8392

Diag. Cht. No. 8152-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. HO-1457 *Office No.* H-8392

LOCALITY

State S. E. Alaska

General locality West Side Tuxekan Island

Locality Karheen Passage

1957

CHIEF OF PARTY

E. W. Richards

LIBRARY & ARCHIVES

DATE April 15, 1958

B-1870-1 (1)

8392

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-8392

Field No. HO-1157

State S. E. Alaska

General locality W. side Tuxekan Island

Locality Karheen Passage

Scale 1:10,000 Date of survey 20 July - 24 Sept. 1957

Instructions dated 21 Nov. 1955 and 1 Oct. 1956

Vessel Launches 93 and 95

Chief of party E. W. Richards

Surveyed by M. D. Christensen and L. D. Thurman

Soundings taken by [redacted] graphic recorder, hand lead, wire

Fathograms scaled by EEM, EWR, MDC, JDB, HWH, LDT

Fathograms checked by HWH, MDC, EEM, LDT, AML, CB

Protracted by C. I. Harding

Soundings penciled by C. I. Harding

Soundings in fathoms [redacted] at [redacted] MLLW and are based on a velocity of sound of 800 fms./sec

REMARKS:

HWB

U. S. GOVERNMENT PRINTING OFFICE 16—60520-1

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY NO. H-8392(FIELD NO. HO-1457)

1957

SHIP HODGSON

SCALE 1:10,000 E. W. RICHARDS, COMDG.

A. PROJECT:

This survey was executed as a part of Project 13470 in accordance with Revised Instructions dated 21 November 1955, and Supplemental Instructions dated 1 Oct. 1956.

B. SURVEY LIMITS AND DATES:

This survey begins at a line extending west from Turn Point at Lat. 55° 50' 45". It extends westward in Sea Otter Sound to Long. 133° 23' 15" and south through Karheen Passage to a line across the north end of Tonowek Narrows, Lat. 55° 45' 50" and a line extending approximately from the south end of Tuxekan Island southwest to Guktu Point.

Field work began on 20 July and was completed on 24 September 1957.

This survey is joined on the north by Survey H-8288(HO-1356); on the north[redacted] and in the small pass at Lat. 55° 48'00", Long. 133° 21' 45" by Survey H-8393(HO-1557); 1957 and on the southeast by Survey H-8036(LJ-1153). There is no contemporary survey at the limit of this survey in Tonowek Narrows on the southwest. * not in Wash Office 6-25-59

C. VESSEL AND EQUIPMENT:

The survey was executed by Launch Nos. 93 and 95 which operated from the Ship HODGSON.

Soundings were taken from all vessels with 808 type graphic recorders and supplemented on critical shoals by vertical cast taken with a lead-line.

The depths which were recorded while obtaining bottom samples with a snapper should be disregarded in most cases, as no special effort was made to insure that the casts were vertical and the emphasis was placed on obtaining a bottom sample.

D. TIDE AND CURRENT STATIONS:

Mean lower low water as recorded on the portable automatic tide gage at Karheen, Lat. 55° 49.8, Long. 133° 19.6 was used for reduction of all soundings on this survey. Time or range corrections were not needed.

One current station was occupied at Lat. 55° 48' 14", Long. 133° 18' 29".

E. SMOOTH SHEET:

The smooth sheet projection was made by hand by ship's personnel at the Ship's Base in Seattle. The shoreline and topographic detail was transferred to the smooth sheet from blue line prints of the photogrammetric manuscripts furnished by the Washington Office. The signals were pricked through from the manuscripts. The signals, shoreline, and topographic detail were checked upon completion. See TPI Review

F. CONTROL STATIONS:

The triangulation used to control the surveys of this area was established in 1904 by E.F.D., 1922 by T.J.M., 1914 by F.H.H., 1952 by R.A.G., and 1957 by E.W.R.

All photo-hydro signals for this survey are found on surveys T-10404, T-10409, ~~T-11102~~, and T-11103.

A number of signals were located from or on photo-hydro stations or triangulation stations. These stations are indexed in the front of the volume in which they appear.

G. SHORELINE AND TOPOGRAPHY:

H-8392 DESC. REPORT

All shoreline on the smooth sheet was taken from advance photogrammetric manuscripts Nos. T-10404, T-10409, ~~T-11102~~, and T-11103. (See TPI Review)

There was no conflict between the hydrography and the shoreline noted on the boatsheet.

It was not practical in most places to try to define the low water line because of the steep banks and numerous rocks and reefs adjacent to the shore. A sounding line was run as near the shore as feasible and an effort was made to delineate the adjacent 5 fathom curve.

H. SOUNDINGS:

All soundings were taken with 808 type fathometers, calibrated for a speed of 800 fathoms per second.

The fathometer was set correctly each morning by taking a reading on a bar suspended 2 fathoms below the surface. The fathometer initial mark for this reading was recorded. Compensation is made for variation of the initial during the day, from this bar check reading, by corrections entered in the sounding volume. The fathometer was again checked by the bar at the end of the day. A checkwas made on the fathometer speed at the time of the bar check and at other times during the day by the hydrographer.

No correction for temperature and salinity were applied to fathometer soundings. All other corrections to the soundings have been entered

and checked in the sounding volumes.

I. CONTROL OF HYDROGRAPHY:

All hydrography was controlled by sextant fixes taken at required intervals and the soundings were properly spaced between fixes.

Attention is called to varying sounding speed along beach lines and in narrow channels. These apparent changes of speed were caused by current, kelp beds, rudder drag, or slight changes of engine speed. Sufficient sextant fixes were taken however, so that no sounding is appreciably displaced.

In the smooth sheet plotting, reference should be made to the boat sheet for line direction between fixes along the beach lines.

J. ADEQUACY OF SURVEY:

This survey is complete and adequate for the area. No additional field work is deemed necessary.

Comparison with the boat sheet indicates satisfactory junctions with Survey H-8288(HO-1356) on the north; Survey H-8393 (1957) (HO-1557) on the northwest and in the small pass at Lat. 55° 48' 00", Long. 133° 21'45"; and, Survey H-8038 (1953) (LJ-1153) on the southeast. There are no holidays or excessive differences of depths at the junctions of the survey. A more thorough comparison of the junctions should be made upon completion of the processing of the smooth sheets concerned. See P4 Review * not in W.O. 6-25-59

K. CROSSLINES:

7% of the total lines were crosslines. No significant crossing discrepancies were noted on the boat sheet.

L. COMPARISON WITH PRIOR SURVEYS:

This survey was originally surveyed on Sheet No. H-2733(1904) and H-3666 (1914).

The soundings of the present survey are in general agreement with those of the prior survey. (P5 Review)

No rocks or dangers shown on the old survey were disproved by the present survey. Numerous additional rocks were found and shoaler depths were obtained on some reefs previously located. (See paragraph N).

M. COMPARISON WITH CHARTS:

The area covered by this survey lies within Chart 8171 and 8157. (See paragraph N for comparison.) Chart 8171 and Chart 8157 have print dates of 1/14/57 and Jan. 16/56 respectively. The final comparison will be made upon completion of the smooth sheet. P6 Review

N. DANGERS AND SHOALS:

The rocks which were taken from the photogrammetric manuscripts, and verified by the hydrographer or photo inspector appear on the boat sheet in black ink. Those located by sextant fixes appear on the boat sheet in red ink.

The following list includes important new rocks and shoals, and revised depths on previously located rocks and shoals. The locations and depths are taken from the boat sheet and therefore may be changed slightly when the smooth sheet in completed.

	FEATURE	LAT.	LONG.	LEAST DEPTH (MLLW)	POS. NO.
1	Shoal	55-50-00	133-22-20	4.7 fm.	~~81-82"b" day, Lch. 93~~ 50-51 Lch #5
2	Shoal	55-49-49	133-22-47	2.1 fm.	8"f" day, Lch. 95
3	Rock	55-49-48	133-22-16	Awash (MLLW) (1)	Vol. 18, Pos. 34
4	Shoal	55-49-35	133-22-53	2.0 fm.	7"f" day, Lch. 95 (10)
5	Shoal	55-49-28	133-22-07	3.1 fm.	81"b" day, Lch. 95 (20) H.L.
6	Shoal	55-49-37	133-21-05	2.6 fm.	115"d" day, Lch. 95 (19) H.L.
7	Shoal	55-49-33	133-20-00	~~5.0~~ fm. 4.9	94"f" day, Lch. 93 (16)
8	Shoal	55-48-50	133-20-41	4.5 fm.	26"f" day, Lch. 93
9	Shoal	55-48-29	133-18-47	1.3 fm.	81"f" day, Lch. 93 (21) H.L.
10	Shoal	55-48-14	133-21-15	2.5 fm.	92"b" day, Lch. 95 (13)
11	Rock	55-47-59	133-20-43	(2) ft.	Vol. 18, Pos. 48
12	Sunken Rock	55-48-14	133-19-15	0.1 fm. (0)	Vol. 18, Pos. 49
13	Shoal	55-48-17	133-19-20	(0) fm. 1.5	29"j" day, Lch. 93 (15)
14	Shoal	55-48-14	133-19-04	4.3 fm.	38"j" day, Lch. 93 (8)
15	Shoal	55-48-09	133-18-43	3.4 fm.	28"j" day, Lch. 93 (8)
16	Shoal	55-48-01	133-18-39	3.4 fm.	27"j" day, Lch. 93 (30)
17	Reef	55-49-13	133-20-06	(2) ft.	Vol. 18, Pos. 43-44
18	Shoal	55-47-31	133-18-08	2.3 fm.	36"h" day, Lch. 93 (11) H.L.
19	Shoal	55-47-03	133-17-01	5.1 fm.	54-55"f" day, Lch. 95
20	Shoal	55-47-13	133-17-11	6.7 fm.	2-3"g" day, Lch. 95
21	Shoal	55-47-15	133-18-49	5.2 fm.	24"h" day, Lch. 93
22	Shoal	55-46-51	133-16-52	2.6 fm.	1K → 1"b" day, Lch. 95 (14)
23	Shoal	55-47-11	133-17-23	3.3 fm.	8"j" day, Lch. 93 (12)
24	Shoal	55-47-03	133-17-31	3.0 2.9 fm.	124"h" day, Lch. 93 (8)
25	Shoal	55-46-56	133-16-50	3.6 fm.	79-80"h" day, Lch. 93
26	Shoal	55-46-55	133-17-12	5.0 fm.	94-95 → 108-109"h" day, Lch. 93
27	Shoal	55-46-46	133-17-41	3.0 2.9 fm.	127"h" day, Lch. 93 (10)
28	Shoal	55-46-34	133-17-56	1.7 fm.	128"h" day, Lch. 93 (10)
29	Shoal	55-46-32	133-18-23	3.4 fm.	70-71"k" day, Lch. 95
30	Shoal	55-46-51	133-18-32	1.3 fm.	42"h" day, Lch. 93 (10)
31	Shoal	55-47-09	133-19-09	7.1 fm.	4-5"h" day, Lch. 93
32	Shoal	55-46-43	133-19-07	7.2 fm.	58-59"g" day, Lch. 95
33	Shoal	55-46-18	133-19-34	5.2 fm.	110-111"k" day, Lch. 95
34	Shoal	55-46-14	133-18-47	2.3 fm.	1"l" day, Lch. 95 (35)
35	Shoal	55-46-27	133-17-34	4.3 fm.	91-92"j" day, Lch. 95
36	Shoal	55-46-29	133-16-04	7.0 fm.	97-98"j" day, Lch. 95
37	Shoal	55-46-22	133-15-55	7.8 fm.	89-90"g" day, Lch. 93
38	Shoal	55-45-45	133-17-40	5.7 fm.	122-123"g" day, Lch. 95
39	Shoal	55-45-37	133-17-36	7.1 fm.	141"g" day, Lch. 95
40	Shoal	55-45-41	133-18-41	4.3 fm.	144-145"g" day, Lch. 95

O. COAST PILOT INFORMATION:

A Coast Pilot Report was submitted for the entire 1957 season. ✓

P. AIDS TO NAVIGATION:

The following fixed aids to navigation are located on this survey:

Karheen Passage Daybeacon
Chapin Island Range Front Daybeacon
Chapin Island Range Rear Daybeacon
Peep Rock Light

Karheen Passage Daybeacon was located by triangulation in 1952 by R.A.G. The other three fixed aids to navigation were located by triangulation in 1957 by E.W.R.

The following floating aids to navigation are located on this survey. These floating aids were located by sextant fixes, and the location recorded in Volume 12 of the sounding volumes.

Point Swift Shoal Buoy 2	Lat. 55-46-15 Vol 12, pos 119 Long.133-18-44
Karheen Passage Buoy 1	Lat. 55-46-33 Vol 12, pos 122 Long.133-17-54
Karheen Passage Buoy 2A	Lat. 55-46-52 Vol 12, pos 120 Long.133-16-56
Ham Island Reef Buoy 3	Lat. 55-47-11 C 3 Vol 12, pos 121 Long.133-17-19
Cob Island Reef Buoy 4	Lat. 55-47-48 N 4 Vol 12, pos 116 Long.133-18-19
Karheen Reef Buoy 6	Lat. 55-48-27 N 6 Vol 12, pos 115 Long.133-18-50

Q. LANDMARKS FOR CHARTS:

There are no landmarks prominent enough to be used as aids to navigation. The buildings located within the limits of this survey are of a temporary nature and therefore are not suitable for landmarks. ✓

R. GEOGRAPHIC NAMES:

A special report on Geographic Names was submitted for the entire area of the 1957 season. ✓

S. SILTED AREAS:

There were no important silted areas within the area of this survey. ✓

Y. MISCELLANEOUS:

The standard procedure for investigating shoals was to run sounding lines 10 meters apart and normal to the regular pattern of the sounding lines until the least depth was obtained. The investigation was done on a linen overlay and stapled into the sounding volume where the soundings were recorded. Positions and add. sdgs. transferred to Smooth sheet. Tracings destroyed.

Only those positions needed to establish the location of the least depth, or provide soundings for delineation of the depth curves, were plotted on the smooth sheet.

Z. TABULATION OF APPLICABLE DATA:

1. Record of Current Observations, Current Station No. 6 - forwarded 13 Aug. 1957.
2. Field Inspection Report - previously forwarded to Washington Office.
3. Tide Data, Karheen Tide Gage - forwarded 3 Aug. 1957 and 14 Oct. 1957.
4. Geographic Names Report - forwarded 7 Nov. 1957.
5. Coast Pilot Report - forwarded 6 March 1958.
6. Manuscripts - to be forwarded with this report.
7. Leadline Comparison - forwarded with this report.
8. Index Sheet (See Layout of 1957 Boat Sheets previously submitted.

Merlyn D Christensen

Merlyn D. Christensen,
ENS, C&GS

STATISTICS

Launch 93

VOL.	DAY	DATE	POS.	NAUT. MI. SOUNDING	H. L.
1	a	7/20/57	165	22.6	
1&2	b	7/31/57	147	16.5	
2	c	8/2/57	181	25.9	
2&3	d	8/3/57	182	26.5	
3&4	e	8/7/57	208	22.9	
4	f	9/3/57	94	6.4	9
4	g	9/6/57	110	15.9	
5	h	9/16/57	128	9.2	10
5	j	9/17/57	92	6.2	9
		Sub-totals	1307	145.9	28

Launch 95

3	a	8/6/57	89	12.8	
6	b	8/21/57	114	9.9	
6	c	8/22/57	97	8.5	
6&7	d	8/23/57	137	11.2	17
7	e	8/28/57	250	33.9	
8	f	8/29/57	161	19.5	
8&9	g	9/15/57	169	24.6	
9	h	9/16/57	154	18.7	
9&10	j	9/17/57	145	15.0	
10	k	9/23/57	177	17.6	
10&11	l	9/24/57	66	5.2	
		Sub-totals	1559	176.9	17
		Totals	2866	329.0	45

TIDE NOTE

TIDE STATION:

Karheen
Lat. 55° 49'8
Long. 133° 19'8

MLLW on staff = 1.4 ft.

The following Geographic Names are pencilled on the smooth sheet:

TONOWEK BAY

TONOWEK NARROWS

TONOWEK CREEK

PRINCE OF WALES ISLAND

GUKTU POINT

KAGUK COVE

DASANI ISLANDS

KAUDA POINT

KARHEEN PASSAGE

COB I.

TRIM I.

SQUAM BAY

POINT SWIFT

CHAPIN I.

HECETA ISLAND

TUXEKAN ISLAND

SEA OTTER SOUND

TURN POINT

LEADLINE CALIBRATION

NO. 35A (WITH BOTTOM SAMPLER ATTACHED)

RANGE	CORRECTION
0.0 - 2.0 fm.	0.0 fm.
2.1 - 5.6 fm.	-0.1 fm.
5.7 - 9.4 fm.	-0.2 fm.
9.5 - 13.4 fm.	-0.3 fm.
13.5 - 17.8 fm.	-0.4 fm.
17.9 - 23.4 fm.	-0.5 fm.
23.5 - 29.2 fm.	-0.6 fm.
29.3 - 35 fm.	-0.7 fm.

All leadlines were checked as required and found to be correct except No. 35A.

APPROVAL SHEET

The boat sheet and records were examined daily during the field season. The plotting of the smooth sheet was done under the supervision and by members of the Processing Pool. It is currently nearing completion. The boat sheet indicates that the survey is complete and adequate. It is hereby approved pending final review of the smooth sheet.

E. W. Richards,
LCDR, C&GS
Chief of Party

APPROVAL SHEET

The boat sheet and records were examined daily during the field season. The plotting of the smooth sheet was done under the supervision and by members of the Processing Pool. It is current1y nearing completion. The boat sheet indicates that the survey is complete and adequate. It is hereby approved pending final review of the smooth sheet.

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Where the field locations of rocks as shown on the Boat sheet differed from the locations as shown on the air-photographic surveys, the rocks are shown on the smooth sheet in accordance with their air-photographic locations.

ADDENDUM TO DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY NO. H-8392 (FIELD NO. HO-1457)

F. CONTROL STATIONS:

The control stations located by hydrographic methods were plotted on the manuscripts and pricked through to the smooth sheet instead of being plotted directly on the smooth sheet.

G. SHORELINE AND TOPOGRAPHY:

The photogrammetric manuscript projections disagreed with the smooth sheet projection. In transferring shoreline and alongshore detail, triangulation was held rather than the projection grid on the blue line print of manuscript T-10409. On the blue lines of manuscripts T-10404 and T-11103, the blue line was shifted as needed and the shoreline was transferred square by square to minimize the effect of the projection disagreement.

Many topographic details were located by sextant fixes and are recorded in Volume 12. When these positions required plotting, as in the case of buoy locations, green ink was used to identify the position dot and the position was numbered in green with no day letter attached.

The topographic location of rocks was held in cases where the topographic and photogrammetric locations disagreed.

The rock awash symbol shown at Lat. 55° 47.04', Long. 133° 17.52' should be removed from manuscript T-10409. The shoalest depth discovered in this area during an investigation conducted on 9/16/57 was 3.0 fm. (ML No. 93, pos. 124h).

A mark on manuscript T-10409 located at Lat. 55° 47' 56", Long. 133° 21' 42", which could be mistaken for a sunken rock symbol, should be removed from the manuscript.

The rock located at Lat. 55° 48.02', Long. 133° 20.65' (Pos. 48 - Vol. 12) should be shown as a rock awash rather than a sunken rock.

J. ADEQUACY OF SURVEY:

This survey is adequate and much more comprehensive than prior surveys. This should supersede all prior surveys.

Junctions with contemporary surveys were not available at the time of completion of the smooth plotting. Boat sheet junctions were satisfactory, but it is recommended that a more thorough examination of the junctions be made during verification of this sheet.

K. CROSSLINES:

Smooth sheet crossings were in very good agreement. In areas of

steep or irregular bottom, some crossings disagreed by one or two fathoms, but these differences were not considered excessive. Where such minor disagreements arose, the shoaler sounding was plotted.

L. COMPARISON WITH PRIOR SURVEYS:

No photostats of prior surveys were available at the completion of the smooth plotting of this sheet. See Section M for comparison with charts.

M. COMPARISON WITH CHARTS:

The smooth sheet was compared with the chartlet issued in Notice to Mariners No. 48, November 30, 1957 showing the corrections to Chart 8171. Areas of the smooth sheet which were not covered by the chartlet were compared with Chart 8171, print date 1/14/57 and Chart 8157, print date 1/16/56.

The present survey agrees very well with the charted data. Several new shoals and dangers were uncovered and shoaler least depths were uncovered. (See Section N).

Reference should be made to prior surveys (not available at this time) in resolving the following discrepancies:

(H-2733-1904)
8 fm. charted at Lat. 55° 49.32', Long. 133° 22.39' lies between a 10.6 and a 7.4 (129a - 130a, ML No. 93) charted sdg. is displaced.

(H-2733, 1904)
4½ fm. charted at Lat. 55° 47.96', Long. 133° 20.98' lies between a 4.2 (102b - 103b, ML No. 95) and an 8.4 (109b - 110b, ML No. 95) Sdg. probably displaced, Disregard

** 5 fm. charted at Lat. 55° 47.08', Long. 133° 17.06' and 4 fm. charted at Lat. 55° 46.80', Long. 133° 16.73' appear on the NM No. 48 correction chartlet but not on Chart 8157 or 8171. If these soundings came from prior surveys, they should be retained on the chart. If they came from this survey, they have apparently been mischarted and should be shifted to agree with the smooth sheet position.
** Retain - Sdg. Explos. OK.

From H-3666(1914)
Sunken rock symbol charted at Lat. 55° 46.85', Long. 133° 16.87' should be replaced by a 2.6 sounding. (Position 1k, ML No. 95).

The following soundings from prior surveys should be retained on the chart because they fall in spaces between sounding lines and help to delineate the depth curves:

19 fm. charted at Lat. 55° 49.96', Long. 133° 23.00' *
18 fm. charted at Lat. 55° 49.96', Long. 133° 20.82' *
1½ fm. charted at Lat. 55° 49.78', Long. 133° 20.05' *
1 fm. charted at Lat. 55° 49.65', Long. 133° 19.75' *
2¼ fm. charted at Lat. 55° 49.33', Long. 133° 19.55' *
1 fm. charted at Lat. 55° 48.97', Long. 133° 22.24' *
7 fm. charted at Lat. 55° 48.55', Long. 133° 20.80' *
4½ fm. charted at Lat. 55° 48.50', Long. 133° 20.30' *
27 fm. charted at Lat. 55° 48.40', Long. 133° 18.90' *

* Disregard, In agreement with depths on H-8392 (Smooth sheet)

12 fm. charted at Lat. 55° 46.88', Long. 133° 18.40'*
8 fm. charted at Lat. 55° 46.75', Long. 133° 18.55'*
4½ fm. charted at Lat. 55° 46.40', Long. 133° 17.10'*
3-3/4fm. charted at Lat. 55° 46.40', Long. 133° 16.92'*
3½ fm. charted at Lat. 55° 46.40', Long. 133¾ 16.70'*
8 fm. charted at Lat. 55° 46.13', Long. 133° 18.87'*
9 fm. charted at Lat. 55° 45.80', Long. 133° 18.70'*

N. DANGERS AND SHOALS:

The following list includes important rocks and shoals and revised depths on previously located rocks and shoals. The location and depths are from the smooth sheet. This list supersedes the list shown in Section N of the descriptive report.

* denotes same as rock on page 4 of this report

FEATURE	LAT. ° ' "	LONG. ° ' "	LEAST DEPTH MLLW	POS. NO. (S)
Shoal	55-50-00	133-22-20	4.6 fm.	50-51b day, Lch. 95 *
"	55-49-58	133-22-43	2.6 fm.	80b day, Lch. 95
"	55-49-49	133-22-47	2.3 fm.	8f day, Lch. 93 *
Rock Awash	55-49-48	133-22-16	(0)	Vol. 12, Pos. 34 *
Shoal	55-49-35	133-22-53	2.2 fm.	7f day, Lch. 93 *
"	55-49-28	133-22-07	3.1 fm.	81b day, Lch. 95 *
"	55-49-37	133-21-05	2.7 fm.	115d day, Lch. 95 *
"	55-49-33	133-20-00	4.9 fm.	94f day, Lch. 93 *
"	55-48-52	133-20-47	4.5 fm.	40a day, Lch. 95
"	55-49-07	133-20-17	3.0 fm.	15-16d day, Lch. 93; 55-56a day & 137d day, Lch. 95
"	55-48-29	133-18-47	1.3 fm.	81f day, Lch. 93
"	55-48-15	133-21-16	2.5 fm.	147b day, Lch. 95
Rock awash	55-47-59	133-20-43	(0)	Vol. 12, Pos. 49 *
" "	55-48-02	133-20-40	(2)	Vol. 12, Pos. 48 *
" "	55-48-14	133-19-15	(0)	Vol. 12, Pos. 47
Shoal	55-48-17	133-19-20	1.5 fm.	29j day, Lch. 93 *
"	55-48-14	133-19-04	4.3 fm.	38j day, Lch. 93 *
"	55-48-09	133-18-43	3.5 fm.	28j day, Lch. 93 *
"	55-48-01	133-18-39	3.4 fm.	27j day, Lch. 93 *
Reef	55-49-13	133-20-06	(2)	Vol. 12, Pos. 43-44 *
Shoal	55-47-31	133-18-08	2.3 fm.	36h day, Lch. 93
"	55-47-03	133-17-01	5.1 fm.	54-55f day, Lch. 95 *
"	55-47-13	133-17-11	6.8 fm.	2-3g day, Lch. 95 *
"	55-47-15	133-18-49	5.3 fm.	24h day, Lch. 93 *
"	55-46-51	133-16-52	2.6 fm.	1k day, Lch. 95 *
"	55-47-11	133-17-23	3.3 fm.	8j day, Lch. 93 *
"	55-47-03	133-17-31	3.0 fm.	124h day, Lch. 93 *
"	55-46-56	133-16-50	7.0 fm.	79-80h day, Lch. 93 *
"	55-46-54	133-17-12	5.0 fm.	94-95g day, Lch. 93 & 227-228e day, Lch. 95
"	55-46-46	133-17-41	3.0 fm.	127h day, Lch. 93 *
"	55-46-34	133-17-56	1.8 fm.	128h day, Lch. 93 *
"	55-46-32	133-18-23	3.4 fm.	1-2j day & 70-71kday, Lch. 95
"	55-46-51	133-18-32	1.3 fm.	42h day, Lch. 93 *
"	55-47-00	133-19-09	7.2 fm.	4-5h day, Lch. 93 *
"	55-46-43	133-19-07	7.3 fm.	58-59g day, Lch. 95 *

FEATURE			LEAST DEPTH MLLW	POS. NO.(S)
Shoal	55-46-18	133-19-34	5.2 fm.	110-111k day, Lch. 95
"	55-46-14	133-18-47	2.0 fm.	1"1" day, Lch. 95
"	55-46-27	133-17-34	4.3 fm.	91-92j day, Lch. 95
"	55-46-29	133-16-04	7.0 fm.	97-98j day, Lch. 95
"	55-46-22	133-15-55	7.8 fm.	89-90g day, Lch. 93
"	55-45-45	133-17-40	5.8 fm.	122-123g day, Lch. 95
"	55-45-37	133-17-36	7.1 fm.	141g day, Lch. 95
"	55-45-41	133-18-41	4.7 fm.	144-145g day, Lch. 95

Y. MISCELLANEOUS:

The fathogram for "g" day, Launch 93 has been misplaced and will not be transmitted with these records. It can probably be found among other 1957 HODGSON fathograms. It is felt that this loss will make no appreciable difference since the fathogram had been carefully scanned by ship's personnel. not available @ time of verification or review (9-1-59) Rec'd from Fearl 7/18/60

Z. TABULATION OF APPLICABLE DATA:

The following items are to be transmitted with this report:

1 - Smooth sheet
1 - Boat sheet
8 - Blue line prints
6 - Manuscripts
2 copies Descriptive Report
12 - Sounding Volumes
2 Envelopes of Fathograms
2 Tracing cloth overlays of developments.

Charles I. Harding
LTJG, C&GS

DIVISION OF CHARTS

REVIEW SECTION-- NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8392 FIELD NO. HO-1457

S. E. Alaska, West Side of Tuxekan Island, Karheen Passage

Surveyed: July-Sept. 1957 Scale: 1:10,000

Project No. 13470

Soundings: 808 Depth Recorder
Lead Line

Control: Sextant fixes on shore signals

Chief of Party----------E. W. Richards
Surveyed by----------M. D. Christensen and L. D. Thurman
Protracted by----------C. I. Harding
Soundings plotted by ------C. I. Harding
Verified and inked by------E. Thomas
Reviewed by----------I. M. Zeskind DATE: 7/10/59
Inspected by----------R. H. Carstens

1. Shoreline and Control

The shoreline originates with reviewed air-photographic survey T-11103 (1948-53-57), with unreviewed air-photographic survey T-10404 (1953-55), and with incomplete air-photographic survey T-10409 of 1955-57.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

The sounding line crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated, except close inshore where steep shores and the foul character of the bottom sometimes prevented development to the low-water line.

The bottom is very irregular and generally drops abruptly from shore to 10-fm depths. Submarine features such as reefs, ledges, shoals, deeps and troughs contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-8393 (1957) on the northwest and with H-8036 (1953) on the southeast. The project survey on the north has not yet been received in this office. No contemporary surveys are available in Tonowek Narrows.

5. Comparison with Prior Surveys

H-2733 (1904), 1:20,000
H-3666 (1914), 1:10,000 and accompanying wire-drag.

These prior surveys together cover the area of the present survey. A comparison between the prior and present surveys reveals only minor differences of 1-2 fms in depths. Attention however, is directed to the following:

1. The sunken rocks charted on Chartlet 8171 (NM 48, 1957) in lat. 55°46.85', long. 133°16.87', and lat. 55°48.48', long. 133°18.80', from H-3666 (1914) respectively, symbolize rocky shoals on the original survey and should be charted in accordance with depths developed on the present survey.

2. The 4-4/6-fm. sounding in lat. 55°46.69', long. 133°17.52' obtained on survey H-3666 (1914) by wire drag should be disregarded. This sounding is considered disproved by the present survey where it falls in depths of 18 fms. The sounding could not be identified in the volumes of the prior survey.

3. The rock awash charted in lat. 55°47.26', long. 133°17.74' originates with H-3666 (1914) where it apparently symbolizes foul area. The feature, which falls in depths of 1.1 fms. on the present survey is believed plotted out of position on the prior survey and should actually fall about 40 meters northward where a ledge is found on the present survey. The rock awash symbol should be deleted from the chart.

4. The rock awash charted in lat. 55°46.83', long. 133°18.52', originates with H-3666 (1914) where it apparently symbolized foul area. A least depth of 1.3 fms. was found by hand lead on the present survey. The shoal is considered adequately developed on the present survey and the rock awash symbol should be deleted from the chart.

5. No conflicts were noted between the present depths and the effective wire drag depths of H-3666 (1914), except in the vicinity of lat. 55°46.53', long. 133°17.70', where a shoal of 25 ft. was not hung by the drag. The drag coverage in this vicinity should be rejected.

A number of bottom characteristics and several soundings from the wire drag portion of hydrographic survey H-3666 have been carried forward to the present survey. With the addition of these bottom characteristics and soundings, the present survey is adequate to supersede the prior surveys within the common area

6. Comparison with Chart 8157 (Latest print dated 9/30/57)
Chart 8171 (Latest print dated 1/14/57)
Chartlets NM 48, Nov. 30, 1957, attached to Charts 8157 and 8171.

A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which need no further consideration, supplemented by soundings from the boat sheet (Bp 55712) of the present survey. A comparison between the charted hydrography and depths on the present survey reveals minor differences of 1 ft. to 2 fms. The rocks charted on Chart 8157 in the vicinity of lat. 55°45.0', long. 133°18.8', originate with H-3666 (1914) and T-11103 (1948-53) prior to verification and review. The rocks shown at this location on the smooth sheet of the present survey originate with T-11103 after verification and review.

A 7.4 fm. sounding on the boat sheet in lat. 55°46.80', long. 133°16.65' was erroneously shown on Chartlet 8171 (NM 48, 1957) as 4 fms. The charted 4 fms. should be revised to 7¼ fms.

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

B. Aids to Navigation

The present survey positions of the aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended.

7. Condition of Survey

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

b. The smooth plotting was accurately done, except in the vicinity of Guktu Point where the present survey joins H-8036 (1953), the junctional depths were in disagreement because signals located by sextant cuts were not correctly plotted. These signals were relocated on the smooth sheet and the junctional depths are now in adequate agreement.

c. Only a single line of soundings showing the least depth on reefs developed on overlays was smooth plotted in the field. It was necessary for the verifier to smooth plot additional selected lines to provide soundings necessary for the delineation of the curves on these reefs.

d. Signals (white washed rocks) off the high-water line are not adequately described. An elevation of these rocks should be included.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is a very good survey providing basic coverage of the area.

Examined and Approved:

Max G. Ricketts
Chief, Nautical Chart Branch

Ernest B. Lewey
Chief, Division of Charts

Lorin F. Woodcock
Chief, Hydrography Branch

Samuel B. Grenell
Chief, Division of Coastal Surveys

GEOGRAPHIC NAMES

Survey No. H-8392

Name on Survey	A On Chart No.	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	
Southeast Alaska			(for title)							1
Prince of Wales Island										2
Kaguk Cove										3
Guktu Point										4
Dasani Islands										5
Kauda Point										6
Point Swift										7
Tonowek Narrows										8
Tonowek Bay										9
Tonowek Creek										10
Heceta Island										11
Indian Gardens Bay										12
Squam Bay										13
Chapin Island										14
Karheen Passage									BGN	15
Trim Island										16
Cob Island										17
Tuxekan Island										18
Karheen Cove										19
Karheen (Abandoned)			(tide station)							20
Turn Point										21
Garden Island										22
Sea Otter Sound										23
Pt. Swift Rk				Names approved 4-30-58						24
Ham Is.						L. Heck				25
Peep Rk										26
										27
										M 234

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens 16 May 1958

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8392

Locality Tuxekan Passage, Alaska

Chief of Party: E. W. Richards in 1957

Plane of reference is mean lower low water, reading

1.4 ft. on tide staff at Karheen

15.9 ft. below B.M. 4 (1957)

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

Condition of records satisfactory except as noted below:

William Shofnos
Signature

Chief, Tides Branch

Comm-DC 34330

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..8392..

Records accompanying survey:

Boat sheets ..1..; sounding vols. ..12..; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls .3-Envelopes

special reports, etc. 1-Smooth sheet, 1-Descriptive report,
*2-Tracing cloth overlays, 6-Photogrammetric Manuscripts,
and 8-Blue line prints.....

10404 Blue (2) INC ADV Black-2(Pro)(INC) 11103 Blue (2) INC ADV Black 1

*Hydro. developments applied to smooth sheet and then destroyed.

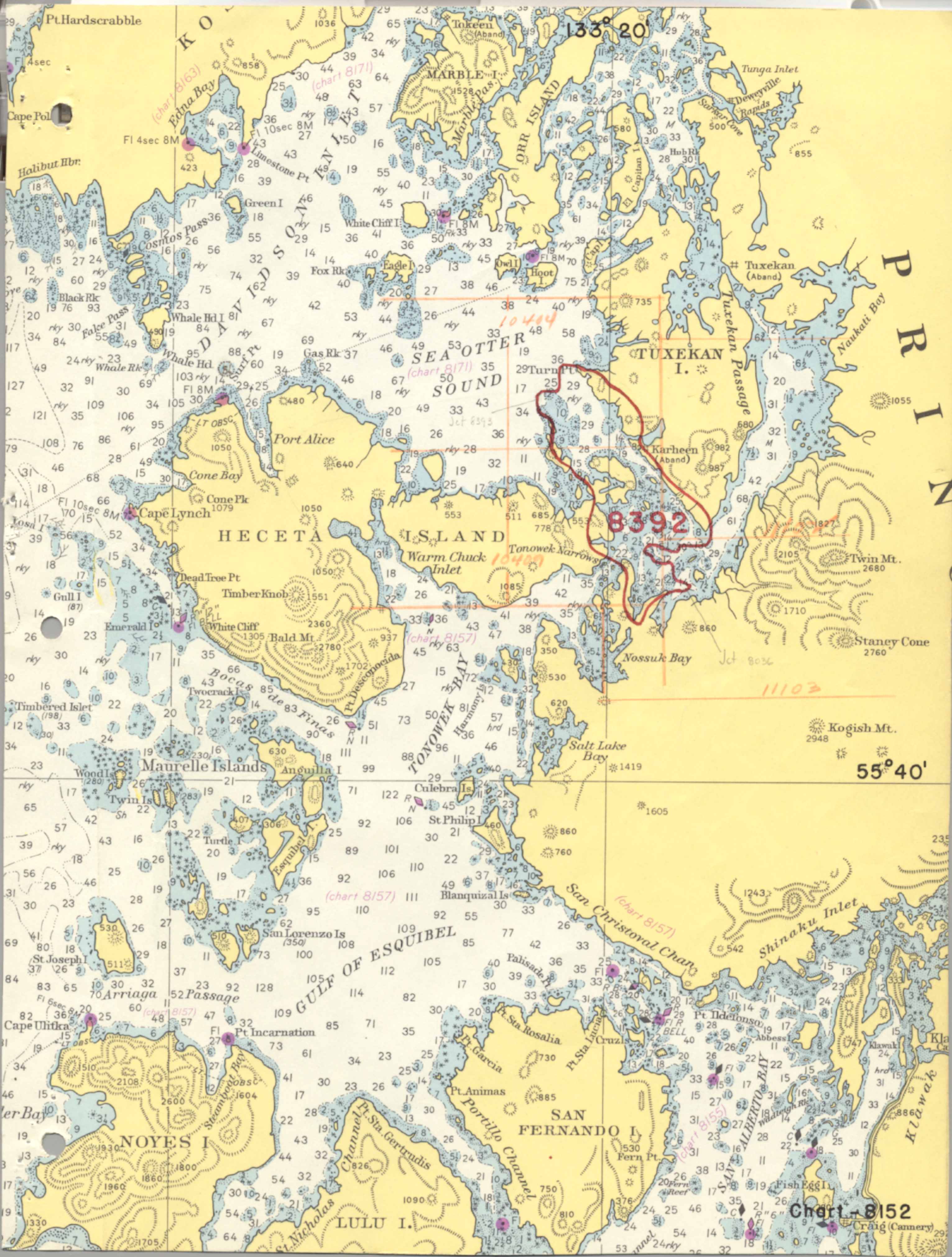
The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		2866
Number of positions checked		180
Number of positions revised		39
Number of soundings revised (refers to depth only)		127
Number of soundings erroneously spaced		
Number of signals erroneously plotted or transferred Jaw, Its, His, GIN, Yet		5 (hydro)
Topographic details	Time	24
Junctions	8993 8036 Time	8 hrs 26 hrs 34 hrs
Verification of soundings from graphic record	Time	19

Verification by Ernest Thomas Total time 307 Date 7/22/59

Reviewed by Lu Zeskind Time 76 Date 7-10-59

M-2232-1



133° 20'
55° 40'
Chart - 8152
8392
Pt. Hardscrabble
Cape Pole
Edna Bay
Halibut Hbr.
Limestone Pt
Green I
Cosmos Pass
Black Rk
Falce Pass
Whale Hd I
Whale Hd.
Whale Rk
Surf Pt
DAVIDSON INLET
MARBLE I.
Marble Pas.
ORR ISLAND
El Capitan I.
Tokeen (Aband)
White Cliff I
Fox Rk
Eagle I
Owl I
Hoot I
Gas Rk
SEA OTTER SOUND
Turn Pt
Tunga Inlet
Deweyville Rapids
Sarkar Cove
Hub Rk
Tuxekan (Aband)
TUXEKAN I.
Tuxekan Passage
Naukati Bay
Karheen (Aband)
Twin Mt.
Staney Cone
Kogish Mt.
Port Alice
Cone Bay
Cone Pk
Cape Lynch
HECETA ISLAND
Warm Chuck Inlet
Tonowek Narrows
Dead Tree Pt
Timber Knob
White Cliff
Bald Mt.
Pt. Desconocida
Emerald I
Gull I
Bocas de Finas
Twocrack I
TONOWEK BAY
Harmony I
Nossuk Bay
Salt Lake Bay
Timbered Islet
Maurelle Islands
Wood Is
Twin Is
Anguilla I
Culebra Is
St Philip I
Turtle I
Esquibel I
Blanquizal Is
San Lorenzo Is
St Joseph I
GULF OF ESQUIBEL
Arriaga Passage
Cape Ulitka
Pt Incarnation
Steamboat Bay
NOYES I
San Christoval Chan
Shinaku Inlet
Palisade Pt
Pt. Sta Rosalia
Pt. Garcia
Pt. Sta Lucia
Cruz Is
Pt. Ildefonso
Abbess I
SAN ALBERTO BAY
Pt. Animas
Portillo Channel
SAN FERNANDO I.
Fern Pt.
Fern Reef
Pt. Sta Gertrudis
Channel
St. Nicholas
LULU I.
Fish Egg I
Craig (Cannery)
Klawak
(chart 8163)
(chart 8171)
(chart 8157)
(chart 8155)
10404
10409
11103
Jct 8036

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8392

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
10-20-58	8152	R.E. Elkins	Partly applied Before ~~After~~ Verification and Review
10-16-59	Reconstr 8171	R.K. DeLaubenfels	~~Before~~ After Verification and Review. Review not typed 10-16-59 RKD.
5-31-60	Tide Corr 8171	R.K. DeLaubenfels	~~Before~~ After Verification and Review
10-19-60	8152	R.E. Elkins	~~Before~~ After Verification and Review Fully applied applied in part from cht 8171 (Reconstr.) and in part from the smooth sheet.
13 Mar 61	8201	J.H. Eaton	Corrs appl'd. thru 8171 (Recon) ~~Before~~ After Verification and Review
Oct 65	8157	C. Misfeldt	~~Before~~ After Verification and Review
Sept 72	8171	James Graham	Before After Verification and Review and inspection Fully appl'd hydro to cht. 8171 after final inspection
Sept 72	8157	James Graham	Before After Verification and Review and inspected Fully appl'd hydro to cht. 8157 after final
11/19/75	8201	Naitoh	~~Full~~ ~~Before~~ insp. part After Verification and Review and signature. By
			Revised hydro thru 8171. Considered ~~fully~~ appld. fully apply next edition
			Before After Verification and Review
12/6/93	17360	[signature]	Fully applied thru 17403 (8171) dwg # 34

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.