8037

Diag. Cht. Nos. 8201-3 & 8152-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PA-1253 *Office No.* H-8037

LOCALITY

State S. E. Alaska

General locality Tuxekan Passage

Locality Ahtun Point to Naukati Bay

1953

CHIEF OF PARTY

Charles A. Schanck

LIBRARY & ARCHIVES

DATE July 12, 1955

B-1870-1 (1)

8037

Form 537
(Ed. Nov. 1941)

REG. NO.

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-8037

Field No. PA-1253

State S. E. Alaska

General locality Tuxekan Passage

Locality Ahtun Pt. ~~Winter Harbor~~ to Naukati Bay

Scale 1:10,000 Date of survey 7 August - 7 September 1953

Instructions dated 11 June 1952, Supplemental 16 March 1953

Vessel USC&GSS PATTON

Chief of party Charles A. Schanck

Surveyed by C. A. Schanck, F. J. Bryant, W. D. Barbee

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

Protracted by L. W. Eason II

Soundings penciled by L. W. E.

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

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 428075

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY NO. H-8037 (PA-1253)

TUXEKAN PASSAGE, S. E. ALASKA

SCALE 1:10,000 DATE 1953

USC&GSS PATTON

CHARLES A. SCHANCK, COMDG.

A. PROJECT:

Field work was accomplished in accordance with Instructions for Project CS-347, dated 11 June 1952, with Supplemental Instructions dated 16 March 1953.

B. SURVEY LIMITS AND DATES:

This survey covers all of Tuxekan Passage from Latitude 55°-47'-10" northward to a line connecting a point on Tuxekan Island at 55°-50'-50", Longitude 133°-13'-10", and a point on Prince of Wales Island at 55°-51'-30", 133°-11'-40". It includes all water areas between Tuxekan and Prince of Wales Islands, between those north-south limits, and also includes Naukati Bay to the northeast.

Junction is made with contemporary survey H-8036 to the south, and H-8038 to the north.

Field work commenced on 7 August and ended on 7 September 1953.

C. VESSELS AND EQUIPMENT:

Hydrography was accomplished by Launch No. 88 and Dory No. 604, both operating from theShip PATTON.

The majority of the work was accomplished by the launch, using 808-A type recording fathometer No. 51, and running at approximately 7 knots. At this speed, the diameter of the smallest turn is approximately 25 meters.

Hydrography for beach lines and in small bights and coves was accomplished with the dory using 808-A type recording fathometer No. 74. Various speeds were used, and the turning radius varied with the speed.

Bottom samples were taken from both the launch and the dory, and in all cases, they were taken with a handlead.

D. TIDES AND CURRENTS:

Soundings were reduced from both the Staney Island and the Naukati Bay Portable Tide Gages.

There were no current stations within the limits of this sheet.

E. SMOOTH SHEET:

The smooth sheet ~~will be~~ was constructed and plotted by personnel of the Seattle Processing Office.

F. CONTROL STATIONS:

Basic control was derived from a scheme of second order triangulation executed by Ship LESTER JONES, Ross A. Gilmore, Comdg., in 1952, and a continuation of the same scheme by the Ship PATTON, Charles A. Schanck, Comdg., in 1953. This scheme connects third order work of 1914 with third order work of 1922.

Additional control was located by planetable topography on Sheets PA-A.B, and C-53.* In addition, several signals were located by hydrographic means, and in two small coves in Prince of Wales Island, one at Latitude 55°-48'-30", one at 55°-50'-40", signals were spotted in relation to shoreline from manuscript T-11102. These last signals were used to control only those lines within the coves themselves, and were considered adequate for that purpose. The boatsheet should be considered as the authority for these signals. * PA-B-53 and PA-C-53 applied to H-8037 and marked for destruction.

G. SHORELINE AND TOPOGRAPHY:

Shoreline and topography for boat sheet purposes was obtained from advance prints of photo manuscripts T-11102-11103 of 1952. Shoreline for the smooth sheet should be obtained from the same source. All revisions made by planetable units of this party have been submitted to the Division of Photogrammetry with the recommendation that they be incorporated in the final manuscript. PI review

H. SOUNDINGS:

Soundings were taken with 808-A type recording fathometers operating on a sounding velocity of 800 fathoms/second. Fathometer No. 51 was used on all launch work, and operated on the fathom scale; Fathometer No. 74 was used for all dory work, and operated on the foot scale. Soundings in feet are corrected and reduced in feet, then converted to fathoms for plotting.

Phase comparisons were obtained between necessary phases on both fathmeters.

Soundings from both fathometers were corrected for tide, initial deviation, phasing error and index error as determined by bar checks. In addition, all soundings obtained from fathometer No. 51 were corrected for a faulty radius of stylus arm. This error was detected, computed and corrected for as described in an article by LCDR David M. Whipp in the 1953 Journal.

Since a total of four corrections were made to soundings and sounding volumes contain only three columns for corrections, a column was allotted to phase correction only when B and C scales were used; i.e., the zero correction on A scale was deleted.

I. CONTROL OF HYDROGRAPHY:

All hydrography was controlled by three point sextant fixes on signals ashore. No unusual or substandard methods were employed.

J. ADEQUACY OF SURVEY:

This survey is considered to be adequate for charting. Junctions with contemporary surveys H-8036 (1953) to the south and H-8038 (1953) to the north are adequate, and depth curves can be delineated at the junctions.

K. CROSSLINES:

Crosslines totaling 7.5% of all hydrography were run on this survey. Two crossings, especially, should be investigated by the smooth plotters; they are:

2-3j and 95-96e, lat. 55°-49.55', long. 133°-11.40' Fath. scanning error
30-31h and 235-236j, lat. 55°-48.15', long. 133°-12.65' Adequate

There is a serious discrepancy at both of these crossings on the boat sheet.

L. COMPARISON WITH PRIOR SURVEY:

There is no previous hydrographic survey of this area.

M. COMPARISON WITH CHART NO. 8171:

Chart No. 8171 shows this area as unsurveyed.

N. DANGERS AND SHOALS:

1. A reef which bares 11 feet at MLLW was found in latitude 55°-47.71', longitude 133°-14.40'. This feature was located on PA-B-53, and that sheet should be the authority for its geographic position. (is awash at MHW; also T-11102 (1953))

2. A rock which ~~covers 2 feet at MLLW~~ (is awash) was found in latitude 55°-48.14', longitude 133°-13.87'. It was located by launch position 44e.

3. A reef which ~~bares 0.6 feet~~ (is awash) at MLLW was located in latitude 55°-48.80', longitude 133°-11.27'; this feature is delineated by dory fixes 1 and 2e.

4. A rock awash which bares 5 feet at MLLW was found in latitude 55°-48.85', longitude 133°-11.48'. This rock was located on PA-B-53, and a height was obtained on dory fix 1d. (T-11102) at MLLW

5. A reef which bares 8 feet was found in latitude 55°-49.63', longitude 133°-11.30'. This feature is delineated by dory fixes 5 and 6e. (T-11102) A rock which uncovers 1ft

6. ~~A reef and a rock~~ awash at MLLW are located at latitude 55°-49.70', longitude 133°-11.27'. These features are located by dory fixes 3 and 4e. (Rock-pos. 4e; reef T-11402)

7. A reef which bares 6 feet at MLLW was found at latitude 55°-49.85', longitude 133°-10.75'. This feature is delineated by dory fixes 10 and 11e. (T-11102) uncovers 1ft

8. A rock, ~~awash~~ at MLLW was found in latitude 55°-49.90', longitude 133°-10.72'. Dory fix 9e located this feature.

N. DANGERS AND SHOALS, Contin.

9. A reef, awash uncovers 2ft at MLLW was found in latitude 55°-49.97', longitude 133°-10.78'. This feature is delineated by dory fixes 7 and 8 e. (T-11102)

10. A reef which bares 3½ feet at MLLW was found in latitude 55°-50.01', longitude 133°-11.04'. This feature is delineated by dory fixes 12 and 13e. (T-11102)

11. The cove whose center is at about 55°-50.2', 133°-09.75' is very foul. Rocks as located on photo manuscript T-11102, and dory fixes 27-29e should be plotted. (Reef from T-11102)

12. A shoal was found in latitude 55°-49.90', longitude 133°-11.78'. After the first indications of this shoal were found, the area was developed with a 25 meter system of lines. Later, a buoy was planted on the shoal, and a total of 35 minutes was spent in drifting and running over the area with the fathometer on, and in probing the spot with a hand lead. Least depth of 1.6 fathoms (handlead) on launch position 158j and 1.7 fathoms (fathometer) on launch positions 148 and 149j were found. The handlead sounding of 1.6 fathoms is recommended for charting. Bottom samples showed hard gravel, but it could not be positively determined whether or not the bottom was rock.

13. A shoal was found in latitude 55°-50.13', longitude 133°-11.67'. The area was developed using 25 meter line spacing, and later, a total of 34 minutes was spent in cruising the area while scanning fathometer returns and in probing for a least depth with a handlead. A least depth of 1.9 fathoms (fathometer) was found on launch position 140j, and it is recommended for charting.

14. A gravel and boulder shoal makes out from Tuxekan Island in latitude 55°-50.31', longitude 133°-13.01'. MLLW line is as outlined by dory fixes 25-29c.

15. A group of rocks and reefs, the highest of which ~~bares 8½ feet at MLLW~~ awash at MHW, was found in latitude 55°-50.72', longitude 133°-09.83'. Dory fixes 25 and 26e delineate this group. The small cove making into Prince of Wales Island east of this group is generally foul and very shoal. (T-11102)

16. A reef which bares 8 feet at MLLW was located in latitude 55°-50.90', longitude 133°-09.88'. It was delineated by dory fixes 21, 23, and 24e.

17. A reef which bares 4½ feet at MLLW was found in latitude 55°-50.95', longitude 133°-09.85'. Dory fix 22e located this feature.

18. Two rocks which bare 2 feet at MLLW were found in latitude 55°-50.97', longitude 133°-10.05'. Dory fixes 19 and 20e delineate these. (Rocks, or reefs from T-11102)

19. A reef which bares 4' at MLLW was found in latitude 55°-51.08', longitude 133°-09.92'. It was delineated by dory fixes 17 and 18e. (T-11101)

20. A reef which bares 3½ feet at MLLW was found in latitude 55°-51.12', longitude 133°-10.13'. It is located by dory fix 16e. (T-11101)

21. A semi-detached reef which is awash at ~~MLLW~~ MLLW was found in latitude 55°-51.32', longitude 133°-10.46'. It is located by dory fix ~~10e~~ 15e. (T-11101)

22. Dory fix 14e marks the outer end of a ledge in latitude 55°-51.43', longitude 133°-10.47'.

23. A shoal was found in latitude 55°-51.45', longitude 133°-10.77'. The area was developed extensively, and a least depth of 1.1 fathoms was found on launch position 191d + 7 seconds.

N. DANGERS AND SHOALS, Contin.

24. A rock which bares 3½ feet at MLLW was found in latitude 55°-51.77', longitude 133°-10.67'. This rock is located by launch position 97c. (T-11101)

25. A group of rocks baring ½ to 4 feet at MLLW was found in latitude 55°-51.35', longitude 133°-11.55'. These rocks are located by dory fixes 1-3a. (T-11101)

26. Two rocks awash, baring 2 feet at MLLW were found in latitude 55°-51.45', longitude 133°-11.17'. They are located by (T-11101) and dory fixes 5a ~~and 7a.~~ rock-pile

27. A reef which bares ½ feet at MLLW was found in latitude 55°-51.56', longitude 133°-11.04'. It is located by dory fix 6a. (T-11101)

28. A reef which bares 3 feet at MLLW was found in latitude 55°-51.~~10~~60', longitude 133°-10.96'. It was located by dory fix 7a. (T-11101)

29. A group of rocks and reefs which bare from ~~2 to 7~~ 5 feet was found in latitude 55°-51.85', longitude 133°-10.00'. They are located by dory fixes 8-11, 15 and 16a. (T-11101) ~~0 feet MLLW to 2 ft MHW~~

30. A reef and two rocks baring from ~~1 to 10 feet~~ were found in latitude 55°-51.79', longitude 133°-09.80'. They are located by dory fixes 12 and 14a; it is on this reef that topographic signal USE is located. and T-11101

31. A reef baring ½ foot at MLLW was found in latitude 55°-51.75', longitude 133°-09.64'. This feature is located by dory fix 13a. (T-11101)

32. A rock which bares 5 feet at MLLW was located in latitude 55°-52.04', longitude 133°-09.46'. It is located by dory fix 18a. (T-11101)

33. An extensive group of reefs, baring from 2 to 18 feet at MLLW, was found in latitude 55°-52.80', longitude 133°-09.25'. They are delineated by dory fixes 21-30a.

34. Two rocks, baring 5 and 7 feet at MLLW, were found in latitude 55°-52.93', longitude 133°-09.84'. They are located by dory fixes 31 and 32a. (T-11101)

35. A reef, baring ~~8 feet at MLLW~~, was found in latitude 55°-53.~~25~~20', longitude 133°-11.~~30~~10'. It is partly delineated by dory fix 33a; triangulation station STAR is located on this reef. (T-11101)

36. Two rocks, baring 5 and 9 feet at MLLW, were found in latitude 55°-53.20', longitude 133°-11.15'. They are located by dory fixes 35 and 36a. (T-11101)

37. A rock baring 1 foot at MLLW, was found in latitude 55°-53.10', longitude 133°-11.10'. It is located by dory fix 34a. (T-11101)

38. In addition to the dangers outlined above, the area northeast to southeast of Staney Island is extremely foul. It was found that the delineation of reef limits, etc., on manuscript T-11102 was excellent, and this manuscript should be the authority for reefs, etc., unless specifically disproved by the hydrographic survey.

SHOALS

1. A shoal with least depth of 4.3 fathoms, launch position 53b + 15 seconds was found in latitude 55°-51.14', longitude 133°-11.~~65~~70' Thirty meter lines were run over this shoal.

2. Shoal indications were found in latitude 55°-50.06', longitude 133°-11.82'. The area was developed with lines spaced at 20 meters, and a fathometer sounding of 3.8 fathoms was obtained on launch position 314c. Due to the congestion in this area on the boat sheet, there is a possibility that a shoaler depth may be recorded in the sounding

and (T-11101)

N. DANGERS AND SHOALS Contin.

volume. This should be especially checked by the smooth plotter. ok

3. A shoal was found in latitude 55°-49.57', longitude 133°-12.19'. A least depth of 3.9 fathoms was found with fathometer on launch position 12ℓ.

4. a shoal was found in latitude 55°-49.50', longitude 133°-11.97'. A least depth of 3.2 fathoms was found by fathometer on launch position 37k.

5. A shoal was found in latitude 55°-49.40', longitude 133°-11.78'. A least depth of 4.5 fathoms was found by fathometer on launch positions 177e + 30 seconds, and on 137h.

6. A shoal was found in latitude 55°-48.44', longitude 133°-13.42'. A least depth of 7.5 fathoms was found by fathometer on launch position 194j + 45 seconds. (and 51f)

7. A shoal was found in latitude 55°-47.75', longitude 133°-13.78'. A least depth of 3.4 fathoms was found by fathometer on launch position 142f.

O. COAST PILOT INFORMATION:

A special report on Coast Pilot Information has been submitted.

P. AIDS TO NAVIGATION:

There are no aids to navigation within the limits of this survey.

Q. LANDMARKS FOR CHARTS:

There are no features within the limits of this survey considered suitable for designation as landmarks.

R. GEOGRAPHIC NAMES:

A special report on Geographic Names has been submitted. on file 854 ltr.

S. SILTED AREAS:

All deeps within the limits of this survey are filled, to some extent, with silt. Depth of silt in these deeps could not be determinde from fathograms.

It appears that Staney Creek discharges some silt, etc., and acts as a shoaling factor. With no previous survey as a basis for comparison, however, no rate or extent of shoaling could be determined.

The head of Naukati Bay has large deposits of silt and mud as have most of the small coves and bights within the survey

T. - Y.

No information for these headings.

Z. TABULATION OF APPLICABLE DATA:

The following special reports are applicable:

1. Field Inspection of Air Photographs, 1952
2. Field Inspection of Air Photographs, 1953
3. Radial Plot Reports and Compilation Report to Accompany T-11102
4. Triangulation Report, Tuxekan Passage, 1952.
5. Triangulation Report, Tuxekan Passage, 1953
6. Geographic Names Report, Tuxekan Passage, 1953
7. Coast Pilot Notes, Tuxekan Passage, 1953
8. Descriptive Topographic Report to Accompany PA-A,B,C,D,E-53

The following applicable data are attached to this report:

1. Table of Statistics
2. Tide Notes
3. Abstract of Bar Checks and Computation of Index Error
4. Abstract of Phase Comparison and Computation of Phase Correction
5. Table of Faulty Radius Corrections
6. Table showing Applicable Tide Correction

Respectfully submitted:

William D. Barbee

William D. Barbee
Lt. (j.g.) USC&GS

Approved and forwarded:

Frank G. Johnson

Frank G. Johnson
CDR. USC&GS
Comdg. Ship PATTON

TIDE NOTE

Portable tide gages at Naukati Bay and at Staney Island were used to reduce soundings for this sheet. For convenience the line separating the area of Naukati Bay corrections from Staney Island was taken as the line separating two sounding line systems. It is the line drawn roughly from latitude 55°-49.50', longitude 133°-12.72' on Tuxekan Island, to latitude 55°-50.35', longitude 133°-10.25' on Prince of Wales Island.

A table giving applicable tide gage data for all hydrography is attached. No corrections for time or range were made.

The plane of reference--MLLW--was 4.1 feet on the Naukati gage, and 3.9 feet on the Staney Island gage as per Director's Letter dated 12 October 1953, reference number 36-rjb.

STATISTICS, SHEET 1253

DATE	DAY	VOL.NO.	H.L. & WIRE	POSITIONS	STAT.MI. SNDGS.
		LAUNCH 88			
	(blue)				
7 Aug.	a	1	0	9	1.0
8 "	b	1	2	421	43.0
9 "	c	2 & 3	3	349	32.6
19 "	d	3	3	296	27.2
13 "	e	4 & 5	3	356	32.7
14 "	f	5	1	201	25.6
18 "	g	5 & 6	1	173	19.5
19 "	h	6 & 7	2	436	49.1
23 "	j	7 & 8	20	263	23.4
28 "	k	8	0	118	14.3
7 Sept.	l	9	1	21	0.8
	Totals:	9	36	2643	269.2
		PORT DORY			
	(red)				
12 Aug.	a	10	9	144	9.2
20 Aug.	b	10	0	141	14.0
21 Aug.	c	10 & 11	1	121	9.8
22 Aug.	d	11	2	161	13.0
24 Aug.	e	11	1	47	1.8
25 Aug.	f	11	1	41	2.8
	Totals:	2	14	655	50.6
Grand Totals:		11	50	3298	319.8

Area surveyed in square statute miles: 16.6

SHEET PA--1253

TIDES

TABLE SHOWING GAGE USED

DATE	TIME FROM	TIME TO	POSITION & DAY LETTER	TIDE GAGE	FMS/FT	VESSEL
7 Aug.	1305	1330	1a-9a	NAUKATI	FMS	LAUNCH 88
8 "	0814	1655	1b-421b	NAUKATI	"	"
9 "	0932	1652	1c-349c	NAUKATI	"	"
10 "	0828	1506	1d-296d	"	"	"
13 "	0824	0855	1e-30e	"	"	"
13 "	0855	1026	31e-59e	Staney	"	"
13 "	1026	1042	60e-75e	NAUKATI	"	"
13 "	1042	1214	76e-149	Staney	"	"
13 "	1315	1321	150-156e	NAUKATI	"	"
13 "	1321	1633	157-342e	Staney	"	"
13 "	1634	1649	343e-356 e	NAUKATI	"	"
14 "	0816	0833	1f-10f	NAUKATI	"	"
14 "	0833	1104	10f-160f	Staney	"	"
14 "	1104	1157	160-201f	NAUKATI	"	"
18 "	1347	1655	1g-173g	Staney	"	"
19 "	0815	1650	1h-436h	Staney	"	"
23 "	0816	0842	1j-24j	Staney	"	"
23 "	0844	1333	25j-159j	NAUKATI	"	"
23 "	1346	1649	160j-262 j	Staney	"	"
23 "	1651		263j	Naukati	"	"
28 "	0907	1217	1-118k	Staney*	"	"
7 Sept.	0840	0910	1-21 ℓ	Staney*	"	"
12 Aug.	0827	1648	1-144a	Naukati	Ft.	Port Dory
20 Aug.	0943	1648	1-141b	"	"	"
21 "	0829	1004	1-48c	"	"	"
21 "	1023	1459	49-121c	Staney	"	"
22 "	0811	1554	1d-161d	"	"	"
24 "	0820	1308	1e-47e	Staney*	"	"
25 "	1514	1631	1f-41f	"	"	"

*Naukati out

ABSTRACT OF BAR CHECKS, 1953 (Fms.)

LAUNCH 88. FATHOMETER NO. 51

SHEET PA—1153

14 Bar Checks — Ave. M = 1.64 fms.

H-8037

SHEET PA—1253

24 Bar Checks — Ave. M = 1.667

SHEET PA—1353

16 Bar Checks — Ave. M = 1.70

SUMMARY OF BAR CHECKS, ALL SHEETS

SHEET	AVE.	CORRECTION
1153	M = 1.64	+0.36 fms
1253 H-8037	M = 1.667	+0.333 "
1353	M = 1.70	+0.30 "

Combined M = 1.672. Correction +0.328 fms

For all work on fathom scale; Index Error = +0.3 fm.

ABSTRACT OF BAR CHECKS (IN FEET 1953)

SHEET PA-1153

8 Checks at 6 feet — Ave. corr. = 0.3 ft.
7 Checks at 12 feet — Ave. corr. = 0.5 ft.

Ave. corr. = 0.42 ft.

SHEET PA-1253 H-8037

12 Checks at 6 feet — Ave. corr. = 0.17 ft.
11 Checks at 12 ft. — Ave. corr. = 0.44 ft.

Ave. corr. = 0.31 ft.

SHEET PA-1353

19 Checks at 6 feet — Ave. corr. = +0.20 ft.
21 Checks at 12 feet — Ave. corr. = +0.27 ft.

Ave. corr. = +0.23 ft.

FOR SEASON

Ave. for 6 ft. = +0.21 ft.
Ave. for 12 ft. = +0.37 ft.
AVE. = +0.29 ft.

Fors all work on foot scale;

Index Error = +0.3 ft.

TABLES OF FAULTY RADIUS CORRECTIONS

FATHOMETER 51 LAUNCH 88

1. This table for use on a-day - Sheet PA-1353
$R/R_1 = 1.011$ 11.1
A = 0

Depth A Scale	Corrections (Fms.)
0 - 2.5 fms.	0
2.6 - 7.8	+0.1
7.9 - 15.5	+0.2
15.6 - 25.5	+0.3
25.6 - 35.5	+0.4
35.6 - 42.2	+0.5
42.3 - 47.9	+0.6
48.0 - 55.0	+0.7

2. This table for use on a-day
b-day
1-214c-day, PA-1253

Stylus Arm Length = between 11.0 + 11.1
A = 0

Depth A scale	Depth B scale	Depth C scale	Correction (Fms.)
0-2.5 fms.	35.0 - 37.5	70.0 - 72.5	0
2.6-7.5	37.6 - 42.5	72.6 - 77.5	+0.1
7.6-13.9	42.6 - 48.9	77.6 - 83.9	+0.2
14.0-19.5	50.0 - 54.5	84.0 - 89.5	+0.3
19.6-30.0	54.6 - 65.0	89.6 - 100.0	+0.4
30.1-38.5	65.1 - 73.5	100.1- 108.5	+0.5
38.6-45.0	73.6 - 80.0	108.6- 115.0	+0.6
45.1-50.5	80.1 - 85.5	115.1- 120.5	+0.7
50.6-55.0	85.6 - 90.0	120.6- 125.0	+0.8

3. This table for use on d-day PA-1153
$R/R_1 = 1.020$
A=+0.5

Depth A-scale	Depth B-scale	Correction (Fms)
0 - 1.0 fm.	35.0 - 36.0	0
1.1 - 2.8	- 38.8	+0.1
- 4.5	- 39.5	+0.2
- 7.0	- 42.0	+0.3
- 10.0	- 45.0	+0.4
- 12.2	- 47.2	+0.5
- 15.0	- 50.0	+0.6
- 18.9	- 53.9	+0.7
- 23.0	- 58.0	+0.8
- 27.0	- 62.0	+0.9
- 32.5	- 67.5	+1.0
- 38.5	- 73.5	+1.1
- 44.5	- 79.5	+1.2
- 50.0	- 85.0	+1.3
- 55.0	- 90.0	+1.4

TABLES OF FAULTY RADIUS CORRECTIONS (Contin.)

4. This table for use on a-day
   Arm Length = 11.0 cm.
   $R/R_1 = 1.020$
   A = 0
   b-day
   c-day
   e-day - PA-1153

215 - 360 c-day
d-day
e-day
f-day
g-day
h-day
j-day
k-day
l-day - PA-1253

b-day
c-day
d-day
e-day
f-day
g-day
h-day - PA-1353

DEPTH			CORRECTION
A-scale	B-scale	C-scale	
0 - 1.5 fms.	35.0 - 36.5	70.0 - 71.5	0
1.6 - 4.5 fms.	- 39.5	- 74.5	+0.1
- 7.5	- 42.5	- 77.5	+0.2
- 12.0	- 47.0	- 82.0	+0.3
- 15.5	- 50.5	- 85.5	+0.4
- 20.0	- 55.0	- 90.0	+0.5
- 25.5	- 60.5		+0.6
- 29.5	- 64.5		+0.7
- 35.0	- 70.0		+0.8
- 39.5	- 74.5		+0.9
- 43.5	- 78.5		+1.0
- 47.0	- 82.0		+1.1
- 51.0	- 86.0		+1.2
- 55.0	- 90.0		+1.3

ABSTRACT OF

PHASE COMPARISONS

PORT DORY

FATHOMETER 74

SHEET	DATE	DAY	VOL.	CORRECTION	
				A-B	B-C
1353	27 July	—	6	+0.39 ft.	
1153	6 Sept.	—	7	+0.39 ft.	-1.0 ft.
		Average		+0.39 ft.	-1.0 ft.

B scale correction = +0.39 ft.

C scale = +0.39 -1.0

= -0.61 ft.

For all foot work this season:

B scale correction = +0.4 ft.

C scale correction = -0.6 ft.

ABSTRACT OF

PHASE COMPARISONS

LAUNCH 68

FATHOMETER 51

SHEET	DATE	DAY	VOL.	CORRECTION A-B	CORRECTION B-C
H-8037 1253	7 Sept.	1	9	0	-0.18
1153	3 "	6	5	-0.16	

Ave. A-B = 0.08

A-C = -0.08 -0.18

= -0.26

Note: Since these phase comparisons were taken at a time when the radius of the stylus arm was incorrect, these comparisons must be corrected for that fault.

		A scale	B scale
On 7 Sept.: Radius correction (R)	for 44 fms =	+1.1 fm.	+0.3
On 3 Sept. R	for 47 fms =	+1.1	+0.3
		B scale	C scale
B scale correction R	for 73 fms	+0.9	+0.1

= A-scale - B-scale + $R_A - R_B$

= -0.08 + 1.1 - 0.3

B-scale correction = -0.08 +0.8

= +0.72 fms

C-scale correction = B-scale correction + B-scale - C-scale + $R_B - R_C$

= +0.72 + -0.18 + 0.9 - 0.1

= +1.34

For all fathom work this season: (with the exception of h-day sheet 1253; see Processing Office notes)

B scale correction = +0.7 fms

C scale correction = +1.3 fms

H-8037 LIST OF SIGNALS

Name	Source
ALDER	Alder, 1952
ADO	PA-C-53
ART	PA-C-53
ASH	Awash, 1952
AGO	PA-C-53
AMY	PA-B-53
ARK	PA-B-53
AFT	PA-B-53
BUCK	Buck, 1953
BOY	PA-C-53
BUG	PA-C-53
BOB	PA-C-53
BIL	PA-B-53
BEN	PA-B-53
BEG	PA-B-53
BIF	PA-B-53
BAN	PA-B-53
BAB	PA-B-53
CAL	Calf, 1952
CLIP	Clip, 1952
CED	Cedar, 1952
COP	PA-C-53
CRY	PA-C-53
CAT	PA-B-53
CAP	PA-B-53
CUP	PA-B-53
COY	PA-B-53
CAN	PA-B-53
DEER	Deer, 1952
DEL	Delta, 1952
DOG	PA-C-53
DIP	PA-C-53
DAD	PA-C-53
DIM	PA-B-53
DIX	PA-B-53
DAZ	PA-B-53
DUN	PA-B-53
DER	Cinder
ELF	PA-C-53
EVA	PA-C-53
ENO	PA-C-53
EAR	Bear, 1952
EMU	PA-B-53
EEK	Creek, 1952
ERG	PA-B-53
ELK	PA-B-53
ELI	Boat Sheet (spotted fm photo)
FIX	PA-C-53
FIG	PA-B-53
FIZ	PA-B-53
FAT	PA-B-53
FIT	PA-B-53
GYP	PA-C-53
GAY	PA-C-53
GUM	PA-C-53
GOB	Boat Sheet (spotted from photo)
GOO	PA-B-53
GOT	PA-B-53
GUN	PA-B-53
GAG	PA-B-53
HAL	PA-C-53
HOT	PA-C-53
HAY	PA-C-53
HIP	Boat Sheet (spotted from photo)
HOY	Vol. #1
HEL	PA-B-53
HOP	PA-B-53
HIC	PA-B-53
HEM	PA-B-53
IRA	PA-C-53
IDA	PA-C-53
INK	T-11102
IRK	Vol. #1
IMP	PA-B-53
ITE	White, 1952
JAI	PA-D-53
JIG	Jiggs, 1952
JOKE	Joke, 1952
JAM	James, 1952
JIM	PA-C-53
JOE	PA-C-53
JAP	T-11102
JAR	PA-B-53
JUS	PA-B-53
KATI	Naukati, 1952
KUM	PA-C-53
KED	PA-D-53
KRA	Krause, 1952
KIN	PA-C-53
KIT	PA-C-53
KAY	T-11102
KIS	PA-B-53
KET	PA-B-53

List of Signals - Cont.

Name	Source
KUJ	PA-B-53
LOCK	Hemlock, 1952
LED	Ledge, 1952
LEI	PA-D-53
LYL	Lyle, 1952
LUG	PA-C-53
LAP	PA-C-53
LIZ	T-11102
LES	Lester, 1952
LIP	PA-B-53
LAB	PA-B-53
LON	PA-B-53
MOO	Moon, 1952
MYO	PA-D-53
MAR	PA-D-53
MOST	Most, 1952
MAX	PA-C-53
MUD	PA-C-53
MAN	T-11102
MIG	PA-B-53
MAD	PA-B-53
MOP	PA-B-53
MIA	PA-D-53
MIX	PA-D-53
NOD	PA-C-53
NEW	PA-C-53
NUG	PA-B-53
NEO	PA-B-53
NAN	PA-B-53
NIB	PA-B-53
OHO	PA-D-53
ORA	PA-C-53
OUT	Trout, 1952
OWN	Brown, 1952
OIK	PA-B-53
CAT	PA-B-53
OWL	PA-B-53
OMA	Thomas, 1952
PAL	PA-C-53
PRY	PA-C-53
PUG	PA-C-53
PUR	PA-C-53
POL	Pole, 1952
POX	PA-B-53
PAR	PA-B-53
POO	Spook, 1952 (off sheet)
QUO	PA-C-53
QUI	PA-B-53
REEF	Reef, 1952
ROB	PA-D-53
RAY	PD-C-53
REX	PD-C-53
RAN	PA-B-53
ROD	PA-B-53
RAP	PA-B-53
RUC	Bruce, 1952
SHELF	Shelf, 1952
SNO	PA-D-53
SAM	PA-C-53
SIN	PA-C-53
SIC	PA-B-53
SAD	PA-B-53
SUM	PA-B-53
SEZ	Boat Sheet (spotted from photo)
TAD	PA-D-53
TOE	PA-C-53
TOY	PA-C-53
TAR	Star, 1952
TIP	PA-B-53
TAX	PA-B-53
TUT	PA-B-53
TIC	Boat Sheet (spotted from photo)
UGH	PA-D-53
UNA	PA-C-53
USE	PA-C-53
UNC	Lunch, 1952
UGO	PA-B-53
UFA	PA-B-53
UPI	PA-B-53
URT	PA-A-53
VEX	PA-C-53
VAN	PA-C-53
VEE	PA-C-53
VAT	PA-B-53
VIM	Vol. #1
WHY	PA-D-53
WAR	PA-C-53
WHO	PA-C-53
WIN	PA-B-53
WAT	PA-B-53
WAX	PA-B-53
XES	PA-C-53
XIT	PA-B-53

List of Signals - Cont.

XRE	PA-B-53
YAM	PA-B-53
YET	PA-C-53
YOU	PA-C-53
YES	PA-C-53
YAW	PA-B-53
YAK	PA-B-53
ZIM	PA-C-53
ZED	PA-C-53
ZOO	PA-B-53
ZUP	PA-B-53
ZIG	PA-B-53

Geographic names penciled on the smooth sheet are listed below. The source of all names other than previously charted names is the Geographic Names Report - Tuxekan Passage 1953.

PRINCE OF WALES ISLAND
TUXEKAN ISLAND
TUXEKAN PASSAGE
LITTLE NAUKATI BAY
NAUKATI BAY
TAHKA POINT
KLINAU ISLAND
KAISHI POINT
KUSSU ISLANDS
KAIKN COVE
KAIGAO POINT
YATUK CREEK
TUXIGAI CREEK
GUTCHI CREEK
HAUTI ISLAND
SURKU COVE
KUSSAN POINT
STANEY ISLAND
STANEY CREEK
KLADEIN FLATS
CHUSINI COVE
KLEITI ISLANDS
NUNDEI COVE
AHTUN POINT
SUHTI ISLAND
YAHKU COVE
KUGUN POINT
NICHIN COVE

E. Smooth Sheet

The hand made projection was drawn on Whatman paper in the Seattle Processing Office.

K. Crosslines

Normal procedures were employed in solving the crossline discrepancy referenced by the field party at Latitude 55° 49'.55, Longitude 133° 11'.40. The discrepancy at Latitude 55° 48'.15, Longitude 133° 12'.65 was believed due to faulty phase corrections applied. A careful check of the length and eccentricity of the stylus arm and of the fathometer speed was made, corrections thus applied were checked and corroborated. However, it was noted that changes from A to B scales produced differences of 2 and 3 fathoms (deeper on B scale). Noting that the plus 0.7 fms B scale corrections, fathometer No. 51, listed in report would not apply to this day without at least 2 fathoms discrepancy, the following A-B scale comparisons were taken from the fathogram for "A" day, August 19, 1953 correction.

A Scale	B Scale	R/R1 for A	R/R1 for B	A-B+RA-RB
35.0 fms	37.3	+0.8	+0.0	-1.5 fms
55.0	58.0	+1.3	+0.6	-2.3
34.5	37.0	+0.8	+0.0	-1.7
53.5	56.5	+1.3	+0.6	-2.3
51.5	54.5	+1.2	+0.5	-2.3
42.0	45.0	+1.0	+0.3	-2.3
35.0	37.0	+0.8	+0.1	-1.3
36.0	38.0	+0.8	+0.1	-1.3
				-1.9 fms (mean)

This correction was applied to all B-scale depths, this day. The soundings were erased and re-penciled. In addition to correcting the crossline discrepancy and producing a more reasonable depth curve pattern, the junction with PA-1153 is now improved (see final paragraph, Processing Office Notes - Descriptive Report for H-8036 PA-1153).

L. Comparison with Joining Surveys

The junction on the north edge of the sheet with H-8038 was investigated and found satisfactory. (1953)

The previously reported discrepancy in the junction with H-8036 (1953) to the south has been eliminated as described under K of the Processing Office notes.

N. Dangers and Shoals

All dangers and shoals are listed under N of field notes. The inked corrections therein represent smooth-sheet corrected values for rock heights.

U. Depth Curves

Because of the rugged on-shore features and the steep slopes many of the curves were eliminated. Around shoals and reefs the inshore curves were not drawn for the purpose of clarity.

TP-3 Review

Respectfully forwarded,

L. W. Eason, II
Cartographer, C&GS

GEOGRAPHIC NAMES

Survey No. H-8037

No. 1

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	
S E Alaska		)								1
Tuxekan Passage		) for title								2
Prince of Wales Island		)								3
Tuxekan Island										4
Suhti Island		(not Suht)								5
Ahtun Point										6
Nundei Cove										7
Yahku Cove										8
Kugun Point										9
Nichin Cove										10
Tahka Point										11
Little Naukati Bay										12
Kaishi Point										13
Kaikli Cove		(not Kaiku)								14
Kaigao Point										15
Kaigao Cove										16
Yatuk Creek										17
Tuxigai Creek										18
Gutchi Cove		(per Project names report, the wide area								19
Gutchi Creek		is the cove, and the stream, as placed on this sheet, drains into east end of cove)								20
Hauti Island										21
Kussu Islands										22
Klinau Island										23
Surku Cove										24
Kussan Point										25
Kladein Flats										26
										27

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GEOGRAPHIC NAMES

Survey No. H-8037

No. 2

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	
Staney Creek										1
Stangy Island		(tide station)								2
Chusini Cove										3
Kleiti I$_s$lands		applies to islets south of the first passage south of Staney I--south of station ARK								4
N$_a$ukati Bey		(tide station)								5
										6
				Names approved 4-18-56 L. Heck						7
										8
										9
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										26
										27

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Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .8037...

Records accompanying survey:

Boat sheets .2...; sounding vols. .11..; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls .5 Env;

special reports, etc. .1 Smooth sheet, & Descriptive Report.....

.....

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

Number of positions on sheet		.....	3298
Number of positions checked		.....	55
Number of positions revised		.....	0
Number of soundings revised (refers to depth only)		.....	40
Number of soundings erroneously spaced		.....	0
Number of signals erroneously plotted or transferred		.....	0
Topographic details	Time	.....	30
Junctions	Time	.....	16
Verification of soundings from graphic record	Time	.....	8

Verification by J.E. Gearhart .....Total time 309. Date 4.4.56

Reviewed by A.W. Beckund ..... Time .30. Date 4-17-56

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8037 FIELD NO. PA-1253

S. E. Alaska, Tuxekan Passage, Ahtun Point to Naukati Bay

Project No. CS-347

Surveyed - August-September, 1953 Scale 1:10,000

Soundings: Control:

808 Fathometer Sextant fixes on shore signals

Chief of Party - C. A. Schanck
Surveyed by - C. A. Schanck, F. J. Bryant and W. D. Barbee
Protracted by - L. W. Eason II
Soundings plotted by - L. W. Eason II
Verified and inked by - J. E. Gearhart
Reviewed by - I. M. Zeskind 4-17-56
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with reviewed air-photographic surveys T-11100, T-11101, T-11102 and T-11103 of 1953.

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

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The depth curves are adequately delineated.

The bottom is very irregular. Submarine features such as reefs, ledges, shoals and deeps contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-8036 (1953) on the south and with H-8038 (1953) on the northwest.

5. Comparison with Prior Surveys

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

6. Comparison with Chart 8171 (latest print date 1-9-56)

A. Hydrography

The charted soundings originate with the present survey prior to verification and review. A comparison between the charted information and the present survey reveals only minor differences of about 0.25 fms. in critical depths.

Attention is directed to the reefs charted in lat. 55° 48.57', long. 133°10.22', and lat. 55°50.05', long. 133° 09.82', as uncovering at MLLW. These charted reefs originate with dashed lines on T-11102 (1953) representing shoal indications from photographs and are not features which uncover at the sounding datum.

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

B. Aids to Navigation

There are no aids to navigation within the area of the present survey.

7. Condition of Survey

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

(b) The smooth plotting was accurately done.

(c) It was necessary for the verifier to make the entire shoreline heavier, because the smooth plotter originally drew the shoreline too fine.

(d) In drawing the penciled depth curves, the smooth plotter cut the surface of the smooth sheet paper. This necessitated the use of an erasing machine when corrections to depth curves had to be made during inking.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

The survey is considered basic and no additional field work is recommended.

Examined and Approved:

Wallace A. Bruder
Wallace A. Bruder
Acting Chief, Nautical Chart Branch

E. R. McCarthy
Chief, Chart Division

J. O. Bull
J. O. Bull
Chief, Hydrography Branch

Earl O. Heaton
Earl O. Heaton
Chief, Division of Coastal Surveys

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 21 July 1955

Division of Charts: R. H. CARSTENS

Plane of reference approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 8037

Locality Tuxekan Passage, Alaska

Chief of Party: C. A. Schanck in 1953
Plane of reference is mean lower low water, reading
4.1 ft. on tide staff at Naukati Bay
11.4 ft. below B. M. 1 (1953)
3.9 ft. on tide staff at Staney Island
12.0 ft. below B. M. 1 (1953)

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

Naukati Bay 10.1 feet

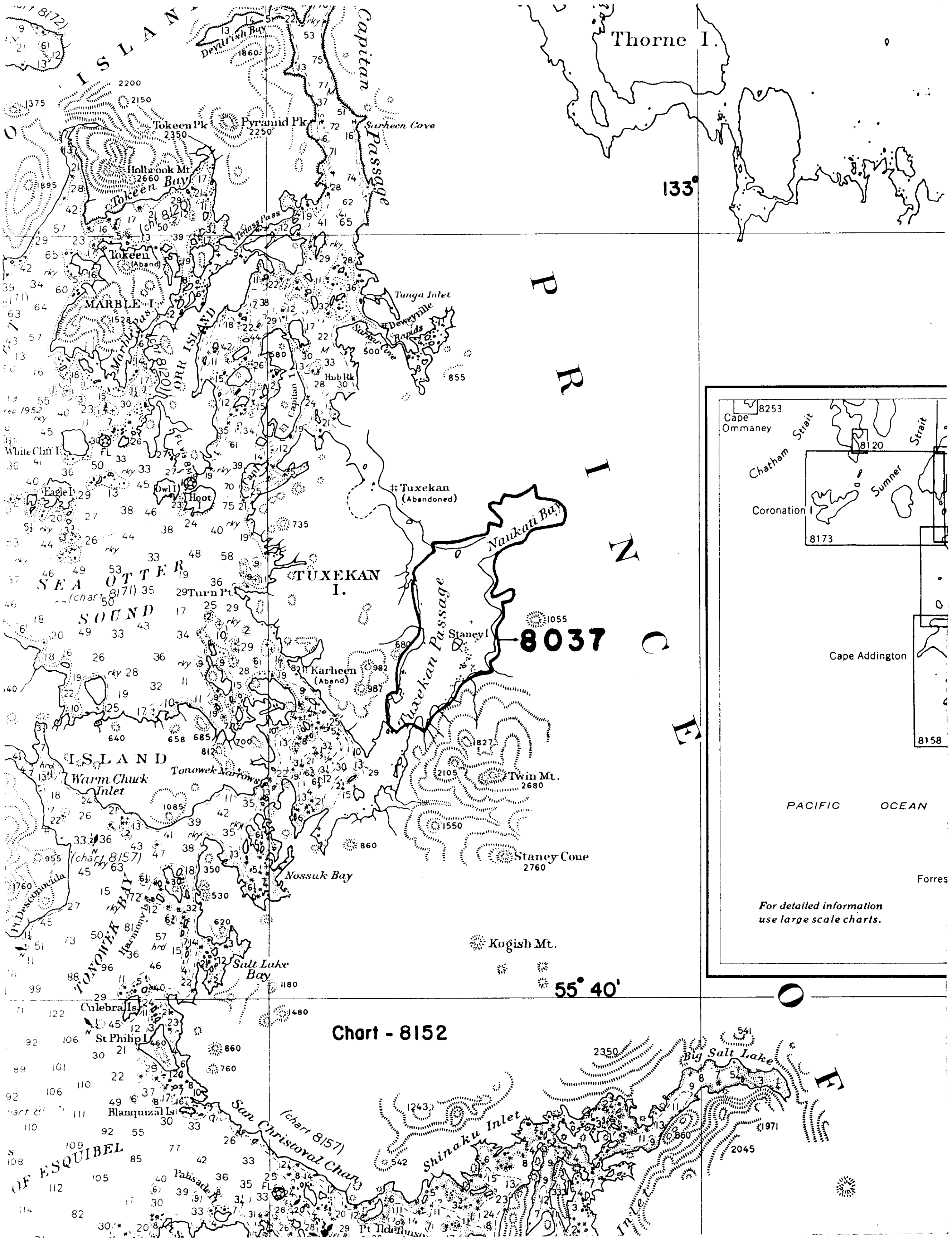
Staney Island = 10.0 feet

Condition of records satisfactory except as noted below:

E. C. McKay
Tides Branch

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 756675



Thorne I.
133°
P R I N C E O F
TUXEKAN I.
8037
Chart - 8152
55° 40'
Capitan Passage
Sarheen Cove
Devilfish Bay
Tokeen Pk 2350
Pyramid Pk 2250
Holbrook Mt 2660
Tokeen Bay
Tokeen (Aband)
MARBLE I.
ORR ISLAND
Tunga Inlet
Deweyville
Hub Rk
Tuxekan (Abandoned)
Naukati Bay
Staney I
Tuxekan Passage
Karheen (Aband)
SEA OTTER SOUND
Turn Pt
White Cliff I
Eagle I
Owl I
Hoot I
Twin Mt. 2680
Staney Cone 2760
Kogish Mt.
ISLAND
Warm Chuck Inlet
Tonowek Narrows
Nossuk Bay
Salt Lake Bay
TONOWEK BAY
Culebra Is
St Philip I
Blanquizal Is
San Christoval Chan
(chart 8157)
Shinaku Inlet
Big Salt Lake
OF ESQUIBEL
8253
Cape Ommaney
Chatham Strait
Sumner Strait
8120
Coronation I
8173
Cape Addington
8158
PACIFIC OCEAN
For detailed information use large scale charts.

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8037

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/9/55	8171	H.W. Burgoyne	completely applied Before ~~After~~ Verification and Review
8/31/55	8201	H W Burgoyne	Before ~~After~~ Verification and Review
8/24/55	8157	H W Burgoyne	Before Ver + Review. Before After Verification and Review
6-20-56	8152	J P Walbay	Before ~~After~~ Verification and Review Thru-Chs 8171 8815 7 Review - Nearshore
3-14-57	8157	R.K. DeLaunder	~~Before~~ After Verification and Review. Exam review consider completely applied.
5/22/58	8201	C.R. Wittmann	~~Before~~ After Verification and Review Examined and consider completely applied
4-9-59	Reconstr 8171	R.K. DeLaunder	~~Before~~ After Verification and Review
1-8-60	8171	R.K. DeLaunder	Part appd ~~Before~~ After Verification and Review thru reconstr. dwg. critical corrections only for title over print. Consider fully appd. pending publication of reconstr.
3/8/61	8201	J.H Eaton	~~Before~~ ~~After~~ Verification and Review thru Recon 8171
			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.