6458

6458

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic Sheet No. 2239
Reg. No. H 6458

State Alaska

LOCALITY

Southeastern Alaska

Glacier Bay

Willoughby Island and vicinity

1939 & 1940

CHIEF OF PARTY

Benjamin H. Rigg

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec. 1930

REG. NO. H6458

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

Field No. 2239

REGISTER NO. H-6458

State Alaska

General locality Glacier Bay

Locality Willoughby Island and vicinity

Scale 1:20000 Date of survey July to October 1939 May 10 to Oct. 1, 1940

Vessel WESTDAHL

Chief of Party Benjamin H. Rigg

Surveyed by Benjamin H. Rigg, J. Carlos Bose, William F. Deane

Protracted by G. W. Branning - W. M. Martin

Soundings penciled by M M

Soundings in fathoms ~~feet~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by G. F. Jordan

Verified by G.F.J.

Instructions dated March 10, 1938 and April 19, 1939

Remarks: smooth sheet & plotting by Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT
to accompany
SHEET NO. 2239 (FIELD), REG. NO. H-6458 (1939-40)*
PROJECT HT - 221

MOTOR VESSEL WESTDAHL 1939* BENJAMIN H. RIGG, COMMANDING

*See page 4 for 1940 work

INSTRUCTIONS:

This survey was made in compliance with the Director's Instructions dated March 10, 1938 and the Director's Supplemental Instructions dated April 19, 1939.

SURVEY METHODS:

Standard survey methods were used throughout. The lines were controlled by sextant fixes; the soundings were taken with hand lead in shoal water and with wire machine in deeper areas except where ship hydrography was done. The WESTDAHL used the Dorsey Fathometer No.3 for sounding. Specific gravities and serial temperatures were taken to check the fathometer.

CONTROL:

All topographic signals on this sheet were located after control by second and third order triangulation had been established. No signals were located by the hydrographic party. See Rev., par. 2 for hydro. signals

DISCREPANCIES:

No discrepancies were noted since this report was written from the boat sheet. It is hoped that after the sheet has been finished by the processing office that there will be an opportunity to discuss any discrepancies.

DANGERS:

9 ON ORIGINAL DOCUMENT

There are no dangers of importance on this sheet. However, as an aid to navigation, the following shoal areas are described: In Lat. 58°35.1', Long. 136°03.0' a least depth of ~~15~~ 12 fathoms was found on a shoal that parallels the axis of Willoughby Island. This was closely developed with the fathometer to obtain the shoalest sounding.

In Lat. 58°34.3', Long 136°02.4', a least depth of ~~19~~ 18 fathoms was found on a shoal that is a continuation of the one mentioned above. These two spots form a ridge of about 1½ miles in length.

In Lat. 58°33.5', Long. 136°04.1' a shoal with a least depth of 17 fathoms was found. This shoal, too, parallels the axis of Willoughby Island.

To the eastward of the limits of this sheet are numerous foul areas and reefs. These will be discussed in the report for Sheet 2139. H-6457(1939)

ADDITIONAL WORK:

This sheet was cut short by the closure of the field season and every effort was made to adequately survey all the area to a satisfactory junction with future work. The small cove on the north end of Willoughby Island should be surveyed to make a definite limit for this sheet. However, future work will take over north of this cove and the surveys will dovetail nicely.

JUNCTIONS WITH OTHER SURVEYS:
The junctions on the west and south with the 1938 surveys were satisfactory. The junction with ~~Sheet 2139~~ H-6457 (1939) on the east was very good.

CHANNELS:
The only channel fully surveyed on this sheet is the large one to the eastward of Willoughby Island. Deep water is found almost to the shoreline of Willoughby Island. The shortest course when proceeding up or down the bay lies about a mile off Willoughby Island and more or less paralleling it. No critical depths exist anywhere in this area.

ANCHORAGES:
Although the cove on the north end of Willoughby Island has not yet been surveyed it is the only one used by the WESTDAHL in this vicinity. The cove offers very little protection from weather and is often occupied by icebergs. In good weather this cove proved satisfactory since it does fend off some ice and the current is negligible compared to that in the channel. Halibut boats use the cove although in good weather.

COMPARISON WITH PREVIOUS SURVEYS:
This survey is the original one.

GEOGRAPHIC NAMES:
It is recommended that the cove on the north end of Willoughby Island be named Johnson Cove. A fox farmer by this name has lived there for several years and the cove is usually referred to by his name. See attached letter dated Nov. 18, 1940

COAST PILOT NOTES:
All notes to be included in the Coast Pilot will be submitted in a separate report.

LANDMARKS FOR CHARTS:
No landmarks of sufficient prominence were noted.

TIDAL DATA:
A portable automatic tide gage was maintained in the cove on the north end of Willoughby Island in Lat. 58°36.5', Long. 136°07.1'. This gage was used for reducing all soundings on this sheet. Tide reducers were entered to the nearest foot.

FATHOMETER CORRECTIONS:
All fathometer soundings were corrected where necessary after determination from salinity observations. There was no index correction. The fathometer corrections are discussed fully in a separate report.

LIST OF SIGNALS:

The signals used in this sheet were as follows;

Triangulation

BERG 1938	MARBLE 1937-38	SPIT 1938
GRAB 1938	REEF 1938	STAR 1938
DUCE 1939	RITE 1939	SWIM 1938
MANX 1938	SINK 1939	VENT 1939
MARS 1938	SIRE 1938	ZEAL 1939

Topographic

Bit	Far	How	Man	Ox
Boy	Four	In	Mom	Pet
Cat	Five	Jam	Nor	Rex
Dog	Gal	Ken	Nun	Sat
Eat	Hot	Lat	Oh	Vir

STATISTICS:

Statute miles of sounding lines 155.5 fm. 7.8 wire 1.1 hand lead .....249.4 total

Number of soundings 2972 fm. 208 wire 43 hand lead ....3223 total

Number of positions 614

Area 18.2 square statute miles

1939 only

Respectfully submitted:

William F. Deane

William F. Deane, Aid

Approved:

Benjamin W. Bigg, Commanding

SUPPLEMENTARY DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET (FIELD NO. 2239), REG. NO. H-6458(1939-40)

M. V. WESTDAHL BENJAMIN H. RIGG, COMDG.

SEASON OF 1940
PROJECT HT - 221

INSTRUCTIONS:

The survey was made in accordance with Instructions from the Director dated March 10, 1938 and Supplemental Instructions dated April 19, 1939.

LIMITS:

The total area surveyed to date lies between Latitude 58° 31' and 58° 41'; and between Longitude 136° 02' and 136° 12'. However, some work was done on this sheet during the field season of 1939 and a descriptive report covering the area surveyed in that year has already been transmitted.

The area surveyed this season and covered by this report lies between Latitude 58° 33' and 58° 41' and between Longitude 136° 05' and 136° 12', with two single sounding lines extending through unsurveyed area as far north as Latitude 58° 44' and as far west as Long. 136° 16'. These two lines were run while the WESTDAHL was making a reconnaissance trip to and from Tarr Inlet.

ADDITIONAL WORK:

On account of the failure of the rotary converter on September 7, 1940 , which made further sounding with the fathometer impossible, a considerable part of the area covered by this sheet remained unsurveyed.

On account of the importance of publishing information obtained from surveys to date on Chart 8306, it is recommended that the smooth

sheet be plotted and transmitted to the Washington Office as soon as practicable. It is also recommended that the remaining area on this sheet be finished in 1941 and applied to the same smooth sheet. A new sheet layout would necessarily overlap most of the present sheet. Unless it is contrary to Office policy, the smooth sheet could be returned to the Seattle Processing Office, after the present data has been transferred to the chart. The smooth sheet could then be completed after the close of the 1941 season. In that case a duplicate boat sheet would be needed, for use in 1941, with the limits of the present area transferred to it. See page 12 of D.R

Additional development of the shoal in Latitude 58° 37.55', Longitude 136° 08.3' is recommended. Least Depth 13fms.

SURVEY METHODS:

Standard practice was followed in making this survey. Inshore areas and shoals were surveyed by the launch (Tender No. 2) and off-lying areas were done by the ship.

The launch party took soundings in depths of about ten fathoms or less with the hand lead, using a wire-centered leadline with a 12 pound lead, and soundings in greater depths with stranded wire and a 25 pound lead, operated by a power driven sounding machine.

The WESTDAHL took most soundings with the Dorsey Fathometer No. III. However, soundings taken by the ship after September 7, the date of the failure of the rotary converter, were obtained by the ship's wire sounding machine, using stranded wire and a 35 pound lead.

A separate report has been submitted on the operation of the fathometer and the method of obtaining temperature and salinity cor-

rections computed from observations made during the season, as described in the separate report, are given in the following tables:

Depth in fathoms	Corrections in feet
0 - 1 5/6	0
2 - 9 5/6	-1
10 - 17 5/6	-2
18 - 25 5/6	-3
26 - 33 5/6	-4
34 - 41 5/6	-5
42 - 49 5/6	-6
50 - 56 5/6	-7
57 - 64 5/6	-8
65 - 72 5/6	-9
73 - 80 5/6	-10
81 - 87 5/6	-11
88 - 99 5/6	-12

Depth in fathoms	Correction in fathoms
100 - 105	-2
106 - 148	-3
149 - 197	-4
198 - 225 +	-5

Three point fixes by means of sextant angles on control points were used to locate all positions. Control was furnished by triangulation stations and topographic signals located by planetable methods, supplemented by one signal located by sextant cuts, namely topographic signal FLM. Notes on Boat Sheet says "not used". See Vol. 6, Page 13. Four additional signals were located on North Marble Island by means of sextant fixes, namely HO, HUM, BED, and GUP but these were used only on Sheet No. 2140.

H-6375 (1944)

See Vol. 6, Pages 11 and 12.

DISCREPANCIES:

As this report is being written before the smooth sheet has been plotted, it is based on the boat sheet, the soundings on which have no fathometer corrections applied to them. However, it is believed that no discrepancies in soundings occur except minor ones caused by the slope of the bottom. See page 12 of D.R.

There are no discrepancies in positions of signals.

DANGERS:

There is a rock awash, baring 11.5 feet at mean lower low water, in Latitude 58° 41.95', Longitude 136° 18.08'. It was located by the topographer and is shown on Topographic Sheet B, Register No. T-6754. (1940)

There is a rocky shoal in the cove at the north end of Willoughby Island, Latitude 58° 36.6', Longitude 136° 07.5$', with a depth of 3 feet at MLLW. See Volume No. 6, Page 16, Positions 13-14s. This cove is a poor anchorage and is seldom used but the rock is a danger to any vessel trying to enter same.

A shoal with enough depth to allow safe passage lies one mile north of the northern end of Willoughby Island, in Latitude 58° 37.55', Longitude 136° 08.3'. A system of lines, spaced 40 meters apart, was run over this shoal. The shoalest sounding obtained was 13 fathoms; see Vol. 6, Page 72, Positions 82-83u. No drift sounding was done. Additional development should be done on this spot next season.

CHANNELS:

A well defined channel lies between the west shore of the mainland and Willoughby, Francie, and Drake Islands. The survey of this

channel is complete almost to the north end of Willoughby Island. The surveyed part of this channel is safe for navigation almost from shore to shore. In midchannel the least depth is about 40 -43 fathoms with greater depths up to 57 fathoms.

The strait between Drake Island and Francis Island has not been surveyed; the one between Francis Island and Willoughby Island is only partly surveyed but deep water exists in midchannel.

ANCHORAGES:

There are no good anchorages within the area shown on this sheet. However, there are anchorages nearby, in the bays on the west shore of the mainland, opposite Willoughby Island, which have been described in the Descriptive Report for Hydrographic Sheet Register No. H-6459. (1939)

COMPARISON WITH PREVIOUS SURVEYS:

This is an original survey.

GEOGRAPHIC NAMES:

Willoughby Island, Francis Island, Drake Island, North Marble Island, South Marble Island, Lone Island, and Geikie Rock are names appearing on the present chart of Glacier Bay, No. 8306. They are well established.

A special report on geographic names has been submitted.

MISCELLANEOUS:

As stated elsewhere, the survey of this sheet was begun in 1939. At the end of the 1939 season, three volumes of sounding records were turned in to the Seattle Processing Office. They were numbered 1, 2, and 3. Volumes 1 and 2 contained work done by the ship and Volume 3 contained work done by the launch (Tender No. 1). At the end of the 1940 season, four volumes were turned in, containing the

work covered by this report. These volumes were numbered 4, 5, 6, and 7. Volumes Nos. 4 and 5 contain work done by the ship and Volumes 6 and 7 contain work done by the launch (Tender No. 2)

The last day's work done by the ship in 1939 carried the day letter J. The first day's work done by the ship in 1940 therefore was given day letter K.

Only one day's work was done by the launch in 1939. This was given day letter a. When launch work on the same sheet was resumed in 1940, the first day's work should have carried day letter b but, by mistake, the letter r was used. Subsequent days carried progressive letters of the alphabet. Consequently, there are no days of launch hydrography with letters b to q, inclusive. If the error had been corrected, position numbers on the boat sheet would probably have been made illegible; therefore, no correction was made.

STATISTICS:

1940 only

Statute miles of soundings - - - - -	129.3	61.2 Fathometer 18.2 Wire (ship) 42.1 Wire (launch) 7.8 Handlead(launch
Number of positions - - - - - -	881	385 Ship 496 Launch
Number of soundings - - - - - - - - -	3040	1298 Fathometer 337 Wire (ship) 1088 Wire (launch) 317 Handlead (launch)
Area, square statute miles - - - -	13.7	

TIDAL DATA:

Tide reducers for the area covered by this sheet were obtained from a portable automatic tide gauge maintained throughout the season near the north end of Willoughby Island.

M.L.L.W. corresponds to 5.4 feet on the staff.

Highest tide observed-- 24.8 feet, September 4, 1940

Lowest tide observed -- 0.0 feet, July 25, 1940

It is believed that there is very little or no difference in time or height of tide between Willoughby Island and the area covered by this sheet.

Respectfully submitted,

J. Carlos Bose

J. Carlos Bose,
H. & G. Engr.

Approved and forwarded:

Benjamin H. Bissell
H. & G. Engr.
Chief of Party.

Forwarded May 1, 1941

Officer in Charge,
Seattle Processing Office.

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POST-OFFICE ADDRESS: 601 Federal Office Building,
Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

November 18, 1940

To: The Director,
Coast and Geodetic Survey,
Washington, D. C.

From: Benjamin H. Rigg,
M. V. WESTDAHL.

Subject: Geographic names.

"C" 1939

2239-40

It has been discovered that in Descriptive Report Topographic Sheet T-6679 the name Willoughby Cove was "suggested" for the small indentation at the northeast extremity of Willoughby Island. While the Descriptive Report submitted for Hydrographic Sheet Reg. No. H-6458 recommends "that the cove on the north end of Willoughby Island be named Johnson Cove". Both of these names were considered at the time the reports were written and I decided that in the absence of assigned names on the chart where there was a well established local name even though it was the name of a living person that name should be recommended.

Johnson has been living at the cove in question for years and anyone with any knowledge of the bay will immediately refer to the locality as Johnson's Place while the name Willoughby Cove might mean any cove on the island and would not be as positive. It is not considered that the charting of this cove as "Johnson Cove" is naming it in honor of a living person, rather it is the addition to the chart of a well established local name.

This letter is written to clear up any uncertainty as to my recommendation in the matter.

Benjamin H. Rigg,
Comdg., WESTDAHL.

ADDITIONAL NOTES BY SEATTLE PROCESSING OFFICE - H-6458

In the fall of 1940 these records were turned in to the Processing Office as unfinished work. After consultation between the Chief of Party, Lt. Rigg, and Commander Sobieralski, it was considered completed and the Processing Office prepared a new boat sheet for extending the work northward. This explains the isolated sounding lines in the north part of the sheet.

DISCREPANCIES AT CROSSINGS:

Lat. & Long.	Position Nos.	Soundings (fathoms)	
58° 37.0' 136° 07.2'	41 - 42 L 4 - 5 M	107 - 121 97 - 98	Accepted
58° 37.6' 136° 08.0'	27 - 28 T 90 - 91 W	55 49 - 42	slope or indentation
58° 36.8' 136° 07.8'	21 - 22 S 49 - 50 N	48 ← omitted; not critical 41 - 35	
58° 33.6' 136° 04.3'	46 - 47 M 17 - 18 E	33 - 32 ← plotted - could be northwest end of shoal 43 - 44	
58° 33.6' 136° 04.2'	88 - 89 C 46 - 47 M	42 - 52 37	slope
58° 36.97' 136° 01.55'	14 - 15 M H-6457 (sheet adjoining)	99 - 94 106	believe 106 is erroneous will be considered on H-6457
58° 35.2' 136° 02.4'	50 fm. curve as shown on Sheet H-6457 not in agreement with soundings on H-6458.		not verified will be considered on H-6457 GFU

Geo. L. Bean
Officer in Charge
Seattle Processing Office.

LIST OF SIGNALS H-6458

Triangulation Stations:

BERG 1938	ENTER 1939	GOLD 1939	MARBLE 1907-38	REEF 1938	STAR 1938
CRAB 1938	EVER 1939	JOIN 1938	MARS 1938	RIDGE 1939	SWIM 1938
DONE 1939	EXTRA 1940	JUST 1939	NORTH 1939	RITE 1939	TLINGIT 1939
DRAKE 1939	FLAT 1939	KILL 1939	OPEN 1939	SINK 1939	VENT 1939
DUCE 1939	FRANK 1939	LONE 1939	PIRATE 1939	SIRE 1938	ZEAL 1939
ELSE 1939	GEIKIE 1939	MANX 1938	QUICK 1939	SPIT 1938	

Hydrographic Signals - plotted on this sheet for the benefit of H-6575.
Data in Vol. 6.

No Num Bed Gup

Topographic Signals: - From T-6630

Five Four One Six Three Two

From T-6677:

Ken

From T-6679:

Abe	Bud	Dub	Him	Leg	Nun	Pet	Vir
Ah	Bul	Eat	Hot	Mad	Oar	Pin	Wash
Ark	Cal	Far	How	Man	Oil	Rex	
Ax	Can	Flo	In	Mit	Oh	Run	
Bad	Cat*	Gal	Jam	Mol	Ore	Saw(Sow)	
Bit	Dik	Gar	Jew	Mom	Ox	Set	
Bol	Deg	Gem	Jig	Nor*	Par	Ten	
Boy*	Dum*	Go	Lat	Nub	Park	Tex	

From T-6754:

Aim	Ced	Dos	Han	Mon	Pad	Say	Tres	Zap
Ana	Cot	Dum*	Hil	Nan	Pek	Sep	Try	
Ate	Ded	El	Jar	Nata	Quat	Sex	Tub	
Atom	Dis	Fee	Lin	Nor*	Ret	Sin	Tue	
Ben	Do	Finis	Mex	Not	Row	Tar	Uno	
Bil	Dor	Fry	Moe	Nut	Sat	Thur	Wed	

From T-6756:

Boy*	Cat*	Ego	Job	Men

* Duplicated names.

TIDAL NOTE H-6458

Portable Automatic tide gage on north end of Willoughby Island:

Latitude 58° 36.5' Longitude 136° 07.1'

	Staff reading (feet)
M.L.L.W. (1940)	5.4
Highest tide observed, Sept. 4, 1940.	24.8
Lowest tide observed, July 25, 1940	0.0

NOTE: 1939 readings not available at Seattle Processing Office.
All reducers entered by field party.

STATISTICS H-6458

	Fatho-meter	Wire Ship	Wire Launch	H.L. Launch	Ship	Launch	Total
Statute miles sounding line							
1939	155.5	7.8		1.1			164.4
1940	61.2	18.2	42.1	7.8			129.3
							293.7
Number of positions							
1939							614
1940					385	496	881
							1495
Number ofsoundings							
1939	2972	208		43			3223
1940	1298	337	1088	317			3040
							6263
Area in square statute miles							
1939							18.2
1940							13.7
							31.9

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6458

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

Number of positions on sheet	1495
Number of positions checked	33
Number of positions revised	3
Number of soundings recorded	6263
Number of soundings revised	18
Number of soundings erroneously spaced	—
Number of signals erroneously plotted or transferred	—

Date: June 17, 1941

Verification by G. F. Jordan Time: 63 hrs

Review by Harold W. Murray Time: 9 hrs.

2629

HYDROGRAPHIC SURVEY NO. H6458

Smooth Sheet One

Boat Sheet One

Records; Sounding 7 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes (in volume #1)

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service ----
(Circular Nov.30, 1933)

Hydrography: Total Days _____; Last Date _____

Remarks Fathometer Corr. filed with H-6457

2776

	Remarks	Decisions
1		585360
2		585360
3		"
4		"
5		580355 U.S.G.B
6		585360
7		"
8		"
9	Do not ink pending U.S.G.B. decision.	"
10		"
11		
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27		

M 234

GEOGRAPHIC NAMES

Survey No. H6458

Name on Survey	On Chart No. 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	
* Whidbey Passage			(USKB	5/27/42)						1
Drake Island										2
Francis Island										3
Geikie Rock										4
Glacier Bay										5
North Marble Island										6
South Marble Island										7
Willoughby Island										8
Johnson Cove										9
Lone I.										10
			Names underlined in red approved by L. Heck on 6-22-41							11
			Also 7/4/42							12
										13
										14
										15
										16
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										25
										26
										27

M 234

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H 6458

Verified and Inked by G.F. Jordan Date June 17, 1941

1. The descriptive report was consulted and appropriate action taken. ✓

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓

3. All references to survey sheets mentioned in the descriptive report include the registry number and year. ✓

4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering. ✓

5. All items effecting 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. ✓

6. All positions verified instrumentally were check marked in the sounding records. ✓

7. All critical soundings are clear and legible. ✓

8. The metal protractor has been checked within the last three months. ✓

9. The protracting and plotting of all bad crossings were verified. ✓

10. All detached positions locating critical soundings, rocks or buoys were verified. ✓

11. The boat sheet was compared with the smooth sheet. ✓

12. The spacing of soundings as recorded in the records was closely followed. ✓ *Changes of course between positions were replotted, where appreciable change in hydrography was affected— 10° and 15° changes disregarded.* ✓

13. The bottom characteristics were shown on outstanding shoals. X

14. The reduction and plotting of doubtful soundings were checked. ✓

M-996

15. The transfer of contemporary topographic information was carefully examined.

16. All junctions were transferred. H 6457 (1939) not verified
H 6575 (1940) " in office

17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered.

18. The depth curves have been drawn to include the significant depths.

19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party.

20. Heights of rocks were checked against range of tide.

21. Rocks transferred from topographic survey have a dotted curve where shown thereon.

22. Unnecessary pencil notes have been removed.

23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.

24. The low water line and delineation of shoal areas have been properly shown (see letter of October 20, 1934).

25. Degree and minutes values and symbols have been checked.

26. Source of shoreline and signals (When not given in report).
also T6680, T6678
Complete list in Rev., par. 1.

27. Depth curves were satisfactory except as follows:
See item #1, addl notes by Process office — 100 fathom curve involved accepted

28. Sounding line crossings were satisfactory except as follows:
see report by Process office ✓

29. Junctions with contemporary surveys were satisfactory except as follows:
very good, except last item noted by process office ✓

30. Condition of sounding records was satisfactory except as follows:

31. The protracting was satisfactory except as follows:

32. The field plotting of soundings was satisfactory except as follows:
changes of course between positions (10°-15°) ignored. ✓

33. Notes to reviewer:
1. "U" day on boat sheet is "W" day on smooth sheet ✓
2. Tide gage reference in descriptive report, only— no position in records or repo. ✓
3. See pages 2 and 11, Vol. 6 — Rock awash Lat 58°40.6, Long 136°04.1 — Not on TG678 — transfered to H6457 — one position and check angle give three points of intersection — position indefinite. This rock shown on ozalid of H-6575(1939) recd from field. Will be disposed of when the smooth sheet is received from the field. H.W.M.

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTATIC~~ } No. H 6458 ~~New~~

received May 9, 1941
registered May 9, 1941
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25	✓	KBC	
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed

✓ JBOR

PQC
HHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 24, 1941.

Coastal Surveys
Division of ~~Hydrography and Topography:~~

✓ Division of Charts: Att: Mr. H. R. Edmonston

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6458

Locality Willoughby Island and Vicinity, Glacier Bay, Alaska.

Chief of Party: B. H. Rigg in 1939-1940
Plane of reference is mean lower low water reading
5.4 ft. on tide staff at Willoughby Island
21.7 ft. below B. M.1

Height of mean high water above plane of reference is 15.3 ft.

Condition of records satisfactory except as noted below:

P. Schureman

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. 6458 (1939-40) FIELD NO. 2239

Alaska, Glacier Bay, Willoughby Island and Vicinity
Surveyed in July-October 1939 and
May-October 1940, Scale 1:20,000
Instructions dated March 10, 1938, and April 19, 1939, (WESTDAHL)

Soundings: Handlead, Machine, and Dorsey Fathometer No. 3

Control: Three-point Fixes on Shore Signals

Chief of Party - B. H. Rigg
Surveyed by - B. H. Rigg, J. Carlos Bose, William F. Deane
Protracted by - G. W. Branning, W. M. Martin
Soundings plotted by - G. W. Branning, W. M. Martin
Verified and inked by - G. F. Jordan
Reviewed by - Harold W. Murray, June 24, 1941
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The shoreline and signals originate with 1938-40 topographic surveys Nos. T-6458, T-6629, T-6630, T-6677, T-6678, T-6679, T-6754, T-6755, and T-6756. The hydrographic signals off North Marble Island (cuts recorded in Vol. 6) were established primarily for control on H-6575 (1940).

2. Sounding Line Crossings

General agreement of crossings is excellent. Several discrepancies are listed in the Descriptive Report, page 12. In general, the conflicting deeper soundings have been omitted on the smooth sheet. The nature of the bottom in the broad, deeper areas is one of remarkable smoothness and has netted numerous perfect crossings.

3. Depth Curves

The usual depth curves may be completely drawn.

4. Junctions with Contemporary Surveys

a. The junctions on the south with H-6340 (1938) and along the west and southwest with H-6338 (1938) and H-6459 (1939) are satisfactory.

b. The junction on the east with H-6457 (1939) will be considered in the review of that survey.

c. The junction on the north with H-6575 (1939) and other surveys in this area will be considered when that work is received from the field.

5. Comparison with Prior Surveys

No prior surveys of this Bureau are registered in this area.

6. Comparison with Chart 8306 (New Print date 9-30-40)

a. Hydrography

Charted hydrography originates with Bp. 29869 and Chart Letter 473 of 1936. The hydrography consists of two reconnaissance fathometer sounding lines run by the Coast Guard vessel TALLAPOOSA. Corrections for fathometer and tides are approximate and horizontal control is based solely on bearings to prominent objects. Differences with the present survey are naturally to be expected and are as large as 30 fathoms. Since the shoalest sounding is 30 fathoms, none of the soundings need be specifically considered. The present survey supersedes this information.

7. Compliance with Instructions for the Project

The work accomplished complies with the instructions for the project.

8. Condition of Survey

a. The sounding records are neat and legible.

b. The protracting and plotting were satisfactory.

c. The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

9. Additional Field Work Recommended

The Descriptive Report, page 7, states that additional work should be done on the 13-fathom shoal in Latitude 58° 37.5', Longitude 136° 08.3'. Since very little feeling around was accomplished on this shoal as well as the three other 12- to 18-fathom shoals to the southeast of Willoughby Island, it may be desirable at some future date to wire drag these kelp-free areas.

It is possible that the new work at the north limits of the present survey may include split-line development of the 114-fathom sounding in Latitude 58° 39.3', Longitude 136° 08.4' and the 118-fathom sounding in Latitude 58° 38.4', Longitude 136° 06.5'.

10. Superseded Surveys

No prior surveys have been made by this Bureau in this area.

Examined and approved:

Chief, Surveys Section

Chief, Division of Charts

Chief, Section of Hydrography

Chief, Division of Coastal Surveys

Applied to cht 8202 via 8306 J.M.A. May 1942
Form curve applied to Cht. 8306 8/29/42 ATL

Cht. 17318 4/12/79 N.J. Bronsch Fully appl'd hydro after inspection.