9222

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 Survey

Field No. DA-05-1-71 *Office No.* H-9222

LOCALITY

State Alaska

General locality Sumner Strait, ~~S.E.~~ Alaska

Locality Red Bay Entrance

1971

CHIEF OF PARTY

CDR. G.C. Saladin

LIBRARY & ARCHIVES

DATE 2-6-74

USCOMM-DC 37022-P66

9222

Area 6

Chart 8201
8168

FORM C&GS-537 (5-66)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO. H-9222

FIELD NO. DA-05-1-71

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State Alaska

General locality Sumner Strait, ~~Southeast Alaska~~

Locality Entrance to Red Bay

Scale 1:5,000 Date of survey 1 July - 14 July 1971

Instructions dated 2 February 1971 Project No. OPR-448

Vessel NOAA Ship DAVIDSON (CSS-31)

Chief of party CDR. Gerald C. Saladin

Surveyed by LTJG. Gregory L. Miller

Soundings taken by echo sounder, hand lead, pole Raytheon DE-723, Fathometer

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Protracted by LTJG. Gregory L. Miller Automated plot by PMC-Gerber Universal Plotter

Soundings penciled by LTJG. Gregory L. Miller

Soundings in fathoms ~~XXXX~~ at ~~XXXX~~ MLLW

REMARKS:

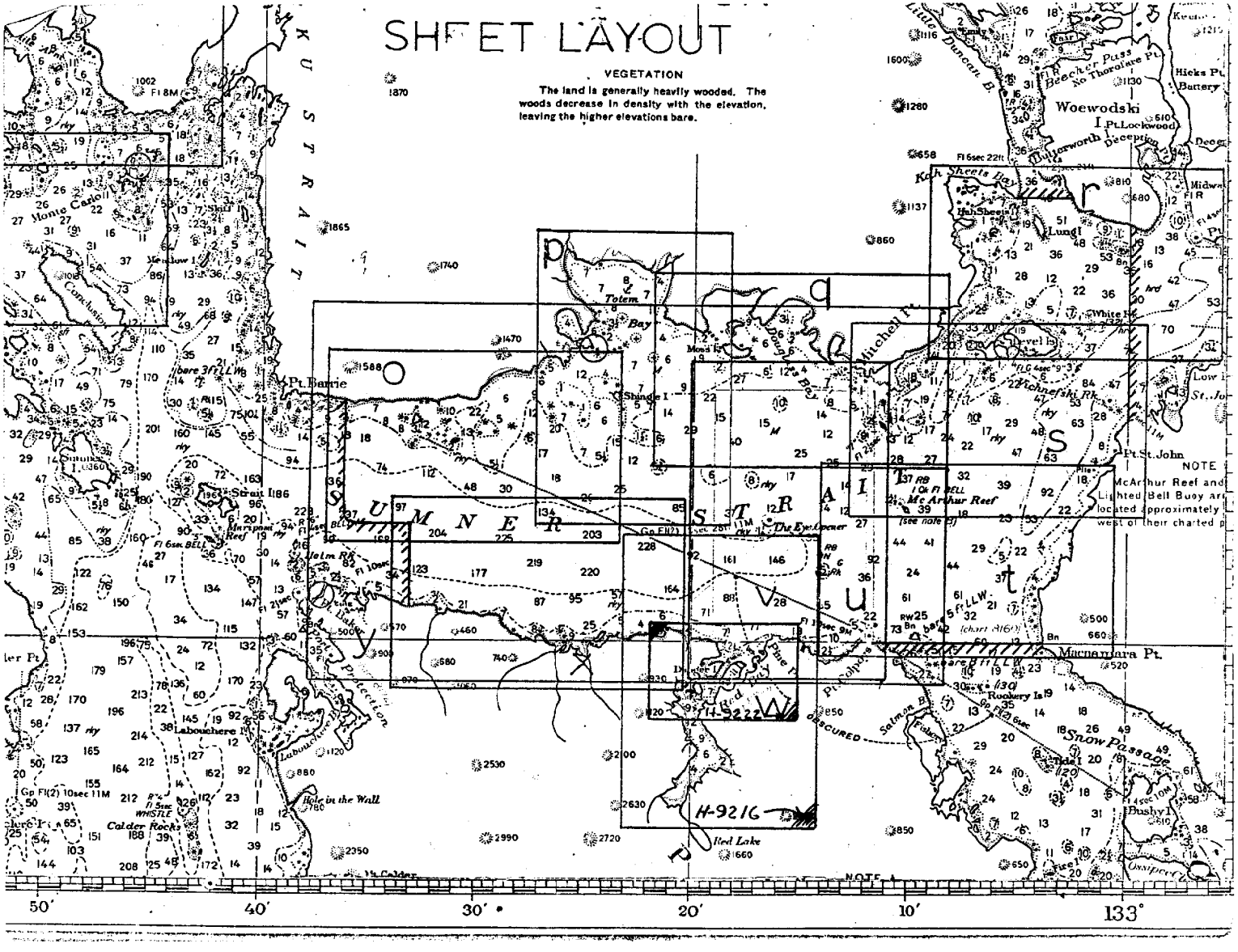
Cat. I survey (replotted at PMC 10/31/77. All sdgs revised) EHC 10/31/77

Chart
8201
8168
Area 6
ADP - Area 8

Applied to std 4-5-74 CAB

Deleted on stds 11-9-77 CAB.

USCOMM-DC 37008-P66


SHEET LAYOUT
VEGETATION
The land is generally heavily wooded. The woods decrease in density with the elevation, leaving the higher elevations bare.
KUSTRAIT
Pt. Barrie
Shingle I
Totem Bay
Mitchell Pt
Woewodski I
Pt Lockwood
Deception
Hicks Pt
Battery
Monte Carlo
Conclusion I
Strait I
Labouchere
Labouchere Bay
Rock in the Wall
Calder Rocks
Red Lake
Red Lake Entrance
Salmon R
Fishery
Snow Passage
Rookery Is
Macnamara Pt
Bushy I
Pt St. John
McArthur Reef
(see note E)
The Eye Lower
Pinnacle
Pinnacle Pt
Pillar Pt
Beecher Pass
No Thoroughfare Pt
Butterworth
Midway
Lagoon
Mitchell R
Duncan Bay
Little Duncan B
Kuh Sheets Bay
Kuh Sheets I
Lagoon I
Low I
St. John
Pt St. John
Ptchinefski Rk
White Rk
Level I
Monte Carlo
Conclusion I
Strait I
Labouchere
Calder Rocks
Rock in the Wall
Red Lake
Red Lake Entrance
Salmon R
Fishery
Snow Passage
Rookery Is
Macnamara Pt
Bushy I
Pt St. John
McArthur Reef
Pillar Pt
Pinnacle Pt
Beecher Pass
No Thoroughfare Pt
Butterworth
Midway
Lagoon
Mitchell R
Duncan Bay
Little Duncan B
Kuh Sheets Bay
Kuh Sheets I
Lagoon I
Low I
St. John
Pt St. John
Ptchinefski Rk
White Rk
Level I
SUMNER
STRAIT
DIXON
ENTRANCE
H-9216
OBSCURED
NOTE
McArthur Reef and Lighted Bell Buoy are located approximately west of their charted p
50'
40'
30'
20'
10'
133°

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY, DA-05-1-71

H-9222

OPR-448

SUMNER STRAIT, ALASKA

NOAA Ship DAVIDSON (CSS-31)

1971

Gerald C. Saladin
CDR. NOAA
Chief of Party

DESCRIPTIVE REPORT

DA-05-1-71

H-9222

A. PROJECT

This survey was accomplished according to Project Instructions: OPR-448-DA-71, Keku Strait and Sumner Strait, S.E. Alaska, dated 2 February 1971.

B. AREA SURVEYED

This survey covers the entrances to Red Bay, Sumner Strait, S.E. Alaska, an area from North of Dead Island to one-half mile south of Flat Island. This survey is between latitudes 56° 18.1'N to 56° 19.8'N, and longitudes 133° 17.25'W to 133° 20.75'W. Hydrographic surveying started on 1 July 1971 and was completed 14 July 1971. This survey junctions with the contemporary survey, DA-10-4-71, H-9216.

C. SOUNDING VESSEL

A 17 foot boat, WZ-3041, was used exclusively on this survey and all position numbers are shown in violet.

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers, serial numbers 1276 and 919, were used in the boat. Echo sounder corrections were determined from bar checks taken daily by the boat and from Nansen casts taken by the NOAA Ship DAVIDSON. Corrections to echo sounders can be found in a separate report titled, "Correction to Echo Sounders OPR-448-1971." All soundings are in fathoms and have been reduced using predicted tides from Red Bay, Alaska. Time meridian 105°W was used throughout the survey. TC/TI tape print-outs are attached.

E. SMOOTH SHEET

The smooth sheet will be constructed and plotted by the Processing Division, Pacific Marine Center, Seattle, Washington.

F. CONTROL

Visual three-point fixes were used for control in this survey. All signals were located by one of three types of ground methods, either using existing triangulation stations, or traversed with a sub-tense bar from existing triangulation stations or intersected with T-2 cuts from existing triangulation stations. Geographic positions were computed on the Ship's Wang Calculator and plotted by the Ship's commissioned officers.

All field data and calculation data are submitted with the hydrographic data and sent to the Chief of Processing, Pacific Marine Center, Seattle, Washington.

G. SHORELINE

Shoreline and shoal area outlines were traced onto the boat-sheet from 1:10,000 photo manuscripts, projected to a 1:5,000 scale, by the ship's personnel. This shoreline was used as a guide. Aerial photography was flown in 1971 and 1:5,000 manuscripts will be compiled. Once the 1:5,000 manuscripts are completed they should be field edited. Verification of the shoreline was carried out by the Ship's commissioned officers on the 1:10,000 manuscript. Features were checked by visual inspections, by estimated distances from photo-identifiable objects, by three-point sextant fixes, detached positions or developed on this hydrographic survey sheet. Compilation of the manuscripts was good. The low water line was defined by soundings except in places where the beach was very steep or the area too foul to safely take a boat. Field edit was completed and revisions to manuscripts were suggested, see "Field Edit Report OPR-448-1971."

H. CROSSLINES

The percentage of Crosslines is 8% or 4.8 Nautical Miles compared to 58 Nautical Miles. Soundings agree at these crossings.

I. JUNCTIONS

Junctions were made with contemporary survey, DA-10-4-71, H-9216. Soundings agree at these junctions.

J. COMPARISON WITH PRIOR SURVEYS

Comparison of pre-survey review was made from H-1758 and Chart 8168. The following is a summary of the results of the investigation:

	Lat.	Long.	Prior Survey	Present Survey	Remarks
	56°	133°	Fathoms	Fathoms	
1.	18.46'	18.59'	1.75'	2.7'	Not found.
2.	18.38'	19.22'	5.25'	5.3'	Agree, the chart is in error.
3.	18.33'	19.25'	2.83'	2.8'	Agree.
4.	18.20'	19.47'	0.75'	1.4' (H.L.)	Note a.

a. A zero sounding was obtained from the fathogram, but three hand leads indicated least depth to be 1.4 fathoms, with thick kelp.

In all the above cases, the areas were adequately developed with the shoalest depth being shown. The present survey depths are reduced using predicted tides for Red Bay, Alaska.

Listed below are developments of areas with shoal depths to delineate its extent and its least depth.

	Lat.	Long.	Least Sounding	Remarks
	56°	133°	Fathoms	
a.	18.33'	19.90'	2.6	
b.	18.75'	18.95'	2.5' & 2.6'	Two peaks
c.	19.09'	18.75'	-0.2'	Rock awash

All developments are on the boatsheet. All soundings have been reduced using predicted tides for Red Bay, Alaska.

K. COMPARISON OF SOUNDINGS WITH THE CHART

A comparison of soundings and depth curves was made with the C&GS chart 8168, 5th Edition, 11 March 1968 and there is agreement. The present survey shows a better delineation of shoal areas and has a greater sounding density.

L. ADEQUACY OF SURVEY

This survey is considered complete and adequate to supercede prior surveys.

M. AIDS TO NAVIGATION

There are no Aids to Navigation on this survey.

N. STATISTICS

A 17 foot open boat, WZ-3041, was used exclusively on this survey. All position numbers are on the boatsheet in violet. Bottom samples and hand lead soundings were taken and placed on the boatsheet in violet. All work is recorded in volumes I to V. A summary of the work follows:

DAY	POSITION NO.		VOLUME	REMARKS
182'	7001-7006'	6	I'	Detached Positions
187'	0001-0227'	227	II'	13.5 N.M. Sounding Line
187'	7007-7008'	1	I'	Detached Positions
188'	0228-0434'	107	III'	13.4 N.M. Sounding Line
188'	7009-7014'	6	I'	Detached Positions
189'	0435-0692'	259	IV'	20.0 N.M. Sounding Line
189'	7015-7021'	7	I'	Detached Positions
190'	0694-0826'	132	V'	8.2 N.M. Sounding Line

GLM

190	8001-8011	"	I	Bottom Samples
193	0827-0884	57	I	2.8 N.M. Sounding Line
194	7022-7025	4	I	Detached Positions
195	7026-7035	10	I	Detached Positions

827

All soundings on the boatsheet were reduced using predicted tides for Red Bay, Alaska.

All data has been logged using a single or dual indicator format. An example and explaination of a single indicator format is included in the appendix.

O. RECOMMENDATION FOR THIS BOATSHEET

It is recommended that this survey supercede prior surveys.

P. REFERENCE TO REPORTS

Correction to Echo Sounders OPR-448-1971
Field Edit Report OPR-448-1971
Geographic Names Report OPR-448-1971
Tide Report OPR-448-1971

Respectfully submitted,

Gregory L. Miller

Gregory L. Miller
LTJG. NOAA

Attachments:
Tide Note
Boatsheet Layout
Form No. 1 - Parameters for digital computing, visual.
Position Sounding Tape
Fathometer Initial Correction
Approval Sheet

TIDE NOTE

Red Bay North at Dead Island

Location	Lat. 56° 19.53'N Long. 133° 18.17'W
Plane of Reference	MLLW
Time Meridian	105°W
Type of Gage	Portable Bubbler

Red Bay South

Location	Lat. 56° 17.43'N Long. 133° 19.94'W
Plane of Reference	MLLW
Time Meridian	105°W
Type of Gage	Portable Bubbler

It was observed that there are very strong currents between Danger Island and Bell Island.

Hourly height tapes, printouts, copies of Form 362 and a field tide note were forwarded to PMC.

Tide station reports, leveling records, marigrams and Form 362 were transmitted to Chief, Tides Branch with cover letter requesting the following to be furnished to PMC:

1. Verified copies of Form 362's with values entered in original record gaps.
2. Datum: Value of MLLW on the marigrams.
3. Form 712's for insertion in Descriptive Report.
4. Time and height relationships between gages operated in the area surveyed.
5. Recommended zoning for tide correctors.

FATHOMETER INITIAL CORRECTION

DAY	TIME	CORR'N	FATHOMETER NO.
187	0833:45	0.0	1276 Table 6
	1541:15	0.0	
188	0821:00	0.0	919 Table 13
	1529:15	0.0	
189	0810:45	0.0	919 "
	1615:30	0.0	
190	0826:30	0.0	919 "
	1513:45	0.0	
193	1334:30	0.0	919 "
	1548:30	0.0	

GEOGRAPHIC NAMES

Survey No. H-9222

Name on Survey	On Chart No. 8186 A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
BELL ISLAND	✓									1
BOAT CHANNEL	✓									2
DANGER ISLAND	✓									3
DEAD ISLAND	✓									4
FLAT ISLAND	✓									5
PRINCE OF WALES ISLAND	✓									6
RANGE ISLAND	✓									7
RED BAY	✓									8
SUMNER STRAIT	✓									9
										10
										11
										12
										13
										14
										15
										16
						Approved by				17
						Chas. E. Harrington				18
						Staff Geographer				19
						19 June 1974				20
										21
										22
										23
										24
										25
										26
										27

3222 SIGNAL PLOTTER CARDS 8-4-71

H-NO.		LATITUDE	LONGITUDE	X	Y	X	
31011	102	71 56194401	133165217	10896	06951	102	
31011	103	71 56193248	133171547	10056	06202	103	
31011	104	71 56192982	133175380	09572	06029	104	
31011	105	71 56192664	133175094	09776	06472	105	
31011	106	71 56193139	133180921	09116	06130	106	
31011	107	71 56195161	133184863	06594	07704	107	
31011	108	71 56194342	133182583	07156	06912	108	
11	109	71 56193325	133185636	06415	06258	109	
31011	110	71 56192977	133184757	06722	06025	110	
31011	111	71 56192741	133183233	07282	05872	111	
31011	112	71 56192108	133181875	07772	05461	112	
31011	113	71 56191888	133183627	07140	05318	113	
31011	114	71 56191128	133182996	07368	04825	114	
31011	115	71 56190813	133184758	06732	04620	115	
31011	116	71 56185739	133184556	06805	03922	116	
31011	117	71 56183672	133185062	06621	02580	117	
31011	118	71 56182574	133191983	05567	01868	118	
31011	119	71 56181151	133194942	04499	00944	119	
31011	120	71 56180103	133201802	02466	00263	120	
31011	121	71 56182994	133202817	03100	02141	121	
31011	122	71 56184098	133201322	02640	02858	122	
31011	123	71 56182692	133194830	04539	01944	123	
31011	124	71 56184226	133192702	05308	02941	124	
11	125	71 56190477	133191837	05620	04587	125	
31011	126	71 56192168	133192659	05324	05501	126	
31011	127	71 56193169	133191869	05609	06151	127	
31011	128	71 56192974	133190427	06130	06023	128	
31011	131	71 56184039	133204416	02523	02820	131	

DA-05-1-71 OPR - 488 SIGNAL OVERLAY TAPE

DEGREES, MINUTES, AND SECONDS

102	56 19 4401	133 16 5217	102
103	56 19 3248	133 17 1547	103
104	56 19 2982	133 17 5380	104
105	56 19 3664	133 17 5094	105
106	56 19 3139	133 18 0921	106
107	56 19 5561	133 18 4863	107
108	56 19 4342	133 18 3583	108
~~109~~	~~56 19 3335~~	~~133 19~~	
109	56 19 3335	133 18 5636	109
110	56 19 2977	133 18 4757	110
111	56 19 2741	133 18 3233	111
112	56 19 2108	133 18 1875	112
113	56 19 1888	133 18 3627	113
~~114~~			
114	56 19 1128	133 18 2996	114
115	56 19 0813	133 18 4758	115
116	56 18 5739	133 18 4556	116
117	56 18 3672	133 18 5063	117
118	56 18 2574	133 19 1983	118
119	56 18 1151	133 19 4942	119
120	56 18 0103	133 20 1802	120
121	56 18 2994	133 20 2817	121
122	56 18 4098	133 20 1322	122
~~123~~	~~56 18 260~~		
123	56 18 2692	133 19 4830	123
124	56 18 4226	133 19 2702	124
125	56 19 0777	133 19 1837	125
126	56 19 2168	133 19 2659	126
127	56 19 3169	133 19 1869	127
128	56 19 2974	133 19 0427	128
131	56 18 4039	133 20 4416	131

APPROVAL SHEET

Hydrographic Survey

DA-05-1-71

OPR-448

Red Bay, Sumner Strait

Southeast Alaska

The field work on this survey was accomplished under my supervision. Frequent inspections were made of the boatsheet and other records.

Gerald C. Saladin
CDR. NOAA
Commanding Officer
NOAA Ship DAVIDSON

NOAA FORM 77-27
(9-72)
(PRESC. BY HYDROGRAPHIC MANUAL 20-2, 6-94, 7-13)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. H-9222

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO, excess overlay	1	BOAT SHEETS	1
DESCRIPTIVE REPORT	1	OVERLAYS (preliminary)	6

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1 & printouts					
VOLUMES	5					
BOXES			1			

T-SHEET PRINTS *(List)*

SPECIAL REPORTS *(List)*

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				
POSITIONS CHECKED		933 (933)		
POSITIONS REVISED		30 (29)		
DEPTH SOUNDINGS REVISED		19 (200)		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		4 (0)		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		(1)		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		55 (40)		
JUNCTIONS		16 (16)		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		152 (86)		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		52 (54)		
TOTALS		275 (196)		

	BEGINNING DATE	ENDING DATE
PRE-VERIFICATION BY		
VERIFICATION BY Matthew G. Sanders C.A.J. Pauw, Matthew G. Sanders	5 May 1973	14 January 1974
REVIEW BY		

* U.S. G.P.O. 1972-769-562/439 REG.#6

VERIFIER'S REPORT

H-9222 Sumner Strait, Southeast Alaska DA-Ø5-1-71

This sheet was constructed and plotted at Pacific Marine Center, Seattle, Washington. Information relating to this will be noted under the heading by the number and letter as on the Verifier's Report, C&GS Form 946A.

PART II SHORELINE AND SIGNALS

5. The shoreline has been modified at Latitude 56° 19' 3Ø" Longitude 133° 18' 3Ø". The ledge symbol has been left in pencil due ~~to a~~ from T-13374 discrepancy between the hydrography and the ledge symbol. At Latitude 56° 18' 2Ø" Longitude 133° 19' 48" the reef symbol is not shown; the hydrography and depth curves delineate the shoal. At Latitude 56° 19' 32" Longitude 133° 17' 45", the ledge symbol is shown in red as described by the hydrographer. No, Revise

PART III JUNCTIONS

1Ø. The junctions with H-9216 (DA-1Ø-4-71) have been made and is complete.

PART VII CURVES

23. The depth curves were inspected before inking by Vincent Flor, Cartographic Technician.

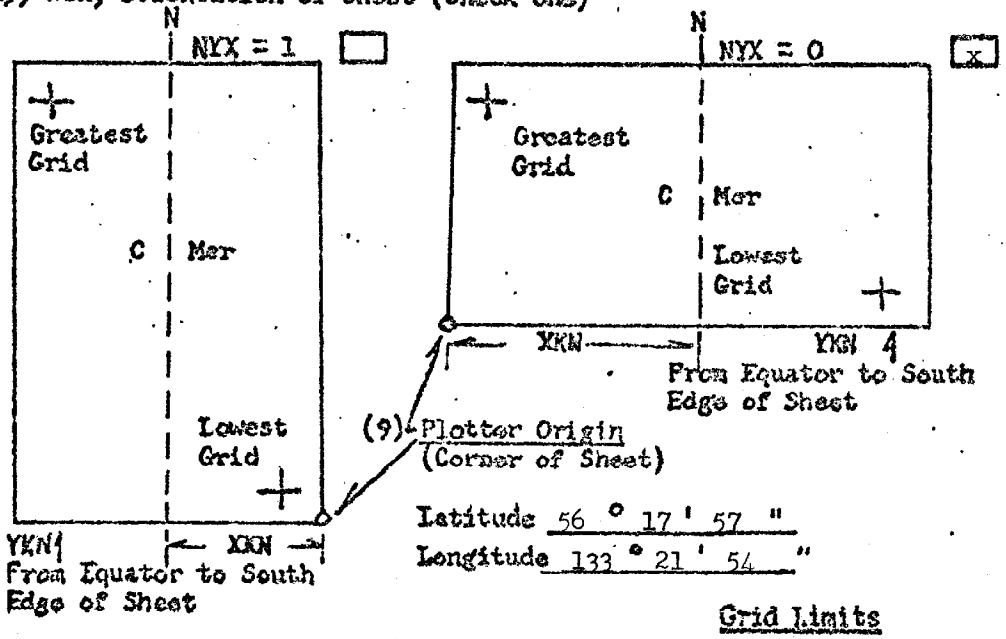
Respectfully submitted,

Matthew G. Sanders

Matthew G. Sanders
Cartographic Technician

FORM # 2
PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION

(1) Project No. 448
(2) H No. 9222
(3) Field No. "W"
(4) Requested by CDR Ray E. Moses
(5) Ship or ~~Office~~ DAVIDSON
(6) Date Required ASAP
(7) Visual [x] Ft.(0) or Fathoms (1) [ ] (8) Electronic [ ] (fill out form #3)
(10) XKN (SP 5) Distance from CMER to East Edge (NYX = 1) or West Edge (NYX = 0). (Origin) 3,508,128 Meters
(11) YKN (SP 241) Distance from Equator to South Edge of Sheet. (Origin) 6,241,659.979 Meters
(12) Central Meridian 133° 18' 30"
(13) Survey Scale 1: 5,000
(14) Size of Sheet (Check one) 36x60 [x] 42x60 [ ]
(15) NYX, Orientation of sheet (Check one)



(9) Plotter Origin (Corner of Sheet)
Latitude 56° 17' 57"
Longitude 133° 21' 54"

Grid Limits

(16) Greatest Latitude 56° 20' 30"
(17) Lowest Latitude 56° 18' 00"
(18) Difference 2' 30"
(19) 15"
(20) 10 YKN
(21) Greatest Longitude 133° 21' 45"
(22) Lowest Longitude 133° 15' 00"
(23) Difference 6' 45"
(24) 15"
(25) 27 XKN

(Projection Line Interval Page 4 Hydro Manual)

H 9223

~~HYDRO II AND III PARAMETER~~ DS

Field No. OPR 448

Date 2-22-71

31011

PARAMETER CARD II

			1	2	3	4	5	6	7	8	9	10
Semi major axis of the earth	6,378,206.4	RDA	6	3	7	8	2	0	6	4	0	7
			11	12	13	14	15	16	17	18	19	20
X Constant- Distance from central meridian to origin of plotter SP 5	meters	XKN	3	5	0	8	1	2	8	0	0	4
			21	22	23	24	25	26	27	28	29	30
Y Constant - Distance from equator to origin of plotter SP 2,1	° ' meters	YKN	6	2	4	1	6	6	0	0	0	7
			31	32	33	34	35	36	37	38	39	40
Central Meridian of Projection	133 18 3000	CMR	4	7	9	9	1	0	0	0	0	6
			41	42	43	44	45	46	47	48	49	50
Plotter Scale/Survey Scale	30498.6876 1:5,000	SCA	2	0	9	9	7	3	7	5	0	1
												51
North/south axis of sheet - to correspond to (Y axis - 0) (X axis - 1) of plotter		NYX										0
												52
Feet/Fathom indicator	0 - feet 1 - fathom	FOF										1
								53	54	55	56	57
H Identification No.		JN						09	91	29	21	21
											58	59
		YR									7	1

FOF - 1

PARAMETER CARD III

			1	2	3	4	5	6	7	8	9	10
Lowest Lat. Intersection	° ' " 56 18 0000	YST	2	0	2	6	8	0	0	0	0	6
			11	12	13	14	15	16	17	18	19	20
Lowest Long. Intersection	133 15 0000	XST	4	7	9	7	0	0	0	0	0	6
			21	22	23	24	25	26	27	28	29	30
Difference between Grid	1500	DXY	1	5	0	0	0	0	0	0	0	2
											31	32
Interval (Long)		XSN									2	7
											33	34
Interval (Lat)		YSN									1	0

Computed EHT

Punched CR

Checked

Date

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY 8/29/72

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for H-9222

Tide Station Used (NOAA Form 77-12): Red Bay Entrance

Period: June 5, 1971 - August 24, 1971

HYDROGRAPHIC SHEET H-9220, 9222 and 9216 from day 156 per telcon 9/12/72 C331 rew

OPR 448

Locality: Sumner Strait

Plane of reference (mean lower low water)= 4.8 ft. on tabulations which is .82 feet on tide staff.

Height of Mean High Water above Plane of Reference is 12.5 ft.

Remarks: Hourly heights for June 8-10 1970 have been computed and are listed on attached sheet.

Hourly heights corrections made & added to main tape.
All hourly heights processed 11-28-72.

Robert A. Cummings
Chief, Tides Branch

APPROVAL SHEET

The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,

James S. Green
Supervisory Cartographic Technician

Approved and forwarded,

Walter F. Forster, Cdr., NOAA
Chief, Processing Division
Pacific Marine Center

ADDENDUM
H-9222 (DA-5-1-71)
Alaska, Sumner Strait
Red Bay Entrance

I. INTRODUCTION

H-9222 (DA-5-1-71), a basic survey done in the entrance to Red Bay, was returned from Rockville after the Tidal Datum Planes Section reported an error of Ø.7 fathoms in the plane of reference. This discrepancy occurred on several days on which the Red Bay Entrance Gage was used wholly or in part. The tide corrector values were recomputed and reapplied. The authority for this action is letter C323, dated October 17, 1975, copy attached. The smooth sheet and smooth position overlay have been plotted on mylar by the Harris/Xynetics System. The printout of positions and soundings, dated August 22, 1977 reflect corrected data.

II. CONTROL AND SHORELINE

The Mean High Water line originates from Class I shoreline manuscripts T-13374 and T-13375 photographs, dated August 1969. Date of Field Edit is June and August 1971.

Several noticeable discrepancies between the shoreline manuscripts and the hydrographic data as submitted from the field are in evidence. These differences are noted as follows:

1. The ledge located at Lat. 56°18'27"N, Long. 133°19'21"W as shown on the T-sheet differs from the field sheet depiction. The verifier showed this feature as per the field sheet.

2. The islets, one at Lat. 56°18'27"N, Long. 133°19'33"W baring 13 feet and the other at Lat. 56°18'27"N, Long. 133°19'48"W baring 16 feet are in disagreement with prior survey H-1758 (1886) by the Form 712 Mean High Water Plan of Reference of 12.5 feet as submitted by Tides Division. These features were left on the smooth sheet as shown from the Class I. The verifier suspects both islets should be referenced to Mean Lower Low Water and recommends re-examination of the photographs at Coastal Mapping Division .

3. Several ledge limits were amended to support the hydrographic information from the field.

4. Three High Water features shown on the smooth sheet located at:

   a) Lat. 56°19'27"N, Long. 133°18'11"W (Awash MLLW)
   b) Lat. 56°19'31"N, Long. 133°18'48"W (Rock awash, no height)
   c) Lat. 56°19'31"N, Long. 133°19'06"W (Not shown)

   are quite readily in conflict with the T-sheets. The verifier disposed of these items using the raw records from the field party. It is recommended that Coastal Mapping reexamine their original compilation.

5. The rocks awash at Lat. 56°19'29"N, Long. 133°18'30"W, Pos. #7012 and Lat. 56°19'28"N, Long. 133°18'33"W, Pos. #7014, are identified on the field sheet in direct conflict with the raw records. The verifier used the hydrographic records to reconcile this error. It is interesting to note, however, that the manuscript agrees with the field sheet depiction of Pos. #7012.

III. HYDROGRAPHY

The verifier rescanned the fathograms after a cursory inspection produced several least depths not logged into the data file.

IV. JUNCTIONS

The junction with H-9216 (DA-10-4-71) borders the extreme north and south boundaries of this sheet. The southern limits disclosed adequate agreement and the junction was accomplished. The northern limits above Danger and Bell Islands did not produce an entirely acceptable junction. Differences of .1 to .4 caused inadequate agreement. However, the verifier felt that re-examination of H-9216 on the north will produce the sufficient changes necessary to effect an adequate tie. Since H-9222 (DA-5-1-71) is the larger scale survey, its curves should take precedence and consequently were inked on the smooth sheet.

X. NOTES TO REVIEWER

As this survey has been partially reviewed, comparison with prior surveys and the chart have not been reaccomplished at the marine center.

Respectfully submitted,

Bruce Alan Olmstead

Bruce Alan Olmstead
Cartographic Technician
October 3, 1977

Examined and approved,

James S. Green
Chief, Verification Branch

SUBMISSION STATEMENT
H-9222

This survey is submitted for continuation of review. The survey has been replotted as requested and comments made in an "Addendum to Verifier's Report" dated 3 October 1977.

This survey has not been subjected to inspection by the PMC Hydrographic Survey Inspection Team, and subsequently has not received administrative approval.

Glen R. Schaefer

14 October 1977

Glen R. Schaefer, CDR
Chief, Processing Division
Pacific Marine Center

Date

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C323

OCT 2 9 1975

TO: Chief, Processing Division
Pacific Marine Center

FROM: Richard H. Houlder
Chief, Marine Chart Division
Office of Marine Surveys and Maps

SUBJECT: Sumner Strait Surveys with Tidal Datum Error (C3311 memo, 10/17/75)

Attached is a copy of a memorandum from the Tidal Datum Planes Section reporting an error of 0.7 fathoms in the plane of reference used for tide correctors on several surveys in Sumner Strait. This error occurs on surveys H-9216, H-9219, H-9220, and H-9222, on which the Red Bay Entrance gage was used wholly or in part.

It is requested that the Red Bay Entrance tide correctors be recomputed and these surveys be replotted. Records for these surveys will be returned in the near future.

Attachment

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C3311-348
SIPA

October 17, 1975

TO: Chief, Hydrographic Survey Branch, C323

FROM: Chief, Tidal Datum Planes Section, C3311

SUBJECT: Plane of Reference OPR 448 Sumner Strait, Alaska

After reviewing a number of hydrographic sheets for OPR 448, Sumner Strait, discrepancies were found in mean lower low water datum used to reduce smooth sheet soundings.

The tide note for hydrographic sheet (Form 712) provided by this Section designates Red Bay Entrance tide gage as control from June - September 1971. The plane of reference (MLLW) was listed as 4.8 feet for marigram and 0.8 foot on the tide staff.

Due to a misunderstanding of the staff-marigram relationship, an incorrect datum was applied by PMC processing. Thus, all surveys reduced in 1971 based on Red Bay Entrance require a correction factor of +4.0 feet (.7 fms).

We have since discontinued supplying both staff and marigram datums, which should eliminate this problem.

NOAA FORM 76-97
(2-72)
(PRES. BY HYDROGRAPHIC MANUAL, 6-94)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.

VERIFIER'S REPORT

HYDROGRAPHIC SURVEY, H 9222

INSTRUCTIONS - This form serves to identify items of a check list in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT	CL	R
Note: The verifier should first read the Descriptive Report for general information and problems.		
1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None	X	
2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: --None	X	
3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None	X	
Part II - SHORELINE AND SIGNALS		
4. Source of shoreline signals Remarks Required: -- List all surveys		
a. Give earliest and latest dates of photographs	X	
b. Field inspection date		
c. Field Edit date		
d. Reviewed-Unreviewed		
5 The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.	X	X
6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None	X	
7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.	X	
Part III - JUNCTIONS		
Note: Make a cursory comparison preliminary to inking soundings in area of overlap.		
8. All junctions of contemporary or overlapping sheets were compared and overlapping curves were made identical. Remarks Required: -- None	X	X
9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None	X	

Part III - JUNCTIONS (Continued)	CL	R
10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of **Butt** junctions and areas which are **SUPERSEDED.**	X	
Part IV - VOLUMES		
11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None	X	
12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:		
(a) rocks		
(b) line turns		
(c) position values of beginning and ending of lines		
(d) bar check or velocity correctors	X	
(e) time recording		
(f) notes or markings on fathograms		
(g) was reduction of soundings accurately done?		
(h) was scanning accurate?		
(i) were peaks at uneven intervals missed?		
(j) were stamps completed?		
(k) references to adjacent features		
Part V - MACHINE PLOTTING		
13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None	X	
14. The plotting of all unsatisfactory crossings was verified. Remarks Required: -- None	X	
15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None	X	

Part V - PROTRACTING (Continued)	CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.	X	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	X	
Part VI - SOUNDINGS		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	X	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	X	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	X	
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	X	
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.	X	
Part VII - CURVES		
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected.		X
24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed Remarks Required: -- None	X	
25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn). Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.	X	

Part VIII - AIDS TO NAVIGATION	CL	R
26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.	X	
27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None	X	
Part IX - BOAT SHEET		
28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None	X	
29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.	X	
Part X - GENERAL		
30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None	X	
31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	X	
32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None	X	
33. The bottom characteristics are adequately shown. Remarks Required: -- None	X	
Part XI - NOTES TO THE REVIEWER		
34. Unresolved discrepancies and questionable soundings.	X	
35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.	X	
36. Supplemental information.	X	

Verified by Matthew G. Sanders

Matthew G. Sanders

Date 14 January 1974

NOAA FORM 76-97
(2-72)
(PRES. BY HYDROGRAPHIC MANUAL, 6-94)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.

VERIFIER'S REPORT

HYDROGRAPHIC SURVEY, H 9222

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1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None	X	
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3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None	X	
Part II - SHORELINE AND SIGNALS 4. Source of shoreline signals Remarks Required: -- List all surveys a. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed	X	
5 The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.	X	X
6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None	X	
7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.	X	
Part III - JUNCTIONS **Note:** Make a cursory comparison preliminary to inking soundings in area of overlap. 8. All junctions of contemporary or overlapping sheets were compared and overlapping curves were made identical. Remarks Required: -- None	X	X
9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None	X	

Part III - JUNCTIONS (Continued)	CL	R
10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are **SUPERSEDED.**	X	
Part IV - VOLUMES 11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None	X	
12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following: (a) rocks (b) line turns (c) position values of beginning and ending of lines (d) bar check or velocity correctors (e) time recording (f) notes or markings on fathograms (g) was reduction of soundings accurately done ? (h) was scanning accurate? (i) were peaks at uneven intervals missed? (j) were stamps completed? (k) references to adjacent features	X	
Part V - MACHINE PLOTTING 13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None	X	
14. The plotting of all unsatisfactory crossings was verified. Remarks Required: -- None	X	
15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None	X	

Part V - PROTRACTING (Continued)	CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.	X	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	X	
Part VI - SOUNDINGS		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	X	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	X	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	X	
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	X	X
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.	X	
Part VII - CURVES		
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24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not **sounded** in black dashed Remarks Required: -- None	X	
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Part VIII - AIDS TO NAVIGATION	CL	R
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27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None	X	
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Part X - GENERAL		
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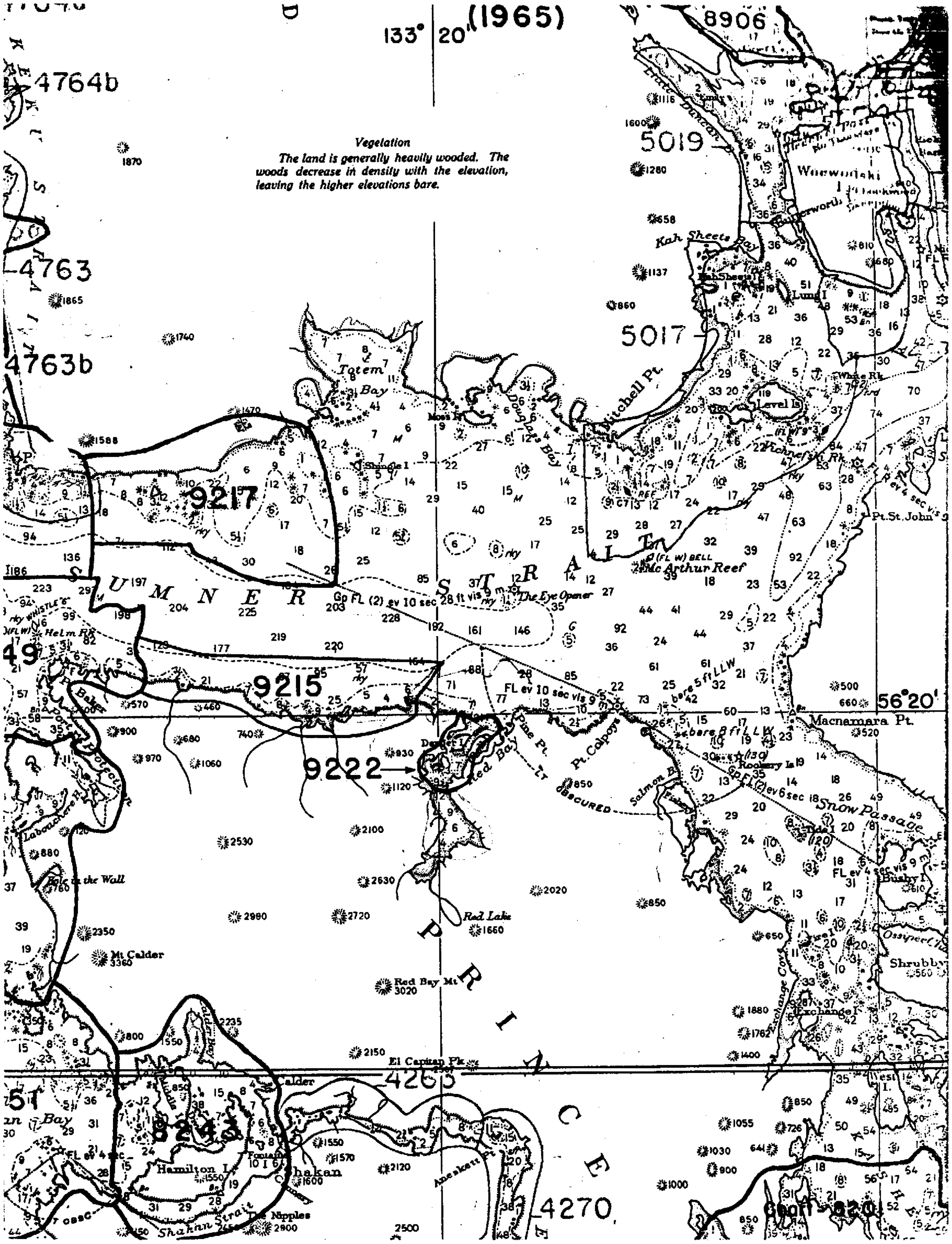
31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	X	
32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None	X	
33. The bottom characteristics are adequately shown. Remarks Required: -- None	X	
Part XI - NOTES TO THE REVIEWER		
34. Unresolved discrepancies and questionable soundings.	X	
35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.	X	X
36. Supplemental information.		

Verified by Bruce Alan Olmstead
Bruce Alan Olmstead

Date 9/20/77

* U.S. G.P.O. 1972-769380/540 REG.#6



133° 20' (1965)
8906
4764b
4763
4763b
Vegetation
The land is generally heavily wooded. The woods decrease in density with the elevation, leaving the higher elevations bare.
5019
5017
Kah Sheets Bay
Level Is
Mitchell Pt.
Totem Bay
Douglas Bay
9217
S U M N E R S T R A I T
Mc Arthur Reef
The Eye Opener
Pt. St. John
9215
56°20'
Macnamara Pt.
Helm Rk
Pine Pt.
Pt. Colpoys
Red Bay
Salmon B
Rookery Is
Snow Passage
9222
Bushy I
Shrubby
Exchange I
Red Lake
Red Bay Mt
Mt Calder
Back of the Wall
P R I N C E
El Capitan Pk
4265
Calder
Hamilton I.
Shakan
Shakan Strait
The Nipples
4270
9243

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9222 (Category I)

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	Final REMARKS
8168	11/29/77	Mark J. Friese	~~Full Part Before~~ After Verification ~~Review Inspection Signed~~ Via
			Drawing No. Fully app'd hydro in conjunction with
			current charted information (least depths, rocks, foul areas, etc)
8162	3/24/78	KANIS	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed~~ Via
8201			Drawing No. ~~Applied thru Chart~~ 8168
			Examined directly from smooth sheet (8168 not reviewed
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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