

5105

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5105

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DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
R. S. Patton, U. S. COAST & GEODETIC SURVEY	
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APR 13 1931	
State: Alaska	Acc. No.
DESCRIPTIVE REPORT	
Topographic Hydrographic	} Sheet No. 5105 Field # 4
LOCALITY	
Behm Canal	
Traitor's Cove, Neets Bay and	
Gedney Pass	
1930	
CHIEF OF PARTY	
E. W. Fickelberg	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 5105

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. 4

REGISTER NO. **5105**

State Alaska

General locality Behm Canal, ~~S. E. Alaska~~

Locality Traitor's Cove, Neets Bay and Gedney Pass

Scale 1 : 20,000 Date of survey July 28 to Oct. 10 1930.

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

Chief of Party E. W. Eickelberg

Surveyed by H.C. Warwick, W. Weidlich, J.C. Partington, H.O. Fortin.

Protracted by W. Weidlich, J.C. Partington, H.O. Fortin

Soundings penciled by W. Weidlich, J.C. Partington, H.O. Fortin

Soundings in fathoms ~~XXXX~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by _____

Inked by J. Fleming Aug. 4 1931

Verified by J.F.

Instructions dated March 7, 1930.

Remarks: _____

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET # 4.

TRAITORS COVE, BEHM CANAL, S. E. ALASKA.

AUTHORITY:

Director's Instructions dated
March 7th, 1930.

EXTENT:

This section of Hydrographic Sheet No. 4 includes all of Traitors Cove from its entrance to Behm Canal at Latitude $55^{\circ} 41.5'$, Longitude $131^{\circ} 42'$, to the head of Traitors Cove, Latitude $55^{\circ} 44'$, Longitude $131^{\circ} 32'$.

GENERAL DESCRIPTION:

Traitors Cove is a narrow body of water extending about 7 miles in a north-easterly direction from its junction with Behm Canal. The shores of Traitors Cove are rocky and abrupt except for the three following localities: In Latitude $55^{\circ} 42.5'$, Longitude $131^{\circ} 40.5'$ there is a flat composed of sand and mud. A group of old piling ~~is~~ at the head of this bight; in Latitude $55^{\circ} 42'$, Longitude $131^{\circ} 38'$ there is a mud flat of considerable extent; in Latitude $55^{\circ} 44'$, Longitude $131^{\circ} 32'$, at the upper end of Traitors Cove, is a large flat composed of sand and mud.

Traitors Cove is divided into two parts of about equal size, the lower half of the cove extending from the junction with Behm Canal to the narrows at triangulation station GATE, and the upper half of the cove extending from triangulation station GATE to the head of Traitors Cove. The upper half of the cove is locally known as "The Chuck".

The shores of Traitors Cove are covered with a heavy growth of pine and fir trees which extend down to the water's edge.

SURVEY METHODS:

Standard ~~m~~ethods were used in this survey. Two launches were used on this work, viz., Launch #69 and Tender #1. Both boats are 30 foot gasoline launches equipped with power driven sounding machines and wire soundings are taken over the sterns. A ten pound hand lead was used for depths under 15 fathoms and 14 and 18 pound leads were used for wire soundings

SHOALS AND DANGERS:

Just outside the entrance to Traitors Cove is a rock in Latitude 55° 41' plus 1600 meters, Longitude 131° 42' plus 150 meters. This rock bares 6 feet at mean lower low water and is marked by kelp. The same rock is shown on hydrographic sheet # 3.

A shoal with a least depth of 9-1/4 fathoms rocky bottom was found in Latitude 55° 41' plus 1520 meters, Longitude 131° 40' plus 680 meters, position 27 "g", Volume 2. No kelp was found.

A shoal with a least depth of 22 fathoms lies in Latitude 55° 41' plus 1670 meters, Longitude 131° 40' plus 190 meters. See position 39 "g", Volume 2.

In latitude 55° 42' plus 280 meters, Longitude 131° 38' plus 600 meters a shoal with a least depth of 2-4/6 fathoms rocky bottom was found. See position 19 "h", Volume 2. This shoal lies in the center of the bight which is recommended as an anchorage in the Coast Pilot. A rock with a least depth of 2 feet at mean lower low water lies in Latitude 55° 42' plus 380 meters, Longitude 131° 38' plus 510 meters. This rock was located by the topographer at the time of a minus tide.

18 fms in Additional Wk.

A sunken rock with 2 feet over it at mean lower low water lies about 60 meters off-shore in Latitude 55° 42' plus 1230 meters, Longitude 131° 40' plus 15 meters. Another sunken rock with 2 feet over it at mean lower low water lies in Latitude 55° 42' plus 1120 meters, Longitude 131° 39' plus 700 meters. These rocks were located by sextant fixes at the time of a minus tide. See page 3, volume #1 for location of these rocks.

A shoal with a least depth of 16 fathoms, gravel and shell bottom was found in Latitude 55° 43' plus 340 meters, Longitude 131° 38' plus 420 meters. See position 8 "j", volume 3.

A shoal of small extent with a least depth of 17 fathoms, rocky bottom, was found in Latitude 55° 43' plus 540 meters, Longitude 131° 38' plus 900 meters. See position 18 "f", volume 2. This shoal is surrounded by depths of 25 to 30 fathoms. The shoal was investigated on two different days and many soundings were taken while drifting over the shoal. No kelp was found.

⁴/₆ 22
A shoal with a least depth of ~~5~~ fathoms was found in the upper part of Traitors Cove in Latitude 55° 43' plus 1660 meters, Longitude 131° 36' plus 550 meters. This sounding was obtained while running a line between positions 21 and 22 "d", volume 2. The shoal is rocky and surrounded by a thick patch of kelp.

A rock which bares 7-1/2 feet at mean lower low water lies 220 meters off-shore in Latitude 55° 43' plus 850 meters, Longitude 131° 34' plus 620 meters. This rock was located by the topographer and then a sextant fix was also obtained by the hydrographer. See page 39, volume 2. It is a single rock of small extent.

In the center of the entrance to the upper part of Traitors Cove is a rock of considerable extent in Latitude 55° 43' plus 1400 meters, Longitude 131° 37' plus 140 meters. This rock is in the center of the channel and bares 2-1/2 feet at mean lower low water. The area north of the rock is foul and should not be attempted. The channel lies on the south side of this rock.

On account of the narrow channel there are strong tidal currents which reach an estimated maximum velocity of about 8 knots. These currents are accompanied by swirls and heavy tide rips. High water slack thru this narrows occurs from 25 to 35 minutes after high water at Ketchikan. Low water slack is from one hour and twenty minutes to one hour and thirty minutes after low water at Ketchikan.

Slack water thru the narrows has a duration of from 5 to 15 minutes. Small craft may enter at time of slack water and the channel carried a depth of 3 fathoms. Local knowledge is necessary when navigating this narrows and it should not be attempted by strangers.

*T. 2055 Shows
7 kn current in
the Narrows*

*see Par. 11 & 13
Page 2 Verifiers
Report.*

CHANNELS AND ANCHORAGES:

In entering Traitors Cove the north channel should be used, passing between the rocky islet in the center of the entrance and the rocky point which lies just north of this islet. Care must be taken to avoid the rock lying 300 meters west to the rocky point. A ledge extends about 50 meters north of the islet at the entrance to Traitors Cove and this ledge is marked by kelp. Favor the north side of the channel when entering.

Anchorage for small craft may be had in the cove along the south shore about two miles from the entrance to Traitors Cove. A sunken rock with 2 feet of water over it lies about 70 meters off the south shore of the small island in this cove. A shoal lies in mid-channel with a least depth of 2-4/6 fathoms. Anchorage may be had about 200 meters south by east of the southern extremity of the island in 10 fathoms, muddy bottom.

*Rock referred to
in last half of
Par 4 - Page 2.*

*same as that
described in 1st half
of Par. 4 - Page 2*

Top

Small craft may also anchor in the small bight along the north shore of Traitors Cove about 1-1/2 miles above the entrance. Two sunken rocks lie about 70 *see Plan 5* and 90 meters off the north shore of the bight. Anchorage may be had in the center of the bight in depths of 10 to 20 fathoms, muddy bottom.

In the upper part of Traitors Cove anchorage may be had about 0.4 mile north of the entrance in 10 fathoms, muddy bottom.

COMPARISON WITH PREVIOUS SURVEYS:

In comparing this sheet with the photostat of the survey of 1891 there were several changes.

On the photostat a sounding of 27 fathoms is shown in Latitude 55° 41' plus 1660 meters, Longitude 131° 40' plus 1020 meters. A sounding of 26 fathoms was obtained in this locality but the sounding is very much closer to the south shore than the photostat shows.

The 24 and 27 fathom soundings shown on the photostat in Latitude 55° 41' plus 1600 meters, Longitude 131° 40' plus 280 meters are taken on the same shoal as shown on Hydrographic Sheet # 4. A least depth of 22 fathoms was obtained here.

On the photostat a sounding of 11 fathoms is shown in Latitude 55° 42' plus 720 meters, Longitude 131° 40' plus 20 meters. A thorough search was made for this shoal and nothing found in this position. The shoal is probably closer to the rocky point on which signal JAN is located than the photostat shows.

This sdg investigated from the original records and found to be closer inshore than was plotted T.O.

On account of the greater detail of the survey it is recommended that the soundings on Hydrographic Sheet # 4 be used in preference to the survey shown on the photostat.

Respectfully submitted,

J. C. Partington
J. C. Partington,
Jr. Hydro. & Geod. Engineer.

Approved and forwarded,

E. W. Eickelberg

E. W. Eickelberg,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

STATISTICS

TO ACCOMPANY HYDROGRAPHIC SHEET # 4

TRAITORS COVE, BEHM CANAL, S. E. ALASKA

VOL.	DAY	DATE	BOAT USED	NO. OF POS.	NO. OF SDGS	STATUTE MILES	MILES TO AND FROM WORK
1	a	7-28-30	Inch #69	68	162	6.9	2.3
1	b	7-29-30	"	116	325	18.3	2.2
1	c	7-30-30	"	135	353	21.7	3.2
2	d	7-31-30	"	148	384	19.1	7.3
2	e	8- 1-30	Ten.#1	86	256	8.4	3.7
2	f	8- 2-30	"	33	80	3.4	0.7
2	g	8- 4-30	"	69	160	5.2	2.0
2&3	h	8- 6-30	"	106	313	8.7	2.5
3	j	8- 7-30	"	26	57	1.4	3.0

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET # 4.

AUTHORITY:

March 7th, 1930.

Director's Instructions dated

SCALE:

1:20,000

Soundings in feet.

Fathoms

LIMITS:

This survey covers the following bodies of water: Traitor's Cove; Neets Bay; Gedney Pass; Shrimp Bay and the eastern part of Hassler Pass. It connects with hydrographic sheets #3, #5, and #6.

SURVEY METHODS:

The approved methods of the service were used throughout, with a few modifications on account of the irregular bottom.

NEETS BAY.

The launch Delta was used for the greater part of this Bay and the work is indicated in red lower case letters. ✓

The work done by the launch #69 is shown by purple lower case letters. ✓

A 10 pound hand lead was used in depths of less than 15 fathoms in greater depths a steam sounding machine with a 14 or 18 lbs lead and stranded wire. ✓

The lines are spaced about 200 meters apart, with splits between. With the exception of a few development lines the sounding lines run in northerly and southerly direction. ✓

In order to avoid confusion when plotting the smooth sheet, only the lesser soundings were plotted or such soundings as necessary to obtain a complete depth curve. - NOTE

When developing shoals two leads were used simultaneously and in numerous cases three lead lines were in use, virtually dragging the shoal area with the hand lead. ✓

Numerous shoals were also developed with the steam sounding machine, in this case lifting the lead only a few feet off the bottom, yet taking great care that all soundings are up and down. ✓

Hundreds of soundings were taken on all shoals, although only the least depths obtained were recorded and plotted. ✓

TIDES:

An automatic portable tide gauge

(2)

equipped with power driven sounding machines and wire soundings were taken over the sterns. A ten pound hand lead was used for depths under 15 fathoms and 14 and 18 pound leads were used for wire soundings.

The lines at the head of Gidney Pass were spaced about one hundred meters apart. All other lines were spaced about two hundred meters apart, except in soundings around 200 fathoms, when they were spaced 300 meters apart. Splits were run between the 200 and 300 meter spaced lines out to the 100 fathom curve. All lines in Shrimp Bay were spaced 200 meters apart, except past the narrows where they were spaced only 100 meters apart.

When developing shoals two hand leads were used sumultaneously, fore and aft the launch.

KEIP:

No kelp, or even any indications of any, was found in any one of the above named localities.

See grass notes

ANCHORAGES:

There is not a good anchorage at the head of Gidney Pass, due to the rock found with a least depth found of 2 fathoms at M.L.L.W. and three other rocks which are in mid-channel and about 990 meters west of the head of the pass.

Anchorage, especially for small craft, may be had towards the head of Convenient Cove where the depth is from 22 to 33 fathoms with a variable bottom varying from sticky to hard and rocky. It is well protected, except from the west, from which direction a westerly or south-westerly blow might give a little trouble.

The eastern entrance to Convenient Cove is narrow, mid-channel being obstructed by two small islands. The least depth found was $7\frac{1}{2}$ fathoms in the passage north of the islands. The western entrance is free from obstructions.

Small craft can find ample protection and an anchorage among a group of islands which lie in Latitude 55 degrees 50.1 minutes and Longitude 131 degrees and 32.5 minutes. Care should be taken, however, in going among them on account of other small islands and rocks.

Due to the fact that the northeast end of Shrimp Bay is almost land-locked it makes an excellent anchorage and is practically free from any direction of winds. The best anchorage is in the middle of the Bay in about fifteen to sixteen fathoms of water with a soft bottom. This anchorage is easily approached, free from obstructions, and was the favorite headquarters while the ship was operating this locality.

Klu B.

A small bight lies in Latitude 55 degrees 53 minutes North and Longitude 131 degrees 33 minutes West on the east shore of Hassler Pass. The entrance is narrow and apparently free from obstructions. This bight is land-locked and sheltered from all winds with the except-

Itachi Cove

(3)

ion of those coming down from the mountains. The water is comparatively deep in the center but shallows gradually toward the head of the bight.

DANGERS AND OBSTRUCTIONS:

#1. A shoal with a depth of 36 fathoms at M.L.L.W. lies about 470 meters 125 degrees from station JUG. (Position 30 and 31 g.)

✓
S. center of Hasler Pass. JUG

#2. A shoal with a least depth found of 25 fathoms at M.L.L.W. lies about 600 meters 101 degrees from TRY. (Tri). (Position 104 v.) Bottom is rocky.

#3. A ledge extends for about 180 meters from SNOR. It is in a westerly direction. The $4\frac{1}{2}$ fathoms sounding between 96 and 97 t. red mark the edges of the ledge which bare at low tide.

✓
A. $4\frac{1}{2}$ and $4\frac{3}{4}$ fms from red. W. mark the western extremity of the ledge. JUG

#4. A 33 fathom sounding was obtained about 320 meters 185 degrees from station LOT. Rocky bottom. (Position 55 t.)

✓
31 fms nearby. JUG

#5. A rock with a least depth found of 2 fathoms at M.L.L.W. 120 meters 349 degrees from station WAY. Bottom is rocky. This area is well developed. (Position 7 f. to 16 f. purple)

✓
(At head of Pass) JUG

#6. A submerged ledge with an increasing depth from $7\frac{1}{2}$ to 17 fathoms extends about 180 meters north-west of the point that lies at the northern entrance to Shrimp Bay.

TIDES:

A portable automatic tide gauge was used at the YES BAY CANNERY DOCK. Comparative readings were taken with the Ketchikan tide station. All tide reducers except those for Shrimp Bay were taken from the station at YES BAY.

At SHRIMP BAY a plain tide staff was used to reduce the soundings from, and to obtain the datum for, M.L.L.W. Comparative readings were taken with the Ketchikan Tide Station.

Respectfully submitted,
Henry O. Fortin,
Jr. and J. Long,

Approved
R. W. Eichelberg
Comdr

1

DESCRIPTIVE REPORT.

TO ACCOMPANY HYDROGRAPHIC SHEET # 4.

GEDNEY PASS, CONVENIENT COVE, AND SHRIMP BAY
BEHM CANAL, S. E. ALASKA

AUTHORITY:

March 7th, 1930.

Director's Instructions dated

EXTENT:

This section of Hydrographic Sheet #4 includes all of Convenient Cove, Gedney Pass, Shrimp Bay, and the southern half of Hassler Pass, from the entrance of Gedney Pass to Behm Canal, Latitude 55 degrees 51 minutes and Longitude 131 degrees 42.6 minutes to the head of Shrimp Bay, Latitude 55 degrees 50.6 minutes and Longitude 131 degrees 26.8 minutes.

GENERAL DESCRIPTION:

Gedney Pass is a fairly narrow body of water extending about $3\frac{1}{4}$ miles in an easterly direction from its junction with Behm Canal. The shores of Gedney Pass are rocky and fairly abrupt except for the following locality - In latitude 55 degrees 50 minutes and Longitude 131 degrees 32.5 minutes there is a small bight at the southern end of which is a mud flat, the northern end being foul with small islands and rocks.

✓
Native name,
"Gungashik"
Cove.

Shrimp Bay is divided into two parts, both free from obstructions. The first part extends for about two miles in an easterly direction from its junction with Gedney Pass. The second part extends about one mile in a north-easterly direction from the narrows. Its shores are rocky and fairly abrupt, except for that part in Latitude 55 degrees 50.7 minutes and Longitude 131 degrees 26.5 minutes which is a mud flat extending about $\frac{1}{2}$ a mile in an easterly direction from its junction with the head of Shrimp Bay.

"Klu Bay;"
so called by
Bur. Fish.

Hassler Pass is a fairly narrow body of water extending in a north-westerly direction for about $3\frac{1}{4}$ miles with its junction with Gedney Pass to where it enters Behm Narrows. Its shores are rocky and fairly abrupt, and the pass is free from obstructions.

SURVEY METHODS:

Standard methods were used in this survey. Three launches were used on this work, viz; Launch #69, Tender #1, and the steam launch Delta. The survey made by launch Delta is indicated by lower case red letters; that of launch #69 by purple lower case letters; and that of Tender #1 by blue lower case letters. All the launches were

was maintained at Yes Bay and comparative readings were taken for 52 hours.

DANGERS AND OTHER OBSTRUCTIONS.

This survey revealed numerous rocks and other obstructions and the most important are enumerated below.

#1. A shoal with a least depth found of 48 fathoms at M.L.L.W. lies about 870 meters 7 degrees from MUSH. Rocky bottom. (Position 79i & 84 j red) ✓ *near entrance to Yes Bay Canal.*

#2. A shoal with a least depth found of 54 fathoms at M.L.L.W. lies about 1920 meters 10 degrees from MUSH. Rocky bottom. (Position 8 f.) ✓

#3. A shoal with a least depth found of 24 fathoms at M.L.L.W. lies about 670 meters 299 degrees from YES. Bottom is rocky. (Position 96 k red) ✓

#4. A shoal of small extent with a least depth found of $7\frac{1}{2}$ fathoms at M.L.L.W. lies about 250 meters 250 degrees from YES. Rocky bottom. (Position 53 k.) ✓

#5. A shoal of small extent with a least depth found of ~~6 3/4~~ fathoms at M.L.L.W. lies about 485 meters 257 degrees from YES. Bottom is rocky. (Position 154 j red) ✓ *There is a 6 1/2 fms and a 6 3/4 fms shoal - likely on this shoal in Pos. 1-2-K Vol. 11.*

The bottom is very irregular in this vicinity, see position 155 j. red with 15.4 fathoms forward and 7.4 fathoms aft. No indications of kelp.

#6. A 10 fathom spot rocky bottom lies about 185 meters 238 degrees from SIP. (Position 10 k. and 136 j. red) ✓

#7. A shoal of very small extent with a least depth found of 10 fathoms at M.L.L.W. lies about 300 meters 345 degrees from YES. Rocky bottom. (Position 112 k red) ✓

#8. A shoal of small extent with a least depth found of 5 and $5\frac{1}{6}$ fathoms at M.L.L.W. lies about 400 meters 17 degrees from YES. (Position 145 k. red) No indications of any kelp. ✓

#9. A pinnacle rock of small extent with a least depth found of 5 fathoms at M.L.L.W. lies about 230 meters 260 degrees from NET. No indications of any kelp. (Position 122 h. red) ✓

#10. A rock which covers an area of about 40 square meters with a least depth found of 2 feet at M.L.L.W. lies about 360 meters $262\frac{1}{2}$ degrees from BUG. This rock is covered with numerous small broken rocks and is surrounded by deep water. This rock is no doubt the supposed $4\frac{1}{4}$ fathom spot as shown on chart #8105, south-west of Bug Island. No indications of any kelp. Launch anchored on this spot and the bottom was closely ✓

examined while the men were fishing.

- #11. A shoal with a least depth found of 32 fathoms at M.L.L.W. lies about 665 meters 351 degrees from EN. (Position 77 h. red). Bottom is rocky. *N.W. of Bug. I.*
- #12. A 16 fathom sounding was obtained about 270 meters $6\frac{1}{2}$ degrees from HAN. Hard bottom. (Position 92 k. red) *Fresh fish cave*
- #13. A $7\frac{1}{4}$ fathom spot lies about 260 meters 5 degrees from REN. Rocky bottom. (Position 1. 33 red.) *Pos 33-34. Vol. 12*
- #14. A 5 and $5/6$ fathom sounding was obtained about 180 meters $342\frac{1}{2}$ degrees from REN. (Position 22 l. red) The last 2 soundings no doubt are the sub-marine extension of the rock which bares at M.L.L.W. north of REN.
- #15. A rock which covers an area of about 50 square meters, with a least depth found of 2 and $1/6$ fathoms at M.L.L.W. lies about 180 meters 203 degrees from BO. Bottom is very irregular and depth vary from 2 and $1/6$ to 5 fathoms. No indication of any kelp. Bottom is plainly visible. (Position 62 l.) This rock is surrounded by much deeper water. There is no indication of this rock on Chart #8105.
- #16. The depth of the rock south-east of Clam Island was reduced by this survey from $1\frac{1}{4}$ fathoms to 1 fathom. This rock covers an area of about 35 square meters. No indication of any kelp. This rock lies about 185 meters 125 degrees from LA. (Positions 159 and 161 n. red.)
- #17. Foul area extends for about 200 meters in a north-westerly direction from a rock which bares about 11 feet at M.L.L.W. north-west of Clam Island. Bottom is very irregular. Least depths obtained 5 and $4/6$ fathoms at M.L.L.W. and lies about 340 meters 314 degrees from LIN. (Position 19 h.)
- #18. A shoal with a least depth found of 24 fathoms at M.L.L.W. lies about 510 meters 271 degrees from TEM. (Positions 21 and 22m.) Rocky bottom. *Long 131-35.5*
- #19. Foul area extends for about 170 meters in a south-westerly direction from OB. (Position 70 m. marks the extreme end, with a depth of 4 and $4/6$ fathoms at M.L.L.W.) *Long 131-35.2*
- #20. A shoal with a least depth found of $8\frac{1}{4}$ fathoms at M.L.L.W. lies about 410 meters $257\frac{1}{2}$ degrees from PAU. Rocky bottom. (Position 8 n. red.) This shoal is surrounded by much deeper water. *Lat. 55.47.75
Long. 131.31.54*
- #21. A pinnacle rock of small extent with a least depth found of 5 and $5/6$ fathoms at M.L.L.W. lies about 265 meters 144 degrees from PAU. Bottom is rocky and area is well developed. (Positions 12 to 122 n. red.)

#22. A 13 fathom sounding was obtained about 440 meters and 134 degrees from PAU. (Position 45 n. red.) Bottom is rocky and area well developed. Least depth found during development on same spot 14 to 15 fathoms.

Tools like extension of the 55 fath shoal to the N.W. ✓

#23. A shoal with a least depth found of 17 fathoms at M.L.L.W. lies about 630 meters 207 degrees from PAU. This area was covered by launch #69 and the Delta. Least depth found by Delta is 18 fathoms. (Position 99 m. & 34 n. red). 17 fathoms located by launch #69. (Positions 40-41 d. purple)

#24. Sunken rock area awash at minus one and one-half foot tide lies about 100 meters, 315 degrees, from station FER, obstructing southern entrance to little bight. (Positions 48 and 49 b. purple)

Lat. 55° 48.8 ✓

#25. Rocks baring two feet at M.L.L.W. lie about 90 meters 133 degrees from station WOR, obstructing north eastern entrance to little bight. (Position 52 b. purple.)

Lat. 55° 48.9 ✓

#26. A rock with a least depth depth found of one feet at M.L.L.W. lies about 80 meters 85 degrees from station FER. (Position 49 c. purple)

Lat 55° 48.75 ✓

#27. A rock with a least depth found of two and one half feet lies about 210 meters 52 degrees from station FER. (Position 80 b. purple)

40 m S W of 0215 ✓

#28 A ledge extending about 45 meters 110 degrees from station WEST, baring five feet at M.L.L.W. (Position 91 b. purple)

Lat. 55-49.0 ✓

#29. A shoal of small extent with a least depth found of $8\frac{1}{2}$ fathoms at M.L.L.W. lies about 290 meters 12 degrees from station WHY. Rocky bottom. (Position 50 and 52 $\frac{1}{2}$ c1 purple) purple)

Lat. 55. 48.7 ✓

#30. A shoal of small extent with a least depth found of 15 fathoms at M.L.L.W. lies about 230 meters, 91 degrees from station OS. Rocky bottom, (Positions 83 a. and 21 - 23 c. purple)

Lat 55. 47.9 ✓

#31. A shoal of small extent with a least depth found of 11 fathoms at M.L.L.W. lies about 605 meters, 255 degrees from triangulation station PAU. Rocky bottom. (Position 22 d. 66 and 68 d. purple)

Lat. 55. 47.75 ✓

#32. Rocks with a least depth found of one and one half feet at M.L.L.W. lies about 180 meters, 256 degrees from station GES. Rocky bottom. (Position 61 d. purple)

Lat 55-47.9 ✓

#33. Rock with least depth found of 1 and $\frac{2}{6}$ fathoms at M.L.L.W. lies about 150 meters, 257 degrees from Station KO. Rocky bottom. (Positions 31 and 32 a. purple)

Lat 55-47.8 Long 131 33.0 ✓

KELP:

Neets Bay is free of kelp.

BOTTOM:

Bottom is very irregular especially near the shore. Rocky, muddy, and hard bottom is the rule with occasional sand.

ANCHORAGES:

Although $7\frac{1}{2}$ miles long, Neets Bay has no good anchorages. While the work was in progress the Steamer Explorer anchored north-west of Clam Island, about 250 meters north-west of a rock which bares about 11 feet at M.L.L.W. Depth varies from 12 to 15 fathoms, rocky and hard bottom with occasional mud. Bottom is very irregular.

Small boats may find shelter, most anywhere near the shores in any desired depth.

During week-ends, the Delta was anchored frequently in a small bight east of PA. The north entrance should be used when entering as the south channel is only navigable at high tides. Bottom is muddy and anchorage may be had in 3 to 5 fathoms of water. This anchorage is suitable for small boats only and offers excellent shelter.

Another excellent small boat anchorage is located east of OB. The entrance is blocked by a rock which bares at half tides. This hole in the wall can be used only by very small shallow draft motor boats and then it is necessary to anchor and tie the stern to the shores to prevent the boats from swinging to the rocks. The depth was found to be about 2 fathoms at M.L.L.W.

Hako Cove
Lat. 55-47.4
Long. 131-38.2

Lat. 55-46.8
131-35.0

N. Neillish

Mat

Approved

J. H. Eckelberry
Comd'g

STATISTICS

TO ACCOMPANY HYDROGRAPHIC SHEET #4

BEEM CANAL, S. E. ALASKA

VOL.	DAY	DATE	BOAT USED	NO. OF POS.	NO. OF SDGS	STATUTE MILES	MILES TO AND FROM WORK.
4	a'	9-18-30	Tender #1	29	76	5.3	10.0
4	b'	9-22-30	"	91	194	14.5	11.0
4	c'	9-23-30	"	84	190	15.0	13.0
4	d'	9-24-30	"	90	195	13.8	12.0
4	e'	9-25-30	"	20	50	2.6	10.0
4&5	f'	9-29-30	"	52	134	6.0	11.3
5	g'	10- 1-30	"	105	224	16.9	12.0
6	a	8-27-30	Lch. #69	151	362	16.4	7.0
6	b	8-28-30	"	169	459	15.3	6.5
6&7	c	8-29-30	"	150	322	13.0	6.5
7	d	9- 2-30	"	113	253	11.0	7.2
7	e	9-23-30	"	112	275	12.4	11.0
7&8	f	9-24-30	"	138	305	16.5	3.1
8	g	9-26-30	"	40	85	2.9	4.6
8	h	10- 1-30	"	101	192	13.8	12.5
9	a	8-11-30	Delta	87	172	11.2	0.0
9	b	8-12-30	"	62	131	8.3	0.8
9	c	8-13-30	"	154	304	20.1	2.2.
9&10	d	8-14-30	"	172	265	24.2	30.7
10	e	8-15-30	"	130	258	16.0	3.0
10	f	8-19-30	"	128	173	19.7	6.8
10&11g		8-20-30	"	180	380	15.9	1.9
11	h	8-21-30	"	169	207	10.0	14.7
11	j	8-22-30	"	164	374	15.5	4.0
11&12k		8-27-30	"	197	418	14.0	21.2
12	l	8-28-30	"	181	406	15.5	2.2.
12	m	8-29-30	"	164	314	18.5	4.2
12&13n		9-3 -30	"	175	265	12.0	3.0
13	p	9-8 -30	"	15	15	1.6	7.8
13	q	9-23-30	"	105	181	17.5	6.0
13	r	9-24-30	"	123	283	17.5	6.5
13	s	9-26-30	"	35	69	4.7	5.5
14	t	10- 1-30	"	156	396	15.5	28.1
14	u	10-6-30	"	17	36	2.0	4.0
14	v	10-10-30	"	171	348	17.4	30.8

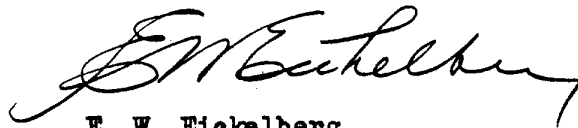
4630

8011

APPROVAL SHEET

TO ACCOMPANY SHEET NO. 4

This sheet and the accompanying records have been examined
by me and are approved.



E. W. Eickelberg,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

Field Records Section

Report on H-5105 and 'Additional Work'

Traitors Cove, Neets Bay and Godney Pass.

Surveys 1930-1

Hand lead and machine soundings.

Chief of party - E. W. Eickelberg

Surveyed by - { H. C. Norwich - W. Weidlich
J. C. Partington - H. O. Fortin }

Protracted by - J. C. P. - H. O. F. and J. D. Torrey

Soundings by W. W. and J. D. J. Fleming

Verified and indexed by J. D. J. Fleming

-
- ① The records were in excellent form and condition.
 - ② The plan character and extent of the developments satisfy both general and specific instructions.
 - ③ The sounding line crossings are satisfactory.
 - ④ The necessary depth curves can be completely drawn.
 - ⑤ The field work on this sheet was excellent.
 - ⑥ Junction with adjoining sheets on the west and north is satisfactory ~~on~~ the sheet on the southwest (H. 5079) was incompletely verified at this writing.

(7) Comparison with previous surveys

A rock awash in	55° 43'	} added from T-2055
	131° 39.4'	
" " "	55° 43.85'	
" " "	131° 35'0"	

(8)

Capt. Eichelberg who is now in the office recommends that the statement regarding 3 fms. (Page 3 Par 4) D.R. be disregarded and the information contained in the enlargement of the narrows of Traitors Cove, above, should be considered.

(9)

The only additional development suggested is in Traitors Cove Narrows where the survey fails to show the available depth nor does it indicate whether the best channel is north or south of the reef in the center.

(10)

The survey is considered unusually good and the analysis of doubtful points thorough and satisfactory. Special mention should be made of the excellence of the protracting and plotting.

Respectfully submitted.

J. Fleming

August 1931

Afp.

A. M. Sobieralski

See Additional Work.

80
16

June 11, 1931

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 5105

Locality ~~xxx~~ Traitor's Cove, Neets Bay and Gedney Pass, S.E. Alaska

Chief of Party: E. W. Eickelberg, in 1930
Plane of reference is mean lower low water, reading
5.4 ft. on tide staff at Loring
19.3 ft. below B. M. 1
8.6 ft. on tide staff at Traitor's Cove (Inside Narrows)
14.4 ft. below B.M. 1

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 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.

Chief, Division of Tides and Currents.

2.1 ft. on tide staff at Traitor's Cove (Outside Narrows)
16.3 ft. below B.M. 1
2.2 ft on tide staff at Yes Bay
26.9 ft below B.M. 1
7.5 ft on tide staff at Shrimp Bay
5.0 ft. below B.M. 1

5105 Add'l WK.

Proj. Cht. No. 8201-3 & 8102-2

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAY 7 1931

State: Alaska

Acc. No.

DESCRIPTIVE REPORT

~~Topographic~~

Hydrographic

Sheet No.
Field # 4

5105 Add'l Wk.

LOCALITY

Behm Canal

Shoal Areas In Traitors Cove

and Gedney Pass

1931

CHIEF OF PARTY

E. W. Eichelberg

5105 Add'l Wk.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5105 Add'l work

HYDROGRAPHIC TITLE SHEET

Additional work on original 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. 4

REGISTER NO. 5105 Add'l work

State Alaska

General locality Behm Canal

Locality Shoal Areas In Traitors Cove and Gedney Pass

Scale 20,000 Date of survey April 7-9, 1931

Vessel Explorer

Chief of Party E. W. Eichelberg

Surveyed by E. W. E

Protracted by J. D. Torrey

Soundings penciled by J. D. T.

Soundings in fathoms - feet

Plane of reference M. T. T. W.

Subdivision of wire dragged areas by

Inked by J. Fleming Aug. 1931

Verified by J. F.

Instructions dated , 192

Remarks:

SUPPLEMENTARY DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET #4, 1930

TRAITORS COVE, BEHM CANAL, S. E. ALASKA

COVERING WORK DONE IN APRIL, 1931

Upon the inspection of smooth sheets of the 1930 season it was discovered that on some of the development, although very closely spaced lines were used, the hydrographer failed to feel for least water. These spots have been investigated and the results, sheets and records, are sent herewith. ✓

Under shoals and dangers, page 2, Traitors Cove descriptive report, Sheet #4, paragraph 4 should read, "In latitude 55° 42' plus 280 meters, longitude 131° 38' plus 600 meters, a shoal with a least depth of 1-4/6 fathoms, rocky bottom was found." See additional work done in April, 1931. ✓

5 fms
16
Vol. 1 - Add. Wk.
Page - 9
E. W.

TIDAL NOTE

A temporary tide staff was set up in Traitors Cove (lower end) and referred to same Bench Marks as 1930. Level notes herewith. ✓

M.L.L.W. on 1930 staff = 2.08 feet

Bench Mark 1 is 16.32 feet above M.L.L.W.

Bench Mark 1 = 14.10 feet on 1931 staff

M.L.L.W. on 1931 staff = -2.22 feet

NOTE: The signals used are identical with last years, although the names are different due to not having the old names at hand. ✓

Examined and approved:

E. W. Eickelberg

E. W. Eickelberg,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

SUPPLEMENTARY DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET # 4, 1930

GEDNEY PASS & HASSLER PASS

BEHM CANAL, ALASKA

Covering Work Done In April, 1931

Four places were investigated in this area, one of which was to prove an erroneous deep sounding.

On the south shores of Gedney Island, the eleven fathom spot shown near signal VOL was reduced to 7 fathoms.

At Dress Point the depth of 4-1/2 fathoms off signal SNOR was reduced to 4-1/6 fathoms. It was feared there was less water here as the hydrographer did not feel for least water when originally making the survey. Sufficient soundings were taken so that least water is now shown on the overlay tracing.

At the northern entrance to Shrimp Bay a few more soundings were taken off the point to properly locate the depth curves. These are shown on the same overlay as Dress Point.

A 69 fathom sounding on the smooth sheet, 400 meters 15° from signal BON was proved wrong. It should have been approximately 89 fathoms. An overlay is furnished showing the soundings taken to disprove the 69.

Capt. Eickelberg now in the office after further study, the attention of the adg. is being given to the P.P.

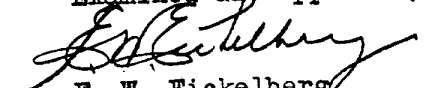
TIDAL NOTE

Ketchikan predicted tides were used for the work done by the Tender No. 1, detached party. For work done by "Delta" and Tender No. 2, Shrimp Bay Bench Marks were used by tying in the water level at half hour intervals to the Bench Mark for the duration of the sounding.

1930 records give Bench Mark #1, 5.0 feet above Mean Lower Low Water.

All signals used were last years objects.

Examined and approved,


E. W. Eickelberg,
Comdg. EXPLORER.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5105.

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

Number of positions on sheet	.5921
Number of positions checked	...1308
Number of positions revised	...43
Number of soundings recorded	10,669
Number of soundings revised	...102
Number of signals erroneously plotted or transferred	None

Date: *August 21, 1931*

Cartographer: *John Fleming*

80
16

June 11, 1931.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
2 volumes of sounding records for

16.3 ft. V. d. 1

HYDROGRAPHIC SHEET 5105 Add'l work

Locality Shoal Areas in Traitors Cove and Gedney Pass, S. E. Alaska

Chief of Party: E. W. Eickelberg, in 1931
Plane of reference is mean lower low water, reading
7.5 ft. on tide staff at Shrimp Bay
5.0 ft. below B. M. 1
-2.2 ft. on tide staff at Traitor's Cove (Outside Narrows)
16.3 ft below B. M. 1

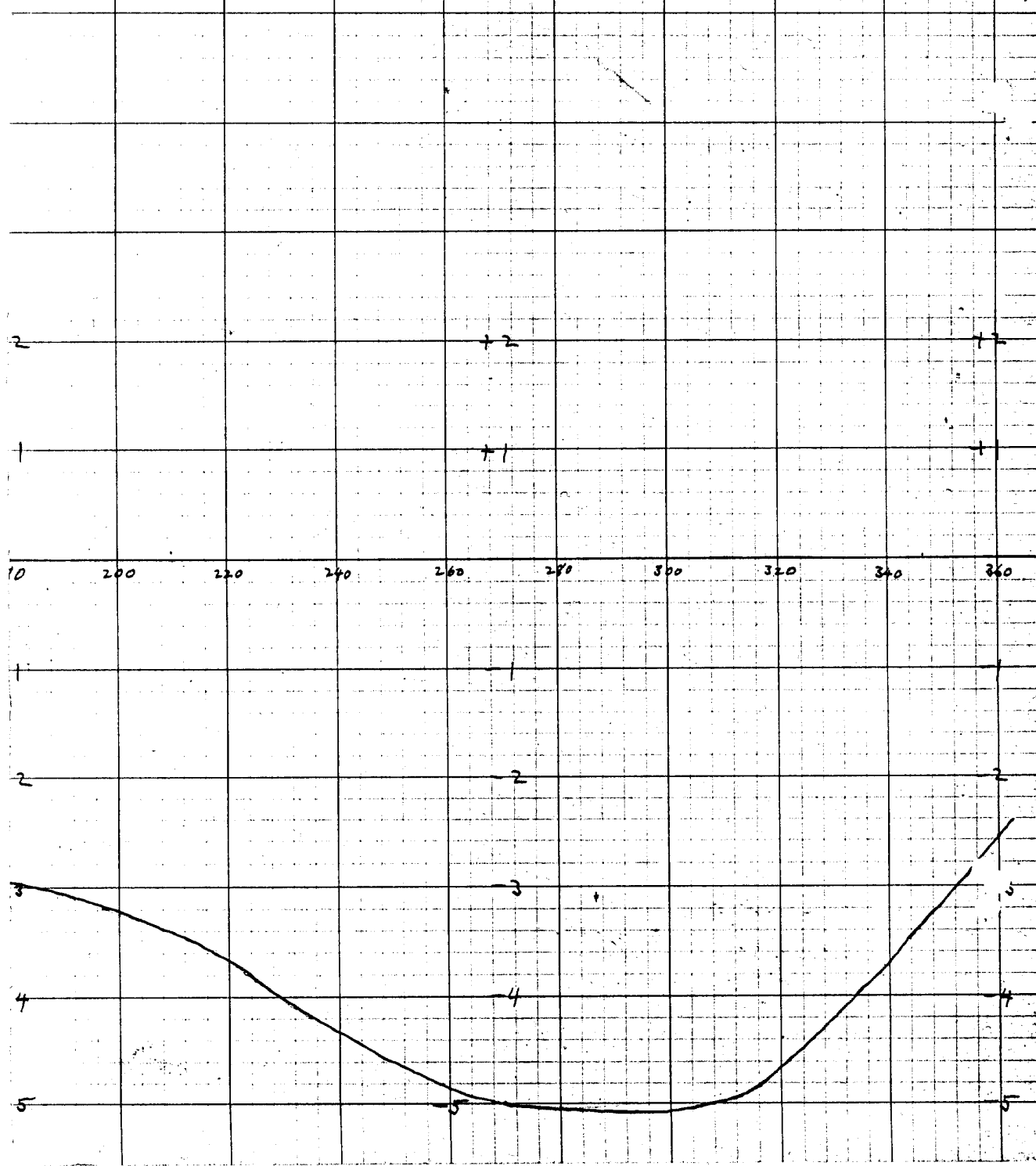
Condition of records satisfactory except as checked below:

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 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.

Chief, Division of Tides and Currents.

Steering Compass Deviation Curve

March 20, 1931.



Tides at Shrimp Bay, April 9, 1931
 Referred to 'D' of old Tide Staff.

MLLW 7:5

Shrimp Bay

Ketchikan (predicted)

Reducers:

3' to 2:00
 4' to 2:40

50 1 10 20 30 40 50 2 10 20 30 40 50 3

BM 27 set at 25' & is 18.74 above MLLW

nsw corresponds to 23' on present staff

4.26 = ~~staff~~ MLLW on present staff at K

$\frac{3.15}{7.41} = \text{MLLW on Shrimp Bay staff}$

write whether Jopo signals
are white cards, banners, etc.