4198

Diag. Cht. No. 8102-2

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

E. Lester Jones, Director

State: S.E.Alaska

11—5813

DESCRIPTIVE REPORT.

Hyd. *Sheet No.* 4198

LOCALITY:

Clarence Strait

West Coast of Gravina Island,

Bronaugh Id. to 55° 18' 30" N

1921

CHIEF OF PARTY:

J. H. HAWLEY, H.&G.E.

4198

STATISTICS SHEET No. 5 (Field Number)

Date 1921.	Letter.	Vol.	Pos.	Sdgs.	Miles Stat.	Vessel
Aug. 12	a	1	92	200	15.3	"Delta"
" 13	b	1	80	204	16.9	"
" 15	c	1	75	125	17.2	"
" 16	d	1	41	92	7.3	"
" 16	d	2	36	74	8.2	"
" 17	e	2	104	225	18.6	"
" 18	f	2	31	85	4.3	"
" 19	g	2	67	118	15.1	"
" 26	h	2	41	91	6.4	"
" 26	h	3	10	10	4.3	"
Totals			577	1224	113.6	

DESCRIPTIVE REPORT

Hydrographic Sheet No. 5

West Coast of Gravina Id., Bronaugh Ids.
to 55° 18' 30" North, Clarence Strait, S. E. Alaska.

This descriptive report of hydrographic Sheet #5 is respectfully submitted. This survey was made in accordance with instructions dated Feb. 11, 1921.

Note: All depths used in this report are referred to M.L.L.W. and miles refer to nautical miles. All bearings given are true, given in a clockwise direction with North as zero.

LIMITS:

The northern limit of this sheet is 55° 18' 30", which is about midway on the west coast of Gravina Id. From this point it extends southward along the west coast of Gravina Island to Dall Head following the shore line and extending about one mile offshore. In includes all bays and irregularities of the shore line. From Dall Head three lines extend southward to the south end of Bronaugh Islands.

ORGANIZATION:

In charge, right angle and plotting, G.L.Bean, H.& G.E.
Left angle and recording: W.G.Fielder, D. C.; M.C.Bonaobra, Ch.Writer.
Coxswain: Fred Peterson, Sea.
Engineer: S. N. Davis, A.to E. 2c
Leadsman: B. C. Felton, Sea.; Clyde Buster, Sea.
Sounding machine operator: B.C.Felton, Sea.; Clyde Buster, Sea.
Tide Observer: T. J. Stocking, W.C.2c

EQUIPMENT:

Boat used: Steam launch "Delta"
Machine: Cosmos sounding machine driven by 3-cyl. steam engine.
Wire: Seven-strand steel sounding wire.
Depth recorded: Ordinary registering sheave.
Lead: A twenty pound lead made by casting a large screw-eye into the top of a piece of two inch pipe just long enough to hold 20 pounds of lead.

Tide staff; ~~Plain staff at Dall Head and~~ Plain staff at Vallenar Bay and
Automatic tide gauge at Menefee Anchorage.
Camp at Dall Head.

METHOD:

This survey was made on a 1:20000 projection. Up and down soundings were obtained by stopping and backing for each sounding. Three hundred-meter lines were necessary for adequate development. It was endeavored to obtain a good development of the ten-fathom curve. Many rocks and kelp patches close to shore that are shown on the sheet could not be mentioned in the record book.

A camp was established near in the first bay north of triangulation station Dall. Practically all of the work on this sheet was done from there, using the automatic tide gauge at Menefee, for the entire sheet except the last half day's work, when the plain staff at Vallenar Bay was used.

CONTROL:

The control is based upon triangulation stations, McCartey Light, Tad, Dall, Slide, Meyer, Pug and Gravina. From these the topographic party located numerous whitewash signals. No trouble was experienced in getting good fixes except very close to shore.

DANGERS:

In the vicinity of Dall Head are a large number of rocky islets and rocks awash, marked by large kelp patches. They however all lie within the ten-fathom curve with the exception of one shoal. This shoal has a charted depth of 1 fathom.* While this work was being done it was covered with thick kelp and as there was a choppy sea whenever the party was in this vicinity it could not be examined closely. However there were small breakers upon it at low tide with a heavy swell so that one fathom is probably very nearly correct.

This shoal lies about 500 meters offshore.
It bears about 300°, dist. 645 m. from hyd. sta. Dap
252°, " 460 m. " " " Pac
211°, " 750 m. " " " Wary

In the entrance to the small bay just south of triangulation station Dall is a kelp patch.
It bears about 326°, dist. 620 m. from hyd. sta. Bo
256°, " 430 m. " " " Sap
211°, " 510 m. " " "

Between this bay and the next one to the north the 10-fathom curve lies about 300 meters offshore. Inside of

Rptd from H.3388

* This charted depth of 1 fathom lies 1½ mile N. 20° W. from the shoal here referred to. E.P.Lucas 4/24/22

this are rocks and kelp.

A rocky islet lies about 240 meters offshore. It is about 25 feet in elevation at M.L.L.W.
It bears about 315°, dist. 670 m. from hyd. sta.
291°, " 290 m. " " "
186°, " 670 m. " " "
Hydrographic station Lad is located on this islet.

From the small bay about 1/2 mile N.W. of triangulation station Dall the ten-fathom curve lies from 100 to 300 meters offshore. Inside of it are many rocks marked by kelp

TRAFFIC:
Small fishing craft occassionally anchor in one of the bights along this coast in fair weather and during the summer months, pile drivers and fish trap tenders are active. There are several trap locations on this sheet. This is practically the only traffic along this shore as Graviha Island is a game reservation.

PHYSICAL CHARACTERISTICS:
The shore line is bold and rugged rising very abruptly in most places. Close to shore are many large boulders and detached rocks. In most places the vegetation is heavy, composed of cedar, fir hemlock and spruce with a dense undergrowth of heavy bushes, devils club, alder and small trees. Dall Head was burned over some years ago so that there are large open spaces with only dead tree trunks and a few young cedars and firs. There are many small streams, but no large ones on this sheet. Deer are plentiful on this island.

BOTTOM:
The bottom is rocky and uneven close to shore and drops rapidly to 200 fathoms, the 100-fathom curve lying about 1/2 to 3/4 mile offshore. In the vicinity of triangulation station Dall it is about 1/3 mile offshore. In the small bays sand, gravel and mud is found over small areas, but generally it is hard bottom.

CURRENTS:
Tidal currents close to shore are strong, especially on the flood tide an estimated velocity of two knots was reached. Small tide rips are set up off the more prominent points, when the wind is opposed to the tide. West of Bronaugh Island moderate tide rips are set up on the flood tide with a N'ly wind.

ANCHORAGES:
There are no good harbors on this sheet, but several of the small bays are fair weather anchorages for small

craft, but not to be trusted during a severe storm. In the small bay 1/2 mile NW of triangulation station Dall small boats are safe during N'ly winds, but a heavy sea makes in during a SE storm. Small boats would also secure a fair anchorage in the bay just S of triangulation station Dall during a N'ly storm but would have no shelter whatever during a southeaster.

Prepared + Submitted by G.L. Beam, H.+G.E.

Approved and Forwarded

J.V. Hawley,

Chief of Party.

TIDAL DATA

Hydrographic Sheet #5

Automatic tide gauge at Menefee Anchorage, connected to bench marks, established in 1921, used from August 12 to August 19, 1921.

Plane of reference	Mean lower low water
" " "	7.8 feet on staff.
Highest tide observed	Not available
Lowest tide observed	" "

Plain staff at Vallenar Bay, connected to bench marks established in 1921, used August 26, 1921.

Plane of reference	Mean lower low water
" " "	8.8 feet on staff.
Highest tide observed (during 1921 observation)	27.1 " " "
Lowest tide observed (during 1921 observation)	6.8 " " "

LIST OF SIGNALS

HYDROGRAPHIC SHEET No. 5

Hydrographic Name.	Location			Est.
Cart.	Triangulation station		McCartey Lt.	1921
Tad	"	"	Tad	1921
Dall	"	"	Dall	1912
Meyer	"	"	Meyer	1921
Slide	"	"	Slide	1912
Pug	"	"	Pug	1921
Vina	"	"	Gravina	1912

All other signals are located on topographic Sheet #2

Note: This is a duplicate copy. Original is posted in front of Vol. 1, sounding record.

Hydrographic Sheet No. 4198.
S. E. Alaska"

The locality covered by this sheet is the West Coast of Gravina Island from Bronaugh Island North to Lat. 55° 18' 30 South and joins up with work by some party covered by Sheets 4199 North and 4190 West.

The work is rather open in places but appears sufficient for an approximate development. There are no indications of danger spots other than those shown on the Sheet and referred to in Discriptive Report.

The Sheet was protracted by the Field Party and a considerable number of errors were found. The Sheet was also pencil plotted by the field party and this portion of the work found to be particularly good: the only errors being in reduction Records good but no change of Course noted.

John D. Torrey
Mar. 7. 1922.

E.A.L.

COPY TO FIELD RECORDS.

February 24,1922.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 4198

Locality: Off Gravina Island, Clarence Strait, S.E.Alaska.

Chief of Party: J. H. Hawley in 1921.
Plane of reference is mean lower low water, reading
7.8 ft. on tide staff at Menefee Anchorage.
8.8 " " " " " Vallenar Bay.

For reduction of soundings.
Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G Fowler

Chief, Division of Tides and Currents.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4198

Surveyed in 1921

Instructions dated Feb. 11, 1921.

Chief of Party, J. H. Hawley.

Surveyed by G. L. Bean.

Protracted by G. L. Bean.

Soundings plotted by W. G. Fielder.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions except that the boat's courses were omitted throughout.

2. The plan and character of development fulfill the requirements of the General Instructions.

3. The plan and extent of development satisfy the specific instructions.

4. The bottom is too irregular and the depths too great for the sounding line crossings to indicate the accuracy of the work.

5. The information is sufficient to enable the usual depth curves to be drawn except close inshore.

6. The field plotting was completed to the extent prescribed in the General Instructions. The protracting was found to contain a considerable number of errors, but the plotting of the soundings was excellent. More care should have been exercised in transferring the shoreline and rocks from the topographic sheet and boat sheet. The projection should have been checked.

7. The junctions with adjacent work are satisfactory.

8. The descriptive report states that the 4 1/6 fathom spot west of Dall Head is identical with the 1 fathom sounding on Chart No. 8102. A careful comparison with the source of the 1 fathom sounding (H. 3388) shows that the two spots are 1 1/8 miles apart. Also in view of the surveyors statement that there were indications of less than 4 1/6 fathoms on the rock, it should be charted as a sunken rock.

9. No further lead-line surveying is required outside of the 10-fathom curve. A closer development is needed inside of the 10-fathom curve to insure the representation of all the details. Also only the drag will reveal the hidden dangers that undoubtedly exist.

10. The surveying is good and the field drafting fair.

11. Reviewed by E. P. Ellis, November, 1922.

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 5 (field number) 4198

State . S. E. Alaska . . . . . .

General locality . Clarence Strait . . . . . .

Locality . West Coast of Gravina Isl. Bronaugh Isl. to 55° 18' 30" N

Chief of party . J. H. HAWLEY, H. & G. E. . . . . .

Surveyed by . GEO. L. BEAN, H. & G. E. . . . . .

Date of survey . August 12 - August 26, 1921 . . . .

Scale . 1:20,000 . . . . . .

Soundings in . . Fathoms . . . . . .

Plane of reference . Mean Lower Low Water. . . . . .

Protracted by G.L.B. . . Soundings in pencil by W.G.F. .
Geographic names by E.F.Lewis.
Inked by J.D.Torrey. . . Verified by J.D.Torrey. . .

Records accompanying sheet (check those forwarded):

Des. report, ...1 Tide books, ... Marigrams, ...1... Boat sheets,

.....3 Sounding books, ... Wire-drag books, ... Photographs.

Data from other sources affecting sheet . . . . . .

Remarks: Vallenar Bay Tide Book, and Menefee Auto. Gauge Marigrams used for tides.

10-7-60 - New chart 8086 - M. Rogers - Hydrography fully applied, butted to H 8442, 1958