8112

Diag. Cht. No. 8152-2.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. HO-20-1-60 Office No. H-8112

LOCALITY

State Southeast Alaska

General locality Iphigenia Bay

Locality Entrance to Sumner Strait

1960

CHIEF OF PARTY

Miller J. Tonkel

USCOMM-DC 5087

A NEW RADIAL PLOT WAS ASSEMBLED FOR MANUSCRIPTS T-10393 & T-10400 (PH-87) IN 1957. ERRORS IN DETAILS IN THE PRELIMINARY COMPILATION AMOUNTED TO AS MUCH AS 0.7 mm AS MEASURED ON THE MANUSCRIPT

S.G. Blankenbaker

Review of T-10393 & T-10400 indicated good agreement with H.W.L. on H-8112. Considering signal location being in agreement with small inlets etc. it is considered that field party had the new radial plot when signals were located. R.H. Carstens Dec 1970

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-8112

Field No. HO-20-1-60

State Southeast Alaska

General locality Iphigenia Bay

Locality Entrance to Sumner Strait

Scale 1:20000 Date of survey June-September 1960

Instructions dated 28 January 1960, 5 February 1960

Vessel HODGSON

Chief of party Miller J. Tenkel

Surveyed by Ship personnel

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

Fathograms scaled by Ship Personnel

Fathograms checked by Ship Personnel

Protracted by C. A. J. Pauw

Soundings penciled by C. A. J. Pauw

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

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 693019

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY H-8112 (Field No. H-20-1-60)

PROJECT OPR-347

IPHIGENIA BAY, ENTRANCE TO SUMNER STRAIT

DATE OF SURVEY: JUNE-SEPT. 1960

SCALE OF SURVEY: 1:20,000

USC&GS Ship HODGSON, CDR MILLER J. TONKEL, COMMANDING OFFICER

Surveyed by: CDR Miller J. Tonkel, LT F. J. Tucker, Jr.
ENSIGNS W. Paul Yeager and James H. Blumer

A. PROJECT:

This survey was executed as part of Project OPR-347 in accordance with Revised Instructions dated 28 January 1960, ammended 5 February 1960.

B. SURVEY LIMITS AND DATES:

This survey covered all of the area within the following limits: from the east coast of Warren Island at Lat. 55°51.20', Long. 133°51.60' east to Lat. 55°51.20', Long. 133°50.00'; then south to Lat. 55°48.92', Long. 133°50.00'; then west to Lat. 55°48.92, Long. 133°53.50'; then south to 55°47.30', Long. 133°53.50'; then west to Lat. 55°47.30', Long. 134°16.80'; then north to the southern coast of Coronation Island at Lat. 55°49.5', Long. 134°80';then northeastward along the east coast of Coronation Island to Lat. 55°55.15', Long. 134°07.15'; then north to the southern end of the Spanish Islands at 55°55.80', Long. 134°07.2'; then east to Lat. 55°11.60', Long. 133°55.3'; then south around the coast of Warren to Lat. 55°51.20', Long. 133°51.60'.

Field work commenced on 11 June and was completed on 29 September 1960.

This survey was joined on the south by H-8444, 1:40,000, 1958. It is joined on the southwest by H-4325 scale 1:20,000, 1923. It is joined on the northeast by H-4326, scale 1:20,000, 1923. It is joined on the north by incomplete survey H020-2-60, scale 1:20,000, 1960. It is joined on the northeast by surveyH-6283, scale 1:10,000, 1937. It is joined on the southeast by H-8286, scale 1:10,000, 1958.

Progress was slowed throughout the entire project by inclement weather. Progress on the work was interrupted by the long week-ends of Independence Day and Labor Day.

C. VESSELS AND EQUIPMENT:

Hydrography was done by the Ship HODGSON and Launch No. CS 95 operating from the Ship HODGSON. All in shore and foul area work was accomplished by Launch No. 95. The Ship HODGSON operated off shore in Sumner Strait in depths generally greater than thirty fathoms. The minimum turning radius of Launch 95 is about 30 meters at maximum speed and 50 meters at minimum speed.

The Ship HODGSON has a turning radius of approximately 100 meters at normal surveying speed.

Sounding apparatus used in Launch No. 95 was EDO 255C No. 255025, calibrated at 800 fm/sec.

Sounding apparatus used in the Ship HODGSON was EDO 255c, No. 44, calibrated at 800 fm/sec.

D. TIDE AND CURRENT STATIONS:

One portable, automatic tide gage was established and maintained near Cora Point on Coronation Island at Lat. 55°54'15", Long. 134°07'05". Cora Pt. tides were used without time or range corrections. One 100-hour current station was observed, located 1.4 miles west of Warren Island.

E. SMOOTH SHEET:

The Smooth Sheet was ruled by hand aboard the Ship HODGSON. No unusual methods were used in transfering the shoreline and signals and this transfer was verified in accordance with topic 757 of the Hydrographic Manual. To be completed after smooth plotting.

F. CONTROL STATIONS :

The triangulation scheme was established for the most part in 1922.

Most of the hydrographic signals were located by selecting points from aerial photographs, radially plotting them on photo manuscripts T-10393, T-10400, T-10678, T-10679, T-10681 T-10682 at a scale of 1:10,000 and then transfering the positions to the hydrographic sheet. A few of the signals were dressed triangulation stations. Five of the signals were located by sextant cuts. Three shoran stations were located and established by triangulation. A list of signals is included later in this report.

G. SHORELINE AND TOPOGRAPHY: H-8112

The shore line and topography were obtained from a Shoreline print of incomplete manuscripts, T-10393, T-10400, T-10678, T-10679, T-10681 and T-10682. One adjustment in the shoreline was necessary on Coronation Island north of Helm Point and at approximate latitude of 55°50'N. A complete discussion of this adjustment is given in the Descriptive Report of the field edit of incomplete manuscripts, submitted under separate cover. The low water line was determined by the hydrography.

H. SOUNDINGS:

EDO 255C, No. 255025 sounding apparatus was used in Launch 95 and EDO 255C, No. 44 was used in the Ship HODGSON.in taking soundings. All shoals were verified by hand lead soundings. No correction for settlement and squat was necessary.

I. CONTROL OF HYDROGRAPHY:

Hydrography was controlled by three point sextant fixes and Shoran. Sextant fixes were used mainly by the launch and Shoran was used mainly in the ship work. No adjustment is needed for any portion of the survey.

J. ADEQUACY OF SURVEY:

This survey is considered complete and adequate for charting purposes and may supercede prior surveys. Junctions with adjoining surveys and charts are in agreement to the extent that depth curves can be adequately drawn at the junctions.

K. Crosslines:

Crosslines were run to the extent of 8.8 percent of the regular sounding lines and the crossings were satisfactory.

L. COMPARISON WITH PRIOR SURVEYS:

Although a few minor discrepancies exist, this survey junctions adequately with survey H-8444, 1:20,000, done by the Ship HODGSON in 1958.

This survey is also in good agreement with surveys H-4325, 1:20,000, 1923; H-4261B, 1:60,000, 1922-23; H-4326, 1:20,000, 1923; H-8286, 1:10,000, 1959; H-6283, year 1937, scale 1:10,000.

M. COMPARISON WITH CHART:

The following is a statement concerning the encircled soundings on the photostat of Chart 8173, of the Preliminary Review of Project CS-1347, that fell within the limits of the survey.

M. COMPARISON WITH CHART (Cont'd.):

? A four (Nothing that shoal in this area) fathom sounding was found very near to the twelve fathom sounding at Lat. 55°49'N, Long. 133°58'W. ?A thirty fathom sounding was found near the forty-one fathom sounding at Lat. 55°49.5', Long. 134°15.5'. Several hours of development with Launch 95 failed to verify the reported five fathom shoal marked No. 7 on the Preliminary Review at Lat. 55°49.3', Long. 134°15.5'. Because of the character of the bottom a wire drag survey would be necessary to make a positive statement as to the least depth at this point. The least depth sounded at this point was eight fathoms. The 8fm sndg is 8.9 on the smooth sheet and 500 meters west of the charted 5fm. sounding.

A twent-nine fathom sounding was located very near the thirty fathom sounding at Lat. 55°51.4', Long. 134°00.7'. The ten fathom sounding at Lat. 55°50.6', Long. 134°14.5' was found to be 1.2 fathoms. A two fathom sounding was found very near the nine fathom sounding at Lat. 55°53.7', Long. 133°57.4'. A sounding of thirteen fathoms was found very near to the nineteen fathom sounding at Lat. 55°53.6' Long. 133°58.4'. A sounding of five and one-half fathoms was found fairly close to the ten fathom shoal at Lat. 55°50.9', Long. 133°51.0'.

N. DANGERS AND SHOALS:

Enclosed is a list of dangers and shoals sounded during the survey. These depths are field corrected only and are reduced to MLLW by predicted tides. To be completed after smooth plotting.

O. COAST PILOT INFORMATION:

Submitted under separate cover.

P. AIDS TO NAVIGATION:

Helm Pt. light was the only aid to navigation and a report of this was submitted under a separate cover.

Q. LANDMARKS FOR CHARTS:

None.

R. GEOGRAPHIC NAMES:

A report of geographic names has been submitted under a separate cover.

S. SILTED AREAS:

There were no areas of noticeable silting.

T. BY-PRODUCTS INFORMATION:

None.

U-Y Enclosed Report on Bathometers

Z. TABULATION OF APPLICABLE DATA:

1. Shoran Report, 2. Coast Pilot Report, 3. Photogrammetric Report (Field Edit of Incomplete Manuscripts), 4. Attached Material.

a Copy of Advance Report of Dangers to be Charted

b Statistics

c Tide Note

d List of Signals

e Geographic Names List

f Report on Depth Sounding Equipment (including velocity correction abstract)

g Approval Sheet

Respectfully submitted:

V. Griffin Yeager
for W. Paul Yeager
ENS., C&GS.

Ship HODGSON
705 Federal Office Bldg., Seattle 4, Washington

6 October 1960

To: The Director
Coast and Geodetic Survey
Washington 25, D. C.

Subject: Boat Sheets Nos. HO-20-1-60 and HO-20-2-60, Project CS-347
(a) Dangers to Navigation, and (b) General Charting Information.

(a) Enclosed are three sheets of Form 786, Advance Report of Dangers to be Charted. These shoals are generally less in depth than charted soundings in the reef area south of Warren Island, and along the shorelines of Warren and Coronation Islands. None of these rocks or shoals fall in principal waterways.

(b) The above shoals, as listed on From 786, and additional changes which are of interest as charting information are listed below. Those marked by asterisk have been reported to the US Coast Guard, Juneau, Alaska.

All soundings listed below are field corrected only and are reduced to MLLW by use of predicted tides.

		Smooth Sheet
1. Sunken rock, Lat.55°49'01.8", Long.133°57'47.9",	51.6 FEET	8.9 fms
2.*Sunken rock, Lat.55°49'~~40.7~~ 39.6", Long.133°56'01.~~2~~ 8",	13.2 FEET	1.8 fms
3.*Sunken rock, Lat.55°49'~~57.1~~ 58.8", Long.133°55'~~15.5~~ 16.8",	19.2 FEET	2.2 "
4.Sunken Rock, Lat.55°49'~~47.4~~ 47.3", Long.133°54'37.6",	35.4 FEET	6.0 "
5. Sunken rock, Lat.55°49'18.6", Long.133°55'24.1",	51.0 FEET	8.5 "
6.*Sunken rock, Lat.55°50'23.9", Long.133°54'18.1",	24.6 FEET	4.2 "
7.*Sunken rock, Lat.55°50'36.9", Long.133°54'~~24~~ 25.8",	18.6 FEET	3.3 "
8.*Sunken rock, Lat.55°50'~~18~~ 19.5", Long.133°55'~~08.8~~ 10.5",	15.0 FEET	3.0 "
9.*Sunken rock, Lat.55°50'29.1", Long.133°55'22.6",	28.2 FEET	4.9 "
10.* Rock (bare) Lat.55°48'43.6", Long.133°57'29.3",	Elev. 8.5 Feet	(9)
11.*Sunken rock, Lat.55°48'40.1", Long.133°57'45.7",	5.4 FEET	1.7 fms
12.*Sunken rock, Lat.55°48'09.4", Long.133°56'00.0",	9.6 FEET	1.6 "

Boat Sheets Nos. HO-20-1-60 and HO-20-2-60, Project CS-347
(a) Dangers to Navigation, and (b) General Charting Information, continued-

39.	Lesser sdg.,	Lat. 55°49'30",	Long.134°09'56",	38 FATHOMS
40.	" " ,	Lat.55°48'42",	Long.134°10'42",	40 FATHOMS
41.	" " ,	Lat.55°48'24",	Long.134°09'48",	41 FATHOMS
42.	" " ,	Lat.55°52'32",	Long.134°07'45",	48 FATHOMS
43.**	" " ,	Lat.55°49'22",	Long.134°16'11",	8 FATHOMS
44.	" " ,	Lat.55°58'54",	Long.134°01'54",	50 FATHOMS

A thorough search was made in the area of the charted 5-fathom shoal at Latitude 55° 49' 17", Longitude 134° 15' 38" and no indication of a shoal area was found. It is recommended that this 5-fathom sounding be deleted from the chart. However, an 8-fathom sounding was found at Latitude 55° 49' 22", Longitude 134° 16' 11", nearby. See No.43 above. The 8-fathom area was extensively developed by fathometer with no lesser sounding revealed. Judging by the rugged coastline and the many pinnacle formations along the Coronation Island shore, above and below water, it is highly possible that a lesser depth, as little as 5 fathoms could exist at the position of the 8 fathoms. Only a wire drag survey would prove the existence or non-existence of the 5 fathoms.

Two rocks charted at Latitude 55°50'42", Longitude 133° 54' 05" and Latitude 55° 50' 46", Longitude 133° 54' 05" could not be verified and should be removed.

Miller J. Tonkel
LCDR., C&GS
Commanding, Ship HODGSON

Boat Sheets Nos. HD-20-1-60 and HD-20-3-60, Project OS-347
(a) Dangers to Navigation, and (b) General Charting Information, continued-

13. Sunken rock, Lat.55°48'06.5", Long.133°56'24.0", 43.8 FEET 7.0 fms
14. Sunken rock, Lat.55°47'52.4", Long.133°55'58.4", 22.8 FEET 2.9 "
15. Sunken rock, Lat.55°48'07.1", Long.133°55'34.0", 52.8 FEET 8.0 "
16. Sunken rock, Lat.55°49'20.6", Long.133°55'59.0", 27.3 FEET 3.9 "
17. Sunken rock, Lat.55°49'16.8", Long.133°55'47.7", 46.4 FEET 7.7 "
18. Sunken rock, Lat.55°49'35.9", Long.133°56'10.2", 21.8 FEET 2.6 "
19. Sunken rock, Lat.55°50'43.0", Long.133°51'32.4", 24.0 FEET 4.2 "
20. Sunken rock, Lat.55°51'01.5", Long.133°51'14.0", 33.0 FEET 4.8 "
21. Sunken rock, Lat.55°53'30.5", Long.133°57'11.9", 25.2 FEET 4.2 "
22. Sunken rock, Lat.55°53'43.3", Long.133°57'26.2", 11.4 FEET 2.2 "
23. Rock (bare), Lat.55°54'58.2", Long.133°57'34.9", ELEV. 3.2 feet. (3.6)
24. Sunken rock, Lat.55°50'38.9", Long.134°14'35.1", 7.2 FEET 1.1 fm
25. Rock (bare), Lat.55°51'4[illegible].6", Long.134°13'12.8", ELEV. 9.0 feet. ⊙ Nig
26. Sunken rock, Lat.55°53'55.0", Long.134°07'24.5", 12.0 FEET 2.6 fms
27. Rock (bare), Lat.55°53'45.0[illegible].7", Long.134°08'00[illegible].2", ELEV. 1.5 feet (1)
28. Lesser edg., Lat.55°53'48", Long.133°58'00", 18 FATHOMS ✓
29. " " , Lat.55°53'34", Long.133°58'26", 13 FATHOMS ✓
30. " " , Lat.55°53'47", Long.133°58'20", 12 FATHOMS ✓
31. " " , Lat.55°54'20", Long.133°59'19", 27 FATHOMS 28 fms
32. " " , Lat.55°54'15", Long.133°58'48", 27 FATHOMS 26 "
33. " " , Lat.55°51'15", Long.134°00'48", 29 FATHOMS ✓
34. " " , Lat.55°51'46", Long.133°58'00", 25 FATHOMS ✓
35. " " , Lat.55°53'11", Long.134°02'30", 83 FATHOMS ✓
36 " " , Lat.55°48'18", Long.133°58'52", 33 FATHOMS 30 fms
37 " " , Lat.55°49'00", Long.134°01'26", 65 FATHOMS 66 "
38 " " , Lat.55°49'19", Long.134°09'54", 34 FATHOMS 33 fms

Form 786
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
(Ed. 1943)

ADVANCE REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. H0-20-1-60 Datum N.A. 1927 Locality Iphigenia Bay State Alaska Date 4 Oct. 198

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by W.P.Y.

M.J. Tonkel *Chief of Party.*

TYPE OF DANGER	DEPTH (FEET)* FATHO-METER	DEPTH (FEET)* LEAD-LINE	LATITUDE AND LONGITUDE °	′	SECONDS (IN METERS)	FROM CHARTED OBJECT OR NATURAL FEATURE† TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	CHART USED‡ NO.	PRINT DATE	DATE OF LOCATION	REMARKS
rock	4.2fms 21.0		55 133	50 51	1348.4 563.4	202.5	2560	South tangent at entrance to Warren Cove	8173	51-10-22	8-30-60	
shoal	[illegible]	4.8fms 33.0	55 133	51 51	~~66.0~~ 40 ~~191.2~~ 234	199.0	1920	South tangent at entrance to Warren Cove	8173	51-10-22	7-29-60	The shoal covers a circular area about 100m wide
rock	4.4fms 25.2		55 133	53 57	944.6 206.8	193.0	3000	Tangent at Point Borlase	8173	51-10-22	9-13-60	
rock	2 2fms 11.4		55 133	53 57	1339.2 454.6	200.0	2720	Tangent at Point Borlase	8173	51-10-22	9-12-60	
rock	[illegible]	-3.2	55 133	54 57	1800.0 607.0	246.0	2090	Tangent at Point Borlase	8173	51-10-22	8-22-60	Rock bares 3.2' at MLLW Pred. Tides
rock	[illegible]	1.1fms 7.2	55 134	50 14	1203.0 609.6	039.5	2500	Helm Point Light	8173	51-10-22	9-16-60	
rock		-9.0	55 134	51 13	1316.4 213.2	037.5	4940	Helm Point Light	8173	51-10-22	9-16-60	Rock bares 9.0' at MLLW ON19 Predicted Tides
rock	2.6fms 12.6		55 134	53 07	1700.0 426.2	048.5	11420	Helm Point Light	8173	51-10-22	8-8-60	
rock	[illegible]	-1.0ft. -1.5	55 134	53 ~~08~~ 07	~~701.6~~ 45.5" ~~20.0~~ 58.8"	048.0	12080	Helm Point Light	8173	51-10-22	8-7-60	Rock bares 1.5' at MLLW Predicted Tides

* Record least depth over danger reduced to plane of reference of charted soundings, using observed tides, if available.
† Record location both by geographic position and by true bearing with distance from object or natural feature shown on chart.
‡ Use largest-scale chart and note print date given in lower left corner of chart.

NOTE.—This form to be used during the season for prompt reports of uncharted dangers. If reports have been sent by wire, fill out this form and mail with confirmations. Enter dates of wires under "Remarks." Copies of reports on this form should be retained and submitted with the descriptive report.

554171 U. S. GOVERNMENT PRINTING OFFICE

Fv 786
DEPARTME F COMMERCE
U. S. COAST A... GEODETIC SURVEY
(Ed. 1948)

ADVANCE REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. H10-20-1-60 Datum N.A.D. 1927 Locality Iphigenia Bay State Alaska Date 4 Oct. 1960

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by N.P.Y.

Miller J. Tonkel *Chief of Party.*

TYPE OF DANGER	DEPTH (FEET)* FATHOMETER	DEPTH (FEET)* LEADLINE	LATITUDE AND LONGITUDE ° ' SECONDS (IN METERS)	FROM CHARTED OBJECT OR NATURAL FEATURE† TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	CHART USED‡ NO.	CHART USED‡ PRINT DATE	DATE OF LOCATION	REMARKS
rock	8.9 fms 51.6		55 49 56.8 133 57 932.4	250.0	2492.8	center of Cay Rock	8173	51-10-22	8-11-60	
rock		1.8 fms 13.2	55 49 1298.6 133 56 20.0	303.5	610.8	center of Cay Rock	8173	51-10-22	8-9-60	Breaking at 090° 8-23-60 Heavy swell
rock		2.5 fms 19.2	55 49 1767.2 133 55 269.6	119.0	910.4	center of Cay Rock	8173	51-10-22	8-19-60	2.2 fms 80m. NNE 3.7 " 180m SW
rock		6.0 fms 35.4	55 49 1466.8 133 54 653.4	060.0	1112.4	center of Cay Rock	8173	51-10-22	8-19-60	
rock	8.5 fms 51.0		55 49 [illegible] 133 55 438.6	156.5	367.2	center of Cay Rock	8173	51-10-22	8-19-60	
rock		4.2 fms 24.6	55 50 740.0 133 54 324.4	037.0	2140	center of Cay Rock	8173	51-10-22	8-30-60	
rock	3.3 fms 18.6		55 50 1142.6 133 54 430.4	129.0	2380	center of Cay Rock	8173	51-10-22	9-13-60	
rock	3.0 fms 15.0		55 50 354.8 133 55 159.2	018.0	1370	center of Cay Rock	8173	51-10-22	9-13-60	
rock	4.9 fms 28.2		55 50 898.8 133 55 393.4	005.5	1860	center of Cay Rock	8173	51-10-22	8-31-60	

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FY 786
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
(Ed. 1948)

ADVANCE REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. H-20-1-60 Datum N.A. 1927 Locality Iphigenia Bay State Alaska Date 4 Oct. 1960

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by W.P.Y

M.J. Tordal
Chief of Party.

TYPE OF DANGER	DEPTH (FEET) *		LATITUDE AND LONGITUDE			FROM CHARTED OBJECT OR NATURAL FEATURE †			CHART USED ‡		DATE OF LOCATION	REMARKS
	FATHOMETER	LEAD-LINE	°	′	SECONDS (IN METERS)	TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	NO.	PRINT DATE		
			55	48	1369.0							
rock		-8.5 ✓	133	57	509.4	234.5	2475.0	center of Cay Rock	8173	51-10-22	8-1-60	
rock		1.2 fms 5.4	55 133	48 57	1240.4 794.6	236.5	2766.6	center of Cay Rock	8173	51-10-22	8-1-60	Breaking at 0900 8-23-60 heavy swell
rock		9.6 1.6 fms	55 133	48 56	291.6 0.0	190.5	2519.4	center of Cay Rock	8173	51-10-22	8-9-60	Breaking at 0900 8-23-60 heavy swell
rock		7.0 fms 43.8	55 133	48 56	1800.0	198.0	2706.4	center of Cay Rock	8173	51-10-22	8-11-60	
rock		2.9 fms 22.8	55	47	1644.4	188.0	2997.8	center of Cay Rock	8173	51-10-22	8-19-60	
rock		8.1 fms 52.8	55 133	48 55	2214.0	179.0	2554.0	center of Cay Rock	8173	51-10-22	8-11-60	
rock		3.9 fms 27.6	55 133	49 55	1084.6	232.0	542.2	center of Cay Rock	8173	51-10-22	8-9-60	
rock	7.7 fms 46.4		55 133	49 55	519.6 828.4	212.5	460.0	center of Cay Rock	8173	51-10-22	8-8-60	
rock		2.6 fms 22.8	55 133	49 56	1118.6 176.6	288.0	684.8	center of Cay Rock	8173	51-10-22	8-9-60	

* Record least depth over danger reduced to plane of reference of charted soundings, using observed tides, if available.
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‡ Use largest-scale chart and note print date given in lower left corner of chart.

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STATISTICS FOR

HYDROGRAPHIC SURVEY H-8112 (HO-20-1-60) 1960

Project OPR-347

Volume	Day Letter	Date	No. of Positions	Hand Lead	Stat. Mi. Sdg.
		LAUNCH CS-95			
17	a	23 July '60	177		16.93
18	b	29 July '60	92	4	11.11
18	c	30 July '60	133	2	23.61
18	d	31 July '60	81		11.11
18 & 19	e	1 Aug. '60	35		5.82
19	f	2 Aug. '60	86		13.77
19	g	6 Aug. '60	163		27.26
20	h	7 Aug. '60	116		15.02
20	j	8 Aug. '60	159		22.22
21	k	9 Aug. '60	11		.3
21	l	10 Aug. '60	153		19.10
21	m	11 Aug. '60	52	6	6.34
21 & 22	n	19 Aug. '60	72	8	8.77
22	p	20 Aug. '60	118		15.10
22	q	22 Aug. '60	133		18.4
22	r	27 Aug. '60	15		1.7
23	s	29 Aug. '60	131		19.8
23	t	30 Aug. '60	84	6	10.4
23 & 24	u	31 Aug. '60	169	1	22.6
24	v	1 Sep. '60	197		26.5
24	w	10 Sep. '60	52		7.4
25	x	11 Sep. '60	87		12.6
25	y	12 Sep. '60	12		1.3
25	z	13 Sep. '60	88	12	12.6
25	aa	14 Sep. '60	108		16.2
26	ba	15 Sep. '60	207		34.3
26	ca	16 Sep. '60	155	3	21.3
27	da	27 Sep. '60	93		12.2
27	ea	28 Sep. '60	54	2	6.9
27	fa	29 Sep. '60	112		13.6

STATISTICS FOR

HYDROGRAPHIC SURVEY H-8112 (HO-20-1-6-)
(Continued)

Volume	Day Letter	Date	No. of Positions	Hand Lead	Stat. Mi. Sdg.
		Ship HODGSON			
1 & 2	A	18 July '60	319		98.5
3 & 4	B	19 July '60	221		49.0
4	C	23 July '60	113		34.9
4	D	24 July '60	78		23.3
5	E	28 July '60	89		25.9
5	F	29 July '60	123		27.6
5	G	31 July '60	65		14.9
6	H	2 Aug. '60	164		42.4
6 & 7	J	3 Aug. '60	165		44.0
7	K	6 Aug. '60	196		52.8
7 & 8	L	7 Aug. '60	156		44.7
8	M	8 Aug. '60	215		53.8
8 & 9	N	9 Aug. '60	193		42.5
9	P	10 Aug. '60	126		30.0
10	Q	11 Aug. '60	169		34.4
10	R	12 Aug. '60	148		33.2
11	S	17 Aug. '60	266		63.4
11 & 12	T	18 Aug. '60	342		94.0
12	U	19 Aug. '60	27		Bottom Samples
13	V	20 Aug. '60	14		Bottom Samples
13	W	11 Sep. '60	11		Bottom Samples
13	X	12 Sep. '60	217		61.9
14	Y	13 Sep. '60	226		60.2
14 & 15	Z	14 Sep. '60	214		46.4
15	AA	15 Sep. '60	208		49.2
16	BA	16 Sep. '60	52		13.4

TOTALS

	Positions	Statute Miles Hydro	Sq. Miles Hydro.
Launch CS-95	3145	512.9	160 sq. stat. Mi.
Ship HODGSON	4117	1040.4	55.7 sq. stat. Mi.
	7262	1553.3	215.7

TIDE NOTE

One portable automatic tide gage was established near Cora Pt. on Coronation Island and maintained throughout the survey. Lat. 55°54'15"N, Long. 134°07'05" W.

MLLW on tide staff was 4.9 feet.

Time and Range Corrections were not applied to the soundings.

LIST OF SIGNALS

Dressed Triangulation Stations

King 001
So 002
West 003
Bor 004
Ron 005
End 006
No 007
Cay 061

Aerial Photos

Coe 008
Bin 009
Cat 010
Fin 011
Elm 012
Ice 013
Gas 014
Job 015
Key 016
Lux 017
Mop 018
Rat 019
Car 020
Ace 021
Ear 022
Kid 023
Gin 024
Eva 025
Day 026
Cow 027
Bob 028
Alp 029
Ski 030
Pad 031
Oak 032
Nig 033
Man 034
Let 035
Jug 036
Its 037
His 038
Fat 039
Ebb 040
Dot 041
Leg 042
Cab 043
Bat 044
Aim 045
Roc 046
Nat 047
Max 048
Ivy 049
Leo 050
Kim 051
Jim 052
Ida 053
Lig - Helm Pt. Light 054
Sho - cor 062
Sho - WAR 063

Sextant Cuts

Dog 055
Hat 056
Jap 057
Gal 058
Dip 059

Abe 060

GEOGRAPHIC NAMES LIST

BOOT POINT
BORLASE ROCK
CAY ROCKS
CHINA COVE
CORA ISLAND

Refer to GEOGRAPHIC NAMES REPORT, IPHIGENIA BAY ENTRANCE TO SUMNER STRAIT ALASKA, Project OPR-347, previously submitted under separate cover.

U - Y

REPORT ON
DEPTH SOUNDING EQUIPMENT

Project OPR-347, H-8112, Field No. HO-20-1-60

EQUIPMENT:

The EDO 255C fathometer No. CS 44 was used by the Ship HODGSON throughout the project. The EDO 255C fathometer No. 255025 was used in Launch CS 95.

CORRECTORS:

The final fathometer correctors applied to the soundings were for echo, index and phase. These corrections were obtained from tests and comparisons made throughout the time of hydrography. The original results are recorded in the volumes. The index correctors are applied as observed from the fathograms. Phase corrections were averaged from the comparison in the volumes and entered as required. Echo correctors are the algebraic summation of vessel draft and velocity and instrument errors as determined by bar check and lead line comparisons and temperature and salinity observations. Temperature and salinity observations were made to determine velocity corrections. The correctors were used for work in deep water. The observations and curves were submitted to the Washington Office in a separate report.

Bar check and lead line comparisons were used to determine correctors for the launch in shallow water.

Settlement and squat corrections were determined for the launch by standard methods and found to be negligible.

Lead lines and bar check lines were calibrated by a steel tape.

Sheave and echo comparisons were made to determine instrument error in the ship's fathometer. The error was found to be -0.20.

VELOCITY CORRECTION ABSTRACT

Launch CS-95

a - f day
Table 3

Depth Fms.	Corr'n. Fms.
0 - 4.0	+0.4
4.1 - 10.4	+0.5
10.5 - 18.4	+0.6
18.5 - 27.0	+0.7
27.1 - 48.8	+0.8
48.9 -	+1.0

Table 4
g - m day

0 - 3.0	+0.2
3.1 - 17.0	+0.3
17.1 - 29.0	+0.4
29.1 - 31.0	+0.5
31.1 - 71.4	+0.6
71.5 -	+0.8

n - s day
Table 5

Depth Fms.	Corr'n. Fms.
0.0 - 5.8	+0.4
5.9 - 7.7	+0.5
7.8 - 10.2	+0.6
10.3 - 19.2	+0.7
19.3 - 45.0	+0.8
45.1 - 75.0	+1.0
75.1 -	+1.2

Table 6.
t - fa day

0.0 - 5.6	+0.2
5.7 - 7.6	+0.3
7.7 - 9.9	+0.4
10.0 - 12.5	+0.5
12.6 - 18.9	+0.6
19.0 - 31.0	+0.7
31.1 - 58.5	+0.8
58.6 -	+1.0

This abstract is a summation of the echo correctors determined by the bar check and Temperature and Salinity Observations.

Phase Correction B - A = +0.2

Leadline Correction

0 - 6	0.0
6.1 - 8	+0.01
8.1 - 11	+0.02
11.1 - 21	+0.03

VELOCITY CORRECTION ABSTRACT

Ship HODGSON

Corrections: 16 July through 31 July 1960 A - days

Table 1

Depth Fms.	Corr'n. Fms.
0	
0.0 - 4.0	+0.9
4.1 - 11.0	+1.0
11.1 - 19.0	+1.1
19.1 - 27.0	+1.2
27.1 - 31.0	+1.3
31.1 - 37.5	+1.2
37.6 - 61.5	+1.4
61.6 - 98.5	+1.6
98.6 - 101.0	+1.8
101.1 - 126.0	+1.5
126.1 -	+2.0

Corrections: 1 August through 4 October 1960 days

Table 2

0.0 - 6.5	+0.9
6.6 - 17.0	+1.0
17.1 - 30.0	+1.1
30.1 - 58.0	+1.2
58.1 - 92.0	+1.4
92.1 - 101.0	+1.6
101.1 - 150	+1.5
150.1 - 161	+1.0
161 -	+2.0

Phase Correction - Negligible

This abstract is a summation of the echo corrections determined by a combination of ship's draft, instrument error and temperature and salinity observations. Average ship's draft determined by daily measurements. Instrument error determined by sheave and echo comparisons.

APPROVAL SHEET

HYDROGRAPHIC SHEET H-8112

The boat sheet and field records for this survey were examined daily during the field season.

The survey is complete and adequate with no additional field work considered necessary. Junctions with contemporary and prior surveys are satisfactory.

Charles W. Clark

Charles W. Clark
CDR, C&GS
Chief of Party

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. 8112

Name on Survey	A On Chart No. 8173	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K BGN	
Alice Rocks	x								x	1
Boot Point	x								x	2
Borlase Rock	x								x	3
China Cove	x									4
Cora Island	x									5
Cora Point	x									6
Coronation island	x									7
False Point	x								x	8
Helm Point	x									9
Iphigenia Bay	x									10
Point Borlase	x									11
Spanish Islands	x									12
Sumner Strait	x								x	13
Warren Cove	x									14
Warren Island	x									15
NOTE: Cay Rocks is incorrectly applied on this sheet, the approved name for this feature is ALICE ROCKS.										16 17
										18
				Geographic Names Section 10 May 1962						19
										20
										21
										22
										23
										24
										25
										26
										27

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8112

Records accompanying survey: Smooth sheets 1; boat sheets 3; sounding vols. 27; wire drag vols. ....; Descriptive Reports 1; graphic recorder envelopes 21; special reports, etc. 1 Cahier-Sheran Abstracts; 1-Cover sheet and 1-Envelope of sections of cover 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	.....
Special adjustments	Time	.....

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

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

Note to Verifier: some positions can be plotted in two positions. See Pos 236 as an example. " " 1328 " " 3076 W.W.

US COMM C&GS DC

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H-8112

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

PROCESSING OFFICE NOTES # H-8112

SMOOTH SHEET

The smooth sheet as furnished by the Ship HODGSON was checked before position plotting and was found to be correct and complete except the rocks and ledges along shore. The rocks and ledges were added after completion of the penciling of soundings.

CONTROL STATIONS

The five sextant located signals were checked by the smooth plotter in the processing office.

SHORELINE AND TOPOGRAPHY H-8112

The low water line or zero curve has not been shown. The low water line in most places, for all practical purposes, coincides with the shoreline as the shore is steep to.

The following rocks were not transfered from the Manuscripts for the stated reasons.

Latitude	Longitude	Remarks
55 50' 40"	133 54' 08"	Falls in 11 fms. no indication on fathograms
55 50 41	133 54 14	Falls in 9.5 fms. " "
55 51 50	133 55 24	Pos. 82u shows 4.9 fathoms; heavy kelp indicated on fathogram. Kelp also mentioned in sounding record. Rock <u>not</u> mentioned by hydrographer and not on boat sheets.
55 52 01	133 55 35	Pos 90u shows 5.7 fathoms. Other conditions the same as above.
55n 53 45	133 56 45	4 rocks shown on T-10393 fall in 6 fms. of water. No indication at all on fathograms and not mentioned in records.

The existance of the above listed rocks is doubtful. Could it be that flotsam such as dead kelp, ect. that photographed appear as rocks?

CROSSLINES

As stated in the report by the hydrographer, crosslines are in very good agreement. Shoran controled lines show some need for adjustment within a mile of the Shoran stations where the visual and shoran work made a junction but the adjustment was small.

The launch hydrography along the shores of Coronation and Warren Islands and in the area of Cay Rocks was extremely conjested. In these areas only about half of the recorded soundings could be plotted on the scale of 1:20,000. To facilitate the selection of soundings, enlargements of the smooth sheet showing only positions and lines run were made to the scale of 1:10,000. The soundings were the plotted on the enlargements and then a selections of soundings from the enlargements were entered upon the smooth sheet.

The enlargements were saved for the use of the verifier and are attached in the following sounding volumes:

Area				Volume	Page
Latitude			Longitude		
55	53'	50"	134 07' 00"	17	2
55	49	15	134 16 00	17	44
55	51	00	133 51 00	18	4
55	48	20	133 55 20	19	9
55	47	40	133 56 00	19	9
55	49	25	133 56 10	19	53
55	48	30	133 57 00	21	7
55	49	00	133 58 00	21	48
55	51	00	133 55 30	22	71
55	50	20	133 53 00	23	2
55	49	30	133 55 00	25	66
55	50	30	134 14 45	26	41

All position numbers and day letters are shown in their proper colors on the enlargements. On the smooth sheet most of the position numbers are shown in the conjested areas and those omitted can be found on the enlargement of that area.

JUNCTIONS

The junction with H-8604, to the north, will be made when that sheet has been completed. Other junction sheets are not available in the processing office.

COMPARISON WITH CHART

An intensive comparison was made with Chart 8173 3rd. Ed., December 10, 1960. This comparison revealed numerous differences in details of the shoreline and also rocks and reefs along the shore. Many soundings on the Chart vary 10 or more fathoms from those on this survey. See section of Chart 8173 attached to this report for comparison.

In addition to the list of shoal soundings in Field Report, corrected in ink to the smooth sheet values, the following list may be of some assistance to the verifier.

Latitude	Longitude	Depth	Remarks
55 53!8	134 07!1	11 fathoms	
55 53.7	134 07.3	9.8 "	
55 53.45	134 09.05	4.6 "	
55 53.8	133 58.35	12.0 "	
55 52.15	133 58.8	26.0 "	
55 51.25	134 00.8	29.0 "	
55 51.75	133 58.05	25.0 "	
55 52.5	133 56.3	6.3 "	
55 51.75	133 56.35	13.0 "	

55	51.05	133	55.5	8.0	fathoms	
55	49.85	133	55.7	6.5	"	
55	49.85	133	55.15	3.7	"	
55	49.7	133	56.00	2.9	"	
55	50.6	133	54.4	3.7	"	
55	50.5	133	53.00	4.7	"	
55	50.2	133	53.05	11.0	"	
55	48.72	133	57.5	0.5	"	40 meters NW of rk aw.
55	48.1	133	55.45	8.8	"	
55	48.85	133	55.2	12.0	"	
55	47.85	133	57.8	28.0	"	
55	47.85	133	56.00	3.7	"	
55	47.7	133	56.15	12.0	"	
55	47.3	133	56.3	27.0	"	

ADEQUACY OF SURVEY

This survey is complete and adquate to supersede prior surveys for charting purposes.

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 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

RHC

~~Division of Coastal Surveys~~

May 21, 1962

Division of Charts: R. H. Carstens

Plane of reference approved in
27 volumes of sounding records for

HYDROGRAPHIC SHEET 8112

Locality Entrance to Sumner Strait, Southeast Alaska

Chief of Party: M. J. Tonkel (1960)
Plane of reference is mean lower low water reading
4.9 ft. on tide staff at Cora Pt., Coronation Island
18.8 ft. below B. M. No. 1 (1958)

Height of mean high water above plane of reference is: 9.8 feet.

Condition of records satisfactory except as noted below:

J. M. Symons
Chief, Tides and Currents Branch

~~Chief, Division of Tides and Currents~~

U. S. GOVERNMENT PRINTING OFFICE 877033

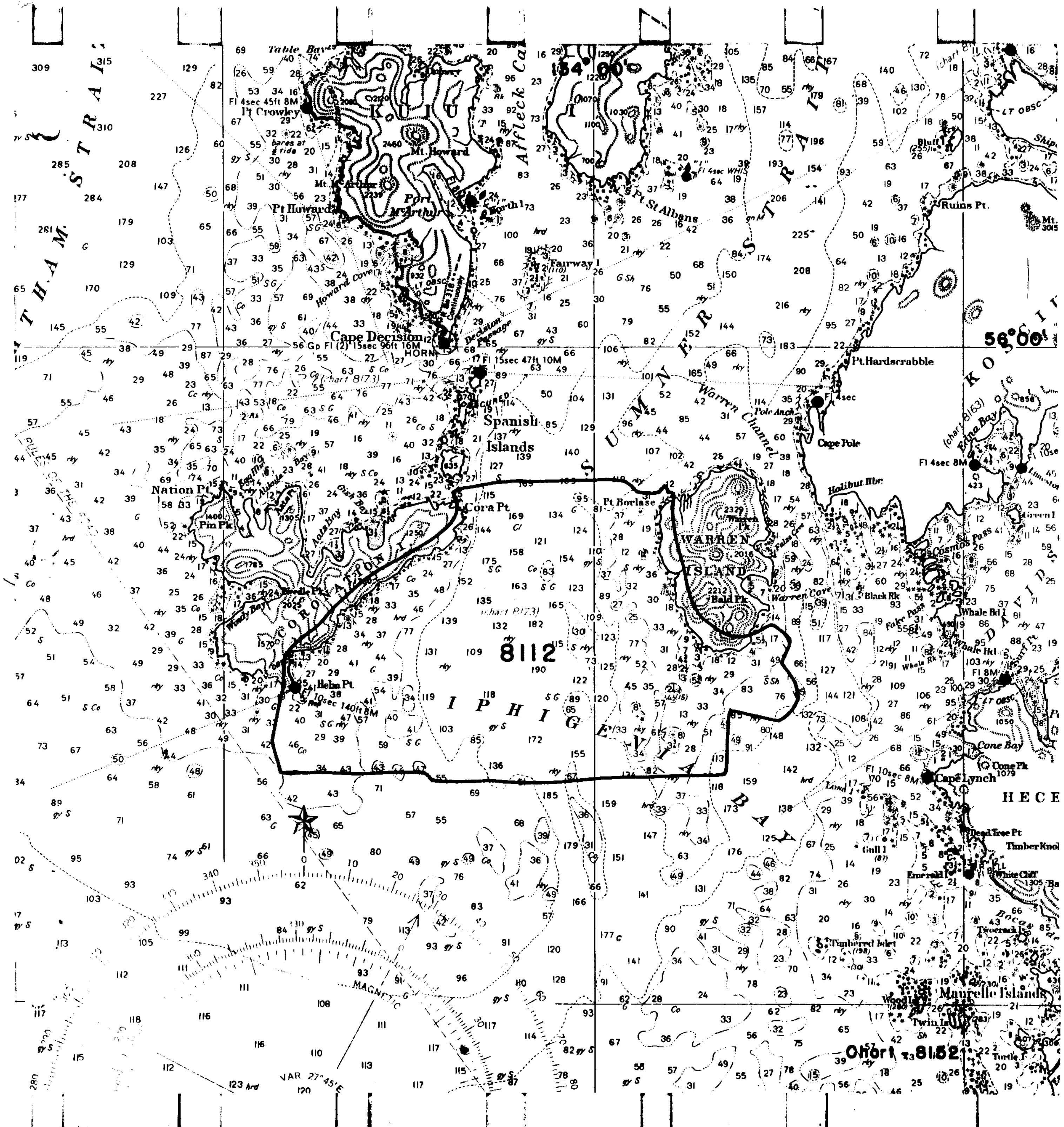
Table Bay
Pt Crowley
KUIU
Mt. Howard
Mt. McArthur
Port McArthur
Pt Howard
Howard Cove
Afleck Ca
Pt St Albans
Fairway I
Cape Decision
HORN
Decision Passage
Spanish Islands
SUMNER STRAIT
Warren Channel
Pt. Hardscrabble
Cape Pole
Ruins Pt.
Pt Borlase
WARREN ISLAND
Bald Pt.
Warren Cove
Nation Pt
Pin Pk
Cora Pt
CORONATION I
Heba Pt
8112
IPHIGENIA BAY
Holibut Hbr
Cosmos Pass
Black Rk
Whale Hd
Cone Bay
Cone Pk
Cape Lynch
HECE
Dead Tree Pt
Timber Knol
White Cliff
Gull I
Emerald I
Timbered Islet
Maurelle Islands
Twin Is
Chart 8152
CHATHAM STRAIT
KOSCIUSKO
56°00'
134°00'
MAGNETIC
VAR 27°45'E

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8112

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
10/30/62	8173	Helmer	Before ~~After~~ Verification and Review Extensive revision of sdgs & curves.
10/30/62	8201	Helmer	Before ~~After~~ Verification and Review Extensive revision of sdgs & curves. (thru 8173)
11/6/62	8252	Helmer	Before ~~After~~ Verification and Review Extensive revision of sdgs & curves (thru 8201)
4/22/63	8002	hjkeeler	Appl. thru chart 8201 Before ~~After~~ Verification and Review Examined.
12-10-64	8152	George Myers	Appld thru chart 8201. Before ~~After~~ Verification and Review
3-11-77	8201	M. Sager	Examined - Status unchanged - NO REVISIONS AT THIS TIME Before ~~After~~ Verification and Review
~~5-13-77~~	~~8173~~		
5-13-77	8173	Sheila S. Forbes	Before ~~After~~ Verification and Review appld Examined - ~~no additional Corrections~~ - Consider Fully appd (Class I survey)
5-14-77	8152	M. Sager	Before ~~After~~ Verification and Review Examined - status Unchanged since Previous application. Consider Fully applied (Class I Survey)
10/25/78	17320	Raitor	Before ~~After~~ Verification and Review Consider fully appld as Class I thru 8152
			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.

969 (1960)