3	43.4	-2.1	86.8	89.1	-2.3	109.0	109.7	-0.7
41.3	43.4	-2.1	87.0	88.9	-1.9	108.5	108.7	-0.2
41.3	43.3	-2.0	87.2	88.9	-1.7	108.2	108.7	-0.5
42.0	43.7	-1.7	87.2	89.5	-2.3	108.0	108.7	-0.7
42.0	44.3	-2.3	87.5	89.5	-2.0	108.5	108.7	-0.2
42.3	44.3	-2.0	87.5	89.4	-1.9			-0.4
42.3	45.0	(-2.7)R			-1.5			
43.0	45.2	-2.2						
43.8	45.8	-2.0						
		-2.0						

FATHOMETER S-101

<u>B</u>	<u>C</u>	<u>DIFF</u>
(74.8	75.5)R	
73.7	75.5	(-1.8)R
74.0	75.5	-1.5
74.5	75.5	-1.0
74.5	75.6	-1.1
74.5	75.7	-1.2
74.5	75.7	-1.2
74.5	75.7	-1.2
74.3	75.7	-1.4
74.3	75.8	-1.5
74.7	75.8	-1.1
74.7	75.6	-0.9
74.8	75.6	(-0.8)R
74.8	75.8	-1.0
		-1.2

SCALE CORRECTIONS

<u>B</u>	<u>C</u>	<u>D</u>
-2.0	-3.5	-3.9

Summary of Bar checks for H 8389 (BO 1157)
(Launch 92) Readings in Fathoms

Fathometer s111

Vol	Day	2	5	8	10
1	a	1.6	4.6	7.6	9.5
		1.8	4.8	7.6	
Total		3.4	9.4	15.2	9.5
Mean		1.7	4.7	7.6	9.5
Correction	plus	0.3	0.3	0;4	0.4
Mean Correction	plus	0.40			

Fathometer s 163

10	k	1.8	4.8	7.6	9.6
		1.8	4.8	7.6	9.6
Total		3.6	9.6	15.2	19.2
Mean		1.8	4.8	7.6	9.6
Correction	plus	0.2	0.2	0.4	0;4
Mean correction	plus	0.30			

Fathometer 57-25

1	a	1.6	4.8	7.8	9.8	Total	45.9	119.4	202.0	127.4
		1.8	4.8	7.8		Mean	1.76	4.78	7.77	9.80
2	b	1.6	4.6	7.6	9.8	Corr. plus	0.24	0.22	0.23	0.20
		1.6	4.8	7.6		Mean correction	plus 0.2 fathoms			
3	c	1.8	4.8	7.8	10.0					
		1.8	4.8	7.8						
4	c	1.8	4.8	7.8	9.8					
		1.6	4.8	7.8						
4	d	1.8	4.8	7.6	9.6					
		1.8	4.6	7.8						
5	e	1.8	4.8	7.8	9.8					
		1.8	4.8	7.8						
6	f	1.8	4.8	7.8	9.8					
		1.8	4.8	7.8						
6	f	1.8	4.8	7.8	9.8					
		1.7	4.8	7.8						
7	g	1.8	4.8	7.8	9.8					
		1.8	4.8	7.8						
8	h	1.8	4.8	7.8	9.8					
		1.8	4.8	8.8						
9	h	1.8	4.8	7.8	9.8					
		1.8	4.8	7.8						
9	j	1.8	4.6	7.6	9.8					
		1.8	4.8	7.8						
10	j	1.8	4.8	7.8	9.8					

Tidal Note to Accompany
H 8389

Two tide gauges were used in conjunction with this survey. One portable gauge and staff was located at Lat. $60^{\circ} 14.9'$ Long. $148^{\circ} 19.2'$ and was used for reducing data west of Long. $148^{\circ} 13'$. Mean lower low water corresponds to 0.8' on the staff. The second gauge was located at Chenega Island Lat. $60^{\circ} 16.9'$ Long. $148^{\circ} 06.9'$ and was used to reduce data east of $148^{\circ} 13'$. Mean lower low water corresponds to 3.2' on the staff.

All marigrams from these stations have been submitted to the Washington office.

GEOGRAPHIC NAMES

Survey No. ~~8~~-8389

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Alaska			(for title)								1
<u>Prince William Sound</u>			"						BGN		2
<u>Whale Bay</u>											3
<u>Dual Head</u>									BGN		4
<u>Verdant Island</u>									"		5
<u>Icy Bay</u>											6
<u>Chenega Island</u>									BGN		7
<u>Dangerous Passage</u>											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names approved 4-1-58
L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8389..

Records accompanying survey:

Boat sheets *2*...; sounding vols. *13*...; wire drag vols.;
bomb vols.; graphic recorder rolls ~~3~~ *Envelopes*
special reports, etc. *1-Smooth sheet and 1-Descriptive report.*
2-Film positives of Boat Sheet.....

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

Number of positions on sheet
Number of positions checked
Number of positions revised
Number of soundings revised (refers to depth only)
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time

Verification by.....Total time Date

Reviewed by..... Time Date

*NOTE: PAPER ALIGNMENT CORRECTION
MAY BE NEEDED FOR FATHOGRAMS*

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- 8389

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.
3. All reference to survey sheets mentioned in the descriptive report include the registry number and year.
4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering.
5. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken.
6. All positions verified instrumentally were check marked in the sounding records.
7. All critical soundings are clear and legible and are a little larger than the adjacent soundings.
8. The metal protractor has been checked within the last three months.
9. The protracting and plotting of all bad crossings were verified.
10. All detached positions locating critical soundings, rocks or buoys were verified.
11. The boat sheet was compared with the smooth sheet.

12. The spacing of soundings as recorded in the records was closely followed.
13. The bottom characteristics were shown on outstanding shoals.
14. The reduction and plotting of doubtful soundings were checked.
15. The transfer of contemporary topographic information was carefully examined.
16. All junctions were transferred and overlapping curves made identical.
17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.
18. The depth curves have been inspected before inking.
19. All triangulation stations and transfer of topographic and hydrographic signals were checked.
20. Heights of rocks were checked against range of tide.
21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.
22. Unnecessary pencil notes have been removed.
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.
24. The low water line and delineation of shoal areas have been properly shown.
25. Degree and minutes values and symbols have been checked.
26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).
28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.
29. All aids located, with those on contemporary topographic sheets, have been shown on survey.
30. Depth curves were satisfactory except as follows:
31. Sounding line crossings were satisfactory except as follows:
32. Junctions with contemporary surveys were satisfactory except as follows:
33. Condition of sounding records was satisfactory except as follows:
34. The protracting was satisfactory except as follows:
35. The field plotting of soundings was satisfactory except as follows:
36. Notes to reviewer:

Verified by

Date

RAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens:

Plane of reference approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET 8389

Locality Prince William Sound, Alaska

Chief of Party: F. Natella in 1957

Plane of reference is mean lower low water, reading

3.2 ft. on tide staff at Chenega Island

12.2 ft. below B.M. 1 (1957)

0.8 ft. on tide staff at Icy Bay

15.9 ft. below B.M. 1 (1957)

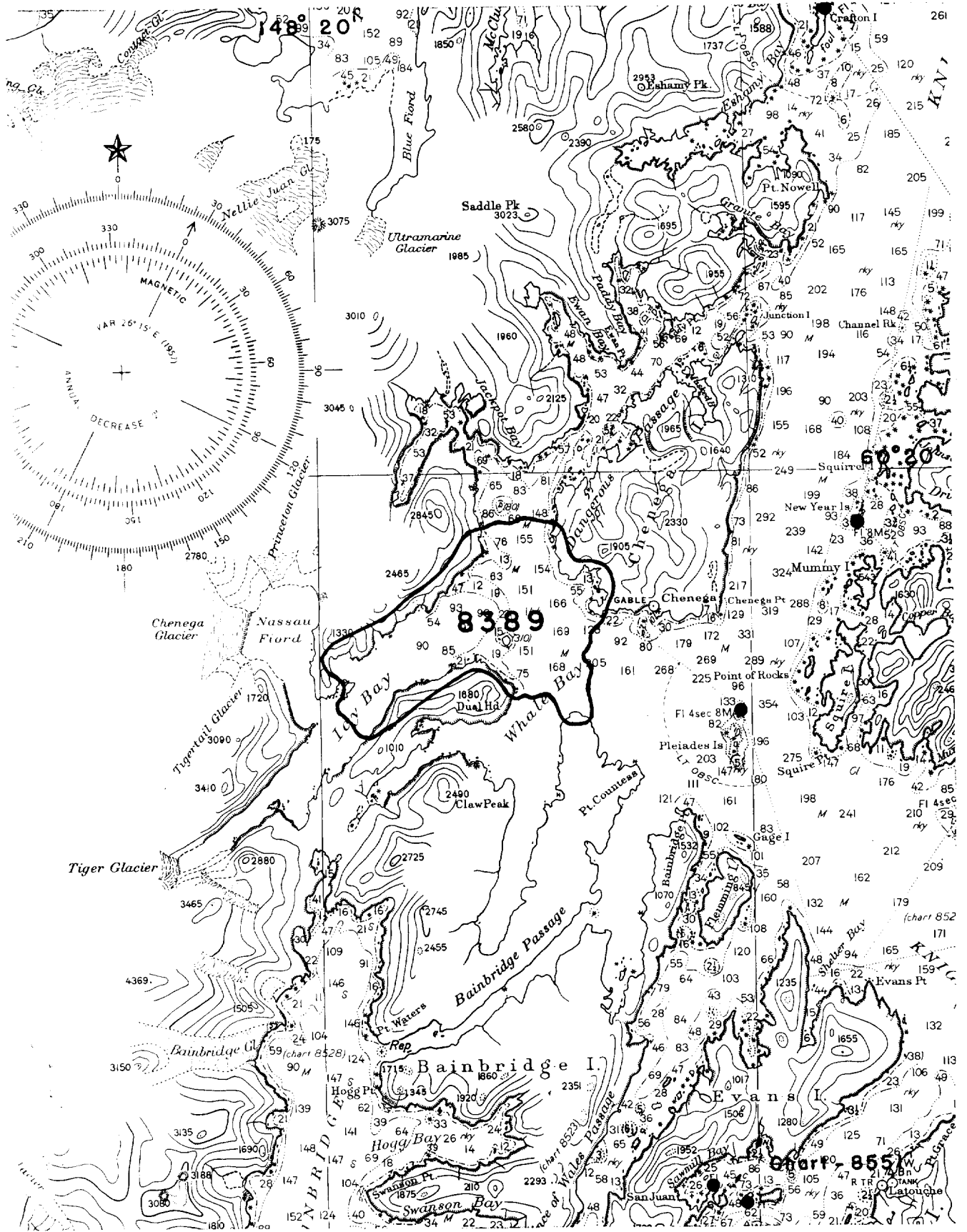
Height of mean high water above plane of reference is as follows:

Icy Bay	10.5 feet
Chenega Island	10.7 feet.

Condition of records satisfactory except as noted below:

Signature

Chief, Tides Branch



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8389

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/12/58	8502	M. Rogers	Inspected Before After Verification and Review - No Corr.
10-21-58	8528	J. Platon	App'd. Before After Verification and Review
1/9/59	8515	H. MacEwen	Before After Verification and Review
7/2/59	8551	JYE	Before After Verification and Review
8/19/63	Extension 8528	DEW	Before After Verification and Review
12/6/65	8523	P. Musfeldt	Before After Verification and Review
8/9/84	16702	B. Farnsworth	Before After Verification and Review No Corr. Dwg # 8, considered adequately appl
3/26/90	16683	D. McQuinn	Before After Verification and Review CONSIDER ADEQUATELY APPLIED CAT I
7-29-91	16701	W. P. Ohms J. Harper	Before After Verification and Review Dwg # 12 Considered Adequately Applied - Cat I
7-29-91	16700	W. P. Ohms J. Harper	Before After Verification and Review Dwg # 26 Considered Adequately Applied - Cat I

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.