

8816

Diag. Cht. No. 8202-2.

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. LJ-20-1-64 Office No. H-8816

LOCALITY

State ALASKA

General locality GLACIER BAY

Locality ENTRANCE, GLACIER BAY

1964

CHIEF OF PARTY

RICHARD H. HOGLDER

LIBRARY & ARCHIVES

DATE 9/25/69

USCOMM-DC 5087

8816

GAK, Prior Survey 6339 <sup>Report</sup> ✓

**HYDROGRAPHIC TITLE SHEET**

H-8816

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-20-1-64

State ALASKA

General locality GLACIER BAY

Locality ENTRANCE, GLACIER BAY

Scale 1/20,000 Date of survey 5-31 to 6-22/64  
4/28/64, Supp. 6/15 & 7/21/64,

Instructions dated ltrs: 4/3&22/64 Project No. SP-3-64

Vessel USC&GS Ship LESTER JONES And Motor Launch No. 1192

Chief of party Richard Houlder

Surveyed by Richard H. Houlder and N. C. Austin

Soundings taken by echo sounder, Hand/yeed/pole/

Graphic record scaled by Launch Personnel

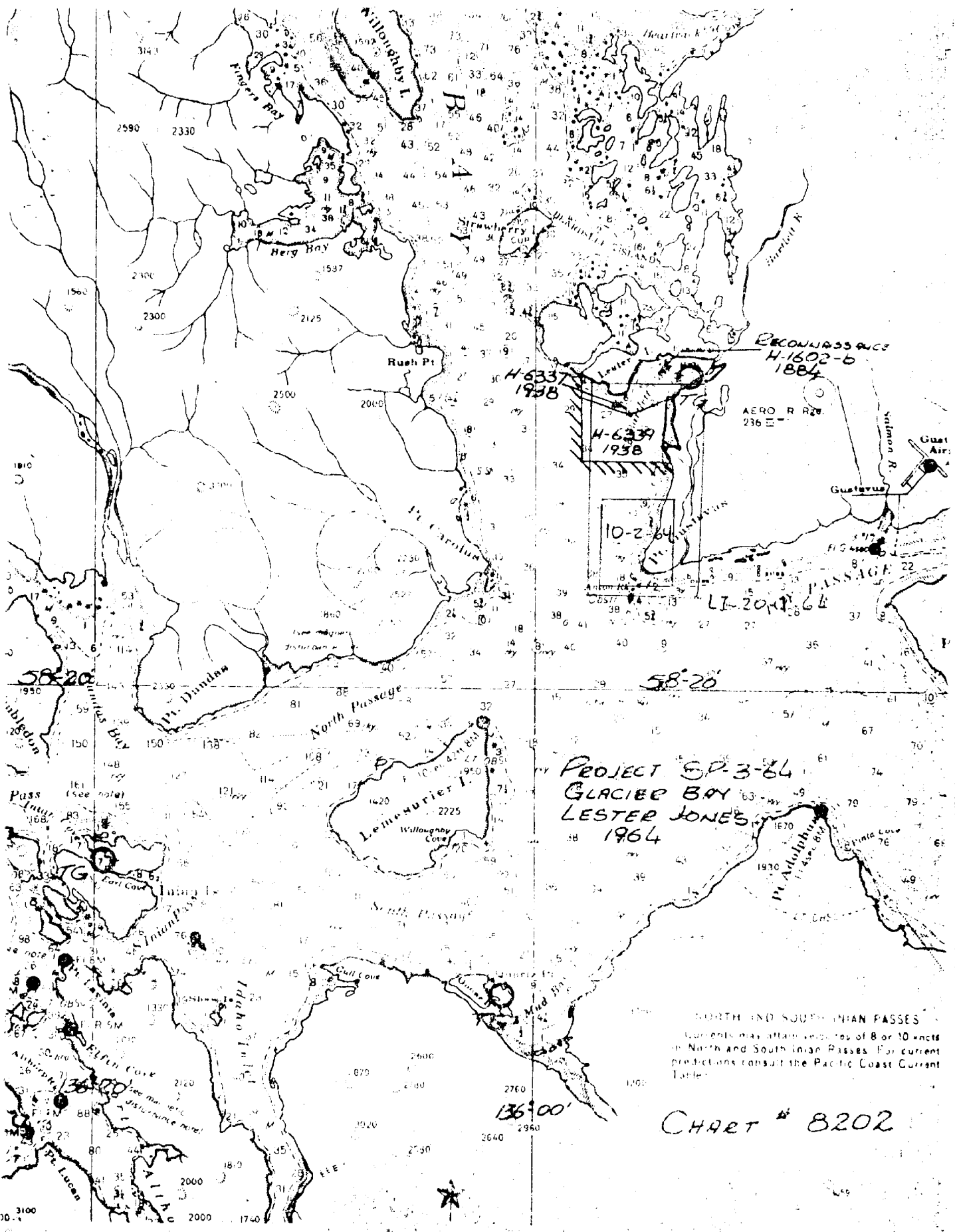
Graphic record checked by Launch Personnel

Protracted by H. L. Pittock, S.H. Otsubo & F.L. Rosario Automated plot by \_\_\_\_\_

Soundings penciled by H.L. Pittock, S.H. Otsubo & F.L. Rosario

Soundings in fathoms 144/ at 144/ MLLW \_\_\_\_\_

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



RECONNAISSANCE  
H-1603-6  
1884

H-6337  
1938

H-6339  
1938

10-2-64

LI-2004-64

PROJECT SP-3-64  
GLACIER BAY  
LESTER JONES  
1964

NORTH AND SOUTH INIAN PASSES  
Currents may attain velocities of 8 or 10 knots  
in North and South Inian Passes. For current  
predictions consult the Pacific Coast Current  
Table.

CHART # 8202

30 3100

136°00'

58°20'

58°20'

DESCRIPTIVE REPORT TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-8816 (LJ-20-1-64) 1964  
ENTRANCE, GLACIER BAY, ALASKA

Scale: 1:20,000

Date: 31 May thru 22 June 1964

A. PROJECT

Project instructions for SP-3-64 included original instructions dated 28 April 1964, supplemental instructions dated 15 June 1964 and 21 July 1964, letter dated 3 April 1964 and 22 April 1964.

B. AREA SURVEYED

The area surveyed covers the eastern portion of the entrance to Glacier Bay, Southeast Alaska, with an inset, (LJ-10-2-64), of the area near Point Gustavus. Sheet limits

for LJ-20-1-64 are:

Lat	58	28'	on the North,
Lat	58	22'	on the South,
Long	135	52'	on the East, and
Long	136	00'	on the West.

The inset limits are:

Lat	58	21.5'	on the South
Lat	58	23.5'	on the North,
Long	135	54.0'W	on the East, and
Long	135	56.5'W	on the West.

The topography of the area is low woodland with sand and gravel beaches. The bottom is generally smooth and soft excepting around Point Gustavus which is very rough and rocky, containing several obstructions to navigation.

The survey was conducted during the period 31 May thru 22 June 1964. It junctions with prior survey H-6339, 1938 (1:20,000) and with contemporary surveys LJ-10-1-64 and LJ-10-2-64. <sup>(insert)</sup>

C. SOUNDING VESSEL

All soundings by Launch 1192; day letter - purple

All bottom samples by ship; day letter - purple.

D. SOUNDING EQUIPMENT

Raytheon Fathometer 723-B, serial number 530, was used. Depths did not exceed 40 fathoms.

Two corrections were applied to the echo sounder; an index correction and an echo correction. The index was set at zero and deviations from this setting accounted for. The echo correction was determined by bar check taken <sup>daily</sup> twice to depths of 20 fathoms. When weather conditions permitted, a bar check to 30 fathoms was observed.

E. SMOOTH SHEET

The smooth sheet was ruled at the Seattle Regional Office by ship personnel, following the procedure outlined in Special Publication No. 5, "Polyconic Projection Tables". The rest of the smooth sheet was also completed there. Conditions were ideal for smooth plotting.

F. CONTROL

Hydrography was visually controlled by sextant fixes.

Hydrographic signals were located by photogrammetric methods and a short planetable traverse near Pt. Gustavus. ✓

Photogrammetric compilations used were: T-12642, -12643, and -12644.

Graphic control appears on sheet: LJ-B-64.

#### G. SHORELINE

Shoreline was transferred from the photogrammetric compilations listed above. The transfer of shoreline and topographic details has been verified.

#### H. CROSSLINES

Crosslines on LJ-20-1-64 amounted to 8.9%; those on the inset (LJ-10-2-64) comprised 4.4%; with a combined percentage totaling 7.7% of the total soundings. Junctions of crosslines ✓ were in good general agreement.

Being part of the relatively flat center basin of Bartlett Cove, soundings at the crosslines of these two survey areas are in excellent agreement. However, near the shoreline, crosslines are more difficult to compare, as a small difference of location will reveal a different sounding. ✓

#### I. JUNCTIONS

Junctions with contemporary survey LJ-20-2-64 and LJ-10-2-64 <sup>inset</sup> are in satisfactory agreement, ~~as~~ with prior survey #6339, conducted in 1938. ✓

J. COMPARISON WITH PRIOR SURVEYS

Registered Survey #6339 was conducted at the entrance of Glacier Bay in 1938. Boat sheet LJ-20-1-64 is a photo-static blue-line copy of #6339.

The one pre-survey review item, as listed in the supplemental instructions dated 15 June '64, is not within the sheet limits of LJ-20-1-64 nor LJ-10-2-64.

K. COMPARISON WITH THE CHART

The largest scale chart of the area is #8304 at a scale of 1:80,000. The sizeable difference between this and the sheet scale makes comparison difficult. Nevertheless, all charted features have been clearly and adequately developed on the smooth sheet.

L. ADEQUACY OF SURVEY

The survey is complete and adequate to supercede prior surveys for charting.

M. AIDS TO NAVIGATION

Ancon Rock Buoy 2 is located SW of Pt. Gustavus in 17 fathoms of water.

latitude 58° 22' 31"  
longitude 135° 55' 43"

N. STATISTICS

LJ-20-1-64

560  
Hydrography: 559 positions  
97.0 nm soundings  
7.0 sq. n. m.  
Bottom samples: 11

LJ-10-2-64

382

Hydrography: ~~274~~ positions  
33.6 n.m. soundings  
0.5 sq n.m.  
Bottom samples: 0

Combined Total

950

Hydrography: ~~933~~ positions  
130.6 n.m. soundings  
7.5 sq n.m.  
Bottom samples: 11

There were no tidal current or magnetic observations in the survey area. ✓

O. MISCELLANEOUS

The reported obstruction at  $58^{\circ}22'22''N$ ,  $135^{\circ}55'42''W$  was investigated as advised in letter dated 22 April '64, from Operations Division. The reported location is covered by more than 15 fathoms at MLLW. There are extreme tide rips in this area causing the buoy to drift over a rather large area. The Coast Guard has a difficult time in keeping the buoy on station because of the tide rips and the steep slope. It is possible for a boat leaving the bay to round the buoy (charted position as well as actual position) and then head due East. If this is done he will soon find himself hard aground on the rocks to the S.E. of Ancon Rock (Hydro signal KIL). One solution would be to have the buoy moved approximately 150-200 meters south of its present location. It is not known if this has been recommended to the Coast Guard or not. ✓



P. RECOMMENDATIONS

Other than the problem mentioned in "MISCELLANEOUS" above, the smooth plotter makes no recommendation.

Q. REFERENCES

1964 Season's Report	(forwarded)
1964 Fathometer Report	(forwarded)
Tide Note	(1 sheet enclosed)
Abstract of Echo Corrections	(1 sheet enclosed)
List of Signals	(1 sheet enclosed)

Respectfully submitted,

*Stanley H. Otsubo*

Stanley H. Otsubo  
Quartermaster Surveyor/lc

Approved and forwarded

*Harold E. McCall*

Harold E. McCall  
LT, C&GS  
Comdg., Ship LESTER JONES

TIDE NOTE

Project SP-3-64  
LJ-20-1-64, LJ-10-2-64  
Glacier Bay  
Southeast Alaska

Station: Bartlett Cove  
Latitude: 58°27.2'N  
Longitude: 135°52.0'W  
Time Meridian: 120 West  
Height MLLW on Staff: 5.0 feet

The portable tide gage at Bartlett Cove was used throughout this survey. Tide reducers were scaled directly from the marigrams. No corrections for differences in time or height were applied.

TIDE NOTE FOR HYDROGRAPHIC SHEET

6/28/65

Seattle Regional Office  
~~XXXXXXXXXXXXXXXXXXXX~~

Plane of reference approved in  
6 volumes of sounding records for

HYDROGRAPHIC SHEET 8816

Locality: Point Gustavus, Glacier Bay, Southeast Alaska

Chief of Party: R. H. Houlder, (1964)

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681): Bartlett Cove, Glacier Bay, Alaska

Height of Mean High Water above Plane of Reference is as follows: 13.5 feet

Remarks

*J. M. Symons*  
\_\_\_\_\_  
Chief, Tides and Currents Branch

ABSTRACT OF ECHO CORRECTIONS

LJ-20-1-64  
LJ-10-2-64

Launch #1192  
Fathometer Type DE-723  
Fathometer Serial #530

<u>DEPTH (fms)</u>	<u>CORRECTION (fms)</u>
0.0 - 6.5	+0.1
6.6 - 14.0	+0.2
14.1 - 21.0	+0.3
21.1 - 28.0	+0.4
28.1 - 36.0	+0.5

Corrections for LJ-20-1-64 to be applied from 31 May through 22 June 1964.

Corrections for LJ-10-2-64 to be applied from 29 May through 20 June 1964.

LIST OF SIGNALS

LJ-10-2-64

<u>NAME</u>	<u>SOURCE OR ORIGIN</u>
DED	LJ-B-64
IVY	LJ-B-64
KIL	Hydro signal;Pg.40,Vol. 1, LJ-10-2-64
NOT	LJ-B-64
REK	LJ-B-64
STAVE	STAVE, 1938
WEST	PT. GUSTAVUS <u>WEST</u> BASE, 1923

LJ-20-1-64

ADO	T-12644 D
BAT	T-12644 D
BEN	T-12644 ID
BEST	BEST, 1938 (T-12642 ID)
COVE	COVE, 1938 (T-12643 D)
DED	LJ-B-64
IVY	LJ-B-64
KIL	Hydro signal;Pg.40,Vol. 1, LJ-10-2-64
MAC	T-12644 D
NOT	LJ-B-64
OFF	T-12644 ID
REK	LJ-B-64
SAM	T-12642 D
STAVE	STAVE, 1938
TELL	TELL, 1938 (T-12644 D)
WEST	PT. GUSTAVUS <u>WEST</u> BASE, 1923

Note: D . indicates pricked directly  
ID indicates pricked indirectly

GEOGRAPHIC NAMES PENCILED ON H-8816

ANCON ROCK

BARTLETT COVE

PT. GUSTAVUS

GLACIER BAY

ICY STRAIT

GEOGRAPHIC NAMES

Survey No. H-8816

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Ancon Rock											1
Bartlett Cove											2
Glacier Bay											3
Icy Passage											4
Icy Strait											5
Lester Island											6
Point Gustavus											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

PREPARED BY

*James W. Sisk*  
CARTOGRAPHIC TECHNICIAN

APPROVED BY

*A. J. Wright*  
CHIEF GEOGRAPHER

HYDROGRAPHIC SURVEY STATISTICS  
 HYDROGRAPHIC SURVEY NO. H-8816

(LJ-20-1-64)  
 (LJ-10-2-64)

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

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

T-SHEET PRINTS (List)

*T-12642 ; T-12643 and T-12644*

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>950</i>
POSITIONS CHECKED		<i>550</i>		
POSITIONS REVISED		<i>74</i>		
DEPTH SOUNDINGS REVISED		<i>76</i>		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		<i>139</i>		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		<i>4</i>		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS <i>(Geo Names)</i>		<i>2</i>		
JUNCTIONS		<i>8</i>		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		<i>17</i>		
<i>Signal moved</i> SPECIAL ADJUSTMENTS <i>Ivy, Rec, Ded, Kil</i>		<i>14</i>		
ALL OTHER WORK		<i>76</i>		
TOTALS		<i>122</i>		
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Cornelius A.J. Paum</i>	<i>Oct 28 1966</i>		<i>Nov 28 1966</i>	
REVIEW BY	BEGINNING DATE		ENDING DATE	



VERIFIER'S REPORT  
HYDROGRAPHIC SURVEY, H-8816

(LJ-20-1-64)  
(LJ-10-2-64)

**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><b>Note:</b> 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 <b>SUPERSEDED</b>.</p>	Satisfactory	
<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>	Not Applicable		<p><b>Part IV - VOLUMES</b></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>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><b>Part II - SHORELINE AND SIGNALS</b></p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys</p> <p>a. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed</p>	T-1262 643 644 and Topo Plane Table 2-B		<p>(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? fairly (i) were peaks at uneven intervals missed? some (j) were stamps completed? not all (k) references to help were omitted in a significant number</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>	None		<p><b>Part V - PROTRACTING</b></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 17 position were revised</p>	✓	
<p><b>Part III - JUNCTIONS</b></p> <p><b>Note:</b> 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.		16/11/66 replotted	26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. <i>No fixed Aid on this sheet.</i> 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. <i>Courts Oct 28 '66</i>	✓		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	✓	
<b>Part VI - SOUNDINGS</b> 18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	✓		<b>Part IX - BOATSHEET</b> 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.	Satisfactory		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 <i>134 sounding were respaced</i>	Poor		<b>Part X - GENERAL</b> 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	✓	
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. <i>Smooth Plotted soundings were much too large (about 4 mm.)</i>	Poor		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	✓	
<b>Part VII - CURVES</b> 23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected. <i>W.M.M.</i>	✓	Some omitted curves were overlooked	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	✓ ✓ No		<b>Part XI - NOTES TO THE REVIEWER</b> 34. Unresolved discrepancies and questionable soundings.	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.	✓		35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.	None	
36. Supplemental information.				None	
Verified by <i>Cornelius A.J. Paxon</i>			Date <i>Nov. 28 1966</i>		

H-3816 (L J-10-2-64)

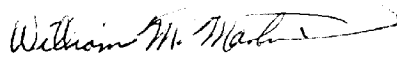
Day	No Positions	No Pos. ✓	No. Pos. Corr.	Volume	Remarks
a	145	55+7	1+1	I	+7 detached positions many changes in speed of launch
b	82	32		I	many changes in speed + short lines
c	68	27	1	II	short lines
d	18	8		II	ditto
e	44	20	1	III	ditto
f	25	16		III	
	382	165	4		



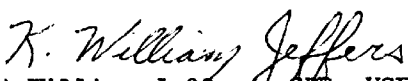
Approval Sheet

The smooth sheet has been inspected and meets the requirements of the Hydrographic Manual. (Note: Exceptions are noted in the verifier's report.)

Examined and Approved

  
William M. Martin  
Supervisory Carto. Tech.

Approved and Forwarded

  
K. William Jeffers, CDR, USESSA  
Acting Chief, Processing Division, PMC

cat 1







H-8816

✓ Ordered - 2-18-80

✓ T-12642  
✓ T-12643  
✓ T-12644

✓ Planetable L.H.B-64  
✓ T-6627-1120,000 (1938)

678-9419 - Geraldine Davis

Junctions ✓ H-8815-1:10,000-1964  
                  ✓ H-9638-1:15,000-1976

Priors ✓ H-6339-1:20,000-(1938)  
          ✓ H-4310 WD-1:140,000-1923

33149

15 Rickenbacker Causeway

N.Y. 10018

(Chinoteague)