

8326

Diag. Cht. No. 8152-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PA-05156 Office No. H-8326

LOCALITY

State SOUTHEAST ALASKA

General locality SUKKWAN STRAIT

Locality HYDABURG HARBOR

19A 56

CHIEF OF PARTY

J. T. JARMAN

LIBRARY & ARCHIVES

DATE JAN 26 1961

8326

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-8326

Field No. PA-05156

State SOUTHEAST ALASKA

General locality SUKKWAN STRAIT

Locality HYDABURG HARBOR

Scale 1:5,000 Date of survey 1956 Field Season

Instructions dated 7 January 1955, and 9 December 1955

Vessel USC&GS SHIP PATTON

Chief of party J. T. JARMAN

Surveyed by JTJ, GEH, DEW

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

Fathograms scaled by GEH, TES, DEW, PTP, DAD

Fathograms checked by GEH, TES, DEW

Protracted by V. F. Flor & Ship personnel

Soundings penciled by V. F. Flor

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

REMARKS:

44

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-8326 (FIELD NO. PA-05156)
HYDABURG HARBOR S. E. ALASKA

SCALE 1:5,000

U. S. C. & G. S. S. PATTON J. T. JARMAN, COMDG.

###

A. PROJECT:

This survey was executed in accordance with revised Instructions for Project 13570, dated 7 January 1955; Supplemental Instructions dated 9 December 1956; and the following referenced letters: 36-419-982pa, 10 September 1956 and 36-354-982pa, 2 August 1956.

All letters and instructions were addressed to the Commanding Officer, Ship PATTON.

B. SURVEY LIMITS AND DATES:

This survey covers Hydaburg Harbor between latitudes $55^{\circ} - 11' - 15''$ and $55^{\circ} - 13' - 00''$. It is bounded on the east by Prince of Wales Island and on the west by Sukkwan Island. Sounding was begun on 26 May 1956 and ended on 20 July 1956. Field work was interrupted by regular supply trips to CLEFT ISLAND in conjunction with the American Telephone and Telegraph Cable Laying Project (Project 10000-802).

One day's work ("a" day) was done on Sheet H-8325, PA-1555 in 1955, however the soundings are near the pier at Hydaburg and should be smooth plotted on PA-05156.

This survey covers part of H-3419, 1:5,000, 1912 and joins contemporary survey H-8325, PA-1555 on the south and west. The area to the north is unsurveyed.

C. VESSEL AND EQUIPMENT:

Hydrography was done with Launch 87, operating from the Ship PATTON. Soundings were taken with an 808-A recording fathometer, No. 51, calibrated for a velocity of 800 fathoms per second, supplemented with handlead soundings on shoals and rocks. Bottom samples were taken by wire and handlead from the launch.

One day's work was done from Skiff No. 478, using a pole for sounding.

D. TIDE AND CURRENT STATIONS:

All soundings are referred to a portable automatic tide gage located on the cannery pier at Hydaburg. No corrections for time or height were applied to the observed values.

There are no current stations within the limits of this survey.

E. SMOOTH SHEET:

All work on the smooth sheet will be done by the Seattle Processing Office and will be covered by an addenda to this report.

F. CONTROL STATIONS:

Existing triangulation stations were used to control the hydrography and to locate additional hydrographic signals. All additional control was located on graphic control sheet PATT-56-B.

Three stations - GAS, HOP, and TEE - were located by triangulation after the hydrography was completed. The computed geographic positions of these stations should be used for the smooth plot.

There were no jumps in the sounding lines and the control is considered good. A complete list of control for this sheet is attached to this report.

G. SHORELINE AND TOPOGRAPHY:

The shoreline for this boat sheet was enlarged from preliminary manuscripts, using a Saltzman projector. The shoreline is displaced slightly in relation to the control and should be shifted north in order to agree.

Some sections of the shoreline off the mouth of Saltery Creek were rodded in by the graphic control party. These sections are shown in red on the boat sheet. All rocks visible were located by sextant fixes or by planetable cuts and are shown in red on the boat sheet.

The low water line is defined by soundings wherever it was practicable. A beach line was run along the entire shoreline at reduced speed during high water. Minus soundings were obtained on this line, but not enough to delineate the zero curve everywhere.

The cannery pier at Hydaburg was sounded with a hand lead on "u" day. Necessary data, including a sketch, is in sounding volume 6.

H. SOUNDINGS:

Soundings were taken with an 808 type recording fathometer operated on the fathom scale. Handlead soundings were taken on shoals and isolated rocks. Daily bar checks were taken at 2, 4, and 7 fathoms. The fathometer initial was set at 0.4 on the fathogram for the entire survey. All soundings were recorded on the A-scale.

A summary of fathometer corrections is attached to this report.

I. CONTROL OF HYDROGRAPHY:

The hydrography was controlled by three-point sextant fixes on signals ashore.

J. ADEQUACY OF SURVEY:

This survey is adequate to supercede prior surveys for charting. Junctions with adjoining sheets are satisfactory and no holidays exist. Depth curves can be adequately drawn at the junctions.

The project instructions were not adhered to in regard to wire dragging shoals. It was planned to drag the shoal area at latitude 55°12'00", longitude 132° 49' 22", during the latter part of the field season. This was not done because of orders to proceed with work on Project 27320. It is believed that the shoal was adequately developed by soundings and that the least depth was found. However, if this shoal is to be cleared by a wire drag, it would be desirable to do so early in the Spring to avoid the thick kelp which appears later in the season.

No other shoals are recommended for wire dragging.

K. CROSSLINES:

Approximately 8% of all sounding lines are crosslines. All crossings, ~~as per boat sheet,~~ are in good agreement.

L. COMPARISON WITH PRIOR SURVEYS:

This survey covers part of old survey H-3419, 1:5,000, 1912. An overlay tracing of the depth curves and critical soundings from the old survey was compared with the boat sheet. The depth curves are in general agreement except that they are more adequately delineated on the 1956 survey.

The soundings are in generally good agreement with the following exceptions:

Previous Location	Previous Depth Feet	Previous Depth Fathoms	New Location	New Depth Fathoms	Remarks
55° 12.08'	19	3.1	55° 12.10'	2.64	Shoal sounding, mid-chammel, Sukkwan Narrows pos 29r
132° 50.48'			132° 50.44'		
55° 12.5'	22	3.8	55° 12.51'	2.5	Shoalest sounding on large shoal area pos 24-25p
132° 50.2'			132° 50.22'		

Survey H-3690, 1:10,000, 1914 is also in general agreement with the present survey.

Rocks, reefs, and shoals are more adequately developed on this survey. A table of Shoal Comparisons follows on the next page.

L. COMPARISON WITH PRIOR SURVEYS (Contin.):

Previous Location	Previous Depth Feet	Previous Depth Fathoms	New Location	New Depth	Remarks
55° 12.00' 132 49.60	35	5.9	55° 12.01' 132 49.63	2.8 ⁴	Shoal, marked by buoy pos. 158-159g
55 11.96 132 48.99	17	2.9	55 11.98 132 48.99	2.1 ²	S'ly end of shoal pos 78-79g
55 12.01 132 49.36	23	3.9	55 12.01 132 49.36	2.2 ⁶	Shoal, undeveloped on H-3690 pos 53a (red)
55 11.74 132 48.86	Rock awash		55 11.74 132 48.85	Rock awash	shown on P-56-B as a sunken rk.

The above positions and depths are from the boat sheet and are subject to revision by the smooth plot. In each case the new depth is the shoaler and should be retained.

M. COMPARISON WITH CHART:

This survey covers parts of Chart 8147 and 8153. All information charted on 8147 has been discussed in Paragraph L above.

The buoyed shoal at latitude 55°-12.00', longitude 132°-49.65', shown on Chart 8153, Third Edition, 1932, is in agreement with this survey. The sunken rock shown at latitude 55°-12.00', longitude 132°-49.38' is the offshore end of a shoal extending in a southerly direction from the beach and has a least depth of 2.2⁶fathoms.

The northern part of Hydaburg Harbor was previously unsurveyed and no comparison can be made.

N. DANGERS AND SHOALS:

All shoals shown on the charts or on prior surveys have been discussed in Paragraph L or M above. Newly found shoals are as follows:

Latitude & Longitude	Least Depth (fathoms)	Position Number	Remarks
55°-12.87' 132 -50.02	Rock, bare 4' @ MLLW	PATT-56-B	This rock is signal LOW in previously unsurveyed area
55 -12.93 132 -49.94	1.3'	31s 27-28n	Offshore end of shoal in previously unsurveyed area
55 -12.48 132 -50.35	2.4	136-137e	Shoal
55 -12.57 132 -50.43	Rock awash	PATT-56-B	Rock awash (5)

N. DANGERS AND SHOALS (Contin.):

Latitude & Longitude	Least Depth (fathoms)	Position Number	Remarks
55°-11.87 132 -49.15	3.8 ⁶	16-17f✓	Shoal ✓
55 -11.64 132 -48.88	2.8 ⁴	42t✓	Shoal ✓

The above are boat sheet positions and depths and are subject to revision by the smooth plot.

O. COAST PILOT INFORMATION:

Refer to "Coast Pilot Report, Ship PATTON, 1956 Field Season".

P. AIDS TO NAVIGATION:

There are three fixed aids to navigation within the limits of this survey. The topographic location of a privately maintained fixed aid is reported on Form 567. The other two fixed aids, Sukkwan Narrows Light, and Hydaburg Daybeacon were reported in 1955.

Topographic locations of the floating aids on this sheet are listed below:

NAME	POSITION	DEPTH	SOURCE
Sukkwan Narrows Buoy 1	55° -12.19' 132 -50.14	5 fms✓	PATT-56-B
Sukkwan Narrows Buoy 4	55 - 12.25 132 - 50.23	3 fms✓	PATT-56-B
Sukkwan Strait Mid-channel Buoy	55 - 12.01 132 - 49.60	5 fms✓	PATT-56-B
Hydaburg Buoy 2	55 - 11.73 132 - 49.03	8 fms✓	PATT-56-B

There are no submarine or overhead cables, or ferry routes within the limits of this survey.

Q. LANDMARKS FOR CHARTS:

Two new landmarks for charts are recommended - Hydaburg, Presbyterian Church Spire, and the stacks at the cannery in Hydaburg. These have been reported on Form 567.

R. GEOGRAPHIC NAMES:

Refer Refer to "Geographic Names Report, Ship PATTON, 1956 Field Season", to be submitted.

2. TABULATION OF APPLICABLE DATA:

Sounding Volume #1 Sheet H-8325 (PA-1555) - ("a" day)
Photogrammetric Report, Project 6117, 1956 Field Season
Topographic Report, PATP-56-B
Geographic Names Report, Ship PATTON, 1956 Field Season
Coast Pilot Report, Ship PATTON, 1956 Field Season
Geographic Positions of GAS, HOP, and TEE (Hydaburg, Presbyterian Church Spire)

Data attached to this report are:

Table of Statistics
Tide Note
Summary of Bathometer Corrections
List of Signals

Respectively submitted,

Gerard E. Haraden
Gerard E. Haraden
LT C&GS

Approved and Forwarded:

J. T. Jarman
CDR C&GS
Cmdg., Ship PATTON

TIDE NOTE TO ACCOMPANY H-8326, (Field No. PA-05156)

All soundings on this sheet were referred to the portable tide gage at Hydaburg at latitude $55^{\circ}112.2'$, longitude $132^{\circ}-49.4'$.

MLLW is 3.90 feet on the staff.

SUMMARY OF FATHOMETER CORRECTIONS

(Applied to Sounding Volumes)

Survey H-8326

Average Index Correction ("a" through "t" day - complete) 0.0 fms.
(initial was set at 0.4 fms throughout sounding and above
average was obtained from Abstract of Barchecks)

Average Initial Correction - scanned from fathograms and entered
where applicable.

Velocity Correction - Not considered.

Phase Correction - All soundings on A-scale.

Note: Hand Lead soundings were made over all shoal areas in an attempt
to verify a least depth. These soundings were found to be in good agreement
with the fathometer. Discrepancies were considered to be the result of the
horizontal displacement between fathometer and leadsman.

STATISTICS FOR HYDROGRAPHIC SURVEY
H-8326, PROJECT 13570
USC&GSS PATTON

VOL. NO.	DAY	DATE	HANDLEAD SOUNDINGS	NUMBER OF POSITIONS	STATUTE MILES SOUNDING LINES
<u>SKIFF #478</u>					
7	a	28 May 1956		76	3.0
<u>LAUNCH #87</u>					
1	a	26 May 1956	--	30	1.7
1	b	27 May 1956	--	135	9.4
1	c	28 May 1956	--	44	2.5
1 & 2	d	8 June 1956	--	130	10.8
2	e	9 June 1956	--	211	17.1
2 & 3	f	10 June 1956	--	205	17.3
3	g	14 June 1956	--	210	15.3
4	h	15 June 1956	--	38	2.5
4	j	25 June 1956	--	106	5.8
4	k	26 June 1956	--	27	1.9
4	l	28 June 1956	--	98	4.6
4 & 5	m	9 July 1956	--	82	4.5
5	n	10 July 1956	--	110	6.8
5	p	11 July 1956	--	70	4.1
5	q	12 July 1956	--	4	0.2
5	r	13 July 1956	29	29	--
5	s	19 July 1956	20	38	0.9
6	t	20 July 1956	46	46	--

HAND LEAD SOUNDINGS FROM PIER

6	u	14 Sept. 1956	22	22	--
8*	a	22 Sept. 1955	4	54	5.8
TOTALS:			117	171	108.4
			21	65	14.2

Area: 1.63 square statute miles

* Soundings taken as part of survey H-8325 and transferred to this survey. *umm.*

LIST OF SIGNALS USED ON H-8326, PA-05156

<u>NAME</u>	<u>SOURCE</u>	<u>NAME</u>	<u>SOURCE</u>
ADD	PATT-56-A	SAX	PATT-56-B
ANN	PATT-56-B	SET	PATT-56-B
BAT	PATT-56-A	SMALL	SMALL 1925
BEACH	BEACH, 1925	SOW	PATT-56-B
BOB	PATT-56-B	STA	PATT-56-B
CON	PATT-56-B	TEE	Hydaburg Presbyterian
COW	PATT-56-B	TIN	Church Spire, 1956
CRY	PATT-56-B	TOM	PATT-56-B
DAY	Hydaburg Daybeacon, 1955	TURN	TURN 1925
DOS	PATT-56-B	UNO	PATT-56-B
DOT	PATT-56-B	WIG	PATT-56-B
EAT	PATT-56-B	WOO	WOODY 1925
EBB	PATT-56-B		
EVA	PATT-56-B		
FAT	PATT-56-A		
FIG	PATT-56-B		
FIRST	FIRST, 1925		
GAB	PATT-56-B		
GAG	PATT-56-A		
GAS	GAS 1956		
GUM	PATT-56-B		
HIS	PATT-56-A		
HOP	HOP 1956		
ICE	PATT-56-A		
IVY	PATT-56-B		
JOE	PATT-56-B		
JUG	PATT-56-A		
KWAN	KWAN, 1925		
LAD	PATT-56-B		
LIG	Sukkwon Narrows Light, 1955		
LOW	PATT-56-B		
LUG	PATT-56-B		
MEET	MEET, 1925		
MOO	PATT-56-B		
NAR	NAR, 1925		
NAT	PATT-56-B		
OIL	PATT-56-B		
PIT	PATT-56-B		
RAT	PATT-56-B		
ROD	PATT-56-B		

SMOOTH SHEET

The projection was hand constructed and checked by personnel of the Seattle Hydrographic Processing Unit. The control and the shoreline were applied by personnel of the Ship PATTON.

Approximately 10% of the positions were protracted by ship personnel.

CONTROL OF HYDROGRAPHY

Approximately 69% of the positions on this sheet were protracted and the balance pricked through from film positives of the boat sheet or from an overlay tracing of soundings from survey H-8325 which were transferred to this survey.

On 22 September 1955 an investigation of the shoal about 200 meters south of the Hydaburg Dock was made and plotted on the boat sheet for H-8325. These sounding lines have been transferred to this survey.

COMPARISON WITH CHART

This survey has been compared with Chart 8151, 7th Ed. July 27, 1959. 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

GEOGRAPHIC NAMES

Survey No. H-8326

Name on Survey	Sources										1	
	A	B	C	D	E	F	G	H	K			
Hydaburg	x											1
Mushroom Island	x											2
Prince of Wales Island	x											3
Spook Island	x											4
Sukkwan Island	x											5
Sukkwan Narrows	x											6
Sukkwan Strait	x									x		7
												8
												9
												10
												11
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												26
												27

George M. Ball
 GEOGRAPHIC NAMES SECTION
 27 FEBRUARY 1961

On Chart No. 8151
 On previous survey No.
 On U. S. quadrangle Maps
 From local information
 On local Maps
 P. O. Guide or Map
 Rand McNally Atlas
 U. S. Light List
 BSN

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .8326...

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.

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

Number of positions on sheet	.....	1765
Number of positions checked	.....	456
Number of positions revised	.....	8
Number of soundings revised (refers to depth only)	.....	35
Number of soundings erroneously spaced	.....	.....
Number of signals erroneously plotted or transferred	.....	.....
Topographic details	Time	56 hrs
Junctions	Time	.....
Verification of soundings from graphic record	Time	90 hrs
Special adjustments	Time	.....

Verification by *Carl Feje*..... Total time *225 hrs* Date *10/31/73*

Reviewed by Time Date

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- 8326

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. N/A
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. N/A
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). ✓
T-11497 & T-11498 Final copies
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:
In doing the junction with H-8456 (1958) position 36 m was found to be misplotted. Position was replotted. Position 59 m was found to be a swing. CDM 4/16/74
35. The field plotting of soundings was satisfactory except as follows:
36. Notes to reviewer:
Shoreline & other topo. features were changed to conform to T-11497 & T-11498.

Verified by

Carl Fife

Date

10/31/73

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

February 17 1961

Division of Charts: R.H. Carstens

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 8326

Locality Hydaburg, Harbor, Southeast Alaska

Chief of Party J.T. Jarman (1956)
Plane of reference is mean low lower water
3.9 ft. on tide staff at Hydaburg, Southeast Alaska
17.3 ft. below B. M. 1 (1955)

Height of mean high water above plane of reference is: 12.0 ft.

Condition of records satisfactory except as noted below:

Burt W. Wilcox

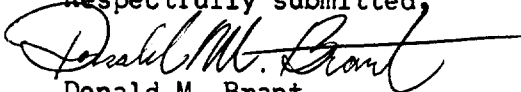
Chief, Tides and Currents Branch

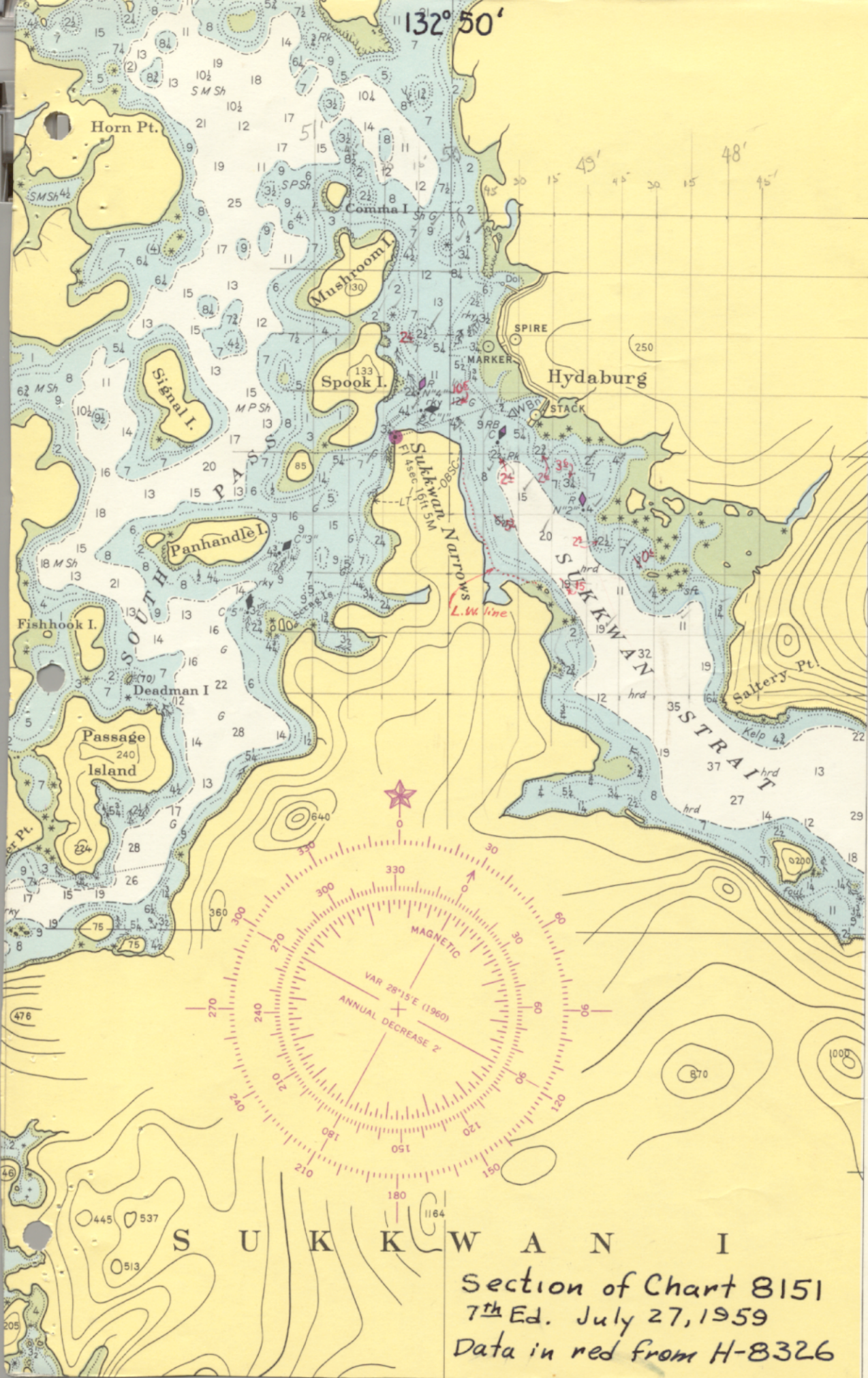
~~CHIEF, DIVISION OF TIDES AND CURRENTS.~~

Notes to the Verifier
H-8326 (unverified)
August 1970

A rock (three feet above MHW) was delineated on photogrammetric survey T-11498. This rock is not shown on hydrographic survey 8326. The rock is located north of triangulation station FIRST, 1925 near hydro signal BAT. It is recommended that this rock be shown on hydrographic survey 8326. ✓

Respectfully submitted,

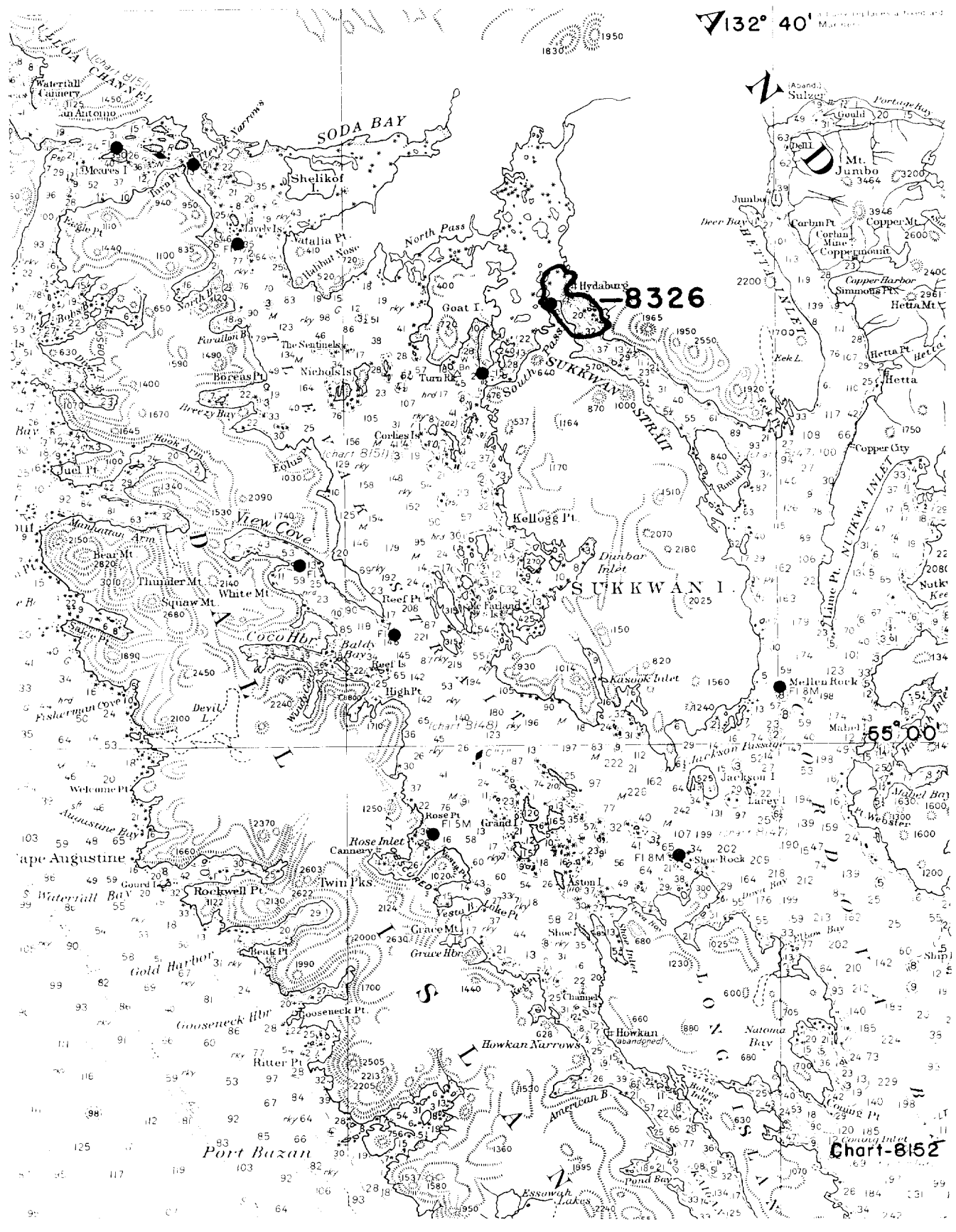

Donald M. Brant



131'
45'
30'
15'
12'
45'
30'
15'
11
55'
10' (JOINS CHART 8147)

S U K K W A N I
Section of Chart 8151
7th Ed. July 27, 1959
Data in red from H-8326

132° 40' 1830 1950



8326

Chart-8152

