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Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

MAR 18 1925

Acc. No.

11—5013

*State:* S. E. Alaska

# DESCRIPTIVE REPORT.

Hydrographic & Wire Drag Sheet Thomas Bay

*Sheet No.* 4443ab

LOCALITY:

Thomas Bay

1924

CHIEF OF PARTY:

F.B.T.Siems,
Lieut. USC.& G.S.

DESCRIPTIVE REPORT
to accompany

Hydrographic and Wire Drag Sheets 66

THOMAS BAY

This survey is a revision and gives additional information to surveys completed in 1887. The deeper offshore areas in the Bay were not re-sounded but all of the shoal inshore areas were re-surveyed. The area was covered by wire drag as close to shore as possible and to an effective depth of at least 40 feet except over shoals. This survey was made under the Director's instructions of February 21st 1924.

GENERAL REMARKS: The hydrography and wire drag work in Thomas Bay is plotted on seperate sheets. It was not considered practicable to plot both on the same sheet The wire drag sheet was made by carefully pricking through with a fine needle the intersections of projection lines and signals from the hydrographic sheet while the hydrographic sheet was in good condition and the projection tested perfectly. The projections are made on the S.E. Alaska datum. The hydrography accomplished on April 28 & 29 can probably not be used as the portable tide guage upon which it depends failed to function. However, some tide readings were obtained on that day and the office may be able to predict tide readings for this period. The area affected was later covered again by sufficient sounding lines.

It was not condidered advisable to resurveyBock Bight as an examination of the entrance showed only a few feet of water at low tide and the entrance is beset with rocks and boulders. It is useless as an anchorage for small boats on this accoount.

METHODS OF SURVEY AND PLOTTING: The wire drag tender # 1 fitted up with sounding chair and hand sounding machine was used for sounding. It was found necessary to slow down the speed by sea anchors on either side of the launch. The wire drag equipment and methods used are the same as described in the Wire Drag Descriptive Report of Kasaan Bay 1924. Frequent tests for lift were made and the records reduced accordingly. Where shoals were found in critical places, they were dragged over to within one foot of the depth obtained by sounding. In other places shoals were dragged to within three feet of the bottom in most cases.

OFFSHORE DANGERS: See Topographic Descriptive Report for Thomas Bay. Additional dangers discovered by hydrography are as follows:

A 10 foot shoal one half mile 341 degrees true (NW½W mag.) from Wood Point.

A 23 foot shoal ¾ mile 254 degrees true (S W ¼ S mag.) from Wood Point.

A 21 foot rock lies in the south entrance to the Spray Island Anchorage. It is 500 yards 199 degrees true (S By E mag.) from South end of Spray Island.

See also Wire Drag Grounds 66 this report.

WIRE DRAG GROUNDS: The following is a list of grounds of the wire drag,

Position 7 A 1350 meters W S W from WOOD, grounded at buoy #5 and cleared itself three minutes later. Depth of drag ~~28~~ 31 feet. Least water found 33 feet. Shoal was later covered by drag depth of 28 feet. A depth of ~~28~~ 31 feet should therefore be charted at this position. (Tender Record 1a) A.T.S.

Position 15 A 1530 meters N W from WOOD, grounded at buoy N. Depth of drag 30 feet. Least water found ~~35~~ 33 feet. Drag grounded again later at 32 feet and shoal was later cleared with a drag depth of 29 feet. A depth of 29 to 30 feet should therefore be charted at this position. (Tender Rec. 4a)

Position 16 A 1350 meters N W from WOOD, grounded at buoy # 6. Depth of drag 40 feet. Least water found 43 feet. Shoal was later covered by a drag depth of 39 feet.

Position 33 A Same shoal as 15 A. Depth of drag 32 feet. Least water found at this time 33 feet. Shoal was later cleared with a drag depthe of 29 feet.

Position 4 B 1200 meters W x S from WOOD, grounded at buoy # 7. Depth of drag ~~28~~ 32 feet. Least water found 30 feet. This shoal was not dragged over again as it was on the edge of the channel. A.L.S.

Position 20 B 1510 meters WNW from WOOD, grounded at buoy # 6. Depth of drag 29 feet. Least water found by sounding 28 feet. This shoal was later cleared by a drag depth of 27 feet.

Position 21 C 1100 meters S from TOM, grounded at buoy N. Depth of drag 45 feet. Least water found by sounding 37 feet. This ground was caused by the drag being too near to known shoal developed by sounding and was not dragged over again.

Position 51 C 1710 meters E of SQUARE, drag parted on this shoal. Depth of drag 47 feet. Least water found by sounding 38 feet. Shoal was later covered by a drag depth of 30 feet.

Position 5 D 340 meters W of SMALL, grounded at N buoy. Drag depth 46 feet. Least water found by sounding 45 feet. This shoal was later covered by a drag depth of 33 feet.

Position 34 E 140 meters W of SMALL, grounded at buoy # 1. Drag depth 40 feet. Least water found by sounding 37 feet. This shoal is near shore and was not dragged over again.

Position 35 E 400 meters W of SMALL, grounded at buoy # 4. Drag depth 40 feet. Least water found by sounding 21 feet. This shoal was later covered by a drag depth of 20 feet.

Position 40 E no sounding obtained, drag depth 33 feet. This was close to shore and not covered again. Ground between buoys 3-4 same shoal as position 35 E.

Position 22 F Aground at buoy # 4 on same shoal as 35 E. Drag depth 40 feet.

CHANNELS & BUOYS: The entrance channel to Thomas Bay bordering along the shoal area around the extensive Wood Point flats has recently been remarked by buoys to conform with the new survey. The positions of the entrance buoys shown on the topographic, hydrographic and wire drag sheets are the old locations which were in use at the time the survey was made. For shoals found in the entrance see Offshore Dangers and Grounds of this report. The entrance channel was dragged and proven to a clear depth of 21 feet throughout the channel. The east side of the channel, however, was proven to a minimum depth of 29 feet. A 31 foot channel proven by wire drag could be used by establishing a range.

There is a small vessel entrance to the passage west of Ruth Island. A rock that bares at M.L.L.W. lies near the middle of the entrance channel and at the entrance are rocks also baring a t M.L.L.W. extending westward from the east entrance point about 450 yards.

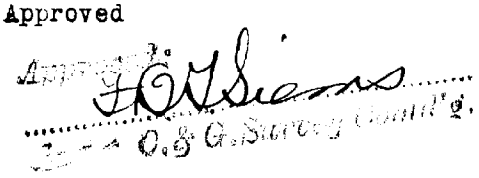
ANCHORAGES: Anchorage for small steamers may be had in back of Spray Island off the bight northward of islet along the east shore. Anchor in about 18 fathoms with outer part of islet and next point to southward on range. This anchorage is quite close to the beach, which however drops off quite steep.

Anchorage with ample swinging room for larger vessels, and sufficiently sheltered, may be had off the bay indentation of the southern part of Ruth Island in about 11 fathoms of water, mud bottom.

The water in this Bay is very muddy throughout the summer due to sediment from the glacial streams at each end of the bay. The fine mud and silt is carried in suspension and deposited all over the bay forming a bottom of sticky mud in the deeper parts and places where it can settle. It is impossible to see bottom in more than two or three feet of water at this time.

Written and compiled from notes by other officers by H.W.Tyler.

Approved



STATISTICS SHEET FOR THOMAS BAY

| Date - 1924 | Letter. | Volume. | Positions | Soundings | Miles (statute) | Vessels |
|---|---|---|---|---|---|---|
| April 30 | c | 1 | 39 | 177 | 7.0 | Tender # 2 |
| May 1 | d | 1 | 42 | 96 | 6.0 | " |
| 2 | e | 1-2 | 80 | 334 | 11.5 | " |
| Sept. 19 | f | 2 | 103 | 346 | 16.0 | Tender # 1 |
| 20 | g | 2-3 | 47 | 122 | 11.0 | " |
| 24 | h | 3 | 52 | 212 | 8.5 | Helianthus |
| 25 | j | 3 | 45 | 201 | 9.0 | " |
| Oct. 2 | l | 3 | 36 | 81 | 4.0 | " |
| 3 | m | 3 | 99 | 274 | 14.0 | Tender # 1 |
| 6 | n | 4 | 114 | 416 | 19.0 | " |
| 7 | p | 4-5 | 101 | 322 | 17.0 | " |
| 8 | q | 5 | 114 | 338 | 21.0 | " |
| 9 | r | 5 | 77 | 245 | 11.5 | " |
| Total | | | 949 | 3164 | 155.5 | |

Soundings are plotted in fathoms.

Plane of reference is mean lower low water.

Tide guage located on west side of Ruth Island (Signal Staff)

Plane of Reference -------

Lowest tide observed ------

Highest tide observed ------

Statistics for Wire Drag Sheet of Thomas Bay.

| Date 1924 | Letter | Volume | Position | No. of Sdgs. | Miles of Drag (Statute) | Vessels |
|---|---|---|---|---|---|---|
| Sept. 22 | A | 1 | 34 | | 4.5 | Helianthus |
| | | | 28 | | | Scandinavia |
| | | | 5 | 5 | | Tender # 1 |
| Sept. 23 | B | 1 | 65 | | 10.0 | Helianthus |
| | | | 61 | | | Scandinavia |
| | | | 2 | 2 | | Tender # 1 |
| Sept. 24 | C | 1 | 82 | | 13.0 | Helianthus |
| | | | 68 | | | Scandinavia |
| | | | 2 | 2 | | Tender # 1 |
| Sept. 25 | D | 1 | 49 | | 9.5 | Helianthus |
| | | | 42 | | | Scandinavia |
| | | | 1 | 1 | | Tender # 1 |
| Sept. 26 | E | 1 | 41 | | 7.0 | Helianthus |
| | | | 38 | | | Scandinavia |
| | | | 3 | 3 | | Tender # 1 |
| October 2 | F | 2 | 37 | | 4.3 | Helianthus |
| | | 1 | 26 | | | Scandinavia |
| | | 1 | 0 | 0 | | Tender # 1 |
| Totals | | | 584 | 13 | 48.3 | |

Soundings in ~~Fathoms~~ feet Plane of Reference M.L.L.W.

Auto tide guage at Ruth Island.

M.L.L.W. reading of Staff ---------

Highest tide recorded by guage --------

Lowest tide recorded by guage --------

April 1, 1935.

Section of Field Records

~~Division of Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4443b

Locality: Thomas Bay, S. E. Alaska

Chief of Party: F. B. T. Sisma
Plane of reference is mean lower low water and is
4.6 ft. ~~second~~ staff at Ruth Island, Thomas Bay, Alaska.

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 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 tubeused not stated.
11. Sounding tube No. entered in column of"Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks

Chief, Division of Tides and Currents.

April 18, 1925.

Section of Field Records

~~Division of Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4443a

Locality: Thomas Bay, Alaska

Chief of Party: F. B. T. Siems, in 1924
Plane of reference is mean lower low water and is
5.8 ft. on tide staff at Ruth Island, Thomas Bay, Alaska
4.6 " " " " No. 2 at Ruth Island, Thomas Bay, Alaska

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 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 tubeused not stated.
11. Sounding tube No. entered in column of"Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks

Chief, Division of Tides and Currents.

Hyd Sheet No 4443a

The work of April 28th and 29th, was not shown on the sheet as the soundings were not reduced because of lack of tidal data. The area covered by these days has been covered again by other days.

The sounding records are fairly well kept.

The protracting done on the sheet is accurate.

The time between soundings is very irregular in places and although some mistakes were made, a careful effort was made to space the soundings to conform to the elapsed time.

Shoal soundings found by the drag have been shown on the sheet in blue.

R L Johnston

E.P.E.

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

August 12, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4443[a]

Thomas Bay - Frederick Sound, S.E. Alaska

Surveyed in 1924

Instructions dated February 21, 1924.

Chief of Party, F. B. T. Siems.

Surveyed by Chas. Shaw.

Protracted and plotted by H. W. Tyler.

Verified and inked by R. L. Johnston.

1. The records conform to the requirements of the General Instructions except that no courses were given.

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

3. Considering the irregular character of the bottom the sounding line crossings are adequate.

4. The information is sufficient for drawing in the usual depth curves.

5. The usual field plotting was done by the field party and was carefully and accurately executed.

6. There are no contemporary surveys covering this area except the one at the entrance to the Bay surveyed in 1923 (H. 4316). The junction with that sheet is adequate.

7. Practically the entire area that was not dragged was sounded. The 4 fathom shoal to the northwest of △Tom should have been dragged over to determine the least water.

GPO

8. Attention is called to the faqt that the rocks shown on H. 1811 about 1 mile west of Spurt Pt. and shown on the present charts, have not been disclosed by the present survey. These should be omitted from the charts by order of the Chief, Section of Field Records. The new survey should be accepted as authority for charting this area.

9. No further surveying is required in this bay.

10. Rating of work { Surveying - excellent. / Field drafting - excellent.

11. Reviewed by A. L. Shalowitz, August, 1925.

# Wire Drag Sheet No 4443 3/

Within the limits of this work the ground has been well covered.

No splits occur on this sheet.

The grounds by the drag are fully listed in the descriptive report.

The wire drag records are satisfactory.

The drag work has been carefully and accurately plotted.

In the south west corner of the sheet, lines should have been drawn for the figures showing the effective depths of the drag.

P. L. Johnston

E.078.

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 August 6, 1925.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. H. 4443[b]

Thomas Bay, S. E. Alaska

Surveyed in 1924

Instructions dated February 21, 1924

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. Siems, Chas. Shaw.

Protracted and inked by H. W. Tyler.

Verified and Area and Depth Sheet by R. L. Johnston.

1. The records conform to the requirements of the General Instructions except that the end launch data should have been transcribed into the guide launch records in the columns provided for such data as per paragraph 247 of the General Instructions.

2. The methods and character of operations satisfy the General Instructions.

3. The extent of dragging satisfies the specific instructions except that from an inspection of the chart it appears that a small drag could have been carried into the area northwest of Spurt Point in the vicinity of △ Tom.

4. The depth of dragging generally satisfies the specific instructions except that the 30 and 31 ft. areas due north of the entrance should have been dragged to at least 40 ft.

5. The least water was found over all important shoals except as follows:

   a. The 38 ft. sounding in lat. 57° 01', long. 132° 58 1/2' was cleared by a 30 ft. drag.

   b. The 37 ft. sounding in lat. 56° 59 1/2', long. 132° 47 1/2' was not cleared. This shoal lies about 100 meters offshore and is apparently surrounded by deeper water.

   c. The 4 fathom shoal developed on H. 4443[a] in lat. 57° 02', long. 132° 56' should have been dragged over to determine the least water.

GPO

6. The junctions with the adjacent sheets are satisfactory.

7. The overlaps within the sheet are sufficient and no splits were left in the work.

8. No important areas were left undragged so additional work will be unnecessary.

9. The field drafting was completed to the extent prescribed in the General Instructions except that the small guide lines for the numerals to the limits of the drag strips were omitted in the southwest portion of the sheet.

10. Rating of the work (Field work - excellent.
(Field drafting - excellent.

11. Reviewed by A. L. Shalowitz, July, 1925.

Form 537
11—5812

4443b

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

# HYDROGRAPHIC TITLE SHEET (WIRE DRAG)

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.
Thomas Bay Wire Drag Sheet
Register No. 4443b

State S.E. Alaska.

General locality . Frederick Sound

Locality . Thomas Bay

Chief of party . F.B.T.Siems

Surveyed by . F.B.T.Siems & Chas. Shaw.

Date of survey . October 1924.

Scale 1 : 20,000.

~~Soundings in~~ . Wire drag depths in feet. Soundings in ~~fathoms.~~ feet

Plane of reference . Mean Lower Low Water.

Protracted by H.W.T. . . Soundings in pencil by H.W.T. Ver & Inked by A.L.S.

Inked by . H.W.T. . . . . Verified by . P.L.J. . . . .

Records accompanying sheet (check those forwarded):

1 Des. report, 1 Tide books, 2 Marigrams, 2 Boat sheets, also used for Hydrographic work.
1 Sounding books, 3 Wire-drag books, ..... Photographs.
1 Tracing.

Data from other sources affecting sheet . Wire drag survey of entrance to Thomas Bay by J.H. Hawley in 1923. (Register No. 4316) See also Register No. 3991.

Remarks: One descriptive report covers both the wire drag and hydrographic sheets.

4443a

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.
Thomas Bay Hydrographic Sheet
Register No. 4443a

State S.E. Alaska

General locality . Frederick Sound

Locality . . Thomas Bay

Chief of party . F.B.T. Siems

Surveyed by . Chas. Shaw

Date of survey . April and October 1924.

Scale . . 1 : 20 000

Soundings in fathoms

Plane of reference . Mean lower low water

Protracted by H.W.T. . Soundings in pencil by H.W.T. .

Inked by . . . . Verified by . . . . .

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, 2 Marigrams, 1 Boat sheets,

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

Data from other sources affecting sheet See Register No. 1811 for hydrography and topography of Bock Bight and section of shoreline on north side of Bay between signals "Foul" & "Doc"

See also Hydrography on bar at entrance to Bay by J.H. Hawley in 1923.

Remarks: One descriptive report covers both the hydrographic and wire drags sheets.