

8125

Diag. Cht. Nos. 8102-3 & 8152-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. HC-1154 Office No. H-8125

LOCALITY

State S. E. Alaska

General locality Cordova Bay

Locality Hessa Inlet and Approaches

194 54

CHIEF OF PARTY

John Bowie

LIBRARY & ARCHIVES

DATE June 20, 1955

B-1870-1 (1)

8125

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-8125

Field No. HO-1154

State S. E. Alaska

General locality Cordova Bay

Locality Hessa Inlet and approaches

Scale 1:10,000 Date of survey 26 April-22 May 1954

Instructions dated 17 March 1953 & 8 January 1954

Vessel Ship HODGSON

Chief of party John Bowie

Surveyed by J. Bowie, E. F. Hicks, Jr. & J. Dermody

Soundings taken by fathometer; graphic recorder, hand lead, wire 808 fathometer

Fathograms scaled by R. Owens, H. Hildahl

Fathograms checked by _____

Protracted by C. R. Lehman

Soundings penciled by C. R. Lehman

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW and are based on a velocity of sound of 800 fms/sec

REMARKS: _____

Handwritten initials

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

NO. H-8125, (FIELD NO. HO-1154)

Scale 1:10,000

SHIP HODGSON

J. BOWIE, COMDG.

Surveyed by J. Bowie, E. F. Hicks, Jr., J. Dermody

A. PROJECT

This survey was executed as part of Project CS-357 under instructions 22/MEK, S-2-HO dated 17 March 1953 and Supplemental Instructions 22/MEK, S-2-HO dated 8 January 1954.

B. SURVEY LIMITS AND DATES

This survey covers HESSA INLET and approaches east of Long. $132^{\circ} 20'$ and north of Lat. $54^{\circ} 45'$.

Field work on this survey began on 26 April 1954 and was completed 22 May 1954.

This survey is joined on the ~~east~~^{west} north of Lat. $54^{\circ} 47.2'$ by survey H-8066, Field No. HO-1253 and south of this latitude by survey H-8065, Field No. HO-1153.

C. VESSELS AND EQUIPMENT

This survey was executed with standard 30 foot hydrographic launch 98 and plane personnel boat, Launch No. 134. Both launches had a turning radius of approximately 25 meters at standard speed.

808 fathometers No. 62S and 150 SPX with reeds calibrated for a velocity of 800 fathoms per second were used for all hydrography.

D. TIDE AND CURRENT STATIONS

A portable automatic tide gage was maintained at Tah Bay, Lat. $54^{\circ} 49:70$, Long. $132^{\circ} 19:98$ (outside the limits of this sheet) during the entire period of the survey and was used without time or range correction for the reduction of all soundings south and west of a line approximately 100 meters north of hydrographic signal BOB which is the beginning of the narrow inlet into Hessa Inlet. ^{topo.}

A portable tide gage was maintained in Hessa Inlet, Lat. $54^{\circ} 47:54$, Long. $132^{\circ} 17:33$ during the time sounding was in progress north and east of the dividing line mentioned above and was used without time or height correction for reduction of all soundings east of that line.

The system of sounding lines was broken at this line to facilitate the reduction of soundings.

No current stations were occupied within the limits of this survey.

E. SMOOTH SHEET

All work on the smooth sheet was done by the Seattle Processing Office

and will be covered by their report which will be an addenda to this report.

F. CONTROL STATIONS

No triangulation ^{from T-11320} exists within the limits of this survey. Topographic stations LAY, ION, AXE, CUR, FRY, GOB, HOW, LIZ, NUT, TRY and HER were from 1953 Graphic Control Sheets HO-B & HO-C by this vessel and the remainder from air photographic surveys Manuscript Nos. T-11303 and T-11320. Where stations were needed and there were no identifiable picture points nearby, the stations were located by sextant fixes at the station using objects located by air photographic methods. * Stations underlined are in disagreement with T-11305
No replotting required since hydrography is satisfactory (per R.H.C.)

In the descriptive report for manuscripts T-11301, T-11303, T-11320 and T-11321 written by the Baltimore Photogrammetric Office, it is mentioned that the radial plot position of station AXE differs from the topographic location by 2.8 millimeters. This station was on the extreme edge of the topographic sheet (off the aluminum backing) and was at some distance from the control of the sheet. It is recommended that the photogrammetric position be held and in the compilation of the chart that hydrography on sheets H-8065 and H-8066 in the vicinity of station AXE be adjusted to fit this new location.

+ no adjustment necessary, junctions satisfactory as per R.H.C.

A list of all signals and method of location is in Vol No. 1 of the sounding record.

** @Axe plotted from T-11320*

G. SHORELINE AND TOPOGRAPHY

All shoreline is from Manuscripts Nos. T-11303 and T-11320 furnished by the Washington Office. T-11305 & T-11321 (1953-54)

No shoreline discrepancies were noted. Several isolated shoals and rocks were found which did not appear on the manuscripts. ✓

On account of the steep-to, rocky coast it was impractical to delineate the low water line in all cases.

H. SOUNDINGS

All soundings except a few hand lead soundings on isolated rocks or shoals were made with 808 fathometers No. 62S and 150 SPX.

The fathometer initial was set so that with the bar at two fathoms the fathometer would read two fathoms eliminating any index correction. Since the fathometers were calibrated for a velocity of 800 fathoms per second no velocity correction was made. ✓

Bar checks were made three times daily at two fathoms only in accordance with letter 22/MEK, S-1-HO dated 15 June 1953 to Commanding Officer, Ship HODGSON.

Phase corrections were made and corrections applied. Details of the phase comparisons and corrections are given in Table 2 following this report.

I. CONTROL OF HYDROGRAPHY

All hydrography was controlled by visual sextant angles on shore objects or signals. ✓

J. ADEQUACY OF SURVEY

This survey is complete and adequate for charting purposes. Junctions with adjoining sheets are satisfactory and no holidays exist. Depth curves can be adequately drawn at the junctions. ✓

K. CROSSLINES

There are approximately 17.5 miles of crossline or slightly over 8% of all lines run are crosslines. All crossings appear to be satisfactory. ✓

L. COMPARISON WITH PRIOR SURVEYS

No prior surveys exist in this area. ✓

M. COMPARISON WITH CHART

This survey was compared with Chart 8145, Second Edition, print date 25 May 1953. No soundings are shown on the chart in the area covered by this survey. There are a number of rocks and kelp patches shown. This survey should supersede all charted data. The charted shoreline is out in several places the most prominent being the southeast part of Hessa Inlet. ✓

N. DANGERS AND SHOALS

Listed in the table below are dangers, shoals and significant soundings found:

LOCATION	DEPTH	POS.	REMARKS
54° 45:88 ✓ 132° 19:33 ✓	Rock cov. 2' MLLW <i>2w25h(0)</i>	45c 11c ✓	Relative unimportant waterway.
54° 46:04 ✓ 132° 19:32 ✓	Rock uncov. ^{2'} 1' MLLW ✓	9c ✓	" " "
54° 46:11 ✓ 132° 19:02 ✓	Rock Awash MLLW (1)	7b 110c ✓	
54° 47:25 ✓ 132° 19:46 ✓	Rock cov. ^{2'} 3' MLLW (0)	1a ✓	
54° 47:28 ✓ 132° 19:46 ✓	Rock ^{2wash} cov. 2' MLLW (0)	2a ✓	
54° 47:19 ✓ 132° 19:20 ✓	Rock cov. ^{1.0} 0.9 fms. MLLW ✓	46d ✓	
54° 47:09 ✓ 132° 19:37 ✓	Rock Awash MLLW ✓	4b ✓	
54° 47:14 ✓ 132° 18:58 ✓	2 Rocks cov. ^{2' 5' 3'} 4' MLLW ✓	5b ✓	
54° 47:25 ✓ 132° 18:67 ✓	^{9'} 3.8 fms. Least depth	41-42a	Significant sounding ✓

LOCATION	DEPTH	POS.	REMARKS
ENE of signal AXE are 1 small rock island and 2 reefs, distances 170, 270 and 460 meters, respectively. ✓			
54° 47:15.6 132° 17:04.3	Rk., 2.0 fms. ✓	³ 6f ✓	Launch #134 ✓
54° 47:75 ✓ 132° 16:86 ✓	2.7 2.4 fathoms	21-22j 93-94j	Shoal sdg. off point ✓
54° 47:61 ✓ 132° 16:72 ✓	0.7 fathoms 0.2 fms, Least depth ✓	10g 103f-104f ✓	Shoal Sdg. Launch 98 ✓
54° 47:76 ✓ 132° 16:32 ✓	0.1 fathom	7h ✓	Rock pt. ✓
54° 47:89 ✓ 132° 16:53 ✓	2.5 2 fathoms 3.3	22-23j 4f ✓	Rk. pt. covers ✓
54° 47:92 ✓ 132° 16:25 ✓	0.8 fathom	5h ✓	Rk. pt. covers ✓
54° 48:48 ✓ 132° 15:74 ✓	* 2 1/3 ft. 2- Rocks uncov. 5' MLID ✓ 2nd Rock uncovers 8' MLID ✓	99-104a ✓	2 Rks. ✓
54° 48:42 ✓ 132° 15:30 ✓	0.7 fathom	14f ✓	Least depth on large E-W reef ✓
54° 48:24 ✓ 132° 15:11 ✓	6 5.8 fms. ✓	10-19a 15g-16g ✓	Least depth, Launch 134 ✓
54° 47:97.8 132° 14:84.5	2.2 fathoms (not plotted) 1.6 fms. ✓	12-13d 16d-17d ✓	Least depth, Launch 134 ✓
54° 47:69 ✓ 132° 14:25.09	2 fathom 2.3 fms 2.1 fms. ✓	34-35a dp 90c ✓	Not least depth Least depth, Launch 134 ✓
54° 48:69.7 132° 14:14.65	1.8 fathom ✓	107b ✓	Pinnacle rock ✓
54° 47:18.1 132° 18:59.60	5.5 3.4 fathom 6.7	34-35a 1e of mid-channel.	Controlling depth in at ✓

Numerous rocks and reefs in unimportant area S of Lat. 54° 47:6 and between Long. 132° 16:0 and 17:0 . ✓

All of above soundings are from boat sheet positions using predicted tides and will be revised when smooth plot is made and actual reducers applied. (depths revised) ✓

The area in the vicinity of signals IVY And LUX is too foul for launch hydrography. Rocks and reefs were located by approximation in relation to existing topography and so indicated on the boat sheet. ✓

The large reef areas in vicinity signal IMP were not located by the hydrographer but the shape and location as shown on the manuscript is correct. ✓

$\phi 54^{\circ}48.62'$, $\lambda 132^{\circ}15.26'$

The area north of signal MEN was very foul with numerous rocks and is so indicated on the boat sheet.

O. COAST PILOT INFORMATION

The best approach into Hessa Inlet is north of the islands and reefs at Lat. $54^{\circ}47:4$, Long. $132^{\circ}19:7$. The approach south of these rocks is not recommended because of the general shoal area southeast of these rocks.

The controlling depth into Hessa Inlet is three and a half fathoms at MLLW 0.25 mile northwest of WHIRLPOOL POINT. (*appears to be 6.7 fms.*)

The approaches from the south are narrow with depths of two to three fathoms and numerous rocks in and along the channels. Their use is not recommended except for small craft with local knowledge.

Hessa Inlet is a large body of water with depth up to 35 fathoms but there are numerous shoals and rocks which lie well offshore and caution should be used to avoid them.

No anchorages for large craft are recommended, but small craft may anchor at numerous places along the beach. The survey ship did not enter this area, the launches anchored at numerous places along the beach.

During the period of this survey the weather varied from rainy to good but the period was so brief no statement regarding weather conditions can be made.

No current observations were made but the current in HESSA NARROWS was estimated to reach a velocity of six to seven knots with slack water near times of high and low water. At the strength of the current there are extensive swirls, eddies and small whirlpools in Hessa Narrows.

P. AIDS TO NAVIGATION

No aids to navigation exist within the limits of this survey.

Q. LANDMARKS FOR CHARTS

Signal CLIFF, Lat. $54^{\circ}47:15.6$, Long. $132^{\circ}18:48$ is the center of a very prominent white bare rock formation about 200 ft. in diameter on the bluff and it is recommended that it be charted as a landmark for chart. *charted*

No other recommended landmarks lie within the area of this survey.

R. GEOGRAPHIC NAMES

*Noted:
854 H.H.*

See special report on geographic names submitted by this party. The following names are recommended:

- (a) The large island Lat. $54^{\circ}46:7$, Long. $132^{\circ}19:5$ be named HESSA ISLAND.
- (b) The point Lat. $54^{\circ}46:85$, Long. $132^{\circ}18:45$ be named WHIRLPOOL POINT.

- (c) The narrow pass into Hessa Inlet between signals BOB and CAN be named HESSA NARROWS.
- (d) The approach into Hessa Inlet from the south between signals NUL and TRY be named BUSCHMANN PASS.

S. SILTED AREAS

No significant silted areas were noted.

T. MARKED STATIONS

The following stations were marked by standard disks: T.G.B.M.NO. 3 and HESS.

Z. TABULATION OF APPLICABLE DATA

Tidal Data
Air Photographs

Respectfully submitted,

E. F. Hicks, Jr.
E. F. Hicks, Jr.
CDR, USC&GS

Approved and forwarded:

J. Bowie
J. Bowie, CDR, USC&GS
Comdg., Ship HODGSON

Addenda to Section R. GEOGRAPHIC NAMES

- (e) After writing this report it was learned that the bay Lat. 54 - 47.2; Long. 132 - 18.6 has been known locally as WINTER BAY and it is recommended that this name be charted.

J.B.

TABLE 1

STATISTICS FOR HYDROGRAPHIC SURVEY H- 8125, HO-1154

VOL.	DAY	DATE	VESSEL	POS.	STAT. MI.	H. L.
1	a	11 May	134	108	12.1	2
1	b	12 May	134	149	21.5	1
2	c	13 May	134	90	11.7	8
2	d	17 May	134	71	8.4	
2	e	18 May	134	6		6
2	f	20 May	134	61	4.4	25
2	g	22 May	134	18	1.4	
Totals for Launch 134 - - - - -				503	59.5	42
3	a*	4 May	98	45	7.9	
3	b*	5 May	98	130	19.3	
3	c*	6 May	98	126	12.4	
3	d*	7 May	98	52	5.9	
4	d*	7 May	98	76	11.4	
4	e*	11 May	98	179	27.4	
4	f	12 May	98	130	13.6	
5	f	12 May	98	31	4.0	
5	g	13 May	98	163	25.0	
5	h	18 May	98	9	0.3	6
5	j	19 May	98	126	12.2	18
Totals for Launch 98 - - - - -				1066	139.4	24
3	a	7 May	dinghy	20	0.8	20
Totals for sheet - - - - -				1589	199.7	66

Area: 3.7 sq. stat. miles

TABLE 2

FATHOMETER CORRECTIONS - (PHASE)

808 FATHOMETER NO. 628

Feet		Fathoms		Fathoms	
A	B	A	B	A	B
44.9	44.5	39.5	39.1	37.3	37.0
45.0	44.5	39.0	39.0	38.2	37.8
45.0	44.3	38.0	38.3	39.0	38.5
44.6	44.0	37.3	37.7	39.9	39.2
44.3	44.0	36.6	36.8	39.9	39.7
44.2	44.0	35.8	36.0	39.5	39.3
44.3	44.0	35.0	35.1	37.0	39.1
44.4	44.0	<u>37.3</u>	<u>37.4</u>	36.9	37.0
44.2	44.0			<u>37.0</u>	<u>37.0</u>
<u>44.0</u>	<u>43.6</u>	Mean		38.3	38.3
Mean	44.1				

Fathoms	
B	C
78.9	77.2
79.0	77.2
79.0	77.2
79.1	77.3
79.2	77.4
79.1	77.2
79.0	77.1
78.9	77.0
78.9	77.0
78.6	76.9
<u>79.0</u>	<u>77.2</u>
Mean	

A-B	+0.4
	-0.1
	<u>0.0</u>
Mean	+0.1
B-C	+1.8
Correction A Scale	0.0
B Scale	+0.1
C Scale	+1.9

TABLE 3

808 FATHOMETER 150 SPX

7 June 1954 - j day Sheet 1354

PHASE COMPARISON

A	B	B	C	
42.3	44.3	74.4	74.8	
41.6	43.2	73.6	74.4	
40.4	42.0	73.5	74.0	
40.0	41.3	73.0	73.5	
39.9	41.2	72.8	73.3	
40.0	41.0	73.0	73.5	
40.0	41.0	72.0	72.5	
40.1	41.2	71.9	72.1	
40.0	41.3	<u>71.7</u>	<u>72.3</u>	
<u>40.4</u>	<u>41.6</u>	25.9	30.4	
4.7	18.1	72.9	73.4	Mean
40.5	41.8			

A-B = -1.3

B - C = -0.5

A	=	0.0
B corr'n	=	-1.3
C corr'n	=	-1.8
D corr'n	=	-1.1

17 Sept. - Sheet 1854

C	D	
122.0	122.0	
122.0	121.0	
121.6	121.0	
121.8	121.0	
121.8	121.0	
121.5	121.0	
122.0	121.2	
122.0	121.2	
122.0	121.5	
<u>121.5</u>	<u>120.0</u>	
18.2	10.9	
121.8	121.1	C-D 0.7

TIDE NOTE FOR HYDROGRAPHIC SURVEY H- 8125
FIELD NO. HO-1154

TIDE STATIONS

TAH BAY - Lat. $54^{\circ} 49' 70$
Long. $132^{\circ} 19' 98$

MLLW on staff = 3.2 ft.

HESSA INLET (Hydrographic Signal TEE)

Lat. $54^{\circ} 47' 04.54$
Long. $132^{\circ} 17' 33$ ✓

MLLW on staff = 6.5 ft.

GEOGRAPHIC NAMES

The following are the geographic names penciled on the Smooth Sheet.

CORDOVA BAY
HESSA INLET
BUSCHMANN PASS
HESSA NARROWS
WINTER BAY
THOMPSON PASSAGE
HESSA ISLAND
PRINCE OF WALES ISLAND
WHIRLPOOL POINT

LIST OF SIGNALS (H-8125 - HO-1154)

<u>Name</u>	<u>Source</u>
ACE	Vol #1, p. 10
AMP	Vol #1, p. 5
ABE	T-11320
AXE	Tp11320 ✓
BIN	T-11320
BOB	T-11320
BUT	T-11320
CAL	Vol #1, p. 5, HO-1152
CAR	T-11320
CLIFF	Vol #1, p. 8
CON	Vol #1, p. 11
CUR	HO-B-1953
DIG	Vol #1, p. 12
DIM	Vol #1, p. 10
DON	T-11320
DUO	T-11320
EAT	T-11320
EAR	HO-C-1953
EGG	T-11303
END	T-11320
EVA	T-11320
FOR	T-11320
FRY	HO-B-1953
FUN	T-11320
GOB	HO-B-1953
GOT	T-11320
GUS	T-11320
HAR	T-11320
HER	HO-C-1953
HESS, 1954	Marked Topo <i>No source available for (marked)</i>
HID	T-11320
HOW	HO-B-1953
HUG	T-11320
HUM	Vol #1, p. 8
ICE	Vol #1, p. 11
IMP	T-11320
INK	Vol #1, p. 7
ION	HO-B-1953
IVY	T-11320
JET	T-11320
JOB	Vol #1, p. 10
JOE	T-11320
JOY	HO-B-1953
KEN	Vol #1, p. 7
KIM	T-11320
KIS	T-11320

LIST OF SIGNALS (Cont)

<u>Name</u>	<u>Source</u>
LAM	T-11320
LAV	Vol #1, p. 7
LAY	HO-B-1953
LEG	Vol #1, p. 11
LIP	Vol #1, p. 6
LIZ	HO-B-1953
LUX	T-11320
MAT	T-11320
MEN	T-11320
MIT	T-11320
MOP	T-11320
MUD	Vol #1, p. 6
MUG	Vol #1, p. 12
NED	T-11320
NEW	T-11320
NUL	T-11320
NUT	HO-B-1953
OLD	T-11320
OUR	Vol #1, p. 12
OWL	T-11320
PAD	Vol #1, p. 4
PAT	Vol #1, p. 5
PEN	Vol #1, p. 6
POT	T-11320
PRO	Vol #1, p. 11
PUP	T-11320 and Vol #1, p. 10, 53
PUP 2	Vol #1, p. 4, 5, 7
QUO	T-11320
REB	T-11320
REX	Vol #1, p. 12
RIP	T-11320
ROCK	Boat sheet
RUE	T-11320
SOX	T-11320
SPY	T-11320
TAM	T-11320
TEE	T-11320
TIT	Vol #1, p. 6
TOM	T-11320
TOP	Vol #1, p. 8
TRY	HO-C-1953
USE	T-11320
VIM	T-11320
WIN	Vol #1, p. 7
WOO	Vol #1, p. 8
YET	T-11320

E. Smooth Sheet

The smooth sheet was hand constructed in the Seattle Processing Office using standard methods.

F. Control Stations

Topographic station AXE (Latitude $54^{\circ} 47.3'$, longitude $139^{\circ} 19.97'$) was plotted as recommended under F of field report. This position does not agree with location on H-8066 and H-8065 as a result of a later re-plot of the photo-topo. However, the sheet junctions agree satisfactorily and the new position was not used hereon.
** AXE plotted from T-11320; result of a check radial plot.*

Hydrographic signal ROCK, plotted on smooth sheet in a position spotted from boat sheet, source of boat sheet location unknown. Rock shown on Manuscript T-11320 is not designated as a signal. Spotted location of signal ROCK is in agreement with range at position #133f V#5, Launch 98, Latitude $54^{\circ} 47.4'$, Longitude $132^{\circ} 16.25'$.
o Rock replotted to agree with T-11320 pos. of rock. Hydro. adjusted accordingly.

A list of signals and method of location is included in this report. Additional signals were added to the list in Volume I, page 1.

G. Shoreline and Topography

All shoreline is transferred from shoreline manuscripts T-11305, T-11303, T-11302, T-11320, and T-11321. (1953-54) ✓

The west shoreline of HESSA ISLAND, the west shoreline of lower reaches of HESSA INLET and of BUSCHMANN PASS are inked in dashed lines. The angle of the picture hides the actual shoreline because of high cliffs. ✓

H. Soundings

Vol. #1, page 56, note included in Remarks, ^{pos.} ~~page~~ 89b, ^{pos.} ~~page~~ 90b appears to have been placed in the wrong volume. The note, which refers to - "an example of soft bottom on the fathogram" - was meant to refer to either of several places; Vol. #2, p.56 from lg-18g, or Vol. #5, p.19 from 55g and on - being two places where note would be applicable. *note on pg. 56, Vol. 1. refers to "excellent example of sediment"* ✓

K. Crosslines

A few discrepancies were found and resolved by re-examination of the fathogram. *Review, par. 7c*

M. Comparison with Contemporary Surveys

The junction with H-8065 ⁽¹⁹⁵³⁾ Cordova Bay, is satisfactory ✓

N. Dangers and Shoals

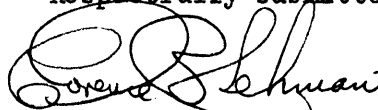
Smooth sheet values for heights of rocks, etc. are shown as inked corrections under "N" of the field report. Additions to this list of dangers are as follows:

<u>Location</u>	<u>Depth</u>	<u>Position</u>	<u>Remarks</u>
Lat. 54° 48.08 Long. 132° 14.74	1.6 fms	80 c	Sunken reef, least depth Rk symbol on sounding ✓
Lat. 54° 47.98 Long. 132° 14.85	1.6 fms	16d - 17d	Least depth, sunken Rk ✓
Lat. 54° 46.92 Long. 132° 18.10 ³	7 ⁶ fms	165 ^e 176 e	Hessa Narrows controlling depth ✓
Lat. 54° 45.18 ²⁰ Long. 132° 19.31	3.2 fms	13-14c	Buschmann Pass controlling depth ✓
Lat. 54° 47.90 Long. 132° 16.51	3.3 2.5 fms	22-23j	least depth ✓
Lat. 54° 45.92 ² Long. 132° 19.24	2 Rks awash MLLW	6 c	In line and in range with TOM ✓
Lat. 54° 45.90 ¹ Long. 132° 19.23	Edge of reef	7 c	10m towards PAD ✓
Lat. 54° 45.97 Long. 132° 19.27	Rk awash MLLW	8 c	Identified on S.S. by note or symbol ✓
Lat. 54° 46.03 ³ Long. 132° 19.32	uncovers 2 feet	9 c	Rk awash MLLW ✓
Lat. 54° 46.17 ⁵ Long. 132° 19.29	uncovers 1 ft. ✓	10 c	Rk awash MLLW ✓
Lat. 54° 45.88 Long. 132° 19.34	Rk awash MLLW	11 c	✓

U. Depth Curves

Generally only 3, 5, 10, 20, 30 fm curves were drawn.

Respectfully submitted,



Clarence R. Lehman
Cartographic Compilation Aid, C&GS

H - 8125

HO - 1154

In the temporary absence of the Supervisor, NW Dist
due to illness, this sheet has been inspected by the writer
in lieu of the Chief of Party's inspection.

Approved and forwarded

A handwritten signature in cursive script, appearing to read "L. W. Eason, II".

L. W. Eason, II
Cartographer in charge,
Seattle Processing Office

GEOGRAPHIC NAMES

Survey No. H-8125

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
Southeastern Alaska											1
Cordova Bay											2
Prince of Wales Island											3
Hessa Inlet											4
Thompson Passage											5
Buschmann Narrows Pass											6
Hessa Island											7
Winter Bay *											8
Whirlpool Point											9
Hessa Narrows											10
											11
											12
											13
											14
											15
Tah Bay											16
											17
											18
											19
* according to project names report, this name applies to the long inlet north of 54° 47.5', its center being slightly west of 132° 18.5'											20
											21
											22
											23
											24
											25
											26
											27

Names Approved
6-23-55. L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ~~8125~~...

Records accompanying survey:

Boat sheets ~~.2...~~; sounding vols. ~~..5...~~; wire drag vols.; bomb vols.; graphic recorder rolls ~~2 envelopes~~; special reports, etc. ~~..1-Smooth sheet & 1-descriptive report/.....~~

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

Number of positions on sheet	.....	1589
Number of positions checked	.....	97
Number of positions revised	.....	3
Number of soundings revised * (refers to depth only)	.....	13
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	..... 40
Junctions	Time	..... 2
Verification of soundings from graphic record	Time	..... 20

Verification by *J.E. Gearhart*..... Total time *.240* Date *11-19-56*

Reviewed by *J.A. Dinsmore*..... Time *.28* Date *19 Dec. 1956*

**approx. 950 sndgs. revised due to fathometer speed,
stylus arm length, and paper alignment corrections
J.E.G.*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8125

FIELD NO. HO-1154

Southeast Alaska, Cordova Bay, Hessa Inlet and Approaches

Project No. CS-357

Surveyed - April - May 1954

Scale 1:10,000

Soundings:

Control:

808 Fathometer
Hand lead

Sextant fixes on
shore signals

Chief of Party - J. Bowie

Surveyed by - J. Bowie, E. F. Hicks, Jr. and J. J. Dermody

Protracted by - C. R. Lehman

Soundings plotted by - C. R. Lehman

Verified and inked by - J. E. Gearhart

Reviewed by - T. A. Dinsmore 19 December 1956

Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with the unreviewed manuscripts of air-photographic surveys T-11303, T-11305, T-11320 and T-11321 of 1953-54.

The origin of the control is given in the Descriptive Report. Graphic control surveys HO-B and C will be destroyed subsequent to the review of the surveys in this area after all useful information has been transferred to the hydrographic survey sheets.

2. Sounding Line Crossings

After applying corrections noted in paragraph 7c, depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The low-water line was determined where practicable. Where steep-to banks occur, the high-and low-water lines are practically identical.

Much of the shoreline in this area is fringed with rocks and ledge. Numerous offlying reefs and rocky shoals contribute to the general irregularities in the bottom. In several localities, submerged ledges constrict the narrow passages leading to Hessa Inlet.

4. Junctions with Contemporary Surveys

The junctions with H-8065a (1953) on the southwest and H-8066 (1953) on the west will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys

There are no prior surveys of the area by this Bureau.

6. Comparison with Chart 8145 (latest print date 1/16/56)

A. Hydrography

Charted hydrography originates entirely with the present survey prior to verification and review. The following discrepancies are noted:

(1) The $9\frac{1}{2}$ -fm. sounding charted in lat. $54^{\circ}47.78'$, long. $132^{\circ}16.65'$, originates with an erroneously positioned sounding on the unverified smooth sheet of the present survey. Falling in depths of 18 - 20 fms., the sounding was repositioned during verification and now falls on the shoal to the westward. The detached shoal as charted does not exist. ✓

(2) The $2\frac{1}{2}$ (RK)-fm. shoal charted in lat. $54^{\circ}47.89'$, long. $132^{\circ}16.53'$, was revised to 3.3 fms. during verification. ✓

No other discrepancies of importance are noted on the chart. The charted information, however, is superseded by the present verified survey.

B. Aids to Navigation

No aids to navigation are charted in this area.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive.

b. The smooth plotting was generally accurate.

c. Discrepancies between the work of launch 134 and the adjacent hydrography were resolved during verification by applying fathometer speed corrections varying between -3% and -10% to sections of four days work by launch 134, affecting the soundings by as much as 1.5 fathoms in 3-to 20-fathom depths.

d. Differences of 1 to 4 ft. between rock elevations by the photogrammetric party and elevations of identical features by the hydrographic party are attributed to differences in height estimation between the observers. Conflicting elevations on the unreviewed topographic manuscripts were disregarded in preference to elevations originating with the hydrographic records.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

The survey is considered to be basic and no further field work is recommended.

Examined and Approved:

Max G. Ricketts

Max G. Ricketts
Chief, Nautical Chart Branch

Charles A. Schanck

Charles A. Schanck
Chief, Division of Charts

Karl B. Jeffers

Karl B. Jeffers
Chief, Hydrographic Branch

Samuel B. Grenell

Samuel B. Grenell
Chief, Division of Coastal Surveys

FHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIRECTOR'S Office Hydrography and Topography~~

28 June 1955

Division of Charts: R. H. Carstens

Plane of reference approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 8125

Locality Cordova Bay, Alaska

Chief of Party: J. Bowie in 1954
Plane of reference is mean lower low water, reading
6.5 ft. on tide staff at Hessa Inlet
15.3 ft. below B. M. 1 (1954)

3.2 ft. on tide staff at Tah Bay
14.1 ft. below B.M. 1 (1909)

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

Hessa Inlet = 12.0 feet
Tah Bay = 11.9 feet

Condition of records satisfactory except as noted below:

E. C. McKay
Tides Branch

Chief, Division of Tides and Currents.

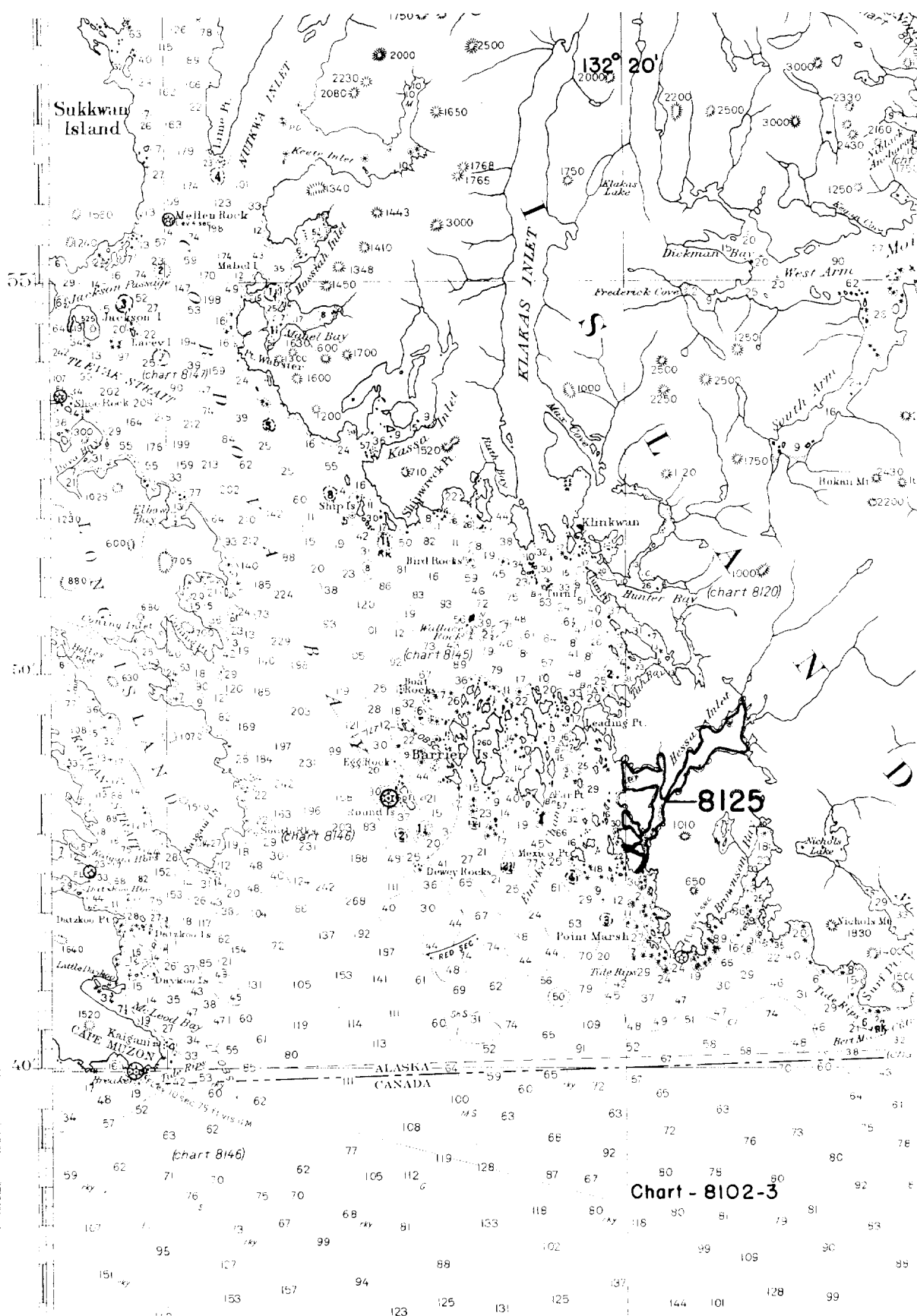


Chart - 8102-3

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8125

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9/27/55	8145	H. W. Burgoyne	Before After Verification and Review - Complete application
1/24/57	8145	L. A. McGann	Before After Verification and Review Completely applied.
5 Sept 57	8102	Wichols	Before After Verification and Review Complete Thru Chart 8145
10/28/58	8152	R. E. Elkins	Before After Verification and Review applied thru chrt 8102 dig 10.
5/22/75	8145	M. D. Karis	Fully applied Before After Verification and Review, signature Reexam- ined only for items in conjunction with reviewed T-11320 Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			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.