

8288

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-1356 Office No. H-8288

LOCALITY

State S. E. Alaska

General locality .....

Locality Northern Part of Sea Otter

Sound .....

1956

CHIEF OF PARTY

R. A. Earle

LIBRARY & ARCHIVES

DATE April 5, 1960

USCOMM-DC 5087

8288

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-8288

Field No. HQ-1356

State S. E. Alaska

General locality ~~Summer Strait~~

Locality Northern part of Sea Otter Sound

Scale 1:10,000 Date of survey 15 Aug. to 5 Oct. 1956

Instructions dated 21 November 1955.

Vessel Ship HODGSON, Launch No. 98 and Motor Whaleboat No. 169

Chief of party Robert A. Earle

Surveyed by Robert A. Earle, Paul Taylor and James P. Randall

Soundings taken by fathometer, graphic recorder, hand lead, ~~XXX~~

Fathograms scaled by H. W. H. & L. F. H.

Fathograms checked by H. W. H. & A. M. L.

Protracted by Clarence R. Lehman

Soundings penciled by Clarence R. Lehman

Soundings in fathoms ~~xxx~~ at ~~MLLW~~ and are based on velocity of sound of 800 fms/sec.

REMARKS: Approximately 75% of the positions on this sheet were

pricked through from film positives of the Boat Sheet.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY NO. H-8288 (FIELD NO. HO-1356)

SCALE 1:10,000

R. A. EARLE, COMDG.

SHIP HODGSON

A. PROJECT:

This survey was executed as a part of Project 13470 in accordance with Revised Instructions, dated 21 November 1955.

B. SURVEY LIMITS AND DATES:

The area covered by this survey lies along the northern part of Sea Otter Sound between the eastern shores of Davidson Inlet and the southern reaches of El Capitan Pass; and includes White Cliff Passage. The limits are delineated by Lat.  $55^{\circ} 50' 73''$  North and  $55^{\circ} 55' 2''$  North and by the west shore of Tuxekan Island and Long.  $133^{\circ} 32' 2''$  West.

This survey connects on the north with contemporary survey H-8289 and prior Survey 4329<sup>(1923)</sup> on the west with contemporary survey H-8287 and on the south with prior surveys H-2732 and H-2733.

Joins on the South H-8393 (1957) (1904) (1904) Joins on SE: H-8392 (1957) (1956)

Field work was started on 15 August 1956 and completed on 5 October 1956.

C. VESSELS AND EQUIPMENT:

This survey was executed with hydrographic launch No. 98; Motor Whale Boat No. 169; and the Ship HODGSON.

All soundings were taken with 808 fathometers No'd. 62S and 104S and portable EDO's No'd. 206 and 207. These soundings were supplemented by hand lead soundings on critical shoals.

D. TIDE AND CURRENT STATIONS:

A portable tide gage was maintained at New Token, Alaska, Lat.  $55^{\circ} 56' 15''$  North, Long.  $133^{\circ} 19' 28''$  West, and was used without time or range corrections for the reduction of all soundings. off limit of H-8288

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

E. SMOOTH SHEET:

The smooth plotters' report will be included as an addendum to this report.

H-1205A

F. CONTROL STATIONS:

ALDER 2 1922	LITE (WHITE CLIFF PASSAGE LIGHT 1956)
BIRD 2 1922	MID 1904-56
CLIFF 1913	MINK 1904-56
CUT 1904-56	MOUTH 1904-56
DRILL 1904-56	NEST 1904-56
DUCK 1904-22	PIN 1904-56
EAST 1922	POLE 1913-56
FOX 1903-46	SHELL 1904-56
HOT 1904-22	STAR 1904-56
HOOT 1904-56	TIDE 1904-56
HOOT ISLAND ROCK LIGHT 1956	TURN 1904-56
LIP 1904-56	TWIN 1904-56

Other stations were located by photogrammetric methods on manuscripts T-10397 through T-10399, T-10404, T-11100 and T-11427.

Where stations were needed and no identifiable photo points were nearby, they were located by sextant angles at the station or from cuts taken from the launches.

A list of all stations with their source is attached to the cover sheet of sounding volume No. 1.

G. SHORELINE AND TOPOGRAPHY:

All shoreline on the boat sheet was taken from preliminary manuscripts No'd. T-10397 through T-10399, T-10404, T-11100 and T-11427. No shoreline discrepancies were noted by the hydrographer.

No attempt was made by the hydrographer to define the low water line due to the numerous rocks and reefs that abound in the area. Lines were run, however, as near the shore as feasible in an effort to develop the adjacent 5 fathom curve.

The area between Eagle Island and Clump Island is exceptionally foul. Field was having trouble with control. Note vol. 4, pp. 61-68

H. SOUNDINGS:

All soundings were taken with 808 fathometers No'd. 62S and 104S, and portable EDO fathometers No'd. 206 and 207. These soundings were supplemented on critical rocks and shoals by vertical casts taken with a standardized lead line.

Only the least depth, plus representative soundings, were recorded on shoals which were investigated with the hand lead.

The fathometer<sup>which</sup> was used on the Ship HODGSON was set each morning over a relatively flat bottom, in order that it would record the correct depth. The transducer depth (draft) was measured and the fathometer initial setting was read and recorded. Compensation was made for changes occurring in these values during the day, by an initial correction which was entered in the sounding volumes.

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DES. REPORT

The fathometer used on Launch 98 was set at the correct depth each morning, and checked at the end of the day, with a bar held two fathoms below the surface. The fathometer initial setting was recorded.

The same procedure was used with the portable EDO fathometer on MWB 169, except that the bar was lowered to a depth of four fathoms.

The 808 fathometer reeds were calibrated for 800 fathoms per second.

Speed checks were taken at regular intervals by the hydrographer.

The EDO fathometers are calibrated for a line frequency of 60 cycles per second with a tolerance of plus or minus 3%. All variations were noted and corrections applied to the soundings. (SEE "Cycle Corrections EDO Fathometers Nos. 206 - 207", attached.)

808 fathometer phase comparisons and corrections, which were applied, are listed and attached to this report.

I. CONTROL OF HYDROGRAPHY:

All hydrography was visually controlled by sextant angles taken on shore signals.  $\odot$  Tan and  $\odot$  Far are the same signal. See Vol. 10, p. 23

There are instances of changes in sounding speed on or near shoals. These speed variations were due to either, or a combination of, current, kelp, rudder drag, and slight changes of engine speed. Sufficient fixes were taken so that the soundings are not appreciably displaced.

Reference should be made to the boat sheet for line directions between fixes along beach lines.

J. ADEQUACY OF SURVEY:

This survey is complete and adequate for the area. No additional field work is considered necessary at this time.

All junctions with contemporary surveys No'd. 8289 and 8287 were satisfactory. Also with H-8393 (1957) and H-8392 (1957)

While numerous bottom samples were obtained over the area, it was considered unnecessary to adhere strictly to the specified spacing. (See paragraph 4 of Reference 3842, Hydrographic Manual.)

K. CROSSLINES:

Fifty two miles, or about 8% of all sounding lines, are crosslines. All crossings appear to be satisfactory.

L. COMPARISON WITH PRIOR SURVEY:

The area of this survey is covered by prior surveys No'd. H-2732 (1904), Scale 1:20,000; H-2733 (1904), Scale 1:20,000, and H-4329 (1923), Scale 1:10,000.

The soundings taken during the present survey are in general agreement

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Review

with those from former surveys; however, due to the scarcity of soundings on the original survey, depth curves can be more accurately delineated on the present survey sheets.

No rocks or shoals which were located during the previous survey were disproved by the present one; however, the least depths were seldom obtained on shoals, and several shoals and many rocks were located which were not shown on the old survey.

Refer to Section "M" below for differences.

M. COMPARISON WITH CHART:

This survey was compared with Chart No. 8171 and the charted soundings, as shown, are more or less correct, although, depth curves will be changed considerably. All rock symbols were verified.

This survey should supersede all charted data.

Listed in the table below are some dangers, shoals and significant soundings that differ with the charted data.

CHART LOCATION	CHART NOTATION	NEW LOCATION	NEW NOTATION	REMARKS
55° 54:70 133° 32:05	1 1/2 fm. ✓ shoal	55° 54:69 133° 32:05	1 1/2 fm. ✓ shoal	Hand lead investigation. ✓ (Pos. 86f)
55° 54:02 133° 31:69	17 fm. ✓ shoal	55° 54:05 ✓ 133° 31:72	1 1/4 fm. ✓ shoal	Shoalest sounding found during development. ✓ <i>Vol. 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100</i>
Not indicated	5.5 fm. ✓ shoal	55° 52:39 133° 31:16	0.8 fm. ✓ shoal	Hand lead investigation. ✓ (Pos. 209p)
55° 50:96 133° 31:81	37 fm. ✓ shoal	55° 50:96 133° 31:79	3 1/2 fm. ✓ shoal	Shoalest sounding found during development. ✓ <i>"D" &amp; "G" days &amp; H-8393</i>
55° 50:84 133° 29:63	21 fm. ✓ shoal	55° 50:77 133° 29:73	4.6 fm. ✓ shoal	Shoalest sounding found during development and hand lead investigation. ✓
55° 53:04 133° 28:58	19 fm. ✓ shoal	55° 53:03 133° 28:59	18 fm. ✓ shoal	Shoalest sounding found during development. ✓ <i>159-160</i>
Not indicated	4 1/2 fm. ✓ shoal	55° 53:34 133° 28:38	0.6 fm. ✓ shoal	Hand lead investigation (Pos. 32d) Shoalest point lies outside kelp. ✓
Not indicated	17 fm. ✓	55° 54:35 133° 27:91	1.5 fm. ✓ shoal	Hand lead investigation. ✓ (Pos. 1g). No kelp found on this sounding. <i>SHOAL</i>
55° 55:18 133° 28:53	10 fm. ✓ shoal	55° 55:18 133° 28:60	8.6 fm. ✓ shoal	Shoalest sounding found during development. ✓ <i>12-13 "C" Vol. 12</i>

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CHART LOCATION	CHART NOTATION	NEW LOCATION	NEW NOTATION	REMARKS
<del>55° 55:25</del> 133° 27:50	<del>10 fm.</del> <i>This area off survey</i>	<del>No indication</del>	<del>14 fm.</del>	<del>Shoalest sounding found during development.</del> <i>This area off survey</i>
55° 55:16 133° 27:35	7 fm. shoal <i>14-15 "G" "8" vol. 1</i>	55° 55:16 133° 27:40	5.4 fm. shoal	Shoalest sounding found during development. ✓
55° 51:48 133° 24:91 133° 25:18	24 fm. shoal <i>14-15 "G" "8" vol. 1</i>	55° 51:65 55° 51:88 133° 25:10 133° 25:10	<del>28 fm.</del> shoal <i>28 vol. 13 and 14</i>	Shoalest sounding found during development. ✓
55° 51:15 133° 23:82	*19 fm. shoal <i>14-15 "G" "8" vol. 13</i>	55° 51:20 133° 23:71	27 fm. shoal <i>130 "G" vol. 14</i>	Shoalest sounding found during development. ✓ <i>*Forward to H-8288</i>
55° 51:40 133° 20:58	9 fm. shoal <i>60-61 "S" vol. 7</i>	55° 51:37 133° 20:39	2.4 fm. shoal <i>60-61 "S" vol. 7</i>	Shoalest sounding found during development. ✓
Not indicated	17 fm. shoal <i>77-78 "S" vol. 7</i>	55° 51:16 133° 20:50	3.7 fm. shoal	Shoalest sounding found during development. ✓
55° 51:00 133° 21:08	2 fm. shoal <i>47-48 "V" vol. 9</i>	55° 51:00 133° 21:05	2 fm. shoal <i>47-48 "V" vol. 9</i>	Shoalest sounding found during development. ✓
55° 50:93 133° 22:96	20 fm. shoal <i>137-138 "G" vol. 15</i>	55° 50:93 133° 22:70	12 fm. shoal	Shoalest sounding found during development. ✓
Not indicated	-- 106-107 "R" vol. 7	55° 53:48 133° 23:71	1.1 fm. shoal <i>23 vol. 7</i>	Shoalest sounding found during development and hand lead investigation. ✓
Not indicated	-- 119-120 "V" vol. 7	55° 53:75 133° 23:35	0.3 fm. shoal <i>4 vol. 7</i>	Shoalest sounding found during development and hand lead investigation. ✓

The above soundings were taken from the boat sheet where predicted tides were used for the reduction of soundings. They may change slightly when the actual reducers are applied.

Particular attention should be given to the numerous rock locations and notes on the boat sheet and photo manuscripts.

N. DANGERS AND SHOALS:

Refer to Section "M" above. ✓

O. COAST PILOT INFORMATION:

Refer to Coast Pilot Report. ✓

P. AIDS TO NAVIGATION:

There are two fixed aids to navigation within the limits of this sheet both of which were located by triangulation. They are: ✓

1. White Cliff Passage Light 1956 (Hydro name "LITE")
2. Hoot Island Rock Light 1956 (Topo name "LAN")

Q. LANDMARKS FOR CHARTS:

The only landmark of note is White Cliff, White Cliff Island, which is already noted on Chart 8171.

R. GEOGRAPHIC NAMES:

There is one addition to the Geographic Names on this sheet.

The long narrow arm, 0.9 mile by 0.4 mile, located on the west coast of Tuxekan Island between Latitudes  $55^{\circ} 51'3''$  North and  $55^{\circ} 51'4''$  North and Longitudes  $133^{\circ} 18'8''$  West and  $133^{\circ} 19'3''$  West, has been called SCOTT COVE, by the local inhabitants for many years. ( $133^{\circ} 18.3'$  &  $133^{\circ} 19.8'$ )

S. SILTED AREAS:

No significant areas of deposition or alongshore shifting of silt were noted.

T Through X:

Not applicable.

Y. TABULATION OF APPLICABLE DATA:

1. Tidal Data - Forwarded 6/21, 6/22 and 10/30/56.
2. Air Photo Data - Forwarded 10/16, 10/22 and 11/15/56.
3. Triangulation Data - Forwarded 9/4 and 10/16/56.
4. Coast Pilot Report - Forwarded 12/12/56.
5. EDO Cycle Corrections - Attached.
6. Phase Comparisons - Attached.
7. Daily Statistics - Attached.

Respectfully submitted,

*James P. Randall*

James P. Randall,  
Lt.(jg), USC&GS

Approved and forwarded:

*Robert A. Earle*  
Robert A. Earle,  
CDR, USC&GS  
Comdg., Ship HODGSON



DAILY STATISTICS

HYDROGRAPHIC SURVEY NO. H-8289 (FIELD NO. HO-1356)

LAUNCH NO. 98

<u>DATE</u>	<u>DAY LTR.</u>	<u>VOL NO.</u>	<u>NO. OF POS.</u>	<u>NAUT. MILES</u>	<u>HANDLEADS</u>
8/25	a	1	45	3.0	
8/27	b	1	110	11.4	
8/28	c	1	77	6.5	
8/29	d	1&2	135	10.2	
8/31	e	2	167	18.8	
9/1	f	2&3	181	20.5	
9/4	g	3	56	2.9	1
9/12	h	3&4	171	19.2	
9/13	j	4	192	22.6	
9/14	k	4&5	145	14.5	
9/15	l	5	161	17.5	
9/17	m	5	96	10.1	7
9/19	n	5&6	109	7.3	
9/20	p	6	210	22.4	
9/21	q	6&7	174	18.4	
9/22	r	7	130	13.7	9
9/25	s	7&8	176	23.5	
9/26	t	8	167	24.8	
9/28	u	8&9	171	25.4	
10/1	v	9	66	10.6	
10/2	w	9	137	9.7	
10/3	x	10	56	6.3	
10/4	y	10	146	13.0	
10/5	z	10	22	0.9	12
TOTALS			3100	333.2	29

SHIP HODGSON

8/15	A	11	180	41.0	
8/17	B	11	69	12.2	12
8/23	C	12	82	16.4	
8/24	D	12&13	213	59.3	3
8/25	E	13&14	183	54.9	
8/27	F	14	143	34.4	8
8/31	G	14&15	184	34.1	21
10/1	H	15	26	4.0	9
TOTALS			1089	256.3	53

MOTOR WHALEBOAT 169

9/12	a	16	167	20.8	
9/13	b	16	175	17.6	
9/14	c	17	200	30.1	
9/15	d	17	74	7.0	13
9/22	e	17&18	132	10.7	
10/1	f	18	27	3.2	
TOTALS			775	89.4	13

GRAND TOTALS 4955 678.9 95

AREA = 33.0 sq. nautical miles

APPROVAL SHEET

HYDROGRAPHIC SURVEY NO. H-8289 (FIELD NO. HO-1356)

The boat sheet and field records for this survey, where the hydrography was not done by the writer, were examined daily during the season. As the survey is considered complete and adequate, no additional field work is deemed necessary.

The person plotting the smooth sheet should write an addendum to this report.



Robert A. Earle,  
CDR, USC&GS  
Comdg., Ship HODGSON

SMOOTH SHEET

The projection was hand constructed and the triangulation plotted by ship personnel.

Topographic and hydrographic signals were transferred, plotted and checked by personnel of the Seattle Hydrographic Processing Unit.

SHORELINE AND TOPOGRAPHY

The shoreline and topographic detail were transferred from advanced prints of the same manuscripts listed in the field report.

ADEQUACY OF SURVEY

The survey is complete and adequate for charting. Junctions with contemporary surveys H-8287, H-8289 and H-8391 were found to be in agreement and the depth (curves can) be adequately drawn at the junctions. (1956) (1957)

COMPARISON WITH CHART

This survey has been compared with Chart 8171, 5th Ed., Revised 1/14/57, which was revised from boat sheet data. (Verifiers used 6th Edition, Dec. 19, 1960)

Items under this heading in the field report have been checked or corrected, in ink, to smooth sheet values. (Herewith attached to D.R.)

See additional items from smooth sheet listed under Dangers and Shoals. See also the section of Chart 8171 attached to this report for comparison between smooth sheet and chart.

DANGERS AND SHOALS


Location	Depth	Remarks
55° 52'.26 ✓ 133 29 .30 ✓	3.7 ✓	pos. 53-54m ✓
55° 52'.17 ✓ 133 29 .50 ✓	2.3 ✓	34-35m ✓
55° 53'.20 ✓ 133 31 .64 ✓	2.4 ✓	87-88m ✓
55° 53'.54 ✓ 133 22 .80 ✓	1.8 ✓	141-142q ✓
55° 53'.97 ✓ 133 19 .70 ✓	1.1 ✓	118-119y ✓
55° 52'.83 ✓ 133 24 .14 ✓	2.6 ✓	19r ✓

Location	Depth	Remarks
55° 53'.60✓ 133 20 .33✓	rk awash ✓	llz ✓
55° 53'.78✓ 133 19 .83-	rk awash * <sup>(2)</sup> on S.S. from B.S.	32y ✓
55° 53'.90- 133 19 .75 * misplotted	charted depth- * 1/4 fm	smooth sheet- shows 11-12 fms.✓

Respectfully submitted

  
William M. Martin  
Supervisory Cartographer

Approved and Forwarded

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

CYCLE	+58.25
	-61.75
	DEPTH
CORRECTION	FMS.
0.0	00 - 1.7
0.1	1.8 - 5.3
0.2	5.4 - 8.9
0.3	9.0 - 12.5
0.4	12.6 - 16.0
0.5	16.1 - 19.6
0.6	19.7 - 23.2
0.7	23.3 - 26.7
0.8	26.8 - 32.1
1.0	32.2 - 39.2
1.2	39.3 - 46.4
1.4	46.5 - 53.5
1.6	53.6 - 60.7
1.8	60.8 - 67.8
2.0	67.9 - 75.0
2.2	75.1 - 82.1
2.4	82.2 - 89.2
2.6	89.3 - 96.4
2.8	96.5 - 103.5

CYCLE	+57.75
	-62.25
	DEPTH
CORRECTION	fms.
0.0	0.0 - 1.3
0.1	1.4 - 4.1
0.2	4.2 - 6.9
0.3	7.0 - 9.7
0.4	9.8 - 12.5
0.5	12.6 - 15.2
0.6	15.3 - 18.0
0.7	18.1 - 20.8
0.8	20.9 - 23.6
0.9	23.7 - 26.3
1.0	26.4 - 29.1
1.1	29.2 - 31.9
1.2	32.0 - 36.1
1.4	36.2 - 41.6
1.6	41.7 - 47.2
1.8	47.3 - 52.7
2.0	52.8 - 58.3
2.2	58.4 - 63.8
2.4	63.9 - 69.4
2.6	69.5 - 75.0
2.8	75.1 - 80.5
3.0	80.6 - 86.1
3.2	86.2 - 91.6
3.4	91.7 - 97.2
3.6	97.3 - 102.7

CYCLE	+58.00
	-62.00
	DEPTH
CORRECTION	FMS.
0.0	0.0 - 1.5
0.1	1.6 - 4.6
0.2	4.7 - 7.8
0.3	7.9 - 10.9
0.4	11.0 - 14.0
0.5	14.1 - 17.1
0.6	17.2 - 20.3
0.7	20.4 - 23.4
0.9	23.5 - 29.6
1.0	29.7 - 34.3
1.2	34.4 - 40.6
1.4	40.7 - 46.8
1.6	46.9 - 53.1
1.8	53.2 - 59.3
2.0	59.4 - 65.6
2.2	65.7 - 71.8
2.4	71.9 - 78.1
2.6	78.2 - 84.3
2.8	84.4 - 90.6
3.0	90.7 - 96.8
3.2	96.9 - 103.1

PHASE COMPARISON

LAUNCH 98 - FATHOMETER NO. 1045 - 4/25/56

A Scale	FATHOMS B Scale	Corr.
42.6	42.8	-0.2
42.7	42.8	-0.1
42.6	42.7	-0.1
43.0	43.2	-0.2
42.9	43.1	-0.2
42.5	42.7	-0.2
42.3	42.4	-0.1
42.0	42.3	-0.3
42.0	42.2	-0.2
42.0	42.3	-0.3
	Sum	-1.9
	Mean	-0.19

PHASE COMPARISON

LAUNCH 98

FATHOMETER 62-8

A	B	A-B
46.0	45.4	+0.6
45.6	45.2	+0.4
45.5	45.0	+0.5
45.2	44.7	+0.5
45.0	44.6	+0.4
45.0	44.5	+0.5
44.8	44.3	+0.5
44.6	44.2	+0.4
44.3	44.1	+0.2
44.3	43.8	+0.5
	Sum	+4.5
(31 May 1956)	Mean	+0.45

B	C	B-C
75.1	73.3	+1.8
74.8	73.0	+1.8
74.7	72.8	+1.9
74.8	72.8	+2.0
74.0	72.7	+1.3
74.6	72.6	+2.0
74.6	72.6	+2.0
74.6	72.5	+2.1
74.4	72.4	+2.0
74.4	72.4	+2.0
	Sum	18.9
(31 July 1956)	Mean	+1.89

A	B	A-B
48.6	48.3	+0.3
48.7	48.4	+0.3
48.8	48.6	+0.2
49.0	48.5	+0.5
49.0	48.6	+0.4
49.0	48.8	+0.2
49.0	48.8	+0.2
49.0	48.8	+0.2
49.0	48.7	+0.3
49.0	48.7	+0.3
	Sum	+2.9
(10 Aug. 1956)	Mean	+0.29

RESULTS

A	B	C	D
0.0	+0.3	+2.2	+3.7

PHASE COMPARISON  
SHIP HODGSON FATHOMETER 104S

			<u>5-26-56</u>					
A	B	A-B	B	C	B-C	C	D	C-D
46.0	45.8	+0.2				118.8	126.4	-7.6
46.8	46.4	+0.4				119.0	126.8	-7.8
47.6	47.6	0.0				119.0	127.2	-8.2
49.0	48.9	+0.1				120.0	127.9	-7.8
50.0	49.6	+0.4				120.0	128.2	-8.2
50.5	50.4	+0.1				120.4	128.8	-8.4
51.7	51.5	+0.2				120.8	129.0	-8.2
52.3	52.1	+0.2				121.0	129.3	-8.3
53.0	53.0	0.0				121.0	129.8	-8.8
53.7	53.1	+0.6				121.0	129.4	-8.4
	Sum	+2.2					Sum	-81.7
	Mean	+0.22					Mean	-8.17

			<u>5-29-56</u>					
A	B	A-B	B	C	B-C	C	D	C-D
40.1	39.6	+0.5	85.5	89.6	-4.1	122.8	131.0	-8.2
40.3	38.8	+0.5	85.8	89.8	-4.0	123.0	131.1	-8.1
40.6	40.0	+0.6	85.9	90.0	-4.1	123.0	131.0	-8.0
40.6	39.9	+0.7	85.8	90.0	-4.2	123.0	131.0	-8.0
40.8	40.0	+0.8	85.8	89.9	-4.1	122.8	130.8	-8.0
40.8	40.0	+0.8	86.0	90.0	-4.0	122.8	130.8	-8.0
41.0	40.1	+0.9	86.0	90.0	-4.0	122.7	130.7	-8.0
41.0	40.2	+0.8	86.1	90.2	-4.1	122.8	130.9	-8.1
41.0	40.2	+0.8	86.2	90.2	-4.0	122.8	130.9	-8.1
41.0	40.2	+0.8	86.2	90.3	-4.1	122.7	130.7	-8.0
	Sum	+7.2		Sum	-40.7		Sum	-80.5
	Mean	+0.72		Mean	-4.07		Mean	-8.05

B to C = -4.07  
A to B = +0.32  
C = -3.75

<u>7-16-56</u>		
A	B	A-B
50.0	50.0	0.0
50.0	49.9	+0.1
49.0	49.0	0.0
49.0	49.0	0.0
48.8	48.7	+0.1
48.8	48.6	+0.2
49.0	48.6	+0.4
48.0	48.0	0.0
47.0	47.0	0.0
46.0	46.0	0.0
	Sum	+0.8
	Mean	+0.08

RESULTS

A	B	C	D
0.0	+0.3	-3.8	+11.9

<u>8-27-56</u>		
A	B	A-B
48.0	47.4	+0.6
47.6	47.4	+0.2
47.4	47.2	+0.2
47.2	47.0	+0.2
45.2	45.0	+0.2
45.2	45.0	+0.2
45.0	44.8	+0.2
44.9	44.7	+0.2
44.9	44.7	+0.2
44.8	44.4	+0.4
	Sum	+0.26
	Mean	+0.026



CYCLE CORRECTION

EDO FATHOMETERS NOS. 206 & 207

CYCLE	+59.50 -60.50	DEPTH FMS.
CORRECTION		
0.0		00 - 6.2
0.1		6.3 - 18.7
0.2		18.8 - 31.2
0.3		31.3 - 43.7
0.4		43.8 - 56.2
0.5		56.3 - 68.7
0.6		68.8 - 87.5
0.8		87.6 - 112.5

CYCLE	+ 59.25 - 60.75	DEPTH FMS.
CORRECTION		
0.0		00 - 4.1
0.1		4.2 - 12.5
0.2		12.6 - 20.8
0.3		20.9 - 29.1
0.4		29.2 - 37.5
0.5		37.6 - 45.8
0.6		45.9 - 58.3
0.8		58.4 - 75.0
1.0		75.1 - 91.6
1.2		91.7 - 108.3

CYCLE	+59.00 -61.00	DEPTH FMS.
CORRECTION		
0.0		00 - 3.1
0.1		3.2 - 9.3
0.2		9.4 - 15.6
0.3		15.7 - 21.8
0.4		21.9 - 28.1
0.5		28.2 - 34.3
0.6		34.4 - 43.7
0.8		43.8 - 56.2
1.0		56.3 - 68.7
1.2		68.8 - 81.2
1.4		81.3 - 93.7
1.6		93.8 - 106.2

CYCLE	+58.75 -61.25	DEPTH FMS.
CORRECTION		
0.0		00 - 2.5
0.1		2.6 - 7.5
0.2		7.6 - 12.5
0.3		12.6 - 17.5
0.4		17.6 - 22.5
0.5		22.6 - 27.5
0.6		27.6 - 35.0
0.8		35.1 - 45.0
1.0		45.1 - 55.0
1.2		55.1 - 65.0
1.4		65.1 - 75.0
1.6		75.1 - 85.0
1.8		85.1 - 95.0
2.0		95.1 - 105.0

CYCLE	+58.50 -61.50	DEPTH FMS.
CORRECTION		
0.0		00 - 2.0
0.1		2.1 - 6.2
0.2		6.3 - 10.4
0.3		10.5 - 14.5
0.4		14.6 - 18.7
0.5		18.8 - 22.9
0.6		23.0 - 27.0
0.7		27.1 - 31.2
0.8		31.3 - 37.5
1.0		37.6 - 45.8
1.2		45.9 - 54.1
1.4		54.2 - 62.5
1.6		62.6 - 70.8
1.8		70.9 - 79.1
2.0		79.2 - 87.5
2.2		87.6 - 95.8
2.4		95.9 - 104.1

PHASE COMPARISON

SHIP HODGSON

FATHOMETER 62S

4-23-56

A	B	A-B	B	C	B-C
44.0	43.3	+0.7	79.0	76.5	+2.5
44.0	43.3	+0.7	79.5	77.0	+2.5
43.9	43.3	+0.6	80.5	78.0	+2.5
44.0	43.4	+0.6	80.9	78.3	+2.6
44.0	43.4	+0.6	81.0	78.6	+2.4
44.0	43.3	+0.7	81.2	79.0	+2.2
44.0	43.4	+0.6	81.3	79.0	+2.3
44.0	43.4	+0.6	81.9	79.2	+2.7
43.8	43.4	+0.4	82.0	79.5	+2.5
43.8	43.4	+0.4	82.2	79.7	+2.5
		<u>+5.9</u>			<u>+24.7</u>
Mean		+0.59		Mean	+2.47

A-B = +0.59  
 B-C = +2.47  
 +3.06

RESULTS

A                      B                      C  
 0.0                      +0.6                      +3.0

GEOGRAPHIC NAMES  
Survey No. H-8288

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On Chart No. 8171</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On previous survey No.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On U. S. Quadrangle Maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">From local information</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On local Maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">P. O. Guide or Map</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Rand McNally Atlas</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">U. S. Light List</div> </div>										K BGN
	A	B	C	D	E	F	G	H	K		
Cap Island	x										1
Clump Island	x										2
Cyrus Cove	x										3
Davidson Inlet	x										4
Dot Island	x										5
Dove Island	x										6
Eagle Island	x										7
El Capitan Island	x									x	8
El Capitan Passage	x									x	9
Fir Rock	x										10
Fox Rock	x										11
Hoot Island	x										12
Knob Island	x										13
Orr Island	x										14
Owl Island	x										15
Scott Cove											16
Sea Otter Sound	x										17
Sumner Strait(Title)											18
Tuxekan Island	x										19
Twin Islands	x										20
White Cliff	x										21
White Cliff Island	x										22
White Cliff Passage	x										23
											24
											25
											26
											27

*George M. Bree*  
GEOGRAPHIC NAME SECTION  
15 APRIL 1960

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8288

Records accompanying survey: Smooth sheets 1; boat sheets 2; sounding vols. 18; wire drag vols. ...; Descriptive Reports 1; graphic recorder envelopes 6; special reports, etc. ....

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

Number of positions on sheet 4955; Number of positions checked 64; Number of positions revised 1; Number of soundings revised (refers to depth only) see P#26, verified reports; Number of soundings erroneously spaced 0; Number of signals erroneously plotted or transferred 0; Topographic details Time 4 hrs; Junctions Time 30 hrs; Verification of soundings from graphic record Time 100 hrs (Entirely too much time required to rescan fath.); Special adjustments Involved depth-curve detail Time 110 hrs.

Verification by A. Rose Total time 431 hrs Date 5-25-'62; Reviewed by [Signature] Time 82 Date 12-26-62

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8288

FIELD NO. HO-1356

S. E. Alaska, Northern Part of Sea Otter Sound

SURVEYED: August - October 1956

SCALE: 1:10,000

PROJECT NO. 13470

SOUNDINGS: 808 Depth Recorder  
Edo Depth Recorder  
Hand Lead

CONTROL: Sextant Fixes  
on shore signals

Chief of Party-----R. A. Earle  
Surveyed by-----R. A. Earle, P. Taylor, and J. P.  
Randall  
Protracted by-----C. R. Lehman  
Soundings plotted by-----C. R. Lehman  
Verified and inked by-----S. Rose  
Reviewed by-----I. M. Zeskind  
Inspected by-----R. H. Carstens

1. Description of the Area

This is a survey of the northern portion of Sea Otter Sound which lies west of Tuxekan Island and east of approximate long.  $133^{\circ} 32.0'$ , and includes the southern entrance to El Capitan Passage. The bottom is very irregular. Submarine features such as ledges, reefs, shoals, pinnacles, ridges and deeps contribute to the bottom irregularity.

2. Control and Shoreline

The source of the control is adequately described in the Descriptive Report.

The shoreline originates with reviewed photogrammetric survey T-11100 (1953) and unreviewed photogrammetric surveys T-10397, T-10398, T-10399 of 1953-55-56, and T-10404 and T-11427 of 1953-57.

The exact location of the shoreline in a few places could not be determined on the photographs due to foliage obscuring the shoreline. In these places, the approximate locations of the shoreline is shown on the photogrammetric surveys by dashed lines; and was so transferred to the present survey.

### 3. Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated, except close inshore where the foul character of the bottom generally prevented development to the low-water line. Soundings on some of the features were too sparse to adequately reveal the bottom configuration and least depths. However, these features were generally at depths not dangerous to navigation in this area.

### 4. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.
- c. The present survey indicates the bottom generally to be muddy, whereas the prior surveys of 1904 and 1923 shows the bottom generally to be rocky. The bottom characteristics as obtained during the present survey are shown on the smooth sheet, except in those areas where development on the prior surveys indicate the bottom to be rocky and no bottom characteristics were obtained on the present survey. Here the bottom characteristic "rky" has been carried forward from the prior surveys.

### 5. Junctions

Adequate junctions were effected with H-8391 (1957) on the northeast in El Capitan Passage, with H-8289 (1956) on the northwest, with H-8287 (1956) on the west, with H-8393 (1957) on the south, and with H-8392 (1957) on the southeast in the vicinity of Turn Point.

### 6. Comparison with Prior Surveys

H-2732 (1904), 1-20,000  
 H-2733 (1904), 1-20,000  
H-4329 (1923), 1-10,000

These prior surveys cover the area of the present survey. The sounding lines are more closely spaced on the present survey than they are on the prior surveys and, therefore, they better develop the configuration of the very irregular bottom. A comparison between the prior and present surveys reveals the present depths generally to be 1-3 fms shoaler than those on the prior surveys, except in several areas where differences in depths of as much as 5 fms are noted. These differences in depths are attributed to the fact that the depths on the prior surveys were obtained principally by wire sounding machines, whereas the soundings on the present survey were obtained by depth recorders, except on shoals where depths were obtained by the hand lead.

1. The rock awash charted in lat.  $55^{\circ}53.08'$ , long.  $133^{\circ}24.52'$ , which is the northernmost of 2 rocks awash, originates with a cluster of sunken rocks on H-2733 (1904). This feature has been carried forward to the present survey as a sunken rock. The charted rock awash should be revised to a sunken rock.
2. The two rocks awash charted in the vicinity of lat.  $55^{\circ}50.95'$ , long.  $133^{\circ}20.60'$ , from H-2733 (1904) where they are plotted out of position. When plotted correctly on H-2733, they fall in the vicinity of the 2 rocks awash shown on the present survey in the vicinity of lat.  $55^{\circ}50.90'$ , long.  $133^{\circ}20.63'$ . The 2 rocks awash should be deleted from the chart and in their stead the 2 rocks awash shown on the present survey should be charted.
3. Some of the charted rocks originate with generalized reef symbolization on the prior surveys. These rocks awash have not been carried forward where the present survey adequately delineates the common area.
4. The 19-fm sounding in lat.  $55^{\circ}51.16'$ , long.  $133^{\circ}23.86'$  and the 23-fm sounding in lat.  $55^{\circ}51.37'$ , long.  $133^{\circ}23.63'$  charted from H-2733 (1904) fall in present depths of 26 fm. and 35 fms. respectively, and were not developed adequately to disprove their existence. These soundings have been carried forward to the present survey.

Several rocks awash, 3 soundings, and a few bottom characteristics have been carried forward from the prior surveys to the present survey. With these additions, the present survey is adequate

to supersede the prior surveys within the common area.

7. Comparison with Chart 8171 (Latest print date 12-19-60)

A. Hydrography

The charted hydrography originates principally with the prior surveys which need no further consideration, supplemented by soundings from the boat sheet of the present survey. The 1/4 fm. sounding charted in lat.  $55^{\circ}53.90'$ , long.  $133^{\circ}19.75'$ , originates with H-4329 (1923), where it is misplotted. The sounding actually plots on H-4329 on a rock awash about 110 meters to the north northeast. The 1/4 fm sounding should be deleted from the chart.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

There are no floating aids to navigation within the limits of the present survey. The present survey positions of the fixed aids to navigation are in substantial agreement with their charted positions and adequately mark the features intended.

8. Compliance with Project Instructions

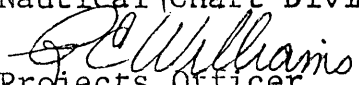
The survey adequately complies with the Project Instructions.



9. Field Work Recommended

This is a good basic survey and no further field work is recommended.

Examined and Approved:

Chief   
Nautical Chart Division

  
Projects Officer,  
Operations Division

  
Assistant Director,  
Office of Cartography  
  
Assistant Director,  
Office of Oceanography



TIDE NOTE

SHEET H-8288

The New Tokeen, Alaska tide gage, Lat.  $55^{\circ} 56' 15''$  North, Long.  $133^{\circ} 19' 28''$  West was used without time or range correction for the reduction of all soundings. (EL Capitan Island, West Side)

MLLW - 2.5 feet on staff

off limit of H-8288

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~XXXXXX~~  
~~Division of Coast and Geodetic Survey~~

17 June 1960

Division of Charts: R. H. Carstens

Plane of reference approved in  
10 volumes of sounding records for

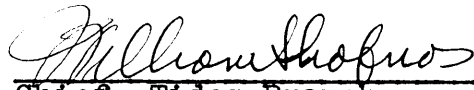
HYDROGRAPHIC SHEET 8288

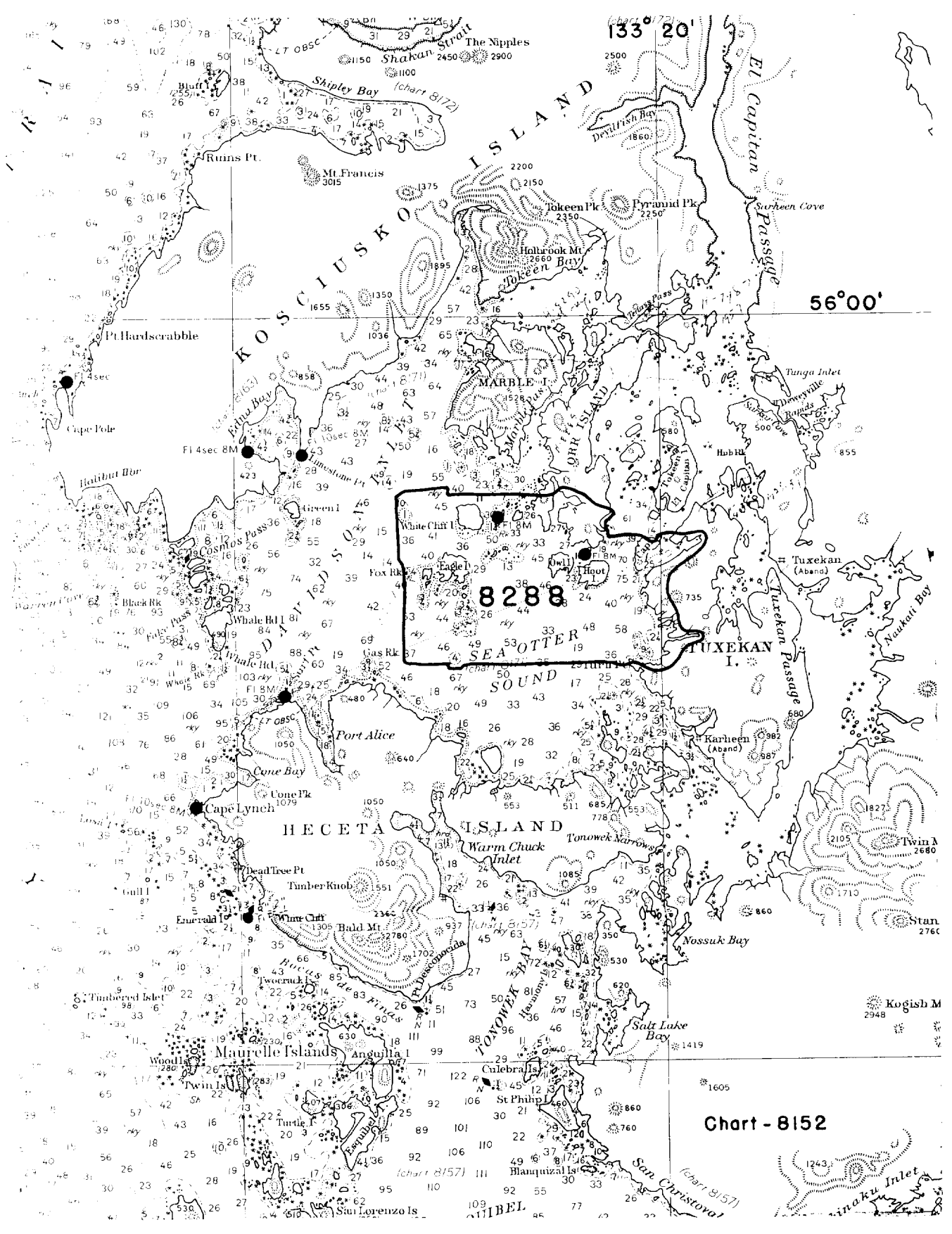
Locality Sumner Strait, Alaska

Chief of Party: R. A. Earle in 1956  
Plane of reference is mean lower low water, reading  
2.5 ft. on tide staff at El Capitan I., West Side  
15.3 ft. below B. M. 1 (1956)

Height of mean high water above plane of reference is 10.0 feet.

Condition of records satisfactory except as noted below:

  
\_\_\_\_\_  
Chief, Tides Branch  
~~Chief, Division of Coast and Geodetic Survey~~



8288

Chart - 8152

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8288

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5-26-60	8171	R. K. DeLander	<i>Part appl</i> Before <del>After</del> Verification and Review <i>To tide over</i>
10-28-60	8152	R. E. Elkins	<i>print drawing.</i> Before <del>After</del> Verification and Review <i>Partly appl'd</i> <i>thru chit 8171 drg #9.</i>
13 Mar 61	8002	<i>End Grayson</i>	Before <del>After</del> Verification and Review <i>partly appl'd</i> <i>thru chit 8152 drwg #12</i>
13 Mar 61	8201	J. Heaton	<i>Part app'd thru chit 8171 drg #9</i> Before <del>After</del> Verification and Review
1-14-63	<i>Reconstr</i> 8171	R. K. DeLander	<i>Completely appl'd.</i> Before <del>After</del> Verification and Review <i>&amp; before inspection</i>
4-25-63	8002	h. j. Keeler	<i>Part. applied.</i> Before <del>After</del> Verification and Review <i>before inspection</i> <i>pending complete application to large scale chts.</i>
5/27/64	8201	G. R. Johnson	Before After Verification and Review <i>Partly App'd</i>
5/29/64	<i>Reconstr</i> 8171	G. R. Johnson	Before After Verification and Review <i>&amp; Insp.</i>
12/14/64	8201	G. K. Myers Jr.	Before After Verification and Review <i>and Insp.</i> <i>Comp appl from Chit 8171, drwg #11</i>
12/14/64	8152	G. K. MYERS Jr	Before After Verification and Review <i>&amp; Insp.</i> <i>Comp appl from 8171 drwg #11</i>
6/17/69	8002	J. S. Stuart	Fully applied after Verification review and inspection. No corr. <i>(Hydro Deleted from Area.)</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.