

8204

Diag. Cht. No. 8551-3.

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey ..... HYDROGRAPHIC  
BO 1255 ..... H 8204  
Field No. ~~DC-1955~~ ..... Office No. ~~H-8205~~

LOCALITY

State ..... ALASKA  
General locality ..... PRINCE WM. SOUND  
Locality ..... PRINCE OF WALES PASSAGE

1955

CHIEF OF PARTY

H.C. APPLEQUIST

LIBRARY & ARCHIVES

DATE .....

COMM-DC 61300

8204

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-8204

Field No. BO-1255

State Alaska

General locality Prince William Sound

Locality Prince of Wales Passage

Scale 1:10,000 Date of survey 1955

Instructions dated 28 December 1954 and 10 February 1955

Vessel Ship BOWIE (Launch 92)

Chief of party H. C. Applequist

Surveyed by K. A. Mac Donald

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

Fathograms scaled by E. A. Cruz

Fathograms checked by H. C. Applequist

Protracted by C. A. J. Pauw

Soundings penciled by C. A. J. Pauw

Soundings in fathoms LLL at MLW MLLW

REMARKS:

*30*

**DESCRIPTIVE REPORT**  
to accompany  
**HYDROGRAPHIC SURVEY SHEET NOS. H-8204 (Field No. BO-1255**  
**and H-8205 (Field No. BO-1355)**

South Entrance and Southern part of Prince of Wales Passage,  
Prince William Sound, Alaska

Scale 1:10,000

USC&GSS BOWIE  
Project 1277

H.C. Applequist, Chief of Party  
Surveyed by: K.A. Mac Donald

**A - PROJECT:**

The survey was done in accordance with instructions for Project CS-277 dated 28 December 1954 and 10 February 1955.

**B - SURVEY LIMITS AND DATES:**

The survey covered an area from Latitude  $60^{\circ} 04'$  in Prince of Wales Passage South to Latitude  $59^{\circ} 58'$  and East to Longitude  $148^{\circ} 17'$  at the approach to the Passage and West to Longitude  $148^{\circ} 07'$  at the entrance to Elrington Passage. Field work was begun 22 July 1955 and ended 20 September 1955.

**C - VESSEL AND EQUIPMENT:**

Diesel Launch No. 92, operating from the Ship BOWIE in Squirrel Bay was used for all hydrography. Launch 92 has a turning radius of approximately 12 meters at sounding speed. Fathometer No. S-163 of the 808-J type was used for all sounding. Inboard bilge transducers were substituted for the keel mounted unit on g day, 6 August 1955 giving much better results in depths over 50 fms. The Ship BOWIE was used for taking bottom samples.

**D - TIDE AND CURRENT STATIONS:**

A portable tide gage was maintained at Squirrel Bay during the survey. Position of the gage was Latitude  $60^{\circ} 00.31' N$ , Longitude  $148^{\circ} 07.82' W$ .

**F - CONTROL STATIONS:**

All control used for this survey was obtained from photo cuts using the preliminary manuscripts T-9148, T-9149 and T-9150. This was done by the field party.

Considerable difficulty was experienced with the control, especially in the vicinity of the entrance to Elrington Passage. Relocation of the signals using the final manuscript should remedy the bad crossings and jumps in the fixes.

G - SHORELINE AND TOPOGRAPHY:

Shoreline and topographic details were taken from Photo. manuscripts T-9148 and T-9150.

The low water line was not defined by the soundings, due to the fact that the shoreline was very steep and dropped off immediately to deep water.

H - SOUNDINGS;

Soundings were taken with an 808<sup>M</sup>J fathometer, bar checks were taken daily and meaned for the entire period. Phase corrections were obtained by making scale comparisons, while drifting over flat bottom. Fathometer errors due to a long stylus arm are discussed in a supplemental report "808 Fathometer Errors", which is included with this report.

I - CONTROL OF HYDROGRAPHY:

All hydrography was controlled by three point sextant fixes.

J - ADEQUACY OF SURVEY:

✕ The survey is considered complete and adequate to supersede prior surveys for charting.

K - CROSSLINES:

Crosslines made up approximately 8% of the total. The East West crossline just north of LONE TREE PT. LT. has considerable discrepancies at crossings. This was caused by poor control, as explained in paragraph F.

L - COMPARISON WITH PRIOR SURVEYS:

Comparison with Survey 4694, Scale 1:20,000, May & July 1927 shows generally good agreement. The 20 fm. curve just South of Procession Rocks appears to have moved a considerable distance to the north, and the shoal in Latitude  $59^{\circ} 58.3'$ , Longitude  $148^{\circ} 13.4'$  was not discovered in Survey 4694.

Comparison with Survey 2833, Scale 1:40,000, 1906 shows generally good agreement, bottom samples however are in very poor agreement.

Comparison with Survey 3188, Scale 1:20,000 shows generally good agreement, bottom samples are in poor agreement.



**H - DANGERS AND SHOALS:**

A newly found shoal with a least depth of <sup>6 fms.</sup> 7 fms. was developed in Latitude 59° 58.3', Longitude 148° 13.4'. ✓

Lat 59° 58.33' - - - - - Long 148° 13.41' is 7<sup>3</sup> on smooth sheet

Lat 59° 58.35' - - - - - Long 148° 13.52' is 6<sup>2</sup> and charted on 8515

Respectfully submitted:

*Kenneth A. Mac Donald*  
Kenneth A. Mac Donald  
Lieut. (jg), C&GS

APPROVED:

Charles A. Schanck  
Commander, C&GS  
Commanding Ship BOWIE

N - DANGERS AND SHOALS:

A newly found shoal with a least depth of <sup>6<sup>8</sup></sup> 7 fms. was developed in Latitude 59 58.3', Longitude 148 13.4'.

(H 8204)

Respectfully submitted:

*Kenneth A. Mac Donald*  
Kenneth A. Mac Donald  
Lieut. (jg), C&GS

APPROVED:

Charles A. Schanck  
Commander, C&GS  
Commanding Ship BOWIE

**TIDE NOTE**

All soundings were reduced to MLLW using tide data from the portable tide gage in Squirrel Bay, Latitude 60 00.31'N, Longitude 148 07.82' W. 4.9 Ft. on the tide staff corresponds to MLLW. Reference letter dated 6 September 1955, 36-108-982B.

Charles A. Schanck  
Commander, C&GS  
Commanding Ship BOWIE

STATISTICS  
FOR  
HYDROGRAPHIC SURVEY SHEET NO. BO-1255

H-5204

DAY LTR.	DATE 1955	POSITIONS			MILES OF SOUNDINGS				NAUT. MILES TO & FROM	MILES MISC. RUN	BOTTOM SAMPLES
		VOL.	VOL.	TOTAL	NAUTICAL VOL.	TOTAL	STATUTE VOL.	TOTAL			
a	7-26	1	181	181	22.9	22.9	26.3	26.3	2.0	5.0	
b	7-27	1	48		5.1		5.9				
b	7-27	2	117	165	11.8	16.9	13.6	19.5	3.5	4.5	
c	7-28	2	113		13.2		15.2				
c	7-28	3	122	235	12.3	25.5	14.0	29.2	4.5	2.5	
d	7-29	3	133		14.8		17.1				
d	7-29	4	61	194	6.3	21.1	7.2	24.3	6.5	7.0	
e	8-3	4	150	150	15.9	15.9	18.3	18.3	8.0	10.0	
f	8-4	4	37	37	4.5	4.5	5.2	5.2	8.0	2.0	
g	8-6	5	80	80	10.8	10.8	12.4	12.4	7.5	1.5	
h	8-8	5	134		17.3		19.9				
h	8-8	6	19	153	2.3	19.6	2.6	22.5	2.0	2.0	
j	8-9	6	213		30.7		35.3				
j	8-9	7	11	224	2.0	32.7	2.3	37.6	6.5	2.0	
k	8-10	7	216	216	36.4	36.4	41.9	41.9	6.0	2.0	
l	8-11	8	91	91	15.2	15.2	17.5	17.5	13.0	1.5	
m	8-12	8	131	131	17.2	17.2	19.9	19.9	8.5	5.0	
n	8-13	9	104	104	15.3	15.3	17.6	17.6	3.5	2.0	
p	8-16	9	119		18.8		21.6				
p	8-16	10	48	167	7.7	26.5	8.9	30.5	2.0	3.0	
q	8-17	10	199	199	27.4	27.4	31.5	31.5	4.0	2.0	
r	8-18	11	237	237	27.0	27.0	31.0	31.0	4.0	3.0	
s	9-6	12	178	178	20.0	20.0	23.0	23.0	2.0	4.0	
TOTAL LAUNCH # 92				2740		354.9		408.2	91.5	59.0	
A	9-20	12	31	31	0.0	0.0	0.0	0.0	6.0	24.0	31
TOTAL SHIP BOWIE				31					6.0	24.0	31
TOTAL FOR SHEET				2771		354.9		408.2	97.5	83.0	31
TOTAL AREA: 20.1 SQ. STATUTE MILES											

PROCESSING OFFICE NOTES - H-8204

SMOOTH SHEET

The smooth sheet was hand constructed by the Seattle Hydrographic Processing Unit using standard methods of construction and checking.

SHORELINE AND TOPOGRAPHY

Shoreline and topographic details were transferred from blueline tracings of Advanced Manuscripts T-9148 and T-9150.

ADEQUACY OF SURVEY

The survey appears complete and adequate for charting.

The junction with H-8205 has been compared and is in agreement. The depth curves can be adequately drawn at the junction.

CROSSLINES

The crosslines on the smooth sheet are in reasonable agreement.


COMPARISON WITH PRIOR SURVEYS

No comparison was made between the smooth sheet and prior surveys.

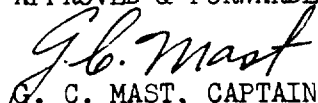
COMPARISON WITH CHART

This survey was compared with Chart 8523, 3rd Ed. Revised 7/30/51. In general the agreement appears satisfactory. See section of Chart 8523 attached to this report for notable differences between chart and smooth sheet.

Since sounding data on chart 8515 appears to be from the same source as 8523, no comparison was made with that chart.

  
WILLIAM M. MARTIN  
SUPRV. CARTOGRAPHER

APPROVED & FORWARDED:

  
G. C. MAST, CAPTAIN, C&GS  
SEATTLE DISTRICT OFFICER

GEOGRAPHIC NAMES PENCILED ON H-8204

ALUKLIK BAY

BAINBRIDGE ISLAND

ELRINGTON ISLAND

ELRINGTON PASSAGE

EVANS ISLAND

LONE TREE POINT

NORTH TWIN BAY

PRINCE OF WALES PASSAGE

SQUIRREL BAY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R.H. Carstens

10/1/59

Plane of reference approved in  
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8204

Locality Prince William Sound, Alaska

Chief of Party: H. C. Applequist in 1955

Plane of reference is mean lower low water, reading  
4.9 ft. on tide staff at Squirrel Bay  
17.9 ft. below B.M. 1 (1955)

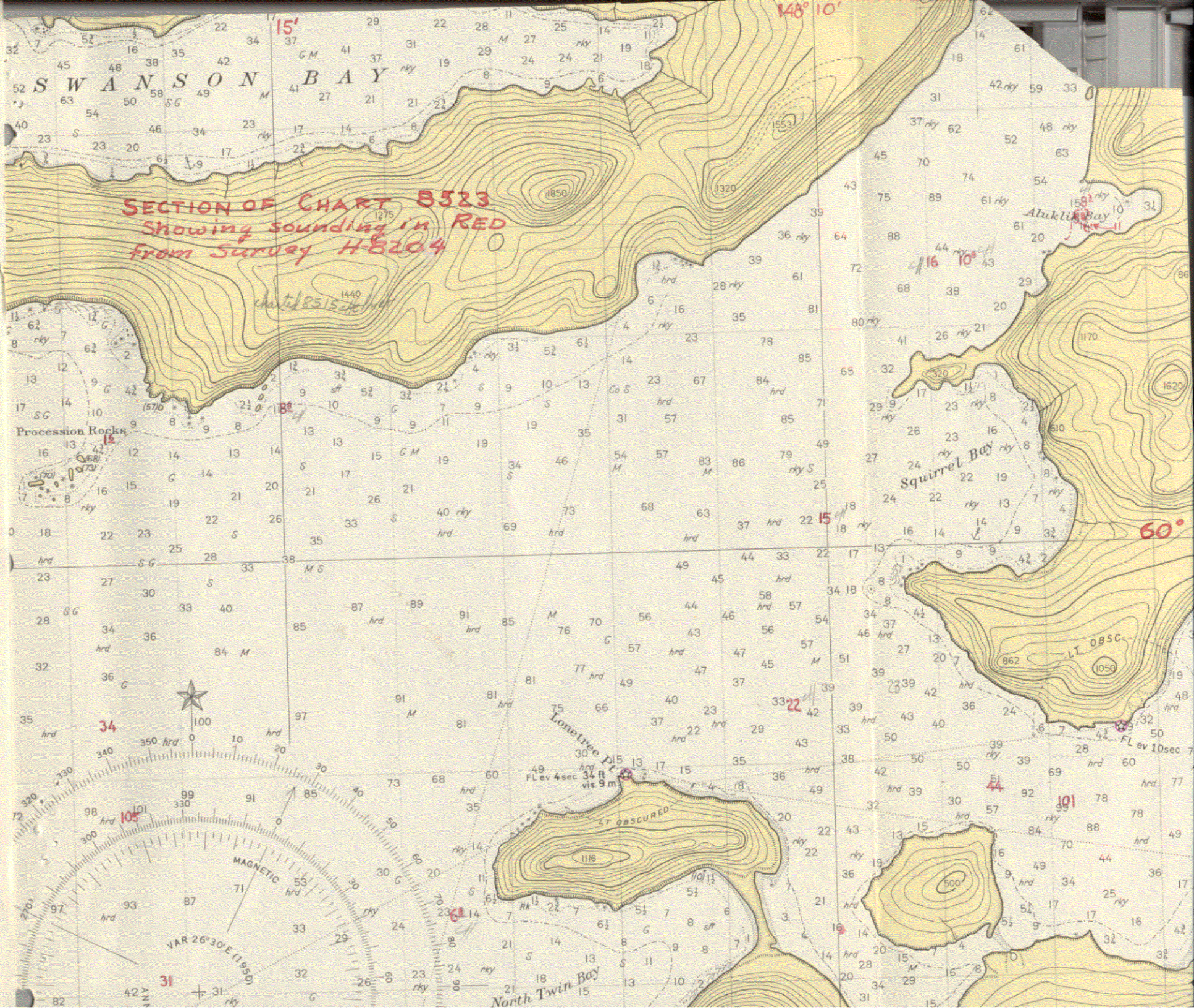
Height of mean high water above plane of reference is 9.9 ft.

Condition of records satisfactory except as noted below:

  
\_\_\_\_\_  
Signature

Chief, Tides Branch





**SECTION OF CHART 8523**  
**Showing sounding in RED**  
**from Survey H-8204**

chart 8515

Procession Rocks

Squirrel Bay

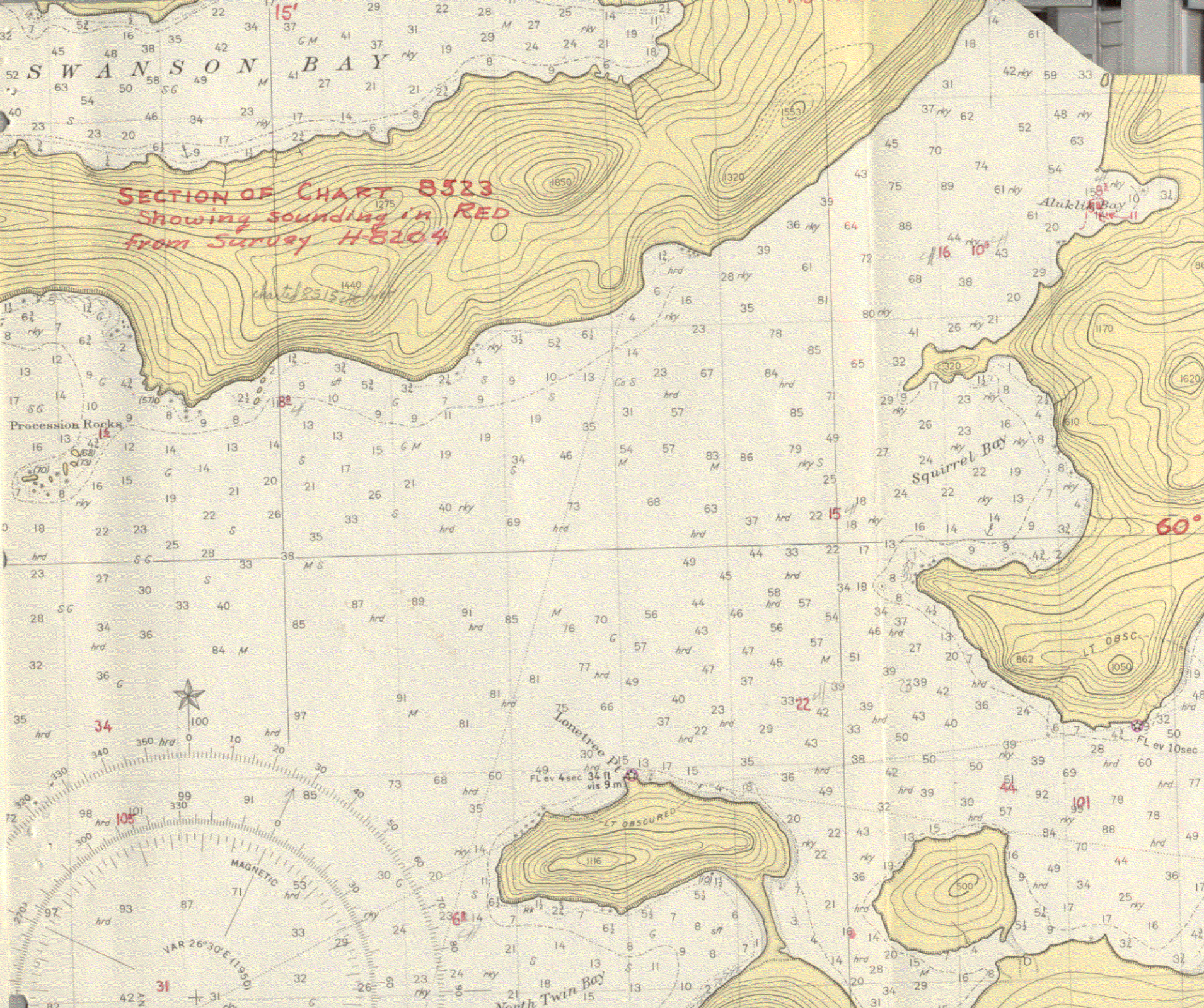
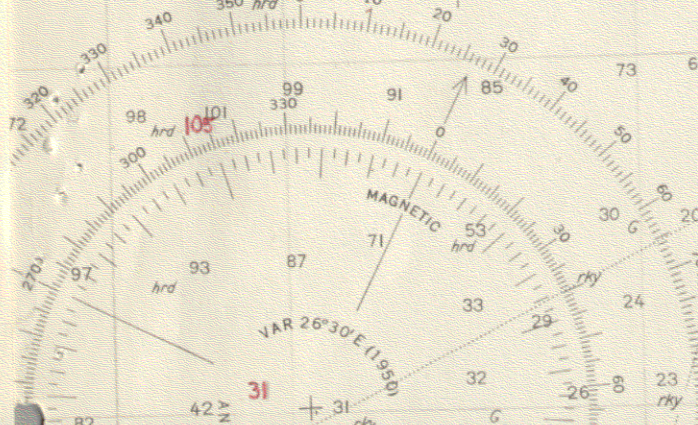
Alukli Bay

North Twin Bay

Lonetree Pt

LT OBSC

MAGNETIC  
VAR 26° 30' E (1950)







Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8204...

Records accompanying survey:

Boat sheets .1...; sounding vols. .1<sup>2</sup>...; wire drag vols. ....;  
bomb vols. ....; graphic recorder rolls 4-Envelopes  
special reports, etc. 1-Smooth sheet and 1-Descriptive report.  
1 Cahier - Diagrams for fathometer corrections and 1 Report containing 808  
fathometer errors (80-1255 + 80-1355).

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 .....

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- 8204

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.

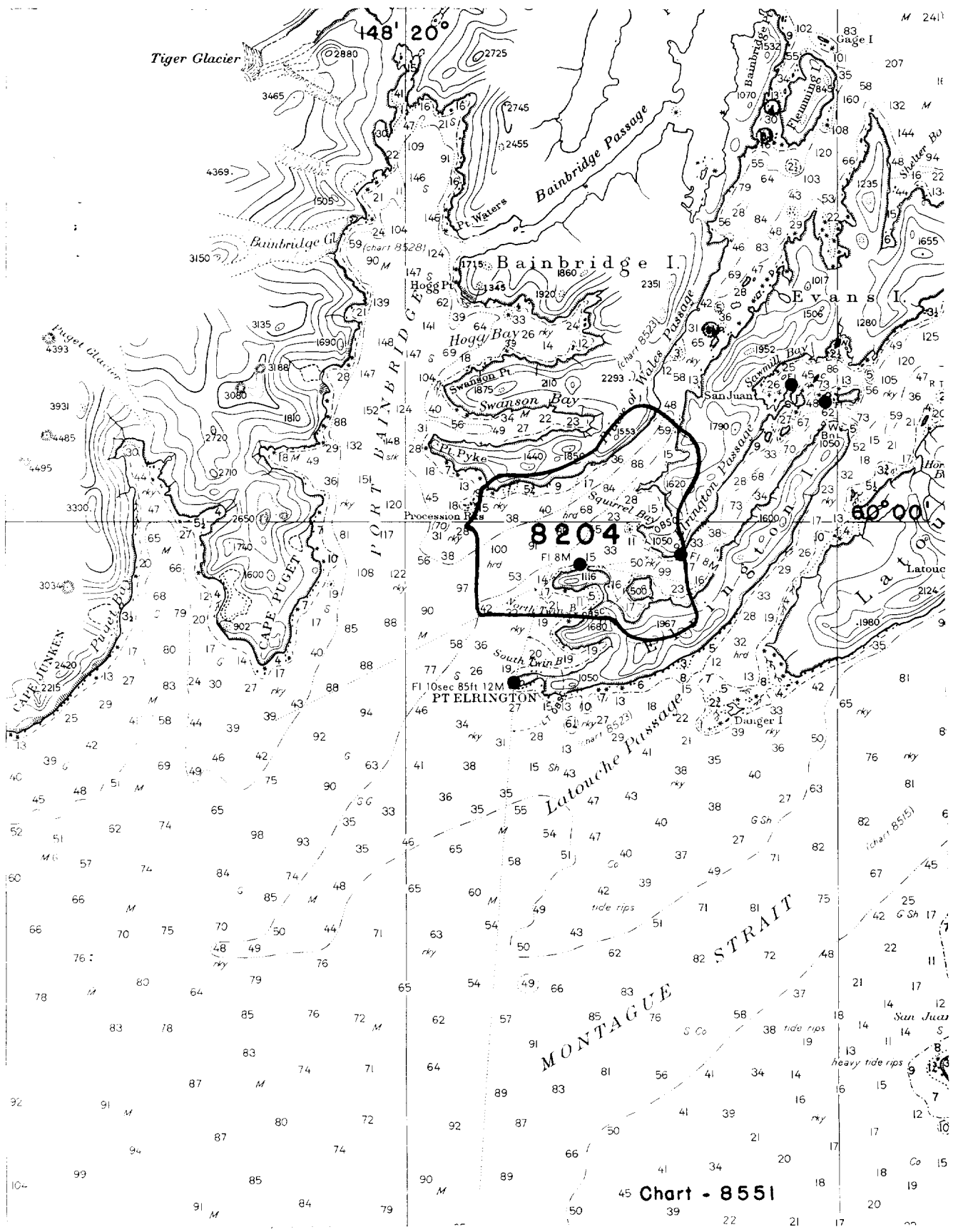
1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.
3. All reference to survey sheets mentioned in the descriptive 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



45 Chart - 8551

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8204

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/14/59	8515	Helmer	Before <del>After</del> Verification and Review <i>Partial application of critical hydro. (about 40 s/dgs &amp; curves revisions) of</i>
2/16/60	8551	Helmer	Before <del>After</del> Verification and Review <i>Partial application of critical s/dgs &amp; curves of</i>
7-24-61	8502	<i>E. M. Brown</i>	Before <del>After</del> Verification and Review <i>Exam No crit con at this scale</i>
10-27-62	8552	Hebesdon Radden	Before <del>After</del> Verification and Review <i>Partial application of critical s/dgs &amp; curves thru chit. 8551</i>
6-19-63	8528	<i>D.E. Westbrook</i>	Before <del>After</del> Verification and Review <i>Added corr. thru Dwg. #3 Chit. 8515</i>
12/13/65	8523	C. Musfeldt	Before <del>After</del> Verification and Review <i>critical only</i>
4/15/71	8551	<i>O.S. Forbe</i>	Before <del>After</del> Verification and Review <i>appd 100 Fm curve</i>
11-9-77	8523	<i>O. Stembel</i>	Before <del>After</del> Verification and Review <i>and considered as fully applied as a Class I Survey. Re-examined</i>
8/4/84	16702	B. Fenwick	Before <del>After</del> Verification and Review <i>No Corr. Dwg. # 8, considered adequately appd</i>
<del>8-1-88</del>			Before <del>After</del> Verification and Review
3-26-90	16683	<i>D.M. KALINDEN</i>	<i>CONSIDERED ADEQUATELY APPLIED CAT I</i>
7-26-91	16700	<i>W.J. Ohms</i>	<i>Considered Adequately applied Cat I</i>
9-5-91		<i>D.C. Bayne</i>	<i>to Dwg # 26</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.