

8946

Diag. Cht. No. 8201-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. LJ-10-2-67 Office No. H-8946

LOCALITY

State ALASKA
General locality CLARENCE STRAIT
Locality WHALE PASSAGE

1967

CHIEF OF PARTY

Wayne L Mobley

LIBRARY & ARCHIVES

DATE 10-22-70

USCOMM-DC 5087

8946

HYDROGRAPHIC TITLE SHEET

H-8946

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

FIELD NO.

LJ-10-2-67

State ALASKA, SOUTHEASTERN

General locality CLARENCE STRAIT

Locality Whale Passage

Scale 1:10,000 Date of survey 4/24/67 through 6/8/67

Instructions dated 2/1/67 Project No. OPR-465

Vessel USC&GSS LESTER JONES & Motor Launch 1192

Chief of party LCDR W.L. Mobley

Surveyed by W.L. Mobley, M.H. Fleming, J.L. Heagle

Soundings taken by echo sounder, hand lead, ~~motor~~ DE 723

Graphic record scaled by Ships Personnel

Graphic record checked by Ships Personnel

Protracted by _____ Automated plot by PMC Digital Plotter

Soundings penciled by _____

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW

REMARKS:

W.L.K

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-8946 (FIELD LJ-10-2-67)

WHALE PASSAGE
CLARENCE STRAITS
S.E. ALASKA

1967

SCALE 1:10,000

USC&GSS LESTER JONES

LCDR WAYNE L. MOBLEY
COMMANDING OFFICER

A. PROJECT -

This survey is part of Project OPR-465. Instructions, dated February 1, 1967; Amendment, dated March 15, 1967; Supplements, dated March 31, 1967; and Change, dated June 16, 1967; serve as the authority for this survey. ✓

B. AREA SURVEYED -

The area surveyed is the northern portion of Whale Passage and part of Kashevarof Passage that is east of Thorne Island. The approximate limits of the sheet are from Latitude $56^{\circ}04.0'$ to $56^{\circ}08.5'$, and from Longitude $132^{\circ}55.5'$ to $133^{\circ}09.5'$. ✓

This survey does not make any junctions with surveys completed on or after the year 1922. This sheet junctions with contemporary survey H-8945 (1:10,000) to the south. The survey was accomplished between April 24, 1967 and June 8, 1967. ✓

C. SOUNDING VESSEL -

Motor Launch 1192 was used to obtain all inshore soundings. The color Blue was used to identify all launch work. USC&GSS LESTER JONES was used to obtain deep water soundings and bottom samples. The ship color is Violet. ✓

D. SOUNDING EQUIPMENT -

Soundings were obtained with the Raytheon DE723 Depth Recorder. Critical least depths were verified with the hand-lead. Number 530 Depth Recorder was used on the ship. Number 821 Depth Recorder was used on the Launch. ✓

Corrections for Soundings were determined using a combined bar check - temperature salinity velocity curve. The resulting curve indicates a velocity correction that is applied to the soundings as a function of their depth. The fathometer was checked regularly for phase error. Stylus arm error was also considered and necessary adjustments were made periodically.

E. SMOOTH SHEET -

To date smooth sheet projection has not been made. The grid ✓

will be made at the Pacific Marine Center, using IBM grid cards and the automated X-Y plotter.

F. CONTROL -

Horizontal control for all hydrography was maintained by three point sextant fixes on shore signals. These signals were located by the following methods: Previously established triangulation stations, photogrammetry, and sextant cuts. No unusual or sub-standard situations were encountered throughout the survey. Photogrammetric manuscripts used for transfer of signals are: T-12310, T-12311, T-12312, and T-12313. Signals 279 and 277 were located by sextant cuts. ✓

G. SHORELINE -

Shoreline details were obtained from the preliminary manuscripts used to establish photo-control. The low water line is defined by the soundings in some areas, but in others where the shore was very steep this was impossible. Mean High Water Line was located at most of the signals. ✓

H. CROSSLINES -

The area surveyed was adequately covered with crosslines. All crossings were satisfactory. ✓

I. JUNCTIONS -

Satisfactory junctions were made with contemporary survey H-8945 (1:10,000) 1967. ✓

J. COMPARISON WITH PRIOR SURVEYS -

Pre-Survey Review Items:

Item #18. This feature was most fully developed in Survey H-8945. Two detached positions, Nos. 6001, 6017, on this sheet, however, supplement that information. The sunken ship Pos. No. 6002 is located by this survey. ✓

This survey was, in general agreement with prior surveys. Depths and extent of shoals are better shown by this survey. Shoreline features on this survey are better defined.

K. COMPARISON WITH THE CHART -

This survey was compared with chart 8160, 19 December 1966, 7th Ed. (1:80,000)

Dangers to navigation not apparent on the chart: ✓

1. A rock at Lat. $56^{\circ}08.10'$ Long. $133^{\circ}03.65'$, with a least depth of 1.6 feet at MLLW. covered $1\frac{1}{2}$
2. A rock at Lat $56^{\circ}06.78'$ Long $133^{\circ}03.58'$ ~~bare~~ 4.5 feet at MLLW.

There was general agreement with the chart; however, some discrepancies were found. A copy of Chart 8160 follows that compares survey items with chart.

L. ADEQUACY OF SURVEY -

The survey is complete enough to supersede prior surveys for charting. Special attention should be paid to shoreline details and rocks along the northern entrance to Whale Passage. ✓

M. AIDS TO NAVIGATION -

There are no aids to navigation within the area of the sheet. ✓

N. STATISTICS -

Number of Bottom Samples (Ship LESTER JONES)	65.0
Number of Positions " " "	628.0
Nautical Miles of Sounding Line " " ,	225.8

Number of Positions (Launch 1192)	2411
Miles of Sounding Line " "	380.2
Number of Positions " "	134.0

 ✓

Area in Square Nautical Miles (excludes land) 19.0

Temperature & Salinity Observations

Jointly with H-8945 2.0

O. MISCELLANEOUS -

In reference to number 49., Notes to the Hydrographer

T - 12310: Verification was accomplished within the area of the sheet limits. Kashevarof Passage Light was visited and is on ~~an~~ ^{THE} island indicated. ✓

T-12311: The objects believed to be piles are, in fact, buoys. They have positions of:

Buoy:	Lat. 56°06.54'	Long. 133°07.05'
Buoy:	Lat. 56°06.62'	Long. 133°07.24'
Buoy:	Lat. 56°06.69'	Long. 133°07.25'
Buoy:	Lat. 56°06.90'	Long. 133°07.34'

 ✓

A small pier used in logging operations is located at:
Lat. 56°06.88' Long. 133°07.26' ✓

plotted as uncovered

- T-12312: The light believed to exist at Lat. 56°04'17" Long. 133°04'35" was found to be a sunken boat covered by 5.4 ft. of water at MLLW. *plotted as uncovering 6 ft. at MLLW*
- T-12313: The existence of kelp at Lat. 56°06'30" Long. 132°55'00" was not verified.

P. RECOMMENDATIONS -

Q. REFERENCES TO REPORTS -

Tides Verified:	Tides & Currents Branch
	November 13, 1967
Bottom Samples Forwarded:	Oceanography Division
	November 8, 1967
Manuscript Field Edit Forwarded:	Coastal Mapping, AMC
	December 26, 1967
Echo Corrections:	

TIDE NOTE H-8946

The 1967 Whale Passage tide gage was located on the small island on the northwest side of the South entrance to Whale Passage, Lat 56° 03' 34" N. Long 132° 59' 01" W.

Actual tides as recorded by the bubbler gage at this location are used to reduce soundings for smooth plot. Predicted tides for the area were used to reduce soundings for the boat sheet. All tide observations were in 120° W. time.

TIDE NOTE FOR HYDROGRAPHIC SHEET

11/13/67

~~NATIONAL OCEANOGRAPHIC~~ Pacific Marine Center

Plane of reference approved ~~is~~ for
~~XXXXXXXXXXXXXXXXXXXX~~

HYDROGRAPHIC SHEET

LJ-10-1-67 H-8945
LJ-10-2-67 H-8946

Locality: Whale Passage, Alaska

Chief of Party: M. H. Fleming, 1967

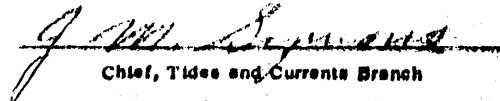
Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681): Whale Passage, Alaska

Height of Mean High Water above Plane of Reference is as follows:

14.7 feet

Remarks Tide reducers for Day No. 135, 13^h24^m to 18^h19^m
have been revised in red and verified.


Chief, Tides and Currents Branch

ECHO CORRECTIONS
H-8946

Boat Sheet

Soundings were reduced in accordance with predicted tides for Whale Passage. No velocity or transducer depth corrections were applied to the boat sheet.

Smooth Sheet

Two oceanographic stations were taken in the area of the survey. Their data along with bar check results were combined and correctors resulted that combined velocity and transducer depth in a single corrector.

Date of Oceao. Station	Dates Correctors Apply
May 8, 1967	May 2 to May 18, 1967
June 8, 1967	May 23 to June 8, 1967

NOTE:

Fathometer initial was maintained on zero for the launch work and one fathom for the ship work. Any wavering from these values was compensated for applying the appropriate corrector prior to logging the sounding data for electronic data processing. The logged soundings have been corrected for initial error.

velocity tables H 8946

velocity tape format type no. 2

000170 00 0002 0001 000 0 000000 000000
000330 00 0003
001000 00 0004
000076 00 0002 0002 000 0 000000 000000
000185 00 0003
000350 00 0004
000600 00 0005
001000 00 0006
000100 00 0003 0003 000 0 000000 000000
000340 00 0004
000630 00 0005
000900 00 0006
000030 00 0003 0004 000 0 000000 000000
000095 00 0004
000240 00 0005
000320 00 0006
000650 00 0007

table no 1

SHIP LESTER JONES MAY 18 (DAY 138) AND PRIOR
table no 2

SHIP LESTER JONES MAY 23 (DAY 143) AND AFTER
table no 3

LAUNCH 1192 MAY 18 (DAY 138) AND PRIOR
table no 4

LAUNCH 1192 MAY 23 (DAY 143) AND AFTER

*as assigned from 15, 1968
JBC*

List of Signals
H-8946

210	T-12313	242	T-12312
211	T-12313	243	T-12312
212	T-12313	244	T-12312
213	T-12313	245	T-12312
214	T-12313	246	T-12312
215	T-12313	247	T-12312
216	T-12313	248	T-12312
217	T-12313	249	T-12312
218	T-12312	250	T-12312
219	T-12312	251	T-12312
220	T-12313	252	T-12312
221	T-12313	253	T-12311
222	T-12313	254	T-12311
223	T-12313	255	T-12311
224	T-12313	256	T-12311
225	T-12312	257	T-12311
226	T-12312	259	T-12311
227	T-12312	260	T-12311
228	T-12312	261	T-12311
229	T-12312	262	T-12311
230	T-12312	263	T-12310
231	T-12312	264	T-12312
232	T-12312	265	T-12312
233	T-12312	266	T-12310
234	T-12312	267	T-12310
235	T-12312	268	T-12313
236	T-12310	269	T-12313
237	T-12310	270	T-12312
238	T-12310	271	T-12312
239	T-12310	272	T-12312
240	T-12310	274	T-12313
241	T-12310	276	T-12401
		277	T-12313
		279	T-12311
		273	T-12402
		275	T-12402

NOTE: Δ BEST, 1916 = 213

Δ ERN, 1916 = 215

GEOGRAPHIC NAMES

Survey No.

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

<i>Kashevarof Passage</i>										
<i>Prince of Wales Island</i>										
<i>Squaw Creek</i>										
<i>Thorne Island</i>										
<i>Whale Passage</i>										

PREPARED BY

Frank W. Pickett
 CARTOGRAPHIC TECHNICIAN

APPROVED BY

A. Joseph Wright
 CHIEF GEOGRAPHER

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VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H H-8946

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	Part III - JUNCTIONS (Continued)	CL	R
<p>Note: The verifier should first read the Descriptive Report for general information and problems.</p> <p>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</p>	✓		<p>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.</p>	✓	
<p>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</p>	✓		<p>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</p>	✓	
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>	✓		<p>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</p>	✓	
<p>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</p>	✓				
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>	✓		<p>Part V - PROTRACTING 13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>	✓	
<p>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</p>	✓				
<p>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.</p>		✓ See Verifier's Report	<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>	✓	
<p>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 transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>	✓		<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>	✓	
<p>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</p>	✓				

Reviewer: I say acceptable only to fit curves, show development of shape & bottom material. Be critical in review.

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	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 reploting or adjustments.	✓		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.	✓	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	✓		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	✓	
Part VI - SOUNDINGS			Part IX - BOATSHEET		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	✓		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	✓	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	✓		29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.	✓	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	✓		Part X - GENERAL		
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	✓		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	✓	
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.	✓		31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	✓	
Part VII - CURVES			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	✓	
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected.	✓ M.F.P.		33. The bottom characteristics are adequately shown. Remarks Required: -- None	✓	
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	✓		Part XI - NOTES TO THE REVIEWER		
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.	✓		34. Unresolved discrepancies and questionable soundings.	✓	
			35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy. <i>Conveyed inadequate development to the cartographer - nothing to be done - no</i>	✓	
			36. Supplemental information <i>is verification of critical data. Do not consider as basic. see memo to ward 4/21/71</i>		

Verified by

Master J. Gordon

Accepted inadequate development to the cartographer - nothing to be done - no
is verification of critical data. Do not consider as basic. see memo to ward 4/21/71
 August 14, 1970
 P.H.G.

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-8946

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET <i>& PNO</i>		<i>/</i>	BOAT SHEETS		<i>/</i>	
DESCRIPTIVE REPORT		<i>/</i>	OVERLAYS		<i>6</i>	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			<i>/</i>			
CAHIERS	<i>1</i>					
VOLUMES	<i>14</i>					
BOXES						

T-SHEET PRINTS (List)

T-12310 ; T-12311 ; T-12312 ; T-12313 ; T-12461 ; T-12462

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				<i>3368</i>
POSITIONS CHECKED		<i>3368</i>		
POSITIONS REVISED		<i>64</i>		
DEPTH SOUNDINGS REVISED		<i>219</i>		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		<i>16</i>		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		<i>0</i>		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		<i>64</i>		
JUNCTIONS		<i>16</i>		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		<i>30</i>		
SPECIAL ADJUSTMENTS		<i>0</i>		
ALL OTHER WORK		<i>552</i>		
TOTALS		<i>662</i>		
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

Marcia H. Sanders

September 12, 1969

August 11, 1970

Verifier's Report
H-8946

E. SMOOTH SHEET

The smooth sheet and position numbers overlay were plotted by the Digital Plotter with all finished work being done by the Verification Branch at the Pacific Marine Center.

F. CONTROL

See Descriptive Report

G. SHORELINE

Shoreline details were obtained from ADVANCE MANUSCRIPTS. A dashed line symbol was used throughout the manuscripts, but it is not clear whether this is the limits of the ledge, foul area, or low water line. The symbol is shown, except where it would interfere with soundings, depth curves, or ledges, with supplementary notes.

H. CROSSLINES

See Descriptive Report

I. JUNCTIONS

See Descriptive Report

J. COMPARISON WITH PRIOR SURVEYS

This survey is in general agreement with prior surveys, H-3940 1:20,000 (1916) and H-3943 1:20,000 (1916).

K. COMPARISON WITH THE CHART

This survey was compared with chart 8160, 19 December 1966, 7th Edition, (1:80,000 and chartlet, 31 January, 1970.

Dangers to navigation are not apparent on chart.

1. Shoal at Latitude $56^{\circ}04.56'$ Longitude $133^{\circ}04.95'$ with least depth of 4.9 fms.
2. Shoal at Latitude $56^{\circ}06.80'$ Longitude $133^{\circ}03.78'$ with least depth of 1.9 fms.
3. Shoal at Latitude $56^{\circ}06.53'$ Longitude $133^{\circ}04.46'$ with least depth of 1.6 fms.

4. Shoal at Latitude $56^{\circ}06.51'$ Longitude $133^{\circ}04.62'$
with least depth of 1.2 fms.
5. Shoal at Latitude $56^{\circ}06.75'$ Longitude $132^{\circ}57.77'$
with least depth of 5.9 fms.
6. Rock at Latitude $56^{\circ}08.06'$ Longitude $133^{\circ}02.96'$
with least depth of 1.5 fms.

MISCELLANEOUS

Mooring buoys (see descriptive report) are not plotted on this survey due to uncertainty of whether they are permanent.

The elevations of the rocky area, latitude $56^{\circ}04.00'$ Longitude $132^{\circ}58'30''$ are found on H-8945.

The position numbers for the first 110 positions are Northeast of the position dot on the position number overlay.

PART II SHORELINE AND SIGNALS

Signal 220

Respectfully submitted,



Matthew G. Sanders
Cart. Tech.

APPENDIX

K. COMPARISON WITH THE CHART

This survey was compared with Chart 8160, 4 July, 1970, 7th Edition, 1:80,000. A portion of this sheet is provided to supplement some discrepancies.

Item #1 Shoal at Latitude $56^{\circ}05.08'$ Longitude $133^{\circ}07.40'$ with least depth of 1.3 fathoms.

Item #2 Shoal at Latitude $56^{\circ}06.85'$ Longitude $132^{\circ}58.25'$ was not verified during survey.

Item #3 Shoal at Latitude $56^{\circ}06.45'$ Longitude $133^{\circ}05.00'$ is incorrect. See Boatsheet.

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

William M. Martin
William M. Martin
Supervisory Carto. Tech.

Approved and forwarded

K. William Jeffers 10/15/70
K. William Jeffers, CDR, NOAA
Chief, Processing Division, PMC

HYDROGRAPHIC TITLE SHEET

H-8946 -

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

FIELD NO.

LJ-10-2-67 -

State Alaska

General locality Whale Passage Kashevarof Straits

Locality Clarence Strait

Scale 1 : 10,000 Date of survey 24 July - 27 July 1971

Instructions dated 19 May 1971 Project No. 465

Vessel NOAA DAVIDSON (Launch 1 and Launch 2 used for this survey)

Chief of party CDR. Gerald C. Saladin

Surveyed by LTJG Taguchi

Soundings taken by echo sounder, ~~hand level~~ Raytheon DE-723 #s 553, 1276

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel

Protracted by LTJG Taguchi Automated plot by _____

Soundings penciled by LTJG Taguchi

Soundings in fathoms ~~XXXX~~ at ~~XXXX~~ MLW MLLW _____

REMARKS: _____

Applied to stds 11-16-73

Chart
8201
8160

CAS

K

KWW: 4-12-91

DESCRIPTIVE REPORT
HYDROGRAPHIC INVESTIGATION
H-8946
WHALE PASSAGE - CLARENCE STRAIT
SOUTHEAST ALASKA
1971

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

A. PROJECT

This survey was accomplished according to Project Instructions: OPR-465-DA-71, Whale Passage, Clarence Strait, Southeast Alaska, dated 19 May 1971.

B. AREA SURVEYED

The survey covered the area of Whale Passage, Southeast Alaska between the latitudes $56^{\circ} 04.0'N$ to $56^{\circ} 08.5'N$ and longitudes $132^{\circ} 55.0'W$ to $133^{\circ} 09.0'W$. Work was accomplished between 24 July and 28 July 1971. Developments and splits were done on a mylar copy of the smooth sheet of the original survey LJ-10-2-67.

C. SOUNDING VESSEL

The following vessels were used to obtain soundings on this survey:

<u>VESSEL</u>	<u>POSITION NUMBER</u>	<u>COLOR</u>
Launch 1		Blue
Launch 2		Red

A summary of each launches work by position numbers is attached. Bottom samples were taken to determine the bottom characteristics of the areas developed. Leadline soundings were made to verify the critical depths.

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers were used:

Launch 1	# 553
Launch 2	#1276

Echo sounder corrections were determined from bar checks taken daily by the launches. The fathometers were initialed at, or adjusted to 0.0. An abstract of these corrections is attached. A digital phase checker was used to check the phase corrections of the fathometers. See appendix.

E. SMOOTH SHEET

The smooth sheet will be processed by PMC, Seattle, Washington.

F. CONTROL

Visual three-point fixes were used for control on this survey. Signals previously used by the LESTER JONES in the original survey of this area were rebuilt in the field. Photo-hydro signals were located in areas that lacked sufficient control. These were located by either the direct or radial plot method. An abstract of signals is included in the appendix.

G. SHORELINE

Shoreline and shoals areas to be investigated were already delineated on the mylar copy of the smooth sheet of the survey area (H-8961). No inspection was required.

H. CROSSLINES

No crosslines were run. Soundings were compared with those obtained from the prior survey. There is good agreement.

I. JUNCTIONS

No junction was made with any contemporary survey, except that soundings within the area developed were checked with the soundings charted on the smooth sheet of H-8946. There is good agreement between soundings of this investigation and those of the prior survey.

J. COMPARISON WITH PRIOR SURVEYS

The areas developed and the least depth found are listed below:

<u>Development Location</u>	<u>Least Depth (H-8946)</u>	<u>Bottom Characteristics</u>	<u>Least Depth (Present)</u>
56° 04.55'N 132° 57.45'W	9.9 fm.		7.2 ⁹ 7/9 fm.
56° 04.65'N 132° 58.00'W	8.3 fm.		7.5 8.1 fm.
56° 04.85'N 132° 58.30'W	7.8 fm.		6.5 7.3 fm.
56° 04.55'N 133° 04.95'W	4.9 fm.	hrd, rky	4.5 4.9 fm.
56° 05.65'N 133° 05.90'W	6.5 fm.	hrd, rky	5.2 3 fm.

56° 05.95'N 133° 05.65'W	1.2 fm. ✓	gy M, brk Sh	0.9 fm. 1.2
56° 06.00'N 133° 07.25'W	2.4 fm. ✓	gy M, brk Sh	1.8 fm. 2.4
56° 06.05'N 133° 05.25'W	7.2 fm.	gy M, brk Sh	7.2 fm. ✓
56° 06.55'N 133° 04.70'W	1.2 fm.	hrd, rky	0.7 fm. 8
56° 06.48'N 133° 04.10'W	2.4 fm.	hrd, rky	1.0 fm. 3
56° 06.75'N 133° 04.25'W	1.9 fm.		1.7 fm. 9
56° 07.78'N 133° 02.75'W	1.9 fm.	gy M, brk Sh hrd bottom	1.0 fm. 5
56° 07.50'N 133° 01.90'W	2.3 fm.	brk Sh, hrd	1.4 fm. 2.8
56° 07.30'N 133° 01.60'W	3.8 fm.		4.2 fm. 3.8
56° 08.00'N 133° 01.75'W	5.4 fm. ✓	gn M, brk Sh	5.7 fm. 4
56° 07.70'N 133° 00.50'W	4.4 fm.	hrd, rky	5.4 fm. 4.4
56° 07.75'N 132° 59.40'W	9.6 fm.	hrd	8.7 fm. 9.6
56° 06.88'N 132° 58.28'W	9.1 fm.	hrd rky, brk Sh	5.1 fm. 5.7
56° 07.15'N 132° 57.90'W	6.1 fm.		6.5 fm. 6.1
56° 07.60'N 132° 57.75'W	7.8 fm.		6.3 fm. 7.0
56° 08.00'N 132° 57.50'W	19.0 fm.		17.0 fm. 18.0

All leadline soundings were reduced using the predicted tides for Lake Bay, Clarence Strait. The only major discrepancy found is the 5.1 fathom shoal located at 56° 06.88'N and 132° 58.28'W. The shallowest depth listed on H-8946 was 9.1 fathoms.

K. COMPARISON WITH THE CHART

No comparison was made with C&GS Chart 8160, 7th Ed., 4 July 1970. The survey was compared with the smooth sheet and there is good agreement.

This survey shows a better development of shoals and should be incorporated with the LESTER JONES H-8946 smooth boatsheet of this area.

L. ADEQUACY OF SURVEY

This survey is complete and adequate and should be combined with the data from the original survey (H-8946).

M. STATISTICS

<u>Day</u>	<u>Vessel</u>	<u>No. of Positions</u>	<u>Miles of Sounding Line</u>	<u>Detached Positions</u>
205	Launch 1	001-160 (1)	13.0	5
206	Launch 1	161-316 (1,2)	14.8	4
207	Launch 1	317,416 (2)	9.25	3
207	Launch 2	2001,2036 (3)	3.5	2
208	Launch 2	2037,2133 (3)	7.7	10
		<u>549</u>	<u>48.25</u>	<u>24</u>

The combined areas of the developments totaled 1.2 square miles. There are three sounding volumes for this survey. The detached positions are found in the volumes. The tide gage was set at Thorne Island, Whale Passage at the same site as was used in the prior survey. 105^{OW} time meridian was used. The soundings on the boatsheet were reduced using the predicted tides for Lake Bay, Clarence Strait, Southeast Alaska.

N. RECOMMENDATIONS

It is recommended that this investigation be incorporated with the data obtained from the original survey of the area (H-8946) and the survey be considered complete.

O. REFERENCES TO REPORT

Descriptive Report for H-8946.

Respectfully submitted,

Warren K. Taguchi
Warren K. Taguchi
LTJG. NOAA

O.K. 721

TIDE NOTE (FIELD)

OPR-465

H-8946

Portable Bubbler Tide Station	Thorne Island, Alaska
Latitude	56° 03.6'N
Longitude	132° 59.1'W
Datum	MLLW
Time Meridian	105°W

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.

APPROVAL SHEET

Hydrographic Investigation

OPR-465

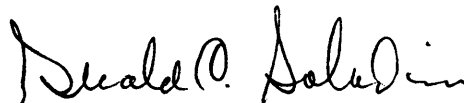
H-8946

Whale Passage - Clarence Strait

Southeast Alaska

1971

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

LIST OF MANUSCRIPTS

T-12312

FATHOMETER INITIAL CORRECTION

<u>LAUNCH 1</u>			<u>LAUNCH 2</u>		
<u>DAY</u>	<u>TIME</u>	<u>CORR'N</u>	<u>DAY</u>	<u>TIME</u>	<u>CORR'N</u>
205	083600	0.1	207	143115	0.0
	094100	0.0		160400	0.0
	100300	0.1			
	104000	0.0	208	090000	0.0
	105400	0.1		092200	0.1
	135000	0.0		150000	0.1
	153500	0.0			
206	084200	0.0			
	155200	0.0			
207	085830	0.0			
	130545	0.1			
	153030	0.0			
	155015	0.0			

LIST OF STATIONS ON H-8946

<u>SIGNAL NUMBER</u>	<u>ORIGIN OF SIGNAL (H-8946 # or T-Sheet)</u>
201	210
202	213 (BEST 1916)
203	214
204	T-Sheet #12313 (Photo #66L-5844)
205	217
206	218
207	T-Sheet #12312 (Photo #66L-5846)
208	T-Sheet #12312 (Photo #66L-5846)
209	221
210	223
211	DAVID 1967
212	231
213	230
214	229
215	228
216	227
217	232
218	233
219	236
220	237
221	238
222	242
223	272
224	243
225	265
226	246
227	247
228	245
229	251
230	270
231	252
232	254
233	256
234	257
235	259
236	260
237	261
238	240 (RAG 1919)
239	219
240	T-Sheet #12313 (Photo #66L-5830)
241	T-Sheet #12312 (Photo #66L-5830)
242	T-Sheet #12312 (Photo #66L-5830)
243	T-Sheet #12312 (Photo #66L-5830)
244	T-Sheet #12312 (photo #66L-5830)

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

RECEIVE

DEC 26 1972

TIDE NOTE FOR HYDROGRAPHIC SHEET

PACIFIC MARINE CENTER
12/15/72

Processing Division: Pacific Marine Center

Hourly heights are approved for smooth tide tape printout

Tide Station Used (NOAA form 77-12): Thorne Island, Alaska

Period: 7/23 - 7/27 1971

HYDROGRAPHIC SHEET: 8945, 8946

OPR: 465

Locality: Thorne Island, Whale Passage, Alaska

Plane of reference (mean lower low water): 6.9 ft.
which is 6.9 feet on tide staff.

Height of Mean High Water above Plane of Reference is 15.0 ft.

Remarks:

Hourly Heights have been revised in Red and Verified.

<u>DAY</u>	<u>HOURS</u>
7/25	1200-1700
7/26	0800-1700
7/27	0800-1600

Robert A. Cumming

Chief, Tides Branch

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

FORM C&GS-117
(4-62)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

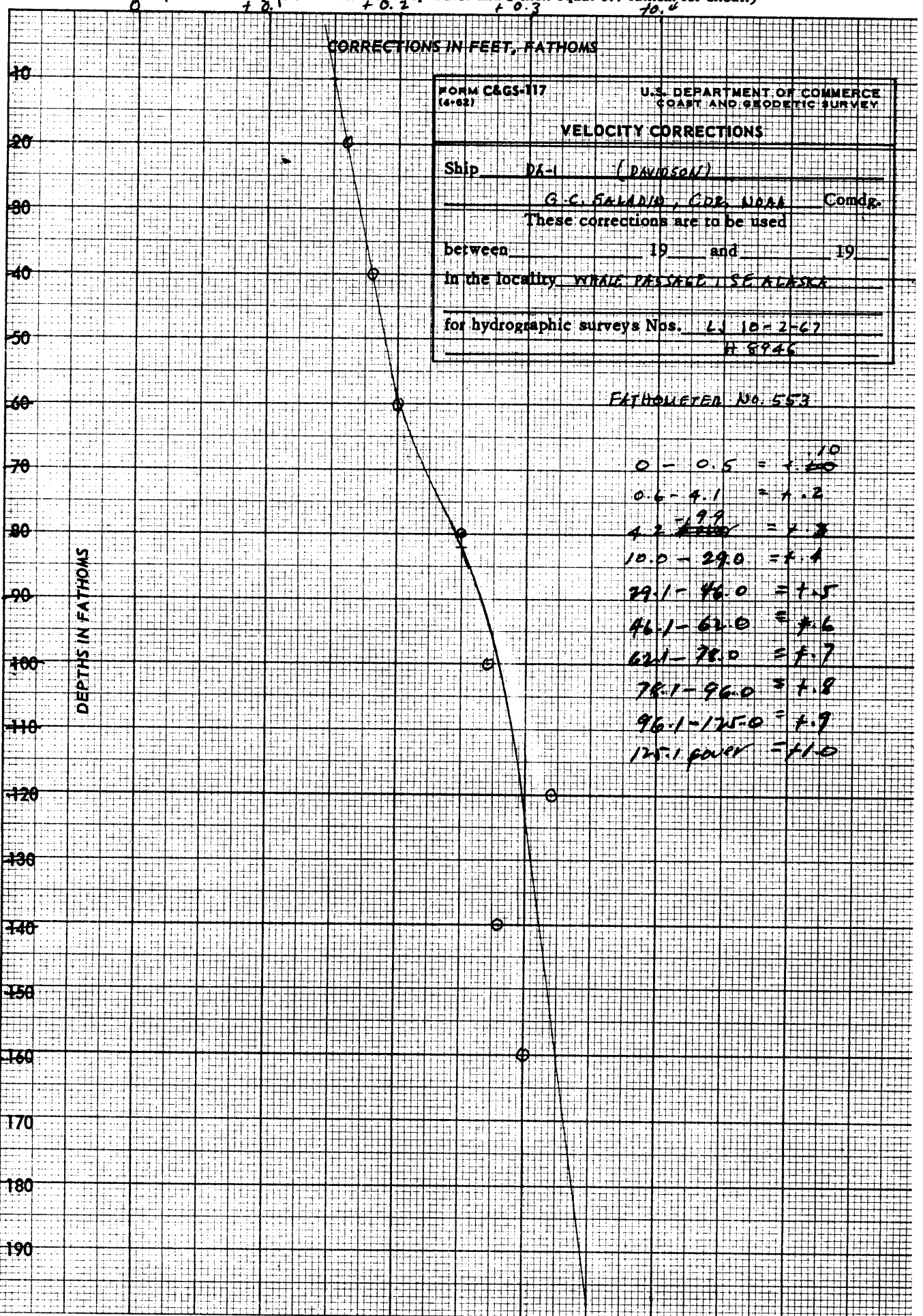
Ship DA-1 (DAVIDSON)
G. C. SALADIN, CDR. NOAA Comdr.
 These corrections are to be used
 between 19 and 19
 in the locality WHALE PASSAGE, SE ALASKA
 for hydrographic surveys Nos. LJ 10-2-67
H 8946

FATHOMETER No. 553

0 - 0.5 = +1.0
 0.6 - 4.1 = +1.2
 4.2 - 9.9 = +1.3
 10.0 - 29.0 = +1.4
 29.1 - 46.0 = +1.5
 46.1 - 62.0 = +1.6
 62.1 - 78.0 = +1.7
 78.1 - 96.0 = +1.8
 96.1 - 125.0 = +1.9
 125.1 fathoms = +1.0

DEPTHS IN FATHOMS

(For deep water add a 0 to these figures)



Velocity Tables

H-8946

1971

$$0 - 0.5 = +.X.3$$

$$0.6 - 4.1 = +.X.4$$

$$4.2 - 9.9 = +.X.6$$

$$10.0 - 17.5 = +.X.7$$

$$17.6 - 25.1 = +.X.8$$

$$25.2 - 32.7 = +.X.9$$

$$32.8 - 40.3 = +.X.10$$

$$40.4 - 47.9 = +.X.11$$

$$48.0 - 55.5 = +.X.12$$

H-8945

$$0 - 4.0 = +.X.3$$

$$4.1 - 17.0 = +.X.4$$

$$17.1 - 41.5 = +.X.5$$

$$41.6 - 54.5 = +.X.6$$

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-8946

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		2	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES	3					
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				549
POSITIONS CHECKED		409		
POSITIONS REVISED		4		
DEPTH SOUNDINGS REVISED		35		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		0		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		16		
SPECIAL ADJUSTMENTS		88		
ALL OTHER WORK	32	16		
TOTALS	32	120		
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Mauley Sanders</i>	27 January 1972		18 August 1973	
REVIEW BY	BEGINNING DATE		ENDING DATE	

VERIFIER'S REPORT

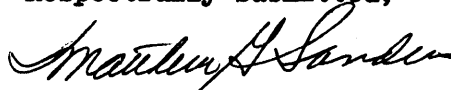
H-8945⁶

LJ-10-1-67
LJ-10-2-67

The applicable sounding data that was acquired in the 1971 "Special Investigation" has been applied to the original 1967 smooth sheet. This data was applied by hand as requested by Review.

All prior and pertinent information can be located in the original Verifier's Report on the preceding pages.

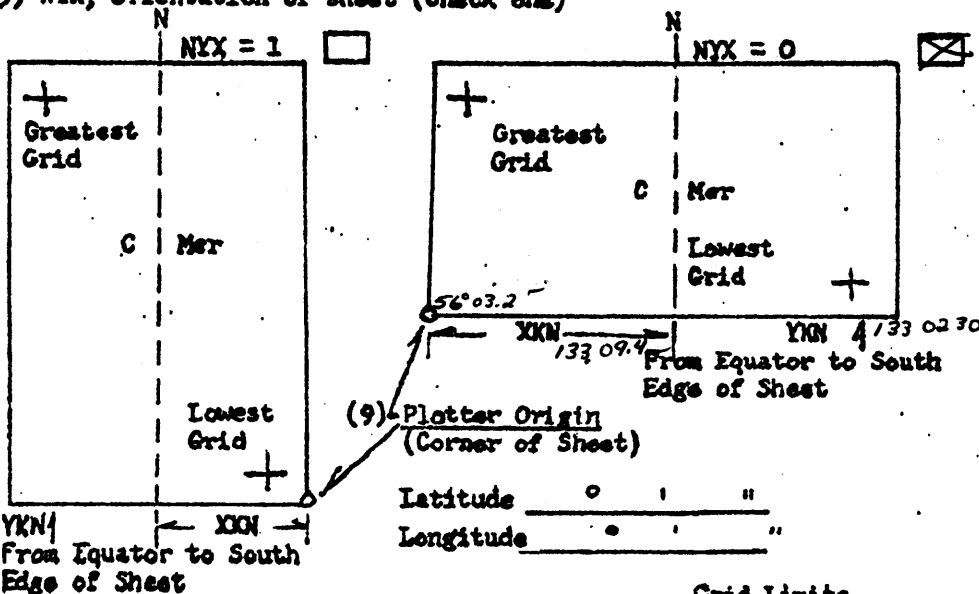
Respectfully submitted,



Matthew G. Sanders
Cartographic Technician
16 August 1973

FORM # 1
 PARAMETERS FOR DIGITAL COMPUTING
 POLYCONIC PROJECTION

- (1) Project No. OPR-465 (4) Requested by W. L. Mobley
 (2) H No. H 8946 (5) Ship or Office LESTER JONES
 (3) Field No. LJ 10-2-67 (79017 Revised) (6) Date Required _____
 (7) Visual 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) 7165.8 Meters
 (11) YKN (SP 241) Distance from Equator to South Edge of Sheet. (Origin) 6,214,233.3 Meters
 (12) Central Meridian 133° 02' 30"
 (13) Survey Scale 1:10,000
 (14) Size of Sheet (Check one) 36x60 42x60
 (15) NYX, Orientation of sheet (Check one)



- Grid Limits
- (16) Greatest Latitude 56° 09' 30" (Projection Line Interval Page 4 Hydro Manual)
 (17) Lowest Latitude 56° 03' 30"
 (18) Difference 6' 00" (19) 30"
 (20) 12 XSN
 (21) Greatest Longitude 133° 09' 00"
 (22) Lowest Longitude 132° 55' 00" (24) 30"
 (23) Difference 14' 00" (25) 28 XSN

Copy source follows

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8946

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.

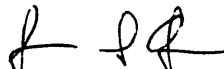
Part I - DESCRIPTIVE REPORT	CL	R	Part III - JUNCTIONS (Continued)	CL	R
<p>Note: The verifier should first read the Descriptive Report for general information and problems.</p> <p>1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None</p>	✓		<p>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.</p>	✓	
<p>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</p>	✓		<p>Part IV - VOLUMES</p> <p>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</p>	✓	
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>	✓				
<p>Part II - SHORELINE AND SIGNALS</p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys</p> <p>a. Give earliest and latest dates of photographs</p> <p>b. Field inspection date</p> <p>c. Field Edit date</p> <p>d. Reviewed-Unreviewed</p>	✓		<p>12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:</p> <p>(a) rocks</p> <p>(b) line turns</p> <p>(c) position values of beginning and ending of lines</p> <p>(d) bar check or velocity correctors</p> <p>(e) time recording</p> <p>(f) notes or markings on fathograms</p> <p>(g) was reduction of soundings accurately done?</p> <p>(h) was scanning accurate?</p> <p>(i) were peaks at uneven intervals missed?</p> <p>(j) were stamps completed?</p> <p>(k) references to adjacent features</p>	✓	
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>	✓				
<p>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</p>	✓				
<p>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.</p>	✓		<p>Part V - PROTRACTING</p> <p>13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>	✓	
<p>Part III - JUNCTIONS</p> <p>Note: Make a cursory comparison preliminary to inking soundings in area of overlap.</p> <p>8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>	✓		<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>	✓	
<p>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</p>	✓		<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>	✓	

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	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.	✓		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.	✓	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	✓		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	✓	
Part VI - SOUNDINGS 18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	✓		Part IX - BOATSHEET 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	✓	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	✓		29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.	✓	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	✓		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	✓	
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	✓		31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	✓	
Part VII - CURVES 23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected.	✓		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	✓	
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	✓		33. The bottom characteristics are adequately shown. Remarks Required: -- None	✓	
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.	✓		Part XI - NOTES TO THE REVIEWER 34. Unresolved discrepancies and questionable soundings.	✓	
Verified by <i>Matthew G. Sanders</i>			35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.	✓	
			36. Supplemental information.	✓	
			Date <i>15 August 1973</i>		

APPROVAL SHEET

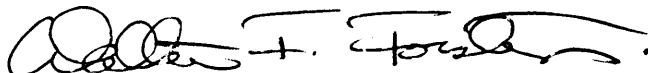
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,

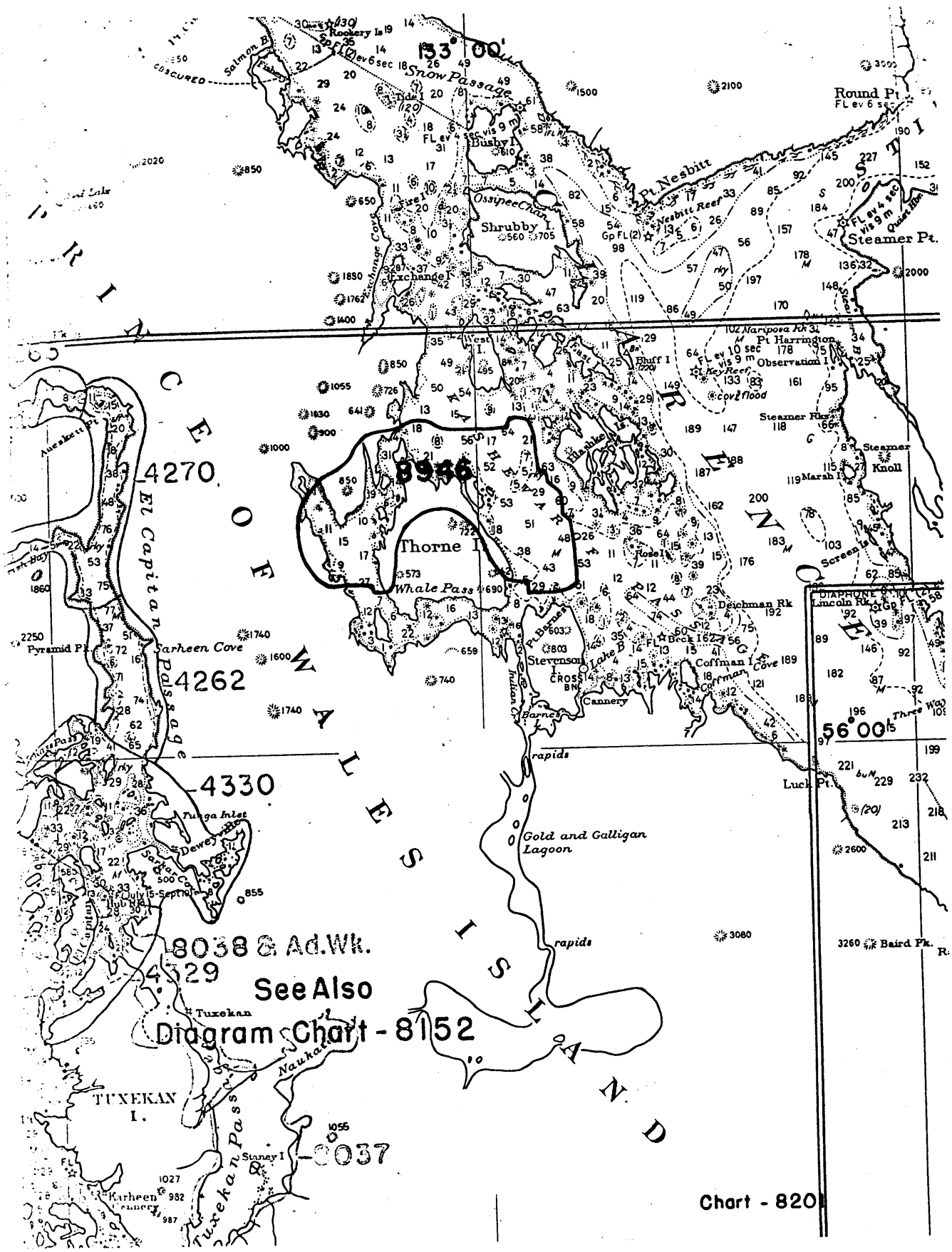


James S. Green
Supervisory Cartographic Technician

Approved and forwarded,



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



8038 & Ad.Wk.
4329 See Also
Diagram Chart - 8152

Chart - 820

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO.

H-8946

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	REMARKS
8160	8-24-71	E. Frey	Full Part Before ^{Before} After Verification Review Inspection Signed Via Drawing No. 12 <i>critical corrections only</i>
8201	8-24-71	E. Frey	Full Part Before ^{Before} After Verification Review Inspection Signed Via Drawing No. 12 <i>App'd critical corrections only thru chrt. 8160 drawing #12</i>
8201	8-24-72	James Graham	Full Part Before ^{Before} After Verification Review Inspection Signed Via Drawing No. 13 <i>Examined, no corr. status of sheet unchanged since last application.</i>
8201	3-11-77	M. Sager	Full Part Before ^{Before} After Verification Review Inspection Signed Via Drawing No. <i>STATUS OF SHEET UNCHANGED SINCE LAST APPLICATION - NO REVISION AT THIS TIME.</i>
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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