

6358

6358

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

DESCRIPTIVE REPORT

Hydrographic } Sheet No. 6358

State S. E. Alaska

LOCALITY

West Shore of Sumner Strait
Louise Cove & Approaches
~~Approaches to Louise Cove~~

1938

CHIEF OF PARTY

G. C. Jones

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEOD. SURV.
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MAY 8 1939

REG. NO.

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. SS1

REGISTER NO. 6358 H6358

State S. E. ALASKA

General locality West shore of Sumner Strait

Locality Louise Cove, Sand Approaches to Louise Cove

Scale 1:10,000 Date of survey Sept. 1-24, 1938

Vessel U. S. C. & G. S. S. EXPLORER

Chief of Party G. C. Jones

Surveyed by W. Weidlich and L. C. Wilder

Protracted by W. Weidlich

Soundings penciled by W. Weidlich

Soundings in fathoms ~~XXXX~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by G. C. McGlasson

Verified by G. C. McGlasson

Instructions dated July 16, 1936

Remarks:

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET ~~78~~ 551

REGISTER NO. 6358

APPROACHES TO LOUISE COVE

EAST-SHORES OF SUMNER STRAIT

S. E. ALASKA

- o -

1-9-3-8

AUTHORITY:

This survey was made under instructions of the Director of the U. S. Coast & Geodetic Survey, dated July 16, 1938.

SCALE:

The scale is 1:10,000 and the soundings are in fathoms and fractions thereof.

LIMITS:

This survey covers the approaches to Louise Cove, connects and overlaps at the southern end with sheet of the survey of 1937, extends to the eastward for about 2 mile east of a group of islands south of Pt. Amelius and extends for about a mile north of Pt. Amelius.

METHODS:

The approved methods of the service were used throughout. The launch Delta was used for the work west of Pt. Amelius, while the remainder of the sheet was surveyed by Tender #2, L. C. Wilder, H. & G. Engr. in charge.

The letter days for launch Delta are shown in red, and for Tender #2, in blue.

With a few exceptions all lines were run parallel to the shore, and spaced as a rule from 100 to 200 meters, with numerous splits between, depending upon the nature of the bottom. In Louise Cove, and in the bight northeast of the cove and north and northwest of a small unnamed island, the lines are spaced much closer in order to develop a possible anchorage.

On account of the very thick kelp, irregular sounding lines were run around the kelp patches, and in the heavy kelp patches, lines were run at high tides, when and where it was possible to find some kind of an opening, it was a rather slow process as the launch had to "back and fill" in order to clear the kelp in the propeller.

A 10 lb. hand lead was used by the launch Delta in depths of less than 15 fathoms, and in greater depths a steam sounding machine with a 14 or 18 lead and stranded wire was used. An 8 lb. hand lead was used by Tender #2, and in depths greater than 15 fathoms a power driven sounding machine with a 14 or 18 lb. lead, and stranded wire was used.

All lines were run on ranges which will explain the lack of compass headings in the sounding volumes. All soundings are up and down.

Rocks were located at minus tides by the hydrographers in charge, and also by the topographer, in order to check the heights of those located by topography in 1937.

CONTROL:

Triangulation and topography in advance furnish the necessary control. Hydrographic signals were established by the hydrographer to replace those built during the previous season, but found to be missing. The following hydrographic signals were located by angles and recorded in Volume No. 1, Page 72. STAR, MIL, FLAG, MAR, and TRIP. The fixes at the southwest end of the sheet are weak at times, due to the scarcity of signals at the south end of the sheet, and occasional poor visibility.

KELP:

The kelp is very thick especially near the shores south of Louise Cove. All rocks are marked by heavy kelp during the summer season.

TIDES:

Reducers for all the work were taken from the records of the Automatic Tide Gauge maintained at the south shore of Louise Cove near Station Ex .

LOW WATER LINES:

The low water line was established whenever it was possible to do so, thick kelp prevented in most cases the approach to the shores. The low water line is well established in Louise Cove, and in the bight northeast of it.

COMPARISON:

The scale and lack of development of the older survey, renders comparison of little or no value.

RESULTS:

Numerous rocks and shoals were located and the depth of the rocky patch in Lat. $56^{\circ} 10.07'$ Long. $133^{\circ} 49.56'$ was reduced from $4\frac{1}{2}$ fathoms to $4-2/6$ fathoms. See remark column page 38, vol 2, blue. "Searched for above shoal for about 20 minutes for least water. Planted buoy on shoal and buoy was immediately towed under, signals were obscured by rain so it was impossible to continue search. This shoal requires further development".

GENERAL CHARACTERISTICS OF THE SHORELINE AND BOTTOM:

The shoreline about the high and low water line is with few exceptions, boulder and ledge. Sand and mud at the head of Louise Cove, and in the bight north of the unnamed island immediately northeast of Louise Cove.

The bottom is very irregular, muddy in deeper water west of the group of islands south of Pt. Amelius, but rocky near the shores, and in numerous kelp patches. East of the group of islands and in the area covered by the Tender the bottom is as a rule rocky in the deeper water, with occasional mud or coral, rocky near the shores and the numerous kelp patches.

DEPTH CURVES:

On account of the very irregular bottom the depth curves are very erratic and at times appear to be impossible. The depth curves were drawn according to the requirements in Louise Cove and in localities where it was possible to do so.

DANGERS AND OBSTRUCTIONS:

Shoals of greater depths than 10 fathoms are not enumerated below.

1. A shoal with a least depth found of $7\frac{1}{4}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 10.64'$ Long. $133^{\circ} 55.06'$, Pos. 60 h. red, bottom is rocky. Numerous soundings were taken on the spot, only least depth obtained were recorded and plotted.

2. A shoal with a least depth found of $8-3/4$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.03'$ Long. $133^{\circ} 55.36'$. Numerous soundings were taken, only least depths obtained were recorded and plotted, bottom is rocky. Pos. 71-72 and 90 h. red.

3. A kelp patch with a least depth found of $1\frac{5}{6}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.07'$ Long. $133^{\circ} 56.19'$, bottom is rocky. Pos. 77c red.
4. A shoal with a least depth found of $8\frac{1}{2}$ fathoms at M.L.L. lies in Lat. $56^{\circ} 11.25'$ Long. $133^{\circ} 56.05'$. Pos. 44e red, numerous soundings were taken, only least depth recorded and plotted, bottom is rocky.
5. A shoal with a least depth found of ~~$6\frac{5}{6}$~~ ^{6 $\frac{1}{2}$ between pos 344a (red)} fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.53'$ Long. $133^{\circ} 56.30'$. Pos. 72 b. red, bottom is muddy, numerous soundings were taken, only least depths recorded and plotted.
6. A kelp patch with a least depth found of $1\frac{1}{2}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.77'$ Long. $133^{\circ} 56.58'$. Pos. 3e red, bottom is rocky.
7. A shoal with a least depth found of $7\frac{3}{4}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.94'$ Long. $133^{\circ} 56.06'$ Pos. 20 and 21k red, bottom is muddy, numerous soundings were taken, only least depth obtained recorded and plotted.
8. A kelp patch with a least depth found of $1\frac{4}{6}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 12.46'$ Long. $133^{\circ} 56.15'$. Pos. 16lh red, bottom is rocky.
9. A shoal with a least depth found of $3\frac{1}{2}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.66'$ Long. $133^{\circ} 57.60'$, bottom is alternating rocky and muddy, numerous soundings were taken, only least depths obtained recorded and plotted. Pos. 12. m red. This shoal was marked by only a few streamers of kelp, bottom not visible on account of heavy rain and discolored water.
10. A 23 fathom spot lies in Lat. $56^{\circ} 10.60'$ Long. $133^{\circ} 53.57'$, bottom is muddy, on account of very irregular bottom in this vicinity additional soundings are necessary. This area was overlooked on account of misunderstanding between the two sounding parties. ⁽¹⁴⁾ A rock which bares ~~2~~ ^{to} 3 feet at high water (signal End) lies in Lat. $56^{\circ} 11.71'$ Long. $133^{\circ} 53.43'$ foul area extends in northerly direction for a distance of about 100 meters with several rocks which bare 1 foot at M.L.L.W.
12. A kelp patch with a least depth found of 1 foot at M.L.L.W. lies in Lat. $56^{\circ} 11.68'$ Long. $133^{\circ} 53.67'$. Kelp is very thick. (Located by hydrographer)? See par 7 b of Review.
13. A shoal with a least depth found of $9\frac{1}{2}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 12.36'$ Long. $133^{\circ} 52.62'$, bottom white shell, Pos. 39b blue. This area is well developed, least depth obtained on e day is $9\frac{1}{2}$ fathoms. Pos. 45 and 46e blue.
14. A $9\frac{1}{2}$ fathom spot lies in Lat. $56^{\circ} 11.58'$ Long. $133^{\circ} 53.87'$. Pos. 127a blue. Area is not developed, rocky bottom.
15. A shoal with a least depth found of $5\frac{1}{2}$ fathoms at M.L.L.W. lies in Lat. $56^{\circ} 11.84'$, Long. $133^{\circ} 53.85'$. Pos. 11e blue. Numerous detached soundings were taken only least depths recorded and plotted. Bottom is rocky. A shoal with 7 fathoms over it at M.L.L.W. lies about 170 meters east of above position. Pos. 14 to 15 e and 16 e blue. The bottom is rocky. Strm between pos. 4-5 d Jay (blue)

ANCHORAGES:

Louise Cove offers an excellent anchorage for small vessels. The EXPLORER anchored in $9\frac{1}{2}$ to 10 fathoms, muddy bottom, about 400 meters from the entrance with a swinging room of about 180 meters. Vessels wishing to anchor at the head of the cove should follow the east shore at a distance of about 150 meters, in order to clear the numerous ledges at the west shore, this will lead ~~to~~ a small kelp patch with a depth of $3\frac{1}{2}$ fathoms at M.L.L.W.

CHANNELS:

Louise Cove is easily entered and the passage between the southernmost wooded islands, or the passage south of the island which is marked by a day beacon is recommended.

The passage between Amelius Point and the northernmost island is not recommended except to vessels with local knowledge.

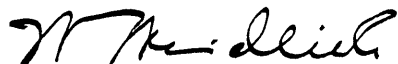
CURRENTS:

No current observations were taken in this locality. The flood apparently runs normal to the shores in northerly direction.

TIDERIPS:

Tiderips were experienced by the Tender while working between the islands, especially during strong southerly winds with the Ebb running.

Respectfully submitted,



W. Weidlich,

Mate,

U.S.C. & G.S.S. EXPLORER.

APPROVED AND FORWARDED:



G. C. Jones,

Commanding Officer,

U.S.C. & G.S.S. EXPLORER.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

June 1, 1939

✓ Division of Charts: Attention: Mr. E. P. Ellis

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 6358

Locality Louise Cove and Approaches, West Shore of Sumner Strait

Chief of Party: G. C. Jones in 1938

Plane of reference is mean lower low water reading

3.3 ft. on tide staff at Louise Cove

15.6 ft. below B. M. 1

Height of mean high water above plane of reference is 10.9 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Remarks

Decisions

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2		560 335
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GEOGRAPHIC NAMES

Survey No. **H6358**

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.
<u>Louise Cove</u>									1
<u>Point Amelius</u>									2
<u>Sumner Strait</u>									3
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by L. Heck on 5/20/39

Field Records Section (Charts)

H6358

HYDROGRAPHIC SHEET NO.

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

Number of positions on sheet	1858.
Number of positions checked	.43...
Number of positions revised 0
Number of soundings recorded	5048.
Number of soundings revised	.168.
Number of soundings erroneously spaced 0
Number of signals erroneously plotted or transferred 0

Date: *Sept. 22, 1939*

Verification by *G.C. McGlasson*

Review by

Lothman

Time: *8 days 6½ hours (62½)*

Time: *18 hours.*

HYDROGRAPHIC SURVEY NO. H-6358

Smooth Sheet Yes

Boat Sheet Two

Records; Sounding 6 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) None

Statistics None

Approved by Chief of Party D. R. only

Recoverable Station Cards (Form 524) ---

Special Chart for Lighthouse Service None
(Circular Nov.30, 1933)

Hydrography: Total Days 12 ; Last Date Sept. 24, 1938

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
 PHOTOSTAT OF

No. H - 6758

~~No. I~~

{ received May 8, 1939
 registered May 12, 1939
 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
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25	✓		Att Page 3, 4 and 5
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RETURN TO

82	T. B. Reed
----	------------

HBC

✓ JBR

September 22, 1939^u

Verification Report
Hydrographic Survey No. 6358 (1938)

1. Condition of Records.

The records are neat and legible and, in general, conform to the requirements of the Hydrographic Manual.

2. Shoreline and Signals.

The shoreline and topographic signals originate with T 6638 (1938) and T 6664 (1938).

The hydrographic signals were located by sextant angles and recorded in the sounding records.

3. Sounding Line Crossings.

The sounding line crossings are in general satisfactory. The bottom is very irregular and minor discrepancies appear on steep slopes.

4. Depth Curves.

Within the area of the present survey the usual depth curves may be satisfactorily drawn. ^{D.R. & R.S.}

5. Junctions with Contemporary Surveys.

The junction on the south with H 6284 (1937) is satisfactory.

6. Aids to Navigation.

Fixed aid - Louise Core day beacon,
There are no floating aids to navigation shown on this survey.

7. Field Plotting.

The field plotting is satisfactory.

8. Note to Reviewer.

In Lat. $56^{\circ} 10.7'$, Long. $133^{\circ} 56.1'$. Volume 2, page 15, position 69c (red).

This is a detached position which locates a pile, apparently anchored in 55 feet of water. This is possible of course but it should be given more consideration.

Respectfully submitted,

L. C. McGlasson

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6358 (1938) FIELD NO. SS1

Louise Cove and Approaches, West Shore of Sumner
Strait, S. E. Alaska.
Surveyed in September, 1938, Scale 1:10,000
Instructions dated July 16, 1936

Hand Lead and Machine Soundings. 3 Point fixes on shore signals.

Chief of Party - G. C. Jones
Surveyed by - W. Weidlich, L. C. Wilder
Protracted by - W. Weidlich
Soundings plotted - W. Weidlich
Verified and inked by - G. C. McGlasson

1. Shoreline and Signals.

The shoreline and signals are from T-6638 (1938) and T-6664 (1938). Fixes for hydrographic signals are recorded on page 72 of Vol. 1.

2. Depth Curves.

The usual depth curves may be satisfactorily drawn including portions of the 0, 1, 2, 3, and 5 fathom curves.

3. Sounding Line Crossings.

No regular system of cross lines was run. The agreement of soundings on adjacent parallel lines is satisfactory.

4. Junctions with Contemporary Surveys.

The junction on the south with H-6284 (1937) is satisfactory.

The surveys on the north and east have not as yet been received. The junctions will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys.

- a. H-1749 (1886), H-1753 (1886) and H-1754 (1886)
scales 1:80,000.

Each of these sheets cover the entire area of the present survey, and actually constitute but one survey. H-1753 contains position numbers only. H-1754 contains more sounding details than H-1749 which shows formlines in addition to the topographic and hydrographic information on the other two sheets.

The old work is on a much smaller scale (1:80,000).

The shoreline is generalized and the area sparsely developed. The depths are in good agreement and there are no shoal indications which have not been adequately covered by the present work. The present survey shows several rocks awash at high water in approximate Lat. $56^{\circ}10'$, Long. $133^{\circ}55'$ which account for the islets shown in this location on the old survey. The present survey should, within the common area, supersede the above old surveys.

- b. H-3791 and 3791a (1915-16) W. D. and H-3916 (1916)
W. D. Scale 1:20,000.

These wire drag surveys taken together overlap a small area of the present survey on the south and east. They contain no effective drag depths that are in conflict with the present survey. Four soundings from H-3791 (1915) in the vicinity of Lat. $56^{\circ}10'$, Long. $133^{\circ}49.5'$, three of which were shoaler, have been carried forward to the present survey.

6. Comparison with Charts 8152 (New Print dated Mar. 13, 1939)
8252 (New Print dated July 24, 1939)
8201 (New Print dated April 29, 1939)

- a. Within the area of the present survey the charts are based on surveys discussed in the foregoing paragraphs.

The 5 fathom sounding charted in Lat. $56^{\circ}12.4'$, Long. $133^{\circ}55.5'$ falls in depths of 18 fathoms on the present survey. This is either an error in charting the 15 fathom sounding in this location on H-1754 (1886) or a displacement of the 5 fathom sounding on the same line. The 5 fathom sounding should be removed and a selection made from the present survey.

The southern most islets of the group in approximate Lat. $56^{\circ}10'$, Long. $133^{\circ}55'$, referred to in paragraph 5 above, should be removed from the chart and the rock awash symbols substituted therefor.

- b. Aids to Navigation.

The day beacon for Louise Cove was located on the southeast side of the small island in Lat. $56^{\circ}10.7'$, Long. $133^{\circ}52.5'$ by the present survey and is in substantial agreement with the charted position.

7. Condition of Survey.

- a. The sounding volumes are neat and legible. On "c" day (red), page 15 of Vol. 2 a three point fix,

no check angle, is recorded for the location of a pile "apparently anchored in mud". This falls in general depths of 60 feet in Lat. $56^{\circ}10.7'$, Long. $133^{\circ}56.12'$ and seems improbable. Confirmation of the existence of a pile in this location is desirable from the field.

- b. The descriptive report was satisfactory. On page 4, item 12 of the paragraph on dangers and obstructions is the following statement "a kelp patch with a least depth found of 1 foot at M.L.L.W. lies in Lat. $56^{\circ}11.68'$, Long. $133^{\circ}53.67'$. Kelp is very thick (located by hydrographer)". No information is recorded in the sounding volumes or the boat sheet showing that a least depth of 1 foot M.L.L.W. was obtained on this kelp patch. a rock awash bare 1 foot M.L.L.W. and a sunken rock 15 meters southeast are shown on T-6638 (1938) and have been accepted as correct.
- c. The field protracting was excellent.
- d. The field drafting was satisfactory, except that the method of showing small islands by solid black areas is undesirable as they look too much like ink blots on the sheet.

8. Compliance with Instructions for the project.

Satisfactory.

9. Additional Field work Recommended.

Because of the irregular character of the area covered by the present survey, additional work in some places would probably reveal shoaler depths but it is not likely that such new depths would be a menace to navigation. Attention is directed, however, to the following shoal indications.

20 fathom sounding in Lat. $56^{\circ}10.37'$, Long. $133^{\circ}52.25'$.
 23 fathom sounding in Lat. $56^{\circ}10.58'$, Long. $133^{\circ}53.55'$.
 25 fathom sounding in Lat. $56^{\circ}11.28'$, Long. $133^{\circ}55.12'$.
 20 fathom sounding in Lat. $56^{\circ}11.53'$, Long. $133^{\circ}53.96'$.

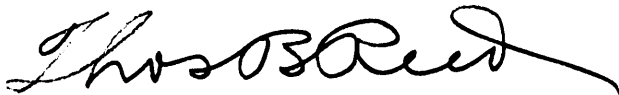
The area in approximate Lat. $56^{\circ}10.25'$, Long. $133^{\circ}49.5'$ may be adequately covered when new basic surveys joining the present survey are made.

10. Superseded Surveys.

H-1749 (1886) in part.
 H-1753 (1886) in part.
 H-1754 (1886) in part.

11. Reviewed by Leo S. Straw, September 30, 1939.
12. Inspected by H. R. Edmonston, October 2, 1939.

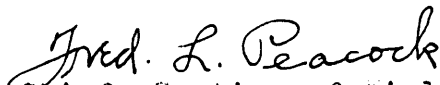
Examined and Approved:



T. B. Reed,
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

Applied to drawing of Chart 8201 - 1/30/40 - JFW

Fully applied survey to new chart 17387 - 5/8/79 OES