8608

Diag. Cht. No. 8551-3.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. B6-10-6-61 *Office No.* H-8608

LOCALITY

State Alaska

General locality Prince William Sound

Locality Culross Passage ~~North~~

1961

CHIEF OF PARTY

F. X. Popper

DATE

COMM-DC 61300

8608

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-8608

Field No. BO-10-6-61

State Alaska

General locality Prince William Sound

Locality Culross Passage ~~North~~

Scale 1:10,000 Date of survey 9/7/61 — 9/17/61

Instructions dated 18 November 1958

Vessel USC&GSS BOWIE

Chief of party F. X. Popper

Surveyed by P. D. Montjoy

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

Fathograms scaled by W. White

Fathograms checked by M. E. Natto, P. D. Montjoy

Protracted by C. A. J. Pauw

Soundings penciled by C. A. J. Pauw

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

REMARKS:

K.W.W. 3/7/94

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

GM

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-8608 Field No. BO-10-6-61

Scale: 1:10,000 Date: 1961

F. X. Popper, Commanding

USC&GSS BOWIE

A Project:

This survey was conducted as a portion of project OPR-277 in accordance with instructions dated 18 November 1958 and supplemental instructions dated 14 January 1960.

B Area Surveyed:

The area of Culross Passage is covered in this survey. The limits of this survey are: 60°-39.8'N to 60°-46.0'N, 148°-11.0'W to 148°-15.5'W.

This survey joins prior survey H-7618 (1947, 1:20,000) at the northern limit. It joins contemporary survey H-8607 (1961, 1:10,000) at the southern limit.

Hydrography was accomplished between 7 September and 17 September 1961.

C Sounding Vessel:

Hydrography was accomplished using Launch No. 95, a 30 ft. wooden diesel powered launch, and Launch No. 184, a 26 ft. plastic diesel powered whaleboat. Bottom samples were taken with Launch No. 184.

Launch No. 95 is called 6-A in the sounding volumes and it's work is designated by blue lower case letters.

Launch No. 184 is called launch 1 in the sounding volumes and it's work is designated by red lower case letters.

D Sounding Equipment:

Soundings were taken with 808 Fathometers calibrated at a speed of 800 Fms./Sec.

Serial numbers of the fathometers used are 57-30 and 57-25.

Phase comparisons were obtained for each fathometer by obtaining ten observations at each change of scale. The 10 observations were then scanned from the fathogram and a mean correction determined. This correction was combined with the bar check correction to give the Echo Correction which is shown on page B.

At the time the phase comparisons were taken a series of tests were run on each fathometer and the results are as follows:

Fathometer	Speed	Paper Advance	Radius Stylus Arm
57-30	109 RPM	7.8 inch/4 min. (foot scale)	O.K.
57-28	"	"	"

Paper advance and speed checks were made twice each day and are recorded on the fathograms.

Velocity corrections determined from the temperature and salinity casts are shown on page C.

Because of the steep and irregular bottom a striker, type NJ-3, was used on each 808 fathometer in ouder to obtain a satisfactory record.

E. Smooth Sheet:

The smooth sheet projection was computed and constructed by the Washington Office.

F. Control:

Three point fixes were used to control hydrography accomplished on this sheet.

Triangulation, Topographic, Photogrammetric and Hydrographic signals were used for control.

Topographic signals were located by cutting down manuscript T-11582 and using it on a plane table. Signals located this way are: Sow, Who, Log, Mug, Nix, Owl, Pup, Rip, Lad, Sox, Vex, Yes and Tub.

For complete information on signals used see Signal List on page A.

G. Shoreline:

All shoreline for this survey was taken from incomplete manuscripts T-11582 and T-11583.

The dashed shoreline on the east side of Culross Passage between Lat. 60°-42'-56"N and 60°-43'-10"N should be adjusted to fit the topographic signals Owl, Pup and Rip.

The dashed shoreline on the east side of Culross Passage between Lat. 60°-44'-20"N and 60°-44'-53"N is correct as shown on manuscript T-11582.

The dashed shoreline on the east side of Culross Passage between Lat. 60°-43'-30"N and 60°-43'-50"N should be adjusted to fit signals Sox, Rum and Pad.

H. Crosslines:

Approximately 12% crosslines were run with good crossings. For a more complete statement see smooth plotters report.

I. Junctions:

Agreement at junctions with surveys mentioned in section B was found to be good. For a more complete statement see the smooth plotters report.

J. Comparison with Prior Surveys:

No Prior survey.

K. Comparison with Chart:

Not charted.

L. Adequacy of Survey:

Due to lack of time three areas were not completed in this survey. Long Bay, Goose Bay and the shoreline on the west side of Culross Passage between Lat 60°-44.0'N and 60°-45.5'N are the incomplete areas. The remainder of the survey is deemed complete and adequate for charting.

M. Statistics:

168 Nautical miles of sounding lines
1574 Positions
15 Bottom samples
3.8 Square miles of hydrography
3 Tide stations used (one gage is not on the limits of this sheet)
1 Magnetic station
0 Current stations

N. Tabulation of applicable data:

A. Signal List
B. Fathometer Corrections
C. Velocity Corrections
D. Tidal note

Respectfully submitted,

Andrew Tczap

Andrew Tczap
Ens., C&GS

APPROVAL SHEET

BO-10-6-61

Field work on this hydrographic survey was inspected daily by the Chief of Party. This survey is considered complete and no additional work is necessary. All records are approved and forwarded.

F. X. Popper

F. X. Popper
CDR., C&GS
Commanding Ship BOWIE

LIST OF HYDROGRAPHIC SIGNALS H-8608 (BO-10-6-61)

USC&GSS BOWIE - PROJECT OPR-277

Hydrographic Name	Source
Abe 002	T-11582
Ace 012	T-11583
Aim 035	T-11582
Amp 056	Vol 1, p. 7
Art 078	T-11582
Bag 003	T-11583
Bat 009	T-11582
Bone 065	1948 Tri Sta BONE
Bus 087	T-11583
Cab 100	T-11582
Car 107	"
Cone 165	1956 Tri Sta CONE
Cow 169	T-11582
Day 109	Vol 1, p 4 & Vol 18, p 18
Deb 120	T-11582
Doc 161	"
Ear 207	Vol 7, p18, Vol 1, p 72
Eat 208a	T-11582
Erg 273	"
Far 207	T-11583
Fat 111a	Vol 1, p 5
Fix 239	Vol 1, p 6 & 7
Fun 285	T-11582
Few 229	"
Gag 303b	"
Gig 333	T-11583
Goat 360	1956 Tri Sta GOAT
Gus 387	T-11582
Hag 222b	"
Hat 308	"
Hex 329	"
Hut 388	T-11583
Ice 312	T-11582
Irk 374	T-11583
Jap 406	T-11582
Jar 407	"
Joe 403	Vol 1, p 3
June 485	1956 Tri Sta JUNE
Key 429	Vol 1, p3
Kid 431	T-11582
Kim 435	"
Lad 401	" Topo
Lax 409	"
Leg 423	Vol 1, p 6

Hydrographic Name	Source
Log 463	T-11582 Topo
Mag 503	T-11582
Man 505	Vol 1 p 4
Mim 535	1948 Tri Sta MIMIC
Mug 583	T-11582 Topo
New 529	Vol 1, p 6 & 7
Nix 539	T-11582 Topo
Nul 584	T-11582
Nux 589	T-11583
Oak 604	T-11582
Odd 611	T-11583
Off 622	Vol 1, p 3
Old 641	T-11583
Owl 694	T-11582 Topo
Pad 601	T-11582
Pan (Tan)	"
Peg 625	"
Pet 628	1948 Tri Sta PETER
Pie 632	T-11583
Pit 638	Vol 1, p 6 & 7
Pup 686	T-11582 Topo
Quo 444c	T-11582
Ram 705	"
Reb 720	1948 Tri Sta REBEL
Rip 736	T-11582 Topo
Rum 785	T-11582
Scare 710	1948 Tri Sta SCARE
She 732	T-11583
Sow 769d	T-11582 Topo
Sox 555d	" "
Split 764	1948 Tri Sta SPLIT
Tan 805	T-11583
Tie 832	"
Tig 833	1948 Tri Sta TIGER
Tub 880	T-11582 Topo
Usher 873	1948 Tri Sta USHER
Vex 829	T-11582 Topo
Who 936	" "
Yes 927	" "
Zag 903	T-11583
Zig 933	T-11582

TOTAL FATHOMETER CORRECTION (ECHO)

Fathometer #57-30

A Scale	+.2
B Scale *	+.3
C Scale **	+.2
D Scale	+.4
E Scale	+1.2

Fathometer #57-25

A Scale	+.3
B Scale	-.3
C Scale	-.8
D Scale	-1.4
E Scale	-1.9

Phase Corrections entered under Echo Corrector in Volumes

Entered as TRA Corrector on Corrector Tape Form

VELOCITY CORRECTIONS

For all work days:

From:	To:	Correction:
0 Fms.	10 Fms.	0
10	15	+.1
15	25	+.2
25	40	+.3
40	60	+.4
60	85	+.5
85	120	+.6
120	140	+.7
140	160	+.8

Above 160 fms. the corr. is zero.

Velocity Corrections entered in 3rd Corrector Column with Initial instead of under Echo Corrector Column.

Velocity Table I

TIDAL NOTE

This sheet was divided into three tide zones. Zone A is the area south of a Northeasterly line drawn thru signal Rebel. Zone B is the area north of the Northeasterly line drawn thru Rebel and south of a Southeasterly line drawn thru signal Zig. Zone C is the area north of the line thru Zig. The three gages used were: Vicinity of Applegate Island, Entrance to Long Bay-Culross Passage and North Entrance-Culross Passage. See the boat sheet for the tide zones.

The North Entrance-Culross Passage gage is located at Lat. 60°-44.7'N, Long. 148°-13'W. At this gage MLLW on the staff is 4.4ft. and MHW is 15.4 ft.

The Entrance to Long Bay-Culross Passage gage is located at Lat. 60°-41.5'N, Long. 148°-15.8'W. At this gage MLLW on the staff is 5.42 ft. and MHW is 16.2 ft.

The Vicinity of Applegate Island gage is located at Lat. 60°-37.5'N, Long. 148°-15'W. At this gage MLLW on the staff is 6.6 ft. and MHW is 17.6 ft.

The time meridiam used for all gages is 150°W.

PROCESSING OFFICE NOTES - H-8608

SMOOTH SHEET

Projection by Washington Office. Control and shoreline by personnel of Seattle Hydrographic Processing Unit. Shoreline and control were from sources in paragraphs F and G in field report.

CROSSLINES

Crosslines appear in good agreement on the smooth sheet.

JUNCTIONS

The junctions with H-7618(1947) scale 1:20,000 and contemporary survey H-8607. The agreement was found to be good for both surveys. The sounding lines on H-7618 when enlarged to 1:10,000 are rather widely spaced and the coverage is not complete at the north end of Culross Passage.

COMPARISON WITH CHART

Comparison has been made with Chart 8517, 7th Ed., May 7, 1962. The soundings on this area of the chart were taken from the boat sheet, there having been no previous survey. Because of this, there are minor differences between the chart and the smooth sheet. Generally, the smooth sheet soundings are deeper than those charted. There are three soundings that should be added to the chart, a 4.7 fathom sounding at Latitude 60° 44'.45 N, Longitude 148° 13'.35 W, where the charted depth on a shoal is shown as $5\frac{1}{2}$ fathoms; a 49 fathom sounding at Latitude 60° 45'.38 N, Longitude 148° 13'.40 W; and probably the 83 fathoms at Latitude 60° 45'.0 N, Longitude 148° 13'.4 W should be shown to indicate the deep hole in that area.

See section of chart attached to this report for comparison.

Respectfully submitted,

William M. Martin

William M. Martin
Supervisory Cartographer

Approved and forwarded

M. E. Wennermark

M. E. Wennermark
Captain, C&GS
Seattle District Officer

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8608

Name on Survey	On Chart No. 8517 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	BGN K	
CULROSS ISLAND	✓								✓	1
CULROSS PASSAGE	✓									2
GOOSE BAY	✓									3
LONG BAY	✓									4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
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										26
										27

George D. Ball
Geographic Names
Jan 15-1963

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8608

Records accompanying survey: Smooth sheets 1;

boat sheets 1; sounding vols. 8; wire drag vols. .....;

Descriptive Reports 1; graphic recorder envelopes 2;

special reports, etc. 2-tracings

.....

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	.....
Special adjustments	Time	.....

Verification by ..... Total time ..... Date .....

Reviewed by ..... Time ..... Date .....

US COMM C&GS DC

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H-8608

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

SURVEY # H-8608 (1961)
Ship - BOWIE (263)
Prince William Sound, Alaska.
Culross Passage North

Vol #	Letter Day	Julian Day	Posn # Manual	Posn # Auto date	Vessel
1	a	250	1 - 247	0001-0246-7Sep61	Launch # 95
2	b	251	1 - 303	0246A-0550-8Sep61	
3	c	252	1 - 44	0551-0594-9Sep61	
3	d	256	3 - 251	0595-0845-13Sep61	
4	d	256	252-335	0845A-0929-13Sep61	
5	e	257	1 - 175	0929A-1104-14Sep61	
6	f	258	1 - 258	1105-1288-15Sep61	
5	g	259	6 - 89	1289-1372-16Sep61	
7	g	259	90 - 143	1372A-1426-16Sep61	
8	a	252	1 - 38	2001-2038-9Sep61-Launch # 184	
1	b	258	1 - 25	2039-2063-15Sep61	
7	c	259	1 - 27	2063A-2091-16Sep61	
8	d	260	1 - 15	2092-2106-17Sep61	
1	a	259	1 - 37	3001-3037-16Sep61	Launch # 1187

LIST OF HYDROGRAPHIC SIGNALS H-8608 (BO-10-6-61)

USC&GSS BOWIE - PROJECT OPR-277

Hydrographic Name	Source
Abe 002	T-11582
Ace 012	T-11583
Aim 035	T-11582
Amp 056	Vol 1, p. 7
Art 078	T-11582
Bag 003	T-11583
Bat 009	T-11582
Bone 065	1948 Tri Sta BONE
Bus 087	T-11583
Cab 100	T-11582
Car 107	"
Cone 165	1956 Tri Sta CONE
Cow 169	T-11582
Day 109	Vol 1, p 4 & Vol 18, p 18
Deb 120	T-11582
Doc 161	"
Ear 207 -999	Vol 7, p18, Vol 1, p 72
Eat 209	T-11582
Erg 213	"
Far 237 —	T-11583
Fat 241	Vol 1, p 5
Fix 289	Vol 1, p 6 & 7
Fun 285	T-11582
Few 294	"
Gag 303	"
Gig 333	T-11583
Goat 360	1956 Tri Sta GOAT
Gus 337	T-11582
Hag 1120	"
Hat 308	"
Hex 339	"
Hit 335	T-11583
Ice 312	T-11582
Ink 314	T-11583
Jap 406	T-11582
Jar 407	"
Joe 403	Vol 1, p 3
June 435	1956 Tri Sta JUNE
Key 429	Vol 1, p3
Kid 431	T-11582
Kin 435	"
Lad 401	" Topo
Lax 409	"
Leg 413	Vol 1, p 6

Hydrographic Name	Source
Log 463	T-11582 Topo
Mag 503	T-11582
Man 505	Vol 1 p 4
Mim 535	1948 Tri Sta MIMIC
Mug 583	T-11582 Topo
New 529	Vol 1, p 6 & 7
Nix 539	T-11582 Topo
Nul 584	T-11582
Nux 589	T-11583
Oak 609	T-11582
Odd 611	T-11583
Off 622	Vol 1, p 3
Old 641	T-11583
Owl 694	T-11582 Topo
Pad 601	T-11582
Pan (Tan)	"
Peg 625	"
Pet 628	1948 Tri Sta PETER
Pie 632	T-11583
Pit 639	Vol 1, p 6 & 7
Pup 636	T-11582 Topo
Quo 444	T-11582
Ram 705	"
Reb 720	1948 Tri Sta REBEL
Rip 736	T-11582 Topo
Rum 785	T-11582
Scare 710	1948 Tri Sta SCARE
She 732	T-11583
Sow 769	T-11582 Topo
Sox 555	" "
Split 764	1948 Tri Sta SPLIT
Tan 805	T-11583
Tie 832	"
Tig 839	1948 Tri Sta TIGER
Tub 880	T-11582 Topo
Usher 873	1948 Tri Sta USHER
Vex 829	T-11582 Topo
Who 936	" "
Yes 927	" "
Zag 903	T-11583
Zig 933	T-11582

RHC

FORM C&GS-712
(4-62)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

4/8/63

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 8608

Locality Prince William Sound, Alaska

Chief of Party: F. X. Popper (1961)

Plane of reference is mean lower low water reading

6.6 ft. on tide staff at Applegate Island

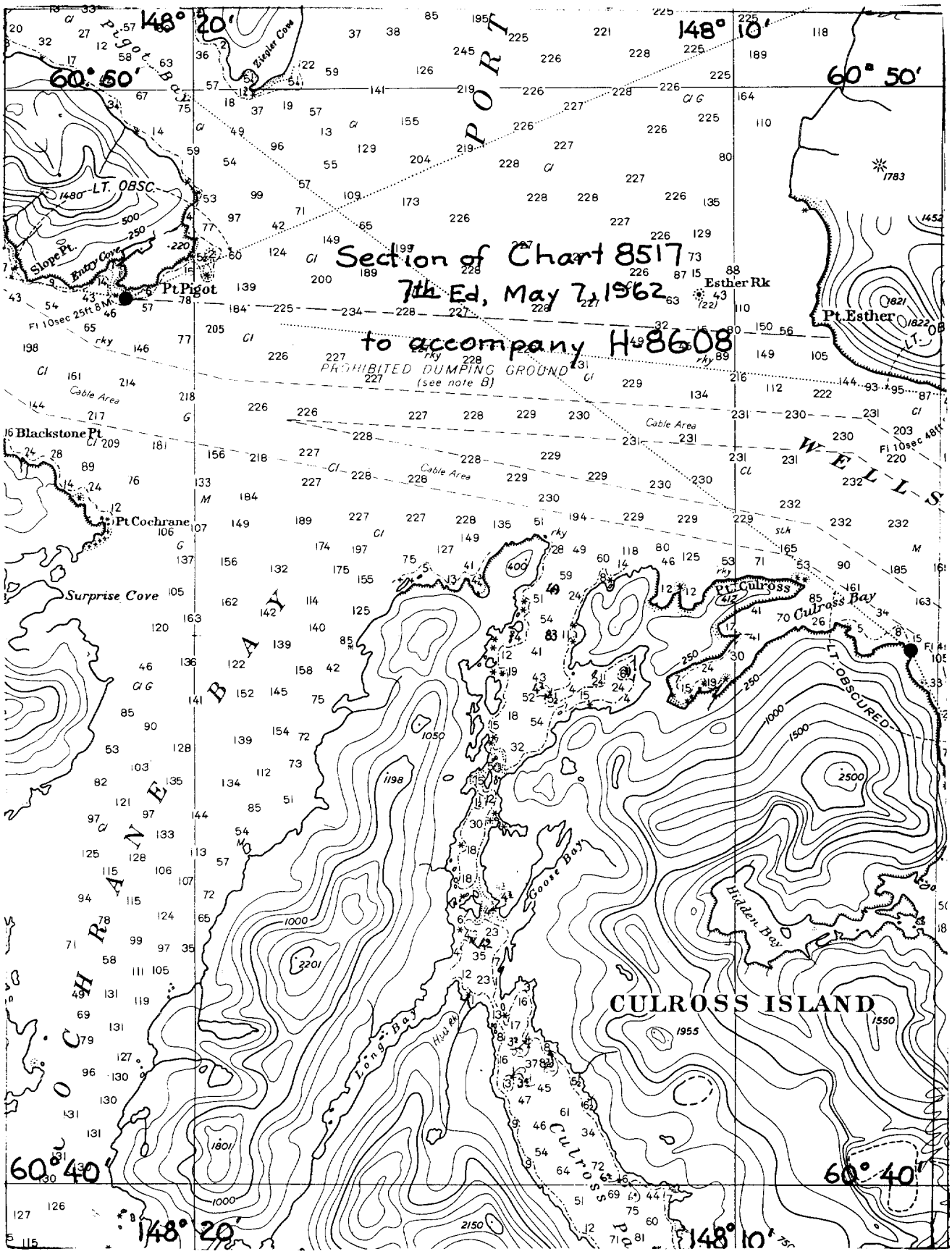
12.9 ft. below B. M. No 1 (1961)

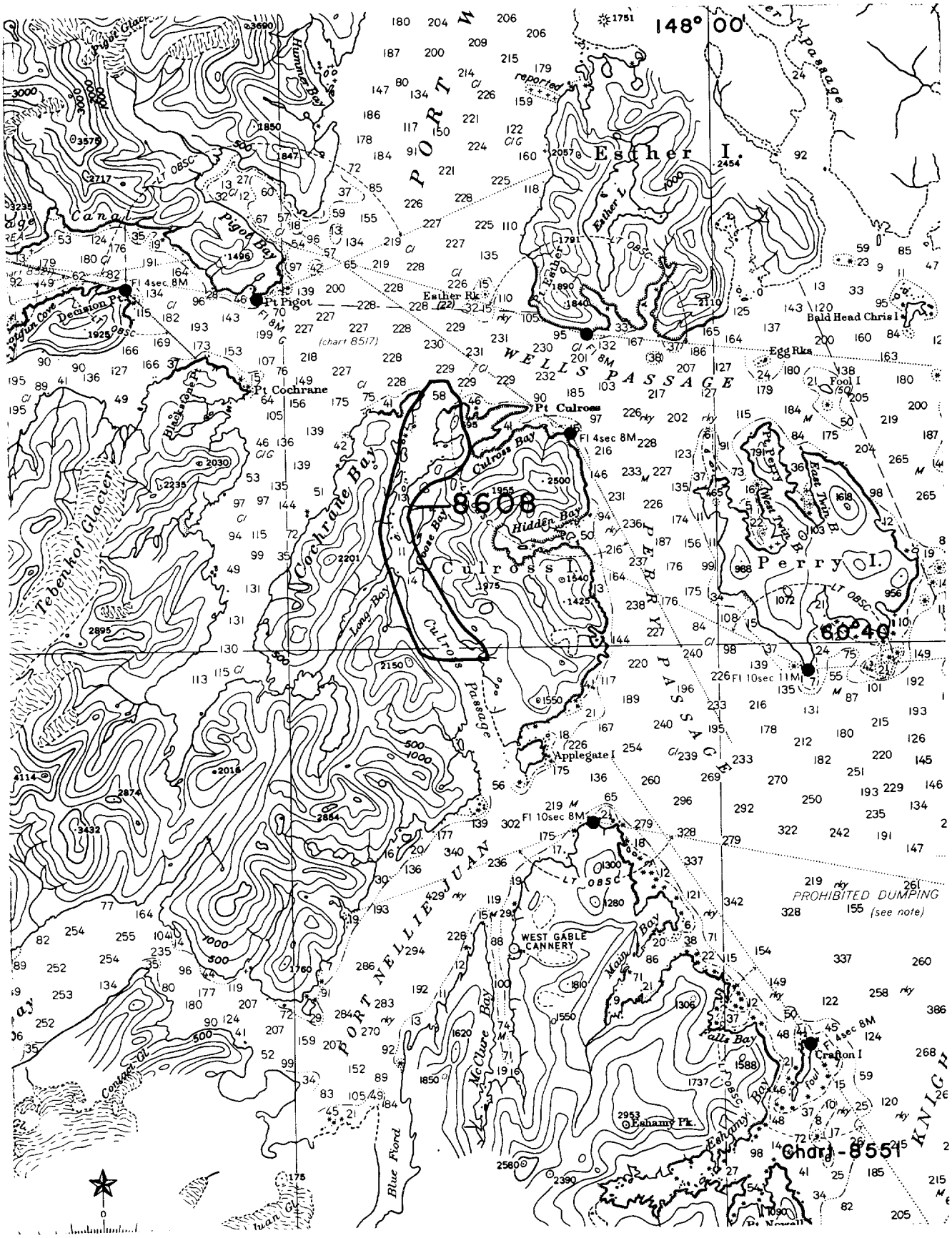
Height of mean high water or above plane of reference is 11.0 feet.

Condition of records satisfactory except as noted below:

J. M. Symons
Chief, Tides and Currents Branch

USCOMM-DC 16543-P62


Section of Chart 8517
7th Ed, May 7, 1962
to accompany H-8608
PROHIBITED DUMPING GROUND
(see note B)
148° 20'
148° 10'
60° 50'
60° 40'
PORT
WELLS
BAY
CHANEK
OCEAN
CULROSS ISLAND
Pt Pigot
Pt Cochrane
Blackstone Pt
Slope Pt.
Entry Cove
Ziegler Cove
Surprise Cove
Esther Rk
Pt. Esther
Pt. Culross
Culross Bay
Goose Bay
Hidden Bay
Long Bay
Hut Rk
Culross Pass
LT. OBSC.
LT. OBSCURED
Cable Area
Fl 10sec 25ft 8M
Fl 10sec 48ft


148° 00'
60 40'
Esther I.
Perry I.
Culross I.
Pt Pigot
Pt Cochrane
Pt Culross
Esther Rk
Egg Rks
Bald Head Chris I
Fool I
Applegate I
Crafton I
Esh amy Pk.
WEST GABLE CANNERY
PROHIBITED DUMPING
(see note)
Chart 8551
8608
Cochrane Bay
Culross Bay
Hidden Bay
Goose Bay
Long Bay
Culross Passage
Pigot Bay
Decision Pt
Tebenkof Glacier
Canal
Esther Passage
WELLS PASSAGE
PERRY PASSAGE
PORT NELLIE JUAN
Blue Fjord
McClure Bay
Maple Bay
Falls Bay
Eshamy Bay
Perry Passage
East Twin B
West Twin B
Fl 4sec 8M
Fl 8M
Fl 10sec 8M
Fl 10sec 11M
LT OBSC
(chart 8517)

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8608

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-5-63	8517	[illegible]	Before ~~After~~ Verification and Review Comp. Appl
8-19-91	16700	[illegible]	Considered Adequately Appl. ed
9-11-91		[illegible]	Before ~~After~~ Verification and Review
			Day #26
			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.