8149

Diag. Cht. No. 8201-3.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. LJ-1154 Office No. H-8149

LOCALITY

State Southeast Alaska

General locality Sumner Strait

Locality Port Protection to Strait I.

1954

CHIEF OF PARTY

C. Le Fever

LIBRARY & ARCHIVES

DATE July 29, 1958

USCOMM-DC 37022-P66

8149

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-8149

Field No. LJ-1154

State SOUTHEAST ALASKA

General locality SUMNER STRAIT

Locality ~~NORTH WEST COAST OF PRINCE OF WALES ISLAND~~ Port Protection to Strait Island

Scale 1:10,000 Date of survey 19 May - 4 August, 1954

Instructions dated 28 December 1953

Vessel LESTER JONES

Chief of party Curtis Le Fever

Surveyed by Curtis Le Fever, Charles A. Schoene & Howard A. Garcia

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

Fathograms scaled by Carl E. Strom and Homer J. De Serisy, Jr.

Fathograms checked by Carl E. Strom

Protracted by H. C. Parsons

Soundings penciled by H. C. Parsons

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 777032

TM
2

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHY SURVEY H-8149 (FIELD NO. LJ-1154)

NORTHWEST COAST PRINCE OF WALES ID., SOUTHEAST ALASKA

SCALE 1:10,000 MAY TO AUGUST 1954

SHIP LESTER JONES

CHARLES A. SCHOENE, CDR.,C&GS (In charge launch hydrography) CURTIS LE FEVER, COMDG. (In charge ship hydrography)

A. PROJECT:-

Authority for this project is contained in "Supplemental Instructions - Project 347" to Commanding Officer, LESTER JONES dated 28 December 1953. (and Supplemental Instructions issued to Commanding Officer, Ship PATTON on 3 June 1953).

B. SURVEY LIMITS AND DATES:-

This survey comprises hydrography in the vicinity of the northwest shore of Prince Of Wales Island from longitude 133° 34' to longitude 133° 44.5' and from latitude 56° 19.5 to latitude 56° 23.5 including the inshore hydrography in the vicinity of Point Baker, Port Protection and Strait Island.

Field work was begun with signal building on 19 May and the hydrography being finished on 4 August, 1954

This survey makes a junction with prior survey H-3405 (1912-13), 1:5000 and 1:20,000, and H-1755 (1886), 1:10,000. There are no contemporary surveys in the project limits. This survey junctions with H-8150 (1954) 1:10,000 on the South, and with H-8689 (1962-65) 1:12,500 on the West (H-8689 unverified)

C. VESSELS AND EQUIPMENT:-

Sounding on this sheet was done by the Ship LESTER JONES and launch 92 (a standard diesel powered motor launch operating from the ship). Launch 92 has a turning radius of about 20 meters, and the ship about 100 meters. The launch was used to survey all the inshore areas and offshore reefs, and the ship was employed for deep water offshore hydrography. Various skiffs attached to the ship were used in signal building and locating rocks.

Two 808 fathometers, Nos. 75 and 102S were used for all the echo sounding on this survey. Handlead and wire soundings were taken while obtaining bottom samples and on shoals.

Sounding machine No. H-144 was used by the ship for wire soundings.

D. TIDE AND CURRENT STATIONS:- off survey

Portable tide gages were maintained at Point Baker and Port Protection on this survey sheet. The Point Baker gage was used for the reduction of all soundings except for two days on the 14th and 15th of June when the Port Protection gage was used.

No time or range corrections were applied.

See tide note attached to this report.

No current stations were observed on this project.

E. SMOOTH SHEET:-

The smooth sheet projection was made in the Washington Office by ruling machine. Shoreline and signals are to be transferred by the processing office. This work is not yet begun as of the date of this report.
Shoreline on smooth sheet inked from T-9621 and T-10,709; both advance manuscripts (also, note Sec. "G", par. 3, below)

F. CONTROL STATIONS:-

Triangulation control was obtained from surveys by L.O.Colbert in 1915, and by this party in 1954. Computed positions were determined for all recoverable topographic stations from Theodolite observations.

The majority of non-recoverable topographic stations are photo-hydro stations located by photogrammetric methods on manuscript T-9621 from 1954 field data.

Other non-recoverable topographic stations are located by computed geographic positions, theodolite cuts, and sextant cuts. All theodolite directions observed on control signals are recorded in the lists of directions; all sextant cuts are indexed in Vol. 1, H-8149, and Vol. 25, H-8150.

Topographic stations with computed positions, and covered by manuscript T-9621 are noted in the "List of Stations on H-8149", sounding volume 1 as "T-9621 (G.P.)". Topographic stations with computed positions and not covered by manuscript T-9621 are noted as "H-8149".

Hydrographic stations were located by conventional methods. Data is indexed in sounding volume No. 1.

Three aids to navigation were located for control on this survey sheet. Two were located as triangulation intersection stations, and the third by photogrammetric means. Corrections for Form 567 and triangulation records are as below.

NAME OF AID	TRIANGULATION NAME	HYDRO NAME
Port Protection Light	Protection Light 1954	NAV
Port Protection Daybeacon	Protection Beacon 1954	CON
Point Baker Anchorage Light*		LIT

*The geographic position for longitude was incorrectly entered on Form 567. Correction: Long. 133°-37'-46.0 meters. Light moved. See N.M. 16/64 # 1988
West Rock Light has been installed subsequent to this survey.

G. SHORELINE AND TOPOGRAPHY:-

Shoreline and topographic details are from advanced photogrammetric compilations of manuscript T-9621 from 1954 field inspection data.

Shoreline for Strait Island was furnished by the Washington Office by photostat on scale 1:10,000 and from a section of survey No. T-3307 (1912), scale 1:20,000. For boat sheet shoreline see Field Inspection report, see P.O. notes # "G"

Isolated revisions to the shoreline based on the hydrographers interpretations were made during hydrography, while running close inshore. The changes were sketched in in black india ink distinguishable from the rest of the shoreline which was delineated in yellow ink.

Rock symbols transferred to the boat sheet from bromoil prints were investigated and positions verified.

H. SOUNDINGS:-

All soundings on sounding lines were measured with echo sounding equipment listed in side heading C. VESSELS AND EQUIPMENT. See the report on fathometer corrections attached at the end of the report.

Hand lead and wire soundings were obtained at detached positions on shoals and at the time bottom samples were taken.

A fifth phase was installed on 808 depth recorder #75, which recorded depths from 155 to 196 fathoms. This phase was used in those depths on this sheet.

I. CONTROL OF HYDROGRAPHY:-

All hydrography was controlled by visual sextant fixes taken on shore stations.

J. ADEQUACY OF SURVEY:-

The survey is considered complete and adequate for charting and complies with project instructions and the hydrographic manual.

The small area on the northeastern corner of the sheet which was not surveyed has depths too great to be reached by the equipment aboard. This area however can be covered at a later date when work is done to the eastward of the project area.

On the western limit of the sheet the hydrography was carried slightly beyond the project area in an effort to develop the edges of the shoals which unexpectedly appeared there. [H-8689 (1962-65) unverified is westward]
The junction with H-8150 will be compared when that survey is plotted.
Junction with H-8150 (1954) completed

K. CROSSLINES:-

Crosslines were run to conform with general instructions. The crossings in all cases were good, there being no difference greater than two or three fathoms.

L. COMPARISON WITH PRIOR SURVEYS:-

There are no previous recent surveys within the project area. All critical soundings will be shown on existing charts. A detailed comparison is made with the charts.

M. COMPARISON WITH CHARTS:- ? Reviewer compared chart # 8174, - 8th Ed. 10-18-65

On chart 8174 print date 46/11/25. The shoal of 4-3/4 fathoms in latitude 56° 21' 20" longitude 133° 38' 00" is verified by a least depth sounding of 2 7 Rk fathoms. pos. 29-30 "t", vol. 12, p. 51

The sounding of 6-3/4 fathoms in latitude 56° 21' 37" longitude 133° 38' 16" is verified by a sounding of 6 fathoms. ✓ pos. 43 "t", vol. 12, p. 53

The sounding of 2-1/4 fathoms on Helm Rock in latitude 56° 21' 59" longitude 133° 38' 22" was not verified in that position. It is recommended that it be deleted. A sounding of 2 1/2 fathoms was found 124 meters southwest of that position in latitude 56° 21' 57" longitude 133° 38' 30". A sounding of 3 fathoms was found on the same shoal in latitude 56° 21' 58" longitude 133° 38' 28" very near the charted sounding of 3-3/4 fathoms. ✓ pos. 52 "v", vol. 13, p. 39

The sounding of 5-1/4 fathoms in latitude 56° 21' 43", longitude 133° 37' 34" is verified by several soundings of 5 fathoms in the immediate area. ✓ 63-64 "d"

The charted sounding of 3½ fathoms in latitude 56° 21' 52" longitude 133° 37' 03" is verified by a sounding of 3 2 fathoms. ✓ 157 "n", vol. 10, p. 52

The charted sounding of 5-3/4 fathoms directly west and close to the last mentioned 3½ fathoms could not be verified and should be deleted. A shoal with least depth of 3 5 fathoms was found directly south of the charted 5-3/4 fathoms in latitude 56° 21' 50" longitude 133° 37' 10". ✓ pos. 10 "s", vol. 12, p. 27

The soundings of 2½ and 2¼ fathoms directly south of ~~Twin Island~~ are verified by soundings of 2 and 3 fathoms. The sounded area south of the island is incorrect however and should be deleted. ✓ East Rock
Sand symbol removed prior to 8th Ed. printing of Chart No. 8174

For the large foul area in latitude 56° 23' longitude 133° 42' extending north from the bell buoy to Strait Island is locally called Mariposa Reef, use this survey for positions of shoals and rocks.

The shoal area in latitude 56° 20', longitude 133° 39' 20" with charted soundings of 3-3/4 and 4-3/4 fathoms, is verified by soundings of ~~3 and~~ 3-2/3 fathoms. 3¾ Fm. shoalest; pos. #15 "W"; vol. 13, p. 62

The charted sounding of 5 fathoms in latitude 56° 19' 33", longitude 133° 36' 21", in the small cove locally known as Wooden Wheel Cove could not be verified and should be deleted from the chart. This sounding originated on survey H-1755. 8th Ed. printing of chart #8174 shows 20 fm. at this spot

The charted sounding of 20 fathoms located latitude 56° 20' 03" longitude 133° 37' 21" could not be verified in that position and should be deleted. However an extensive shoal with a least depth of 11 fathoms is located near to the southwest. There is a 20fm sounding about 75m. S.E. of this charted sounding.

The soundings of 16 fathoms in latitude 56° 22' 25" longitude 133° 38' 04" and 17 fathoms in latitude 56° 22' 21" longitude 133° 38' 16" could not be verified and should be deleted from the chart.

The charted sounding of 17 fathoms in latitude 56° 23' 03" longitude 133° 40' 48" could not be verified and should be deleted from the chart.

The charted sounding of 13 fathoms in latitude 56° 22' 35" and longitude 133° 42' 12" could not be verified and should be deleted from the chart.

The charted sounding of 36 fathoms in latitude 56° 22' 11" and longitude 133° 42' 32" was overlooked and not verified but ~~It probably~~ should be retained.

On chart 8201 print date 50/9/18 covering the western part of this sheet there is very little resemblance in the soundings as charted and those on this survey. The differences are so great that no comparisons can be made. There are large shoal areas where there are depths less than 20 fathoms and the charted depths are near 100 fathoms.

Vertical casts were taken on several of the shoals which verify the fathometer soundings.

It is recommended for this area that the soundings on this survey be accepted and those charted be deleted.

No satisfactory junction is possible on the western limit of this sheet between charted depths and those found. It doesn't appear, due to the great differences between charted soundings and those found on this survey along the western limit of the sheet, that an adjustment is possible.

My recommendation would be to extend hydrography westward across Sumner Strait. See H-8689 (1962-65)

N. DANGERS AND SHOALS:-

No additional dangers were found on this sheet. The large shoal areas on the western portion of the sheet which had not been previously charted are of sufficient depths that they cannot be considered dangers to surface navigation. In all cases this survey should supersede previous surveys.

All charted danger shoals and bare rocks were found as charted except for those mentioned in L, M and N.

Coast Pilot has no additional information on this — S. Rose 8-22-67

O. COAST PILOT INFORMATION:-

A ship may enter Port Protection on either side of the daybeacon, being careful to pass the shoal at a safe distance. The day beacon marks a detached rock ledge which is well outlined by heavy kelp beds.

Port Protection, a trading post and fish buying station known as Buckshot's ("Buckskin" on S.S.) Trading Post is a permanent settlement with a general store located in Wooden Wheel Cove. It supplies food, gasoline, oil, fresh water and some repair parts for boat machinery. Publications and charts of the U.S.Coast and Geodetic Survey may be secured here. A small boat float, 370 feet long has depths of 5 to 8 fathoms of water alongside.

Craft of a size not too large to enter Wooden Wheel Cove when approaching Port Protection from the east favor the southern shore of Sumner Strait passing south of the shoal which lies 0.3 miles north of the entrance to Point Baker. A safe course of 248° passes 0.15 mile off the steep tangent on the eastern side of the Point Baker entrance. This course will pass less than 0.1 mile of the rocky shore to the west of the entrance but should be held until the Port Protection Daybeacon comes in view past the tangent of the entrance to Port Protection. Change course to south and hold until the beacon bares 146°. Change to course 135° and pass halfway between the beacon and the shore on the port hand. Continue on this course passing mid-channel with the entrance light on starboard beam. When past the light change course to the right to a a mid-channel course into the cove and proceed to the float which lies at its head.

Point Baker is a permanent settlement with post office; on the inner bay east of Point Baker, and south of Point Baker Light, is a trading post. There is a fish buying station and food, fresh water, gasoline, oil and fishermen equipment are available. The mail boat calls weekly with supplies and mail. There is a float 250 feet long having depths of 3 to ~~9~~ 6 fathoms alongside. Daily radio schedule is maintained with Alaska Communication System. Planes call frequently during the summer with mail and passengers.

The shores of the bay are steep-to and lined with thick kelp. The inner bay and passages there to are thoroughly surveyed. The mid-channel passage into the bay and to the float at the post office is safe for small craft, the controlling depth being ~~4~~ fathoms. ~~It appears that 2.5 fms may be the controlling depth.~~ pos. 141-142 "k"

The inner bay is restricted and has several detached submerged dangers, because of these it is not recommended as an anchorage. This port is used extensively during the fishing season.

Point Baker Light shown from a small white house marks the eastern side of the entrance into the inner harbor and post office. The light is obscured from 181° to 331°.

Small vessels enter Point Baker from the east by approaching on a course of 248°, passing 0.15 miles off the steep tangent on the eastern side of the entrance. When Point Baker light appears past the eastern tangent of the entrance, change to a south course and enter with caution. When approaching near the light favor that side of the entrance. Pass 160 feet off the light. When about 120 yards past the light change course to the right and approach the post office float. ~~There is a 2.5 fm sounding about 50 meters SW of the light.~~ pos. 141-142 "k"

There is a narrow restricted passage for very small craft running from the head of Point Baker harbor into Port Protection. This passage is used considerably by small craft drawing up to 3 feet, when the tide is half or above. See notes pos. 180 "k", 26 "u"

The small bay 0.6 miles southeast of ~~Twin Island~~ East Rock was known on the old surveys as Point Baker Anchorage. A tide gage was located there in 1912. This bay is known locally now as Merrifield Bay.

The LESTER JONES anchored twice here in daylight hours during the season. Enter mid-channel on a course of 160° to desired depth. The bottom is sand and mud.

The ship entered Wooden Wheel Cove in Port Protection each week throughout the season. We laid at the float of the fish buying station, there during weekends. This is particularly good shelter in all weather.

Strong currents were encountered over a large part of this sheet. The general direction of flood is from the south and of ebb from northeast. There are radical differences in velocity and directions on different parts of the sheet, at near the same time. A survey with Roberts current meters in conjunction with next season's combined operations is suggested.

P. AIDS TO NAVIGATION:-

A report of Non-floating Aids to Navigation, Form 567, was prepared on 2 November 1954 for the project.

Floating Aids.

Strait Island Lighted Bell Buoy #5
Lat. 56° 22' 25.4" Long. 133° 41' 05"
Depth of water 21 fathoms
Postion No. 134f. Date 16 June 1954

Helm Rock Lighted Whistle Buoy #6
Lat. 56° 22' 04" Long. 133° 38' 30"
Depth of water 24 fathoms
Postion No. 24a. Date 9 June 1954.
Changed to "BELL" subsequent to this survey

Q. LANDMARKS FOR CHARTS:-

See report of Non-Floating Aids or Landmarks for Charts prepared and forwarded 2 November 1954.

R. GEOGRAPHIC NAMES:-

See special report on geographic names for the project.

S. SILTED AREAS:-

There are no silted area on this sheet.

Z. APPLICABLE DATA:-

See following tabulation.

Respectfully submitted,

Curtis Le Fever

Curtis Le Fever,
Commander, C&GS

Approved and forwarded:

Curtis Le Fever

Curtis Le Fever,
Commander, C&GS
Comdg., Ship LESTER JONES

STATISTICS FOR
HYDROGRAPHIC SURVEY H-8149(1954)
SHIP LESTER JONES
PROJECT CS-347

DATE	VOLS.	DAY LETTER	NO. H.L. OR WIRE SOUNDINGS	NO. POSITIONS	STAT. MILES SOUNDING LINE
			LAUNCH NO. 92		
6/9/54	1	a	- - -	153	23.2
6/10/54	1 & 2	b	- - -	216	28.3
6/11/54	2 & 3	c	- - -	193	28.8
6/12/54	3 & 4	d	- - -	94	14.0
6/14/54	4 & 5	e	- - -	190	22.7
6/16/54	5	f	- - -	134	19.3
6/17/54	5 & 6	g	- - -	226	24.2
6/18/54	6 & 7	h	3	199	24.5
6/19/54	7	j	- - -	98	13.6
6/21/54	7 & 8	k	- - -	186	16.8
6/23/54	8 & 9	l	4	160	18.4
6/24/54	9 & 10	m	- - -	217	19.5
6/25/54	10	n	11	168	14.2
6/30/54	10 & 11	p	1	169	17.0
7/1/54	11	q	- - -	73	3.5
7/2/54	11 & 12	r	11	158	10.7
7/3/54	12	s	4	77	5.6
7/6/54	12 & 13	t	3	164	11.4
7/10/54	13	u	7	59	3.1
7/12/54	13	v	22	133	8.3
7/13/54	13 & 14	w	9	165	14.6
7/14/54	14 & 15	x	6	205	21.6
7/15/54	15	y	- - -	170	21.5
7/16/54	15 & 16	z	6	146	14.5
7/19/54	16	ab	12	190	11.3
7/20/54	16 & 17	ac	18	114	5.3
TOTAL FOR LAUNCH 92			117	4057	415.9
			SKIFF		
6/19/54	18	a	- - -	20	- - -
6/18/54	18	b	- - -	5	- - -
7/27/54	18	c	35	9	- - -
TOTAL FOR SKIFF			35	34	- - -

STATISTICS - H-8149

DATE	VOLS.	DAY LETTER	NO. H.L. OR WIRE SOUNDINGS	NO. POSITIONS	STAT. MILES SOUNDING LINE
			SHIP		
6/15/54	19 & 20	A	- -	274	63.3
6/22/54	20 & 21	B	- -	215	39.7
6/29/54	21 & 22	C	- -	179	43.0
7/7/54	22	D	- -	190	41.9
7/8/54	23	E	- -	135	27.5
7/9/54	23 & 24	F	- -	224	50.5
7/17/54	24	G	- -	7	1.6
7/22/54	24	H	18	18	- - -
7/23/54	24 & 25	J	- -	100	17.7
7/24/54	25	K	- -	86	19.0
7/26/54	25 & 26	L	- -	90	18.6
7/28/54	26	M	- -	84	17.7
7/29/54	26	N	4	105	22.8
8/3/54	26 & 27	P	39	39	- - -
8/4/54	27	Q	28	28	- - -
	TOTAL FOR SHIP		89	1774	363.3
	TOTAL FOR SHEET		241	5865	779.2

TIDE NOTE

to accompany

Hydrographic Sheet H-8149 (LJ-1154)

Tide reducers for this sheet were obtained from a portable tide gage established by this party at Point Baker, 300 yards west of Point Baker post office at Lat. 56-21-15, Long. 133-37-11. ↖east

MLLW corresponds to a reading of 6.0 feet on the Point Baker tide staff.

On 14 June and 15 June 1954, tide reducers were obtained from a portable tide gage established by this party at Port Protection at Lat. 56-18.5, Long. 133-36.0, corrected to Point Baker in accordance with Bureau letter No. 36-25-982 lj, dated 3 November 1954.

MLLW corresponds to a reading of 5.2 feet on the Port Protection tide staff.

No corrections were made for distances from either gage except as noted above.

COMBINED PHASE AND BAR CHECK OR DRAFT CORRECTIONS

SHEET H-8149 (LJ-1154)

Fathometer Scale	A	B	C	D	E
Fathometer No. 75					
Phase correction - fms.	0.0	0.0	+0.3	+0.5	+3.7
Bar check or draft correction - fms.	+0.3	+0.3	+0.3	+0.3	+0.3
Sum	+0.3	+0.3	+0.6	+0.8	+4.0
Correction - Depth 0-11 fms.	+0.3	- -	- -	- -	- -
Correction - Depth 11 plus fms.	+0.2	+0.2	+0.6	+0.8	+4.0
Fathometer No. 102-S					
Phase correction - fms.	0.0	-2.6	-5.2	-5.7	- -
Bar check or draft correction - fms.	+0.3	+0.3	+0.3	+0.3	
Sum	+0.3	-2.3	-4.9	-5.4	
Corr'n. Depth 0-11 fms.	+0.3	- -	- -	- -	
Corr'n. Depth 11 plus fms.	+0.2	-2.4	-5.0	-5.4	
Fathometer No. 107					
Phase correction - fms.	0.0	-1.1	-1.0	+1.2	- -
Bar check or draft correction - fms.	+0.3	+0.3	+0.3	+0.3	
Sum	+0.3	-0.8	-0.7	+1.5	
Corr'n. Depth 0-11 fms.	+0.3	- -	- -	- -	
Corr'n. Depth 11 plus fms.	+0.2	-0.8	-0.8	+1.4	

Note: The above corrections are entered in the sounding records as Phase-Draft corrections.

FATHOMETER CORRECTIONS
SHEETS H-8149, H-8150, H-8151, LJ-1154
LJ-1254, LJ-1354 (1954)

PHASE CORRECTIONS

DATE	A-B	B-C	A-C	C-D	A-D	D-E	A-E
				FATHOMETER No. 75			
6/19	0.0	+0.2		+0.1		+3.1	
7/17	-0.1	+0.4		+0.2		+2.9	
10/8	+0.1	+0.3		+0.4		+3.5	
Mean	0.0	+0.3	+0.3	+0.2	+0.5	+3.2	+3.7
Corrs.	0.0		+0.2		+0.4		+3.6
				FATHOMETER NO. 102-S			
7/6	-2.6	-2.5		+0.8R			
7/17	-2.6	-2.5		-0.5			
10/8	-2.5	-2.7		-1.4R			
Mean	-2.6	-2.6	-5.2	-0.5	-5.7		
				FATHOMETER NO. 107			
10/8	-1.1	+0.1	-1.0	+2.2	+1.2		

DRAFT CORRECTIONS

SHIP DATE	DRAFT FEET
6/15	7.8
6/22	7.8
6/29	8.1
7/7	8.0
7/8	8.0
7/9	8.1
7/17	8.0
7/22	7.9
7/23	7.9
7/24	7.9
7/26	7.8
7/28	8.0
7/29	8.0
8/3	8.0
8/4	8.0
10/4	8.0
10/5	8.0

DATE	DRAFT FEET
8/10	7.9
8/11	8.0
8/14	7.6
8/16	7.8
8/21	7.8
9/4	8.0
9/4	8.1
9/7	8.1
9/11	8.1
10/2	8.0
10/4	8.0
10/5	8.0
Mean	8.0 ft.
	1.33 fm.

DRAFT CORRECTIONS

DRAFT FMS.	INITIAL FMS.	DIFF.
1.33	1.0	+0.33

	CORRECTION
0-11	+0.3
11+	+0.2

SHEAVE CORRECTIONS

Sheave No. H-407

Depth	Correction
0-10	0.0
10-11	+0.1
11-30	+0.0
30-70	+0.2
70-110	+0.4
110+	+0.6

PROCESSING NOTES TO ACCOMPANY THE REPORT FOR H-8149
(LJ--1154)

F. CONTROL STATIONS

1. Photo locations for signals WOL, ZAG, BUC, and YES, in WOODEN WHEEL COVE gave a distortion to the hydrography at and close to the boat floats. The signals were replotted from the photo center to agree with the sextant angles at INGOT 1954, recorded on page 8, Vol. # 25 (H-8150.)

2. The hydro cuts to station HEX and the theodolite cut from BARRIE 2, 1915, gave a location which produced poor crossings. The photo location was used.

3. The photo location of signal DOT gave poor crossings. The signal was replotted from a combination of sextant cuts and a computed cut from BARRIE 2, 1915.

4. Signal GAM was not located on the manuscript. It was plotted from a group of check angles locating rocks in the general area.

5. Signals REV and SIS were not located on the manuscript. Hydrography using these signals was plotted by time and course and boat sheet locations.

6. Signal REEF 2, 1915 was used in the hydrography only two or three times. It was trimmed off the completed smooth sheet.

G. SHORELINE AND TOPOGRAPHY

The location and shape of the boat floats at both POINT BAKER Post Office and BUCKSKIN TRADING POST were only shown on the inserts, scale 2,500, of these areas. Shoreline was transferred from T-~~6921~~ 9621 and T-4330. Shoreline from T-4330 was left in pencil. Strait Island inked from T-10,709

N. DANGERS AND SHOALS

Numerous kelp notes could not be plotted because of the density of soundings and sounding lines over shoals and along the shoreline.

M. COMPARISON WITH CHARTS

C&GS Chart 8174 (Oct 31/55 - corrected to 23 June 1958)

1. The sounding of 34 fms in Lat. 56° 21' 39", Long. 133° 33' 47", falls out of the sounded area. See H-1749 (1886) ✓

2. The rock awash in Lat. 56° 21' 03", Long. 133° 35' 08", plots 20 meters NE. pos. 101 "l", vol. 9, p. 6 ✓

Items 2-12 are charted from the boat sheet and have been revised on the later chart editions

3. The rock awash at MLLW in Lat. 56° 21' 26", Long. 133° 36' 04", has a depth of 8 ft. and is part of the ledge area connected with the shore. pos. 55 "r", vol. 11, p. 69

4. The rock awash at MLLW in Lat. 56° 21' 35", Long. 133° 36' 46" has a depth of ~~6~~ 8 ft. pos. 186-187 "c" & pos. 49-51 "f", vol. 3, p. 57 & vol. 11, p. 69

5. The rock awash in Lat. 56° 21' 32", Long. 133° 37' 26", should be omitted. A blue day letter of (x) is at this point on the boat sheet. pos. 143-144 "x", vol. 14, p. 69

6. The rock awash in Lat. 56° 21' 11", Long. 133° 38' 08", should be plotted 50 meters East. Area of West Rock

7. Rock awash at MLLW in Lat. 56° 22' 41", Long. 133° 41' 43" has a least depth of 1 fms. 0 & Fm. pos. 114 "p", vol. 11, p. 20 ; - note pos. 26 "z", vol. 15, p. 67

8. The rock awash at MLLW in Lat. 56° 22' 43", Long. 133° 41' 50" has a depth of 3 fms. Area of 3-4 fm. depths. See pos. 106-107 "y", vol. 15, p. 45

9. The rock awash in Lat. 56° 22' 45", Long. 133° 41' 54", was located by sextant intersection fixes with a height of 5 ft. The rock awash 30 meters west has a depth of 3 ft. photo plot point of T-10,709 on rock; reef also from T-10,709; note 119-120 "y" & 29-31 "g"

10. The rock awash at MLLW in Lat. 56° 22' 51", Long. 133° 41' 47" has a depth of 9 ft. pos. 105-106 "y", vol. 15, p. 44

11. The rock awash at MLLW in Lat. 56° 22' 58", Long. 133° 41' 51" has a depth of 3 ft. pos. 165-166 "h", vol. 7, p. 20

12. The 7 fm sounding in Lat. 56° 23' ~~48~~ 18", Long. 133° 41' 20", has a least depth of 6.7 fms. pos. 145-146 "p", vol. 11, p. 29

13. There is a rock awash at MLLW in Lat. 56° ~~23~~ 22' 38", Long. 133° 42' 01". pos. 74-75 "p", vol. 11, p. 9

14. There is a 3 fm sounding in Lat. 56° 22' 55", Long. 133° 42' 09". pos. 56-57 "g", vol. 6, p. 6

15. There is a rock awash baring 1 ft. at MLLW in Lat. 56° 21' 12"" Long. 133° 38' 08". Area of West Rock

16. The rock awash in Lat. 56° 21' 10"", Long. 133° 37' 15" is awash at MLLW and is the northern edge of a ledge. The surveyed channel runs to the west of this ledge. Southwest of the town of Point Baker

Typed notes refer to standard #6 of chart 8174 (Note latest standard)

Respectfully submitted,

William M. Martin

William M. Martin
Supervisory Cartographer

Approved and Forwarded:

E. H. Kirsch

E. H. Kirsch, Captain, C&GS
Seattle District Officer

LIST OF GEOGRAPHIC NAMES H-8149

EAST ROCK

HELM ROCK

JOE MACE ISLAND

MARIPOSA REEF

MERRIFIELD BAY

POINT BAKER

PT. BAKER

PORT PROTECTION

PORT PROTECTION

PRINCE OF WALES ISLAND

STRAIT ISLAND

SUMNER STRAIT

WEST ROCK

WODDEN WHEEL COVE

GEOGRAPHIC NAMES

Survey No. H-8149

Name on Survey	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
Southeast Alaska		preferable to Alaska for title								1
Sumner Strait										2
Prince of Wales Island										3
Port Protection										4
Port Protection		(community or trading post)					(Tide station			5
Wooden Wheel Cove										6
Point Baker		(point)								7
Point Baker		(village)			(Tide station)					8
Joe Mace Island										9
West Rock										10
East Rock										11
Merrifield Bay										12
Helm Rock										13
Mariposa Reefs										14
Strait Island										15
		Names approved 9-12-58								16
All of the above listed names are shown on chart 8174.										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8149

Records accompanying survey:

Boat sheets 1; sounding vols. 27; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 9-Envelopes

special reports, etc. 1-Smooth sheet and 1-Descriptive report.

.....

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

		verif.	Review
Number of positions on sheet		6592	
Number of positions checked		Approx. 6%	81
Number of positions revised		4	0
Number of soundings revised (refers to depth only)		Approx 35 sdgs revised mostly by one tenth fathoms to smoothen out curves.	0
Number of soundings erroneously spaced		12	0
Number of signals erroneously plotted or transferred		None	0
Topographic details	Time	40 hrs	13 hrs.
Junctions	Time	18 hrs	17 hrs.
Verification of soundings from graphic record	Time	Approx. 16 hrs	16 hrs.

Verification by George A. Rozencsak Total time 695 Date June-20-1967

Reviewed by A. Rose Time 186 hrs. Date Nov. 13, '67

M-2232-1

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8149 FIELD NO. LJ-1154

SE Alaska - Sumner Strait - Port Protection to Strait Island

SURVEYED: May 19, 1954 through August 4, 1954

SCALE: 1:10,000 PROJECT NO.: OPR-347

SOUNDINGS: 808 Fathometers CONTROL: Sextant fixes on shore signals

Chief of Party..... C. Le Fever
Surveyed by..... C. Le Fever
..... C. A. Schoene
..... H. A. Garcia
Protracted by..... H. C. Parsons
Soundings Plotted by..... H. C. Parsons
Verified and Inked by..... G. A. Kozemczak
Reviewed by..... S. Rose
..... Date: Nov. 2, 1967
Inspected by..... R. H. Carstens

1. Description of the Area

This survey covers the area of Sumner Strait from Port Protection to the southern shore of Strait Island. Offshore depths range from about 200 fathoms to 2.7 fathoms at Helm Rock. The bottom is rocky and irregular.

Numerous knolls and ridges are found southeast and southwest of Strait Island. Inshore ledges and rocks awash border much of the shoreline, and numerous shoals and pinnacles rise sharply from deeper depths.

2. Control and Shoreline

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

The shoreline originates with unreviewed advance photogrammetric manuscripts T-9621 (1953-54) and T-10709 (1955-65).

2.

3. Hydrography

Sounding line crossings are in good agreement. Standard depth curves are adequately delineated. Shoals and peaks are emphasized by curves. The development of the bottom configuration and determination of least depths are considered adequate. Handlead verification of critical depths is particularly complete.

4. Condition of the Survey

The Descriptive Report, the field plotting, and the sounding records are adequate and conform to the requirements of the Hydrographic Manual, except that:

a. The wreck at lat. 56°22.83', long. 133°42.00', although well positioned, was not described to indicate the amount uncovering at any stage of tide. One survey line crosses the wreck and a trace assumed to be from the wreck was used for this information.

b. Some rocks are difficult to plot accurately because the fixes are weak and/or the rock is adjacent to one of the signals used to plot it; (suggest that the field also give distance from a station in the latter cases).

c. Soundings on the survey are excessively close to the edge of the smooth sheet on the east side.

5. Junctions

The junction with H-8150 (1954) to the south agrees well with the present survey.

The junction with H-8689 (1962-65) to the west will be discussed in the review of that survey.

No contemporary survey exists north or east of the present survey.

6. Comparison With Prior Surveys

H-1749	(1886)	1:80,000
H-1753	(1886)	1:80,000
H-1754	(1886)	1:80,000
H-1755	(1886)	1:10,000
H-3405	(1912-13)	1:20,000 and 1:5,000

Taken together, these surveys comprise the prior coverage of the area of the present survey. The surveys of 1886 are for the most part small scale reconnaissance surveys revealing little of the irregularities in the bottom.

(1) The following uncharted soundings of 16 and 17 fms. on H-3405 are considered to be erroneous and should be disregarded. These unsupported soundings fall in general depths of about 50 fms. or greater on both the present and prior surveys, and are considered disproved by the present development.

Soundings (Fm.)	Latitude	Longitude	Present Depths
17	56°23.07'	133°40.80'	50
16	56°22.42'	133°38.08'	60
17	56°22.36'	133°38.25'	52

(2) The 36-fm. sounding on H-1749 at lat. 56°22.25', long. 133°42.40' falls in depths of 120 fms. on the present survey. The sounding is apparently in error in value or position and should be disregarded.

The present survey supersedes the prior surveys in the common area.

H-3811 (1915-16) WD

The effective depths of this wire-drag survey do not conflict with the depths of the present survey in the common area. The 51-ft. sounding on this wire-drag survey at lat. 56°22.60', long. 133°41.55' falls in present depths of 14 fms. and is about 100 meters east of comparable depths on the present survey. The position of the 51 is considered to be in error because of the weak control for the position. The present survey soundings are adequate to portray the bottom configuration in this area, and the 51 should be disregarded.

One sounding from this wire-drag survey was carried forward to the present hydrographic survey.

Comparison with 4th Ed 8174 Aug 9/69

4.

7. Comparison With Chart 8174, 8th Ed., October 18, 1965

A. Hydrography

This edition of the chart was compiled from the boat sheet, and from the unverified smooth sheet of the present survey. Some of the topographic detail of Strait Island originates with T-4330 (1927) and is superseded by the latest topographic information of the Strait Island area on T-10709 (1955-65).

The discrepancies discussed under "Comparison With Prior Surveys" were revised on this edition of the chart. The remaining differences between charted and the verified survey depths are generally less than one fathom.

Attention is directed to the following:

1. The charted 1-fm. sounding at lat. 56°23.41', long. 133°42.55' originates with the boat sheet and is shown too far eastward of the shoreline. The reviewed survey indicates no less than 2.6 fms. in this immediate vicinity.

2. The 92-fm. depth charted at lat. 56°22.41', long. 133°41.00' originates with the boat sheet of the present survey. The correctly reduced depth is 88 fathoms.

3. The rock awash charted in lat. 56°22.82', long. 133°41.95' from the verified smooth sheet was revised to 1 fm. during review. The 1 fm. sounding should be charted.

4. The 1-fm. 3 ft. charted in lat. 56°21.58', long. 133°36.76' from the verified smooth sheet was subsequently changed to 1-fm. during review.

5. The 74 charted in lat. 56°20.13', long. 133° 43.37' from the junctional survey H-8150 (1954) was reexamined in the records and found to be on a section of fathogram where it was impossible to identify the correct phase and scan the soundings. The 74 has been rejected and the 100-fm. curve revised.

6. Some inshore low-water curves charted from the verified smooth sheet were revised to ledge symbols during review.

7. The 2fm. 3ft. charted in lat. 56°21.33', long. 133°37.08',from the verified smooth sheet, was rejected during review and was found to fall outside the channel into Point Baker.

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

B. Aids to Navigation

The area of the present survey has two floating aids to navigation. One marks Helm Rock, while the other one marks Mariposa Reef extending southward of Strait Island. The charted position of each aid adequately marks the feature intended.

Five nonfloating aids are within the area of the present survey. Two of these aids are daybeacons; three are lights.

Subsequent to the present survey, the following changes occurred:

1. The Point Baker Anchorage Light has been moved to the north end of the island to Triangulation Station "Sumner-1915"; (N,M. 16/64, Par. 1988).

2. A daybeacon has been established at the former position of the Point Baker Anchorage Light: (N.M. 16/64, Par. 1988).

3. A light has been established on West Rock; (N.M. 16/64, Par. 1988).

4. The Mariposa Lighted Buoy has been discontinued; (N.M. 32/64, Par. 4134).

5. A light has been established on Mariposa Reef, south~~west~~ward of Strait Island; (N.M. 32/64, Par. 4134).

6.

8. Compliance With Project Instructions

The present survey complies adequately with the project instructions.

9. Additional Field Work

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

Examined and Approved;

Chief
Marine Chart Division

Associate Director
Hydrography and Oceanography

RHC

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division R. H. Carstens 9 December 1958

Plane of reference approved in
27 volumes of sounding records for

HYDROGRAPHIC SHEET 8149

Locality Sumner Strait, Alaska

Chief of Party: C. LeFever in 1954

Plane of reference is mean lower low water, reading

6.0 ft. on tide staff at Point Baker

12.9 ft. below B.M. 1 (1954)

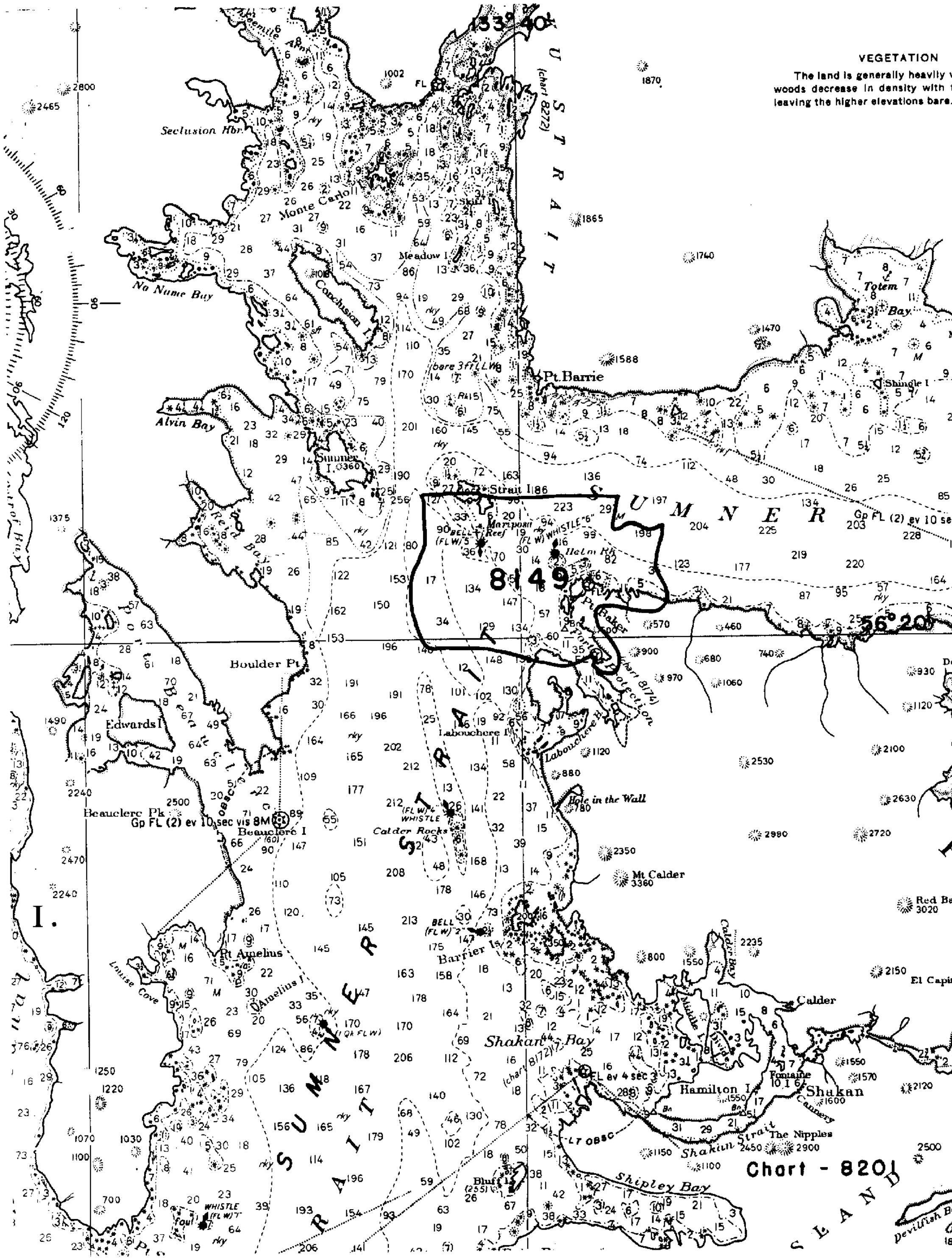
Height of mean high water above plane of reference is 11.9 feet.

Condition of records satisfactory except as noted below:

William Thayer
Signature

Chief, Tides Branch

Comm-DC 34330



VEGETATION
The land is generally heavily
woods decrease in density with
leaving the higher elevations bare.
133° 40'
Seclusion Hbr
Monte Carlo I
No Name Bay
Conclusion I
Meadow I
Alvin Bay
Sumner I
Pt. Barrie
Totem Bay
Shingle I
Strait I
Mariposa Reef
Helm Rk
8149
Pt. Baker
Port Protection
56° 20'
Boulder Pt
Edwards I
Beauclerc Pk
Beauclerc I
Gp FL (2) ev 10 sec vis 8M
Labouchere B
Hole in the Wall
Calder Rocks
Mt Calder
Red Bay
El Capitan
Pt Amelius
Louise Cove
Barrier Is
Shakan Bay
Calder
Hamilton I
Shakan
The Nipples
Shakan Strait
Shipley Bay
Devilfish Bay
Chart - 8201
SUMNER STRAIT

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8149

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/12/59	8201	M. Rogers	Examined Before ~~After~~ Verification and Review Landg. surveyed.
3/7/61	8174	J. Heaton	Part App'd. Before ~~After~~ Verification and Review
7-27-70	8174	Eric Frey	Part appd. ~~Before~~ After Verification and Review Critical corrections
		Reviewed 8-18-70 DJK	pointed out in review only were appd
7-29-70	8201	Eric Frey	~~Before~~ After Verification and Review Added wreck
			per review
5/9/73	8174	E. Frey	Full app'd. ~~Before~~ After Verification and Review
			Revised hydro in entire area
11/19/75	8201	Reitek	FULL ~~Before~~ After Verification and Review and Signature
			Revised hydro thru 8174
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			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.