

4511a  
4511b

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4511b

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

**DESCRIPTIVE REPORT**

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Type of Survey .....

Field No. .... Office No. ....

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LOCALITY

State .....

General locality .....

Locality .....

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194 .....

CHIEF OF PARTY

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LIBRARY & ARCHIVES

DATE .....

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

45112

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. 45112 *see supplemental T.Sh. 1926 work*

State . S E. Alaska . . . . .

General locality . Frederick Sound . . . . .

Locality . . . . Fybus Bay . . . . .

Chief of party . F.B.T. Siems . . . . .

Surveyed by . . F.E. Joekel . . . . .

Date of survey . . Sept. <sup>13</sup> - Oct. <sup>14</sup> 1925. . . . . .

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

Soundings in fathoms . . . . .

Plane of reference . mean lower low water . . . . .

Protracted by . G.A.N. . . . . Soundings in pencil by G.A.N. . . . .

Inked by . . P.S. . . . . Verified by . R.H.H. . . . .

Records accompanying sheet (check those forwarded):

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

\* 4 Sounding books,      Wire-drag books,      Photographs.

Data from other sources affecting sheet . . . . .

Remarks: \* 3 additional Vols. 1926 work recd. Feb. 7, 1927  
registered - 45112 Additional  
can Feb. 7, 1926

## DESCRIPTIVE REPORT

to accompany

### HYDROGRAPHIC SHEET OF PYBUS BAY

**EXTENT:** This hydrography supplements work accomplished on Register #1996 at the entrance of Pybus Bay and a previous survey of Pybus Bay, (Register # ) a photostat copy of which is forwarded with this sheet. This photostat copy of the former hydrographic survey has indicated upon it, by the office, areas where additional soundings are required. In addition to this the instructions of February 21st, 1924 require that all areas between the beach and wire drag work should be sounded. In accordance with the note on the photostat, channels at entrance of the bay to deep water should be developed also.

The survey of Pybus Bay was undertaken near the end of the season and on account of unfavorable weather conditions, some of the work as outlined above could not be accomplished. Signals have been marked temporarily so that remainder of the work could be done at the beginning of the next season.

**GENERAL DESCRIPTION:** Pybus Bay has numerous rocks, shoals, and small islands scattered all over the bay and the waters along the shores are generally foul. A central chain of small islands (the northern group of which are known locally as the Midway Islands and the southern as Southwest Islands) more or less irregular but extending in general direction of the trend of the bay and paralleling the west shore divides the bay into two distinct parts. The fairly straight channel forming the west part and known as the West Channel has been developed and dragged. Although fringed with several reefs along its eastern side, the western side of this channel is marked by islets (the largest of which is locally known as Grave Island) at the lower part, and further northward by points along the main shore. The islets and one of the points referred to, make good landmarks and are clear except for the foul ground just southeast of the entrance to the Cannery Cove. On account of strong cross currents at the south entrance of West Channel and the foul ground on either side of this entrance, special care in navigation is required, although there should be no difficulty in clear weather.

The eastern part of the bay as divided in the preceding paragraph embraces what was probably formerly known as the main channel, and a circular group of islands locally known as the San Juan Islands. The several irregular channels between the main islands of this group and the mainland were developed in the hydrography but were not dragged. On account of the winding character

and surrounding foul ground they are not recommended for ship use, however, they are often used by launches with local knowledge.

The so called main channel between the San Juan Islands and the Southwest Islands is partly obstructed by an offlying rock which bares at lowest tides, lying 1/2 mile S.W. of the largest San Juan Island, and by foul ground extending 1/4 mile offshore from the long narrow Southwest Island almost directly west (true) of the first obstruction mentioned. The distance between these two obstructions, however is ample, the channel being more than one mile wide at this part. Further north and about in the center of the bay is a rock baring at low tides which is marked by a navigation can buoy #1. Halfway between this and the northeast Midway Island is a small rocky shoal with a depth of 15 feet which was discovered by the wire drag. Foul ground also extends 3/8 mile off the north-western point of the largest San Juan Island.

A rocky shoal with only 8 feet at mean lower low water was discovered to exist in the middle of the channel situated among the Midway Islands and connecting the east part with the west part of the bay. This channel was used before that time, and a light was established on the northeast Midway Island to mark it. The survey reveals the fact that the resulting channels on either side of the shoal are narrow and two changes in course are required to navigate them.

An attempt was made to drag a one course channel connecting the east and west part of the bays with the result that a 15 foot rocky shoal was discovered on the proposed axis of this channel. The channel as proposed extends through the 15 foot rocky shoal 3/8 mile S.E. of the northeast Midway Island directly to the Cannery Dock.

All channels in the vicinity of the Midway Islands should be abandoned as steamer routes in favor of the one between Midway Islands and the Southwest Islands. This would obviate the use of the light and buoy #1. The rocks 1/4 mile 325° (true) from signal TUF marking the east side of the channel between Midway Islands and Southwest Islands are visible at most stages of the tide, the rocks covering at about 3/4 tide. This channel has been dragged to its maximum width. It is recommended that the light now on the northeast Midway Island be transferred to rocky islet north of Grave Island at signal RRRF and that a red nun buoy be placed at the southern extremity of the foul ground of the Midway Island group, so as to mark both the West Channel and the channel between Midway Islands and Southwest Islands.

**SAILING DIRECTIONS:** If bound for Cannery Cove via West Channel, which is the safest approach, pass Spruce Island 0.4 mile on left hand steering  $356^{\circ}$  (true) to 0.2 mile off rocky islet (Signal Reef). From Spruce Island to entrance of West Channel be on the lookout for strong cross currents. At the position given off Spruce Island left tangent of Northeast Midway Island is directly ahead. The course  $356^{\circ}$  true is also  $1/3$  the way in direction from east tangent of Grave Island (wooded) to west tangent of the largest Southwest Island at the position off Spruce Island. A light placed at Signal Reef would become visible to the right of Grave Island after passing Spruce Island about one mile on the course given. When one point abaft the beam of Signal Reef Islet, change course to  $336^{\circ}$  (true) heading for right tangent of large island forming northeast boundary of Cannery Cove. When the south tangent of the southernmost of the Midway Islands and the south tangent of the northernmost of the Southwest Islands come in range change course to  $302^{\circ}$  (true) and keep the two tangents on range until on the range of the southeast tangent of the largest island and northwest tangent of second island in size, both of which lie at the northeast entrance of Cannery Cove. Then southeast tangent of the second island and the north tangent of the northwest Midway Island are coming on range, change course so as to bring this range directly astern by steering  $251^{\circ}$  (true). Anchor in 13 to 14 fathoms M.L.L.W. sticky bottom when south entrance point appears in range with the south point of the northernmost island of the Southwest Group. In maneuvering in the vicinity of the anchorage or in making or leaving the dock to avoid the sunken rock patch at the entrance and shoal water to westward keep the passage open to view between the largest island and the main land. The limiting sector is indicated on the sheet. The rocks in the northern part of the bay can be avoided by keeping south of the range formed by the south tangent of the second island and the south tangent of the northwest island of the Midway Group. Heretofore entrance to the Cannery Cove has generally been made through the southern channel to effect a port landing; but, unless the buoy is in the charted position, it may lead to trouble as the sunken rock patch is not marked by kelp. Steamers have even backed out from the dock through the southern channel. There is a shoal water flat just west of the present Cannery dock with outcropping rock which should be avoided in leaving the dock. At the present time three dolphins mark the edge of this shoal area. There is only 18 feet of water alongside the cannery dock at M.L.L.W. (see page 5, Vol.4, Soundings)

Perhaps the navigation of this cove could be greatly simplified by establishing a front range on the prominent point

just west of signal LET and corresponding rear range in back of it on the shore to mark the axis of the southern channel. Ships would then probably enter through the southern channel and leave through the northern channel. It is believed that there is sufficient room for maneuvering in the space limited by the ranges given above to make the right rudder turn to leave through the northern channel. This maneuvering area has been dragged. The positions of limits of sunken rock patch at the entrance were determined and are given on pg. 32 Vol. 4 Soundings, the least water being about 3 feet at M.L.L.W.

If bound for the Cannery Cove from the eastward at position  $3/8$  mile from Round Rock Light bearing E, steer  $275^{\circ}$  (true) for 2.7 miles heading for south tangent of the long narrow island. When the S.W. islet of the Southwest Group bears  $218^{\circ}$  (true), steer  $333^{\circ}$  (true) for 2.0 miles, heading for the N.E. tangent of the northeast island of the Midway Group. When the N tangent of the southern group of Midway Islands bears  $285^{\circ}$  (true), steer  $285^{\circ}$  (true) for  $1/2$  mile with northwest point of the largest San Juan Island astern. When "signalRAAF" Islet bears  $189^{\circ}$  (true) steer  $189^{\circ}$  (true) for 0.7 mile. (The small islet about 150 meters S.W. of Grave Island appears just to left of "signalRAAF" Islet on this course.) When the island point (signalWASH) bears  $243^{\circ}$  (true) steer  $243^{\circ}$  (true) for 0.4 mile. Then follow courses given for the West Channel. Due allowance should be made in all of the courses for turns to avoid overrunning.

Respectfully submitted,



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

OFFLYING ROCKS AND DANGERS: The following rocks have been located and developed by hydrography.

1. A sunken rock having 3 feet of water on it at M.L.L.W. lies one half mile S.W. of the San Juan Islands. Latitude  $57^{\circ} 16'$  1028 m. longitude  $134^{\circ} 01'$  200 meters. Position 14g Vol.2 Sounding Record. ✓
2. A sunken rock having  $3\frac{1}{2}$  fathoms of water over it at M.L.L.W. lies one half mile from the S.E.'ly most point of the San Juan Islands in the direction of Point Pybus. Latitude  $57^{\circ} 17'$  570 meters, longitude  $133^{\circ} 58'$  885 meters. Position 16g Vol.2 Sounding Record. Present chart shows a sounding of  $2\frac{1}{2}$  fathoms on this rock. ✓
3. A sunken rock having 8 feet of water over it lies  $\frac{3}{8}$  mile W.S.W. of Point Pybus. Latitude  $57^{\circ} 17'$  1808 meters, longitude  $133^{\circ} 59'$  230 meters. Position 4-5d Vol. 1 Sounding Record. ✓
4. A sunken rock having 1 foot of water over it at M.L.L.W. lies  $\frac{3}{8}$  mile  $325^{\circ}$  W (true) from Pybus Bay Light. Latitude  $57^{\circ} 18'$  847 meters, longitude  $134^{\circ} 05'$  130 meters. Position 1k Vol.2 Sounding Record. ✓
5. A rock baring 1 foot at MLLW lies 1050 meters ( $\frac{5}{8}$  mile)  $S 15^{\circ}$  W (true) from Pybus Bay Light. Latitude  $57^{\circ} 18'$  810 meters, longitude  $134^{\circ} 04'$  960 meters. Position 2k Vol 2 Sounding Record. ✓
6. A rock bares 6 feet at low water about 200 meters off the south shore of the San Juan Islands. Latitude  $57^{\circ} 16'$  1335 meters, longitude  $134^{\circ} 00'$  100 meters. Position 7k Vol 2 Sounding Record. ✓
7. A rock baring 3 feet at M.L.L.W. lies  $\frac{1}{2}$  mile S.E. (true) from the southernmost point of the Southwest Islands. Latitude  $57^{\circ} 14'$  1190 meters, longitude  $134^{\circ} 03'$  37 meters. Position 85h Vol. 2 Sounding Record. ✓
8. A sunken rock with 3 fathoms of water over it at M.L.L.W. lies  $\frac{1}{4}$  mile N.W. of the San Juan Islands. Latitude  $57^{\circ} 18'$  660 meters, longitude  $134^{\circ} 01'$  225 meters. Position 52 $\frac{1}{2}$ d pg 49 Vol. 1 Sounding Record. Later soundings showed this to be a shoal instead of a sunken rock. ✓
9. A rock bares 1 foot at M.L.L.W.  $\frac{1}{2}$  mile N.W. of the northerly San Juan Island. Latitude  $57^{\circ} 18'$  423 meters, longitude  $134^{\circ} 01'$  143 meters. Position 86m Vol.3 Sounding Record. ✓

STATISTICS FOR PYBUS BAY HYDROGRAPHIC SMOOTH SHEET

Date 1925	Letter of day	Volume	No. of positions	No. of sdgs.	Miles (statute)	Vessel
Sept. 18	a	1	79	260	9.8	Motor whaleboat
" 23	b	1	81	198	9.5	Helianthus
" 24	c	1	85	265	8.5	"
" 25	d	1	97	342	15.0	"
" 26	e	1	29	53	6.0	"
" 28	f	2	75	191	16.1	"
" 29	g	2	80	255	11.5	"
" 30	h	2	85	180	10.3	Tender # 1
Oct. 1	j	2	92	293	11.5	"
" 2	k	3	90	282	11.5	"
" 6	l	3	8	15	1.0	"
" 8	m	3	90	221	9.5	"
" 9	n	3	60	170	6.9	"
" 10	p	3	28	75	4.7	"
" 12	q	4		6		"
" 13	r	4	58	193	6.7	"
" 14	s	4	57	162	4.8	"
<b>Totals</b>	<b>17</b>		<b>1094</b>	<b>3161</b>	<b>143.3</b>	

E.P.E.

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 7-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON June 18, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4511<sup>a</sup>

Pybus Bay, Alaska

Surveyed in 1925

Instructions dated February 21, 1924 (EXPLORER)

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

Surveyed by F. E. Joekel.

Protracted and soundings plotted by G. A. Nelson.

Verified and inked by R. L. Johnston.

1. The records conform to the requirements of the General Instructions except that boats headings were entirely omitted.
2. The plan and extent of development, except as will be noted below, satisfy the requirements of the specific instructions. No doubt many of the areas left incomplete were due to the termination of the season's work.
3. The information is sufficient for drawing the usual depth curves except those close to shore and around some of the islands.
4. The sounding line crossings are adequate wherever comparisons are possible.
5. The usual field plotting was done by the field party. The protracting was good, but the plotting of the soundings was not executed very accurately.
6. There are no contemporary surveys adjoining this sheet.
7. This sheet cannot be considered as complete and additional work will be required as follows:
  - a. A development of the 3 1/2 fathom shoal in lat. 57° 17' 570 m., long. 133° 58' 885 m. including the area between this shoal and the limits of the drag work.

The location of this shoal checks closely the position given by the master of the S. S. NORWOOD which struck on March 22, 1918. (See letter 112 - 1918). The 2 1/2 fathom sounding charted at present in this vicinity is from a survey made in 1920 by N. H. Heck (H. 4143). Owing to lack of control at the time, the sounding was plotted on a 200,000 scale chart and then transferred to the smooth sheet. A replotting of this sounding with better control and using in addition other angles given in the records throws the 2 1/2 fathom sounding about 450 meters to the westward, but still about 200 meters from the position of the 3 1/2 fathom spot found on this survey (H. 4511<sup>a</sup>). There is a possibility of 2 distinct shoals existing here, and until further work is done here the 2 1/2 fathom sounding will be retained in its present charted position and the 3 1/2 fathom shoal added. This area should be wiredragged and the least depth determined on the shoals.

- b. Between Pt. Pybus and the southernmost of the San Juan Islands, the hydrography should be extended to seaward to the limits of the wire drag work.
- c. The 3 1/2 fathom shoal in lat. 57° 18' 700 m., long. 133° 59' 900 m. should have additional development.
- d. The 8 3/4 fathom wire drag grounding in lat. 57° 17' 540 m., long. 134° 02' 60 m. should be developed and if possible dragged over.
- e. To the northwest of the San Juan Islands the hydrography should be extended to the limits of the drag work in accordance with the outline on the bromide of H. 2002.
- f. Additional work in the long bight north of Pt. Pybus and on the flat to the northwest of Pt. Pybus as called for on the bromide of H. 2002 was not complied with.
- g. Sounding lines should be run around the island on which Pybus Bay Light is located and particularly from the light to the northeast to join with the wire drag work.
- h. Additional soundings should be taken in the vicinity of Buoy G-1, lat. 57° 18' 800 m., long. 134° 03' 700 m. to develop the extent of the shoal.
- i. Additional hydrographic development is necessary in the vicinity of the 13 ft. spot in lat. 57° 18' 1300 m., long. 134° 04' 300 m. to determine the extent of the shoal.

j. In the channel between the westernmost of the Midway Islands and the mainland, a more detailed survey should be made, particularly in the vicinity of the + P.D. and the kelp patch to the westward of ⊙ Gras. The 4 5/6 fathom spot about 300 meters E x N of ⊙ Gras shows indications of a possible shoal and should be investigated. This entire channel should be wire dragged if practicable. (See letter 358 - 1923 re grounding of the ADMIRAL SEBREE.) The position of the grounding as reported by the master plots close to a 4 1/6 fathom spot and is probably where the vessel grounded. The draft of the vessel is 26.5 feet and she struck at about MLLW. The master reports having found pinnacles with 15 to 18 ft. of water over them.

It is recommended that the + P.D. be removed from its present position and a sunken rock symbol be shown in the position of the 4 1/6 fathom spot.

k. The area between the westernmost of the Midway Islands and the middle island of the group should be dragged and the location of the + P.D. (authority, letter 177 - 1924) verified. It is very probable that it is the same rock found by this party about 400 meters to the southwest. However, for the present it is recommended that this rock be retained.

l. Additional hydrography is required in the west arm of Pybus Bay to conform to the outline on the bromide of H. 2002, a copy of which was sent to this party.

m. In the bay where the camery is located the drag work should be extended to cover the 5 1/2 fathom and the 5 fathom spots found by the drag. The effective depth in the heart of the anchorage should also be increased to at least 31 feet to permit being shown on the wire drag chart.

n. The area west of the Southwest Islands group should be surveyed and the ++ E.D. (authority letter 176 - 1919) verified. For the present these doubtful rocks should be retained on the charts.

o. The rock awash off the southernmost of the Southwest Islands (authority H. 1996), although not found on this survey, should be retained.

8. For the details of the additional drag work to be done in this locality, see review of W. D. 4511<sup>b</sup>.
9. When the hydrographic work is resumed in this locality, it is suggested that, owing to the discrepancy in the shoreline, due to lack of control (see descriptive report T. 3691), the topography of the Brothers Islands, at least to definitely determine the

northern limits, be verified. The north tangent to the islands was used to locate a rock and until the limits are accurately located, it will be impossible to plot the rock. The verification should therefore consist of the following:

△ Fox on the northern end of the westernmost of the Brothers Islands should be occupied and the shoreline of the northern end of the island run in. The shoreline of the northern end of the easternmost of the Brothers should also be surveyed. In both cases a proper junction should be made with the existing topography (T. 3691).

10. Survey recommended for acceptance, but incomplete.  
Field drafting - good.
11. Reviewed by A. L. Shalowitz, June, 1926.

Note: This review should be read together with the review of H. 4511<sup>b</sup> when outlining future work.

Hyd. Sheet No 4511<sup>a</sup>

The hydrography on this sheet supplements the wire drag survey done at the same time, Hyd 4511<sup>b</sup>, and is hardly complete enough to draw a complete set of curves from.

The ground is very broken and uneven and there are numerous shoals.

All questionable points which arose in the verification have been discussed and settled.

The records are satisfactory.

The sheet is well protracted and the soundings are neatly but not very accurately plotted.

R. L. Johnston

MAR 18 1926  
WWE

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in  
4 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4511 A

Locality: S. E. Alaska

Chief of Party: F. B. T. Siems in 1925.

Plane of reference is  
7.2ft. on tide staff at Pybus Bay Cannery

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.



Chief, Division of Tides and Currents.

4511a

See 4511a Additional, for 1926 work

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: <u>S. E. Alaska</u>	
11-5613	Acc. No.
G. & G. SURVEY L. & A.	
<b>DESCRIPTIVE REPORT.</b>	
Hydrographic Sheet No.	<u>4511a</u>
LOCALITY:	
<u>Pybus Bay</u>	
<u>Frederick Sound</u>	
<u>Pybus Bay</u>	
1925-26	
CHIEF OF PARTY:	
<u>F. B. T. Siems</u>	

4511a-Additional

4511a-Additional

Form 504

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

..... Director

U. S. COAST AND GEODETIC SURVEY

L. & A.

Acc. No.

State: SE Alaska

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**DESCRIPTIVE REPORT**

Topographic } Sheet No. **4511a**  
Hydrographic } Additional

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LOCALITY

Frederick Sound

Pybus Bay

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1926

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CHIEF OF PARTY

F. B. T. Siems

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET (Supplemental to  
SUPPLEMENTAL 1925)

4511a Additional

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. 4511a Additional

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

General locality . . . . Frederick Sound. . . . . .

Locality . . . . . Pybus Bay. . . . . .

Chief of party . . . . . F. B. T. Siems . . . . .

Surveyed by . . . . . W. Weidlich . . . . .

Date of survey . . . . . October 1926. . . . . .

Scale . . . . . 1/20,000. . . . . .

Soundings in . . . . . Fathoms. . . . . .

Plane of reference . . . . M. L. L. W. . . . . .

Protracted by G.A.N. . . . . Soundings in pencil by G.A.N. . . . .

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

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, . . . . Marigrams, 1 Boat sheets, <sup>cas</sup>original B.S.

\* 3 Sounding books, <sup>1926 work</sup> Wire-drag books, . . . . Photographs.

Data from other sources affecting sheet . . . . .

Remarks: \* Registered as 4511a Additional

SUPPLEMENTAL  
DESCRIPTIVE REPORT

to accompany

PYBUS BAY HYDROGRAPHIC SHEET

REGISTER 4511a.

- o -

NOTE: This Descriptive Report  
supplements that of previous  
year and should be attached  
thereto.

SUPPLEMENTAL  
DESCRIPTIVE REPORT

to accompany

PYBUS BAY HYDROGRAPHIC SHEET.

Register 4511a Additional

EXTENT. This hydrography supplements that of 1925 appearing on register 4511a. All areas not wire dragged were covered by soundings according to the Director's instructions dated September 14, 1925 and supplemented by letter from the Director dated August 3, 1926.

GENERAL DISCRPTION. As of report of 1925.

DANGERS: (Found by 1926 survey)

1. Rock awash at M.L.L.W., 470 meters west of signal CASH. Located by positions 7 and 8w, volume 6. ✓
2. Two fathom shoal at entrance to Donkey Bay, 800 meters, N.20°W. of signal CAT. Located by positions 10 and 24z, volume 7. Least sounding 2 fathoms at position 23z. ✓
3. Reef baring at half tide 940 meters S.W. of triangulation station FAR and in prolongation of Spruce Island. Located on topographic sheet. ✓
4. Reef baring at <sup>half tide</sup> ~~low water~~ 940 meters S.31°E. of triangulation station GRA, located on topographic sheet. ✓
5. Rock, 2ft of water, 150m. 194°T. from  $\odot$  Mid. ✓

ANCHORAGES. As of the report of 1925.

SAILING DIRECTIONS. The directions as given in Descriptive Report for 1925 work were used by the EXPLORER and were found to be practicable except as follows:

1. The course leading to the Cannery Cove, entrance northward of the entrance rock, and marked by a natural range: the south tangent of the south Midway Island in range with the south tangent of the northern island of the Southwest group, appears to pass somewhat closer to the entrance rock buoy than shown on the sheet in following the range. It is considered better therefore to enter the cove south of the entrance rock. (See paragraph beginning at bottom of page 3 of previous descriptive report.) *The range mentioned above is also not readily recognized.*
2. The courses as laid out for passing between the Midway Islands and the Southwest Islands entail several large angle changes and short courses making it somewhat impracticable for

a ship to keep on the various sailing tracks. In descriptive report of 1925 it was recommended that all channels among the islands of the Midway group be abandoned, but additional hydrography and wire drag work indicates that two of the channels could be made practicable by establishing aids to navigation; namely the narrow but straight channel between the northwestern Midway Island and the mainland and the channel between the southern and middle island of the Midway group. These channels are probably more practicable than the indirect channel between the Midway Islands and the Southwest Islands. The Lighthouse Superintendent at Ketchikan upon reviewing the additional wire drag work of the past season in Pybus Bay considered that the channel between the northwestern Midway Island and the mainland would be the more favorable. The 15 foot rock found by the wire drag in Latitude  $57^{\circ}19'$  20 meters Longitude  $134^{\circ}05'$  605 meters could be marked by a buoy, and after entering channel from the eastern part of the Bay and passing 50 to 100 yards Northwest of such a buoy a course  $239^{\circ}$  true, heading for the Cannery dock can be followed until Cannery Cove entrance rock buoy is abeam to enter Cannery Cove south of the rock. (See course drawn on smooth sheet.)

JAN 21 1927



F. B. T. Siems,  
Chief of Party,  
U. S. S. EXPLORER.

APPENDIX.

Referring to various subdivisions, a,b,c, etc., under seventh paragraph of Section of Field Records Report on Hydrographic sheet No. 4511a there is submitted as necessary, notes relating to additional work performed as follows:

(a) The shoal was not developed by hydrography since the drag found 11 feet on the 3-1/2 fathoms shoal in Latitude  $57^{\circ}17'$  570 meters, Longitude  $133^{\circ}58'$  885 meters. A drag of 45 feet depth passed

a little over 200 meters southeast of the shoal. It was planned to pass it closer, but this was not accomplished on the last day of the season, due to apparent loss of control by one of the launches. However, a drag of 17 feet depth was probably carried over the "replotted position" of shoal of 2-1/2 fathoms, to the 3-1/2 fathoms (former depth) shoal, where a depth of 11 feet was obtained. The exact location of the 2-1/2 fathoms shoal as replotted or originally plotted was not known by the party, if it is within the 17 foot or 45 foot drag depth, <sup>are</sup> its existence <sup>there</sup> would be disproved.

(c) A rock awash at M.L.L.W. was found on this shoal. ✓

(d) This shoal was developed by the drag and least depth ✓ of 4 fathoms was obtained about 120 meters southeast of the 8-3/4 fathoms originally found.

(f) The contemporary topographic sheet shows the areas referred to as extensive flats, whereas it is believed that the bromide of the original hydrographic survey on which work required was indicated did not show the flats at all. It was thought they were therefore considered as possible water areas <sup>and thus included as</sup> in the areas to be sounded. It would have required a rising tide to sound over the flats, to prevent stranding the launch, and this condition was also required on a great deal of the more important work of sounding close to the shore.

(g) Area also dragged.

(i) Area dragged close to shoal on all sides.

(j) Fifteen feet found close to the 4-1/6 fathoms spot the supposed position of the grounding of the Admiral Sebree. The entire channel was dragged. Near the 4-5/6 fathoms spot, soundings of 4-2/6 fathoms were obtained and about 100 meters in a N.W. direction a shoal of 2-2/6 fathoms was found. The drag of 38 feet depth was carried right up to the 4-2/6 and 4-4/6 fathoms soundings.

(k) This area dragged to a depth of 47 feet disproves existence of P.D. rock referred to.

(n) Area in question surveyed, <sup>E</sup> the ~~± ±~~ P.D. rocks not found, it is believed that <sup>these</sup> ~~this~~ rocks refer to those found about 100

meters south westward by contemporary topographic ~~party~~ <sup>Survey.</sup>

*Charted*

(o) <sup>^</sup> Rock awash off southermost of Southwest Islands carefully searched for when bottom was visible at low tide in 1926 and could not be found near or at charted position. (See page 28 of Wire Drag Sounding Record, accompanying Sheet 4511b) The sea conditions at this time were unusually good for seeing bottom in depths to four fathoms, and it is believed that least water in this locality was obtained. Soundings in this area are plotted on 4511b as well as 4511a.

STATISTICS FOR HYDROGRAPHIC SHEET PYBUS BAY.

Date 1926	Letter	Vol.	No. of Pos.	No. of Sdgs.	Statute Miles	Vessel
Oct. 11	t	5	117	306	14.5	Tender
12	u	5	124	436	21.3	"
13	v	5	130	401	24.0	"
14	w	6	58	156	10.00	"
15	x	6	13	13	0.1	"
16	y	6	114	329	23.3	"
20	z	7	39	39	1.0	"
TOTALS	7	3	595	1680	94.2	

POST-OFFICE ADDRESS: 202 Burke Building, Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
U.S.C. & G.S.S. EXPLORER.

DEC 20 9 10 26

*PH*  
*11*

December 22nd, 1926.

To: Director, Coast & Geodetic Survey,  
Washington, D. C.

Through: Inspector, Coast & Geodetic Survey,  
Seattle, Washington.

From: Commanding Officer, U. S. S. EXPLORER,  
Seattle, Washington.

Subject: Rock in Pybus Bay.

Replying to your letter of above subject, reference 10-LE, forwarding section of original topographic sheet 1964 which is herewith returned, you are respectfully advised as follows: Mr. H. W. Tyler, has passed the locality indicated on the photostat on numerous occasions and states that a rock was never seen there. A line of soundings was carried over the area in question in 1926, and 17 fathoms was obtained where the rock is supposed to be (see tracing herewith). The drag was not carried over the area in question. It appears that the photostat shows a small island instead of a rock in the encircled area. There is no high water island, but it cannot be definitely said that a rock does not exist in the approximate locality.

*F. B. T. Siems*  
F. B. T. Siems,  
Commanding Officer.

*Forwarded*  
*F. Hardy*

3-1111

January 13, 1927.

To: Commanding Officer,  
U. S. Coast and Geodetic Survey,  
Steamer EXPLORER,  
302 Burke Building,  
Seattle, Washington.

From: The Director, U. S. Coast and Geodetic Survey.

Subject: Rock in Pybus Bay.

References: (a) Director's letter, No. 19-LE, December 14, 1926.  
(b) Letter, Commanding Officer EXPLORER, December 22, 1926.

The receipt is acknowledged of reference (b) and also the tracing and photostat of a section of F. 1954 mentioned therein.

The information furnished by you is considered sufficient to warrant the omission on our charts of the islet in question and to justify an amendment of the interpretation of the delineation of the earlier survey.

Please accept my thanks for your report.

(Signed) W. L. Paris

Acting Director

10-LE



December 14, 1926.

200  
11/14/26

Return to H. & T. Div. for filing

To: Commanding Officer,  
Coast and Geodetic Survey,  
Ship EXPLORER,  
under 202 Burke Building,  
Seattle, Washington.

Through: Inspector, Seattle Field Station.  
From: Director, U. S. Coast and Geodetic Survey.  
Subject: Rock in Pybus Bay.

There is forwarded herewith a photostat copy of a section of the original topographic sheet 1964, of a section of Pybus Bay surveyed in 1889.

Encircled in red on this photostat is shown a rock off the southern point of Donkey Bay. This rock appears upon the sheet showing the hydrographic survey for the same year. For some reason which the records fail to reveal, this rock has never been shown on the chart. An examination of the topographic and hydrographic survey made by your party in 1925 also failed to show this rock. The sunken rock symbol between this rock and the shoreline agrees closely with one of the rocks located by the topographic party. It is also noted that a line of soundings was carried by your party between the position shown for this rock and the shoreline.

It may be that the additional work which you have done this season will furnish either soundings or drag area to definitely settle the existence or non-existence of this rock. If however, your additional work was not carried to this degree, it is desired that you advise whether you are able to furnish information to show the definite existence or non-existence of this rock. Members of your party who worked in this vicinity either of the past two seasons may be able to assist you in this matter.

(Signed) W. BOWLE

ACTING Director.

AND REFER TO No. 11-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON January 10, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4511a, Additional Work  
Surveyed in 1925 and 1926 (Additional Work, 1926)

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

Surveyed by W. Weidlich.

Protracted by G. A. N.

Soundings plotted by G. A. N.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions except that the sounding boat's heading by compass was omitted in all cases.
2. The plan and character of the development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. No system of sounding line crossings was used.
5. The usual depth curves can be completely drawn.
6. The field plotting was completed to the extent prescribed in the General Instructions.
7. The office draftsman did not have to do over any of the work done by the field party.
8. This being a shoreline development to supplement a wire drag survey, the junctions are satisfactory.
9. No further surveying is required to fully develop important areas within the limits of this sheet, except some work at the entrance to Pybus Bay outlined in the instructions and not accomplished by the field party due to weather conditions and insufficient time.
10. Rating of work:
  - a. Character and scope of the surveying, good.
  - b. Field drafting, good.

Reviewed by H.E. MacEwen, June 14, 1927.

H. 4511a - 2.

Sheet inspected by A. L. Shalawf

Approved:

A. M. Sobieralski  
Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

February 10, 1927.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
3 add'l volumes of sounding records for

HYDROGRAPHIC SHEET 4511A

Locality: S. E. Alaska.

Chief of Party: F.B.T. Siems  
Plane of reference is M L L W  
7.1 ft. on tide staff at Pybus Bay Cannery.

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.

*E. Wade*

Chief, Division of Tides and Currents.

4511b

See 4511b Additional for 1926 work

4511b

Form 504

**DEPARTMENT OF COMMERCE**  
**U. S. COAST AND GEODETIC SURVEY**  
**L. & A.**

State: S. E. Alaska      Acc. No. \_\_\_\_\_

11-5613

**DESCRIPTIVE REPORT.**

Wire Drag Sheet No. **4511b**

**LOCALITY:**

~~Pybus Bay~~

~~Frederick Sound~~

Pybus Bay

\_\_\_\_\_

1925

\_\_\_\_\_

**CHIEF OF PARTY:**

F. R. T. Siems

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

4511b

WIRE DRAG ~~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. 4511b(W.D.)

State S.E. Alaska . . . . .

General locality Frederick Sound . . . . .

Locality Fybus Bay . . . . .

Chief of party F.B.T. Siema . . . . .

Surveyed by F.B.T. Siema . . . . .

Date of survey Sept. 30 - Oct. 15 1925. . . . .

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

Soundings in fathoms . . . . .

Plane of reference M.L.L.W. . . . . .

Protracted by G.A.N. . . . Soundings in pencil by G.A.N. . . .

Inked by G.A.N. . . . . . Verified by R.D.H. *RLH* . . . . .

Records accompanying sheet (check those forwarded): *sk*

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

*\** 1 Sounding books, 5 *sk* Wire-drag books, --- Photographs.

Data from other sources affecting sheet . . . . .

Remarks: *\* Rec'd 2 sdy 106*

MAR 18 1926

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4511 B

Locality: S. E. Alaska

Chief of Party: F. B. T. Siems in 1925

Plane of reference is  
7.2 ft. on tide staff at Pybus Bay Cannery

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.



Chief, Division of Tides and Currents.

## DESCRIPTIVE REPORT

to accompany

### Wire Drag Sheet of Pybus Bay

**EXTENT:** This sheet comprises the dragging of Pybus Bay and joins the wire drag work of Register # 4143 a or b northwest of Round Rock. It was intended to drag the channel northwest of Spruce Island on J day but owing to loss of control of the end launch that end of the drag grounded off the northeast part of Spruce Island defeating the original purpose. The waters on either side of the chain of Islands which divide the bay into the two main parts were dragged and the channel between the Midway Group and Southwest Group of these Islands was dragged to its maximum width and limits of deep water at the two projecting points of reefs one on either side were determined by dragging up against them, then converging ends of drag and obtaining positions of parts of the drag where aground. An attempt was also made to carry the drag up against the rock patch at the entrance of Cannery Cove and bring ends together so as to sweep the channels north and south of the rock patch, but this was prevented by the drag going aground near the ends at the beginning of the maneuver.

**METHODS OF SURVEY:** Three sixteenth inch bottom wire was used with wooden floats tested for buoyancy and single toelines (not bridled) but of sufficient length to prevent great lift. The toggles were either of sufficient buoyancy or of less buoyancy required to sustain the wire, so that no lift on account of buoyancy occurred. There was probably more or less section sag due to insufficient buoyancy and kite effect of the toggles - therefore tests were made near the buoys. On B and C days tests were made at the middle parts of sections (also near the buoys) for experimental purposes revealing section sags of 2 to 4 feet. The tests on C day were not completed. As a safe measure a general correction of 2 feet was applied in reducing drag depth except where the tests indicated greater lift, which sometimes occurred at an end section near the large buoy, no bridle arrangement being used. Very favorable sea conditions at all times while this work was in progress made it unnecessary to make any correction for swell etc. Difficulty in maneuvering, due to strong currents, was experienced along the entrance of Pybus and at drag positions 30 to 35 G where the end launch did not keep station with the guide launch, the latter had no alternative but to allow itself to be pulled away from its proposed line by the combined effect of current and the other launch at that important area. The two boat control method was used throughout.

**PLOTTING AND RECORDS:** The launch positions were pricked through the protective tracing cover on the smooth sheet and the towline connecting launch position and large buoy is indicated by a light pencil line. This method of plotting is considered necessary for absolute accuracy and also useful in shaping drag curves, which are generally tangent to the towline. In using the buoy spacers for drawing curves, for normal dragging, the celluloid strip edge of the spacer is then made to pass through the four points namely the two launch positions and the two large buoy positions.

The end launch positions were copied into the guide launch record. It was intended to obtain positions on both launches simultaneously generally every five minutes, this could not always be done. The numbers corresponding to the guide launch positions were indicated on the sheet; those of the end launch were retained in copying but were not shown on the smooth sheet. To differentiate between the end launch and guide launch positions the end launch positions are bracketed and marked E L in red.

Grounds recorded are prominently indicated in the record by a red G with a red circle around the letter.

**RESULTS OF THE SURVEY:** This wire drag examination reveals the existence of a clear straight and fairly wide channel west of the central chain of islands, also a clear wide channel between the Midway Group and Southwest Group of these islands. No important dangers were found. A 15<sup>12</sup> foot rock was found 1/4 mile S.W. of Pybus Bay Light while dragging for a direct channel in the Midway Island Group. Other shoals found by the drag will be found enumerated in the list of grounds attached to this report.

Respectfully submitted:



F.B.T. Siems,  
Chief of Party  
Commanding Str. Explorer.

LIST OF GROUNDS. WIRE DRAG SHEET, PYBUS BAY

1. Position 29A Grounded with drag set at 70 feet, effective depth 62 feet. Sounding of 9 fathoms obtained at ground. This was not covered later.
2. Position 42A Grounded at #8 buoy with drag set at 70 feet (effective depth of 67 feet) Sounded and least depth obtained was 62 feet. Later passed over with an effective depth of 47 feet.
3. Position 28 $\frac{1}{2}$ B Grounded between N and #11 buoys. Drag set at an effective depth of 52 feet. No soundings taken and ground was not covered later but was developed by hydrography.
4. Position 35B end launch - Grounded between #7 and #8 buoys with an effective drag depth of 52 feet. Least depth found by soundings 47 feet. Later passed over by an effective drag depth of 38 feet.
5. Position 39 $\frac{1}{2}$ B Grounded at #12 with an effective depth of 53 feet. Least depth found by sounding 56 feet. Not covered later but a later drag with an effective depth of 41 feet hung up on the same place. On the boat sheet a sounding of 42 feet is shown on the position of the 56 feet sounding but no record of it can be found. However it is probably there and through some inadvertence was not recorded.
6. Position 23C Ground at E buoy with drag set at 60 feet (effective depth of 41 feet) This is the same shoal that drag hung up on at position 48 $\frac{1}{2}$  B and no soundings were taken.
7. Position 54C Grounded at F and #12 buoys with an effective drag depth of 56 feet. No soundings were taken as this ground was just off the end of Spruce Island and current was running too strong. Not later covered.
8. Position 35D Grounded between buoys 6 and 7 with an effective drag depth of 40 feet. Sounding of 31 feet (reduced) obtained. Drag was hooked up to 39 feet on that side and a new trial made but hung up again position 39D. This time drag was hooked up to 35 feet (effective depth 22 feet) and a third trial made which was again unsuccessful. A reduced sounding of 2  $\frac{1}{6}$  fathoms (12 feet) was obtained. No further attempts were made to drag over the shoal. N at 430
9. Position 53E F buoy bumping on ground with drag set at an effective depth of 44 feet but not hanging up. F buoy slid off and #12 buoy hung up momentarily but this also pulled across until at position 56E buoy #11 hung up solidly. No sounding was taken as this ground was near the beach.
10. Position 56E N buoy bumping on ground with an effective drag depth of 44 feet but sliding around shoal until drag finally hung up between buoys #4 and #5. This caused drag to be hung at three points as follows: between #4 and #5 on a shoal on which a sounding of 5  $\frac{1}{2}$  fms. (reduced) was obtained, at buoy #9 on the horizontal stripe red and

black navigation buoy which marks the shoal in the bay and at buoy #11 on a shoal at which no sounding was taken. The drag was stretched tightly around these three points.

11.

11. Position 5F Grounded at #6 buoy on point of shoal off south end of southernmost Midway Island (near signalile). Drag set at an effective depth of 45 feet. One sounding just outside the drag was 8 fathoms reduced.

12. Position 15F Grounded at buoy #3 with an effective drag depth of 43 feet on a known shoal. No soundings were obtained and area was not covered later.

13. Position 34F Grounded between buoys #4 and #5 with an effective drag depth of 48 feet on a known shoal off end of (signalTUT) island. A sounding of  $8 \frac{1}{6}$  fathoms reduced was obtained. This shoal was not covered later.

14. Position 3G F buoy bumping on ground with an effective drag depth of 42 feet. Buoy finally grounded at position 5G. Sounding of  $5 \frac{5}{8}$  fathoms (35 feet) reduced was obtained at this point. Not covered later.

15. Position 5G Drag aground between #7 and #8 buoys with an effective drag depth of 42 feet. Sounding of  $7 \frac{1}{6}$  fathoms (43 feet) reduced was obtained. Not covered later.

16. Position 9E Drag aground on known shoal. Drag set at an effective depth of 29 feet. No soundings were obtained and shoal was not covered later.

STATISTICS FOR WIRE DRAG SHEET OF FYBUS BAY

Date 1925	Letter day	Length of drag	No. of Soundings	No. of Positions	Miles (stat.)	Square Miles
Sept. 30	A	3600	3	44	6.9	3.5
Oct. 1	B	6500	3	44	5.8	6.0
" 2	C	6500	--	64	8.3	8.0
" 9	D	1800	7	45	5.0	3.5
" 10	E	3900	1	56	7.0	2.0
" 13	F	3000	4	72	8.0	2.0
" 14	G	3300	2	34	3.0	0.5
" 15	H	1200	1	10	0.7	0.3
<hr/>			<hr/>	<hr/>	<hr/>	<hr/>
	8		21	369	44.7	25.8

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

June 19, 1926.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4511<sup>b</sup>

Pybus Bay, S.E. Alaska

Surveyed in 1925

Instructions dated February 21, 1924

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

Surveyed by F. B. T. S.

Protracted and inked by G. A. Nelson.

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

1. The records conform to the requirements of the instructions for wire drag work (Special Publication 118) except in the following particulars:
  - a. Effective depths should be entered on each page of the record and not merely at the beginning of the day's work.
  - b. Actual effective depths should be shown on the smooth sheet instead of merely showing the increment over the basic color as has heretofore been done (See page 40, paragraph 1, Special Publication 118).
2. The methods and character of the survey conform to the requirements of the General Instructions.
3. The depth of dragging satisfies the specific instructions except in the anchorage near the cannery in the western part of Pybus Bay, which was only dragged to an effective depth of 29 feet. The depths in this anchorage vary from 10 to 24 fathoms, so that unless it is dragged to at least 31 feet the anchorage will not be tinted on the chart, and important information will be withheld from parties interested.
4. The extent of dragging does not entirely conform to the specific instructions, doubtless due to the termination of the season. Attention will be called to the incomplete portions in the succeeding paragraphs.
5. A clearance depth was obtained over all important shoals discovered sufficient for surface navigation except the following:

- a. The 13 ft. sounding in lat. 57° 18' 1300 m., long. 134° 04' 300 m. A small drag should be passed over this and the least depth determined.
  - b. The 37 ft. sounding (grounding depth) about 250 meters W.N.W. of buoy G-1 was not cleared. This is close to a 5 1/6 fathom sounding but may be a detached spot.
  - c. The 52 ft. sounding (grounding depth) in lat. 57° 17' 540 m. long. 134° 02' 60 m. should be cleared when the drag work is extended inshore.
  - d. The 41 ft. sounding (grounding depth) in lat. 57° 15' 1660 m. long. 134° 02' 820 m. was not cleared. This spot lies on the edge of the main channel on the east side of Pybus Bay. It is surrounded by much deeper water and is of sufficient importance to determine the least depth.
  - e. The 43 ft. sounding (grounding depth) in lat. 57° 16' 1250 m. long. 134° 04' 300 m. was not cleared. This is probably an extension of the shoal making out from the reef.
  - f. The 42 ft. sounding (grounding depth) in lat. 57° 14' 600 m. long. 134° 05' 180 m. was not cleared. This should be covered when the drag work is extended closer inshore.
  - g. The 33 ft. sounding in lat. 57° 18' 1150 m., long. 134° 08' 20 m. This should be covered when the large split close by is dragged.
  - h. The 30 ft. sounding in lat. 57° 18' 800 m., long. 134° 08' 740 m. should be cleared and the least depth determined, as it is important for vessels using this anchorage to know what swinging room they have.
6. Besides the points mentioned in the preceding paragraph, the following additional drag work is required to complete the survey of this bay:
- a. The channel between Pt. Pybus and the San Juan Islands should be dragged from a junction with W. D. 4143 to join with the drag work already completed in the east arm of the bay, dragging as close inshore as practicable and being particularly careful to obtain the least depth on the charted 2 1/2 fathom spot and the 3 1/2 fathom shoal from H. 4511<sup>a</sup> lying between the largest of the San Juan Islands and the group of islets south of Pt. Pybus (See paragraph 7, a, review of H. 4511<sup>a</sup>).

- b. Westward of the San Juan group the drag should be extended closer inshore, at least to effect an adequate junction with the existing hydrography.
- c. The drag work should be extended to the head of navigation in the eastern arm of Pybus Bay to anticipate any future commercial development in this section.
- d. The channel to the northward of the Midway Group (south of  $\odot$  Gras) should be dragged if practicable to its greatest effective width.
- e. The channel between the western of the Midway Islands and the islands on which Pybus Bay Light is located should be dragged to effect a junction between the drag work in the eastern and western arms of the bay, being particularly careful to drag over the + P.D., which is believed to be identical with the  $1\frac{1}{4}$  fathom spot to the southward (see paragraph 7 k, review of H. 4511<sup>a</sup>).
- f. The drag work should be extended westward and northwestward of buoy G-1, through the channel south of Pybus Bay Light if practicable and connecting with the existing drag work. Drag as close to Pybus Bay Light as the hydrography will permit.
- g. Extend the drag up the western arm of the bay and run as close to shore as practicable, indenting for Donkey Bay and other large bights in the shoreline.
- h. Drag the large split in the anchorage north of the cannery, increase the effective depth to at least 31 feet and carry the drag as close to the dock as possible.
- i. Extend the drag close to the fish trap in lat.  $57^{\circ} 14\frac{1}{2}'$ , long.  $134^{\circ} 05\frac{1}{2}'$  to cover the 7 fathom sounding (grounding) and continue the drag strip northward running close to  $\odot$  Rok and joining with the deep drag near Grave Island.
- j. Drag around the reef to the southward of the Southwest Islands, extending the work at least to the 10 fathom curve. This area is very important as a light will probably be placed here to mark the eastern limit of the main channel.
- k. The drag should be extended closer inshore along the eastern side of the Southwest Islands being careful to drag over the 41 ft. grounding.
- l. The area between lat.  $57^{\circ} 14'$  and  $57^{\circ} 16'$  should be dragged and a junction effected with this sheet and H. 4143.

7. Attention is called to the fact that the survey discloses a clear, safe channel in the western arm of the bay from seaward in to the cannery. A safe depth of 44 ft. can be carried along this route until the buoy opposite the cannery is reached. This channel should be strongly recommended to maritime interests and all other channels abandoned, at least until the survey is entirely completed.
8. This sheet is acceptable for charting purposes as far as it goes, but it is not complete.

The field drafting is excellent except for the notation of effective depths which was not in accordance with the general instructions.

9. Reviewed by A. L. Shalowitz, June, 1926.

Note: This review should be read together with the review for H. 4511<sup>a</sup> when outlining future work.

## Wire Drag Sheet No 4511<sup>b</sup>

The area within the limits of the drag work is very well covered. With the possible exception of the small area in Cannery Cove, no splits occur.

The grounds are listed in the descriptive report. There is a position on page 33 Vol. No. 3, which is marked "Position of drag aground at end of day".

The records are satisfactory except that the effective depths should have been entered on each page and a few positions are shown on pieces of paper pasted into the book.

The protracting and plotting of drag positions has been carefully and accurately done. The use of a zero before drag depths of a single figure is unnecessary and contrary to the usual practice. The soundings on the drag sheet should have been plotted in feet instead of fathoms

R. L. Johnston

4511b Additional

4511b Additional

Form 504

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

....., Director

C. & G. SURVEY  
L. & A.  
Acc. No.

State: S.E. Alaska

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**DESCRIPTIVE REPORT**

~~Topographic~~ } Sheet No. **4511b**  
~~Hydrographic~~ } **Additional**

WIRE DRAG

LOCALITY

Frederick Sound

Pybus Bay

---

1926

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CHIEF OF PARTY

F.B.T. Siems

GOVERNMENT PRINTING OFFICE

Form 504

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: S. E. ALASKA

11-5613

SUPPLEMENTAL  
DESCRIPTIVE REPORT.

WIRE DRAG ... Sheet No. 4511b

LOCALITY:

PYBUS BAY. S. E. ALASKA.

~~(This Report to be  
attached to Original  
DESCRIPTIVE REPORT  
For 4511b)~~

1926.

CHIEF OF PARTY:

F. B. T. Siems.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

WIRE DRAG - (SUPPLEMENTAL TO 1925)

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. 4511b. Additional Work

State . . . . . S. E. ALASKA . . . . .

General locality . . FREDERICK SOUND . . . . .

Locality . . . . . ADMIRALTY ISLAND - PYBUS BAY . . . . .

Chief of party . . . F. B. T. SIEMS . . . . .

Surveyed by . . . . F. B. T. SIEMS AND ROELAND D. HORNE . . . .

Date of survey . . . OCTOBER 1926 . . . . .

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

Soundings in . . . . Feet . . . . .

Plane of reference M.L.L.W. . . . . .

Protracted by G.A.N. . . . Soundings in pencil by G.A.N. . . .

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

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, \_\_\_\_\_ Marigrams, 2 Boat sheets, *original B. Sh.*

1 Sounding books, 7 Wire-drag books, \_\_\_\_\_ Photographs.

Data from other sources affecting sheet . . . . .

→ *Registered as Boat Sheets*

Remarks: 5 sheets of wire drag work on vellum not plotted on smooth sheet which form a part of the smooth sheet and accompanies it.

DESCRIPTIVE REPORT  
to accompany  
WIRE DRAG SHEET OF PYBUS BAY

SUPPLEMENTAL TO 1925.

- 0 -

## DESCRIPTIVE REPORT

to accompany

### WIRE DRAG SHEET OF PYBUS BAY

Supplemental to 1925.

**EXTENT:** This sheet, register 4511b, comprises the wire drag work in Pybus Bay accomplished in 1925 and 1926. The two years may be distinguished in that the work of 1926 appears in pencil on the register and begins with "J" day. The work of 1926 consisted of the development of shoals, the widening of dragged areas in channels and the covering of splits. Since most of this work was complicated it was necessary to use supplemental sheets to distinguish the various drag lines, this was done by tracing a section of the smooth sheet on tracing vellum and plotting directly thereon, using as many tracings as was necessary to insure clearness. It is believed that no loss of accuracy was occasioned by this method over the small areas involved, the effect of any distortion being considered negligible.

**SURVEY METHODS:** The standard drag consisting of 3/16" ground wire, wooden toggles, and can buoys was used throughout. A bridle was used on short toelines. Where there was no drag test a correction of one foot was arbitrarily applied. Two boat control was used throughout.

**PLOTTING AND RECORDS:** The usual method of plotting was used, the initial plotting of the launch position and then a short line representing the direction of the towline being drawn through this position. The length of towline was then stepped off on this line. The celluloid strip of the buoy spacer was made to pass through these four points in plotting depth changes for normal drag underway. All plotting on Register 4511b was done in pencil to distinguish it from the previous years work. The plotting on the supplemental vellum sheets was inked in as no confusion would result therefrom.

The positions 37P to 48P were plotted and subsequently rejected as they covered no new area or dragged area that had not previously been covered at greater or equal depth.

Between position 46 and 47K, N buoy touched momentarily

whereon the guide launch swung into the clear. The path of N from position 46 to 47K is therefore plotted as a curved line as shown on the sheet.

*\* Smooth sounding record*

The guide launch records contain all the information necessary to plot the sheet, the end launch and tender records being copied therein. End launch positions are marked with a red bracket. Grounds are marked by a red "G" inclosed in a red circle.

RESULTS OF SURVEY: The drag discovered a fifteen foot shoal in latitude  $56^{\circ} 19.0'$ , longitude  $134^{\circ} 05.6'$ , probably the position of the grounding of the Admiral Sebree (See appendix paragraph (j) Supplemental Descriptive Report, Register 4511a).

2. The 2-1/2 fathom shoal shown on the old chart at latitude  $57^{\circ} 17.2'$ , longitude  $133^{\circ} 58.5'$ , was proven to be misplaced. The dragging in this vicinity may disprove its existence entirely other than the 11 foot shoal found in latitude  $57^{\circ} 17.3'$ , longitude  $133^{\circ} 58.9'$ . (See appendix paragraph (a) Supplemental Descriptive Report, Register 4511a)

3. The channel between Northwest Midway Island and the mainland was dragged and found clear. It can be recommended for ship use after marking the 15 foot shoal with a buoy. (See sailing directions Supplemental Descriptive Report, Register 4511a)

LIST OF GROUNDS FOR PYBUS BAY WIRE DRAG.

1. Position 4J. Grounded at depth of 35 feet between 4 and 6. Grounds located by sextant fixes and soundings corresponding to depth of drag plotted. Not redragged being on edge of known shoal.

2. Position 11J. Grounded at depth of 35 feet at buoys N, 1, 6, and 7. Least sounding obtained was 35 feet. Not redragged as ground was at edge of known shoal water.

3. Position 15J. Grounded at buoys 3,4,5, and 6 at depth of 37 feet. A sounding of 29 feet was obtained at buoy 3 and 35 feet at buoy 4. Not dragged over as ground was at edge of known shoal.

4. Position 22J. Grounded with a depth of 38 feet between buoys 8 and 9. Least sounding obtained 38 feet. Later found 31 feet and dragged over with a depth of 28 feet.

*(Plotted 27 (see boat sheet + pos 23K, W.D. record) p. 27  
(Par No 9)* 5. Position 35J. Grounded at buoys 4 and 6 with a depth of 37 feet on 30 foot spot. Later found 26 feet and dragged over with a depth of 22 feet.

6. Position 5K. Grounded between buoys 2 and 3 with a depth of 27 feet, least sounding obtained 26 feet. Later dragged over with a depth of 22 feet.

7. Position 8K. Grounded with a depth of 22 feet. No sounding obtained as ground was at known shoal water near shore.

8. Position 18K. Grounded with a depth of 31 feet at buoy 4. Later dragged over with a depth of 28 feet. Sounding of 31 feet (depth of drag) plotted between buoys 4 and 5.

*27 R.D.* 9. Position 23K. Drag touched momentarily. Evidently on the same shoal indicated under 8, therefore 27 feet should be plotted instead of 31 feet. Passed over with 19 feet.

10. Position 30K. N aground at a depth of 43 feet. N remained aground while the end launch swung the drag around and against an island. Soundings were obtained at the various buoys.

11. Position 46K. N touched momentarily slightly after this position was taken. Drag depth 46 feet. Later covered at 27 Ft.

12. Position 51K. N aground at a depth of 47 feet. No sounding obtained. Not covered later as ground was at edge of known shoal water. ✓

13. Position 51-52K Drag aground between buoys 5 and 6 at a depth of 47 feet. Least sounding obtained 39 feet. Not covered later as it grounded at edge of known shoal. ✓

14. Position 48L N aground at a drag depth of 34 feet. N remained aground while the end launch swung its end around. Between positions 49 and 50L drag grounded at #7 and between buoy 2 and 3 at a depth of 34 feet. At buoy 2 a least sounding of 34 feet was obtained. Not dragged over as ground was at edge of known shoal. Hydrography obtained 28 feet sounding here. ✓

15. Position 9M. Drag aground between buoy 5 and 6 and at buoy 3 at a depth of 44 feet. Least sounding obtained 36 feet. Not dragged over as ground was at edge of known shoal area. ✓

16. Position 23M. F grounded at a depth of 39 feet the end launch reversed and cleared. Not dragged over as the ground was close to shore, see hydrographic sheet, a sounding reducing to zero at mean lower low water was obtained here by end launch. ✓

*plotted 38 (tide change)  
see sounding rec.  
+ H.D. rec. P.A.*

17. Position 30M. Drag aground between F and 8 at a depth of 37 feet. No sounding obtained. This area had been cleared with a depth of 38 feet the year before. ✓

18. Position <sup>later 35+36</sup> 35M. Aground between 6 and 7 at a depth of 34 feet. No sounding, drag depth was plotted. The drag slipped over the shoal on a rising tide and grounded about 100 meters farther on. A least sounding of 27 feet was obtained at this second ground. The first ground was later covered with a depth of 24 feet and the second at a depth of 22 feet. ✓

19. Position 39M. Drag grounded at F and 8 at a depth of 24 feet. No sounding obtained. Covered at a depth of 22 feet on N day. ✓

20. Position 5N. F grounded at a depth of 42 feet. The end launch reversed, pulled F clear and went around the shoal as it was close to the beach. ✓

21. Position 8N. F grounded momentarily with a drag depth of 42 feet. ✓

22. Position 23N. <sup>+F</sup> Aground at buoy 7 at a drag depth of 43 feet. No soundings were obtained the drag depth being plotted. The area had been previously covered on L day with a drag depth of 34 feet. ✓

23. Position 33N. Drag aground between buoy 5 and 6 at a depth of 42 feet. No sounding was obtained, the drag depth being plotted. Not dragged over as the ground was at the edge of a known shoal. *N.P. close to shoaler sounding at pos 6N R.L.* ✓

24. Position 24P. N touched momentarily at a depth of 38 feet. ✓

25. Position 25P. Drag aground at buoy 3 at a depth of 38 feet. No sounding obtained, the drag depth being plotted. Not dragged over as the ground was close to shore. ✓

26. Position 34P. Drag grounded at a depth of 39 feet. The least sounding obtained was 39 feet. Not dragged over as the ground was on known shoal area. ✓

Positions 37P to 48P may be rejected as the drag in reversing failed to clear and no new area was covered. It is plotted in pencil but not inked in on smooth tracing. ✓

27. Position 76P. Drag aground at buoy 3 at a depth of 27 feet. Least sounding obtained was 26 feet. This ground was later covered at a depth of 21 feet. ✓

28. Position 76-77P. F touched momentarily at one minute before position 77P at a depth of 27 feet. This depth was plotted. Later covered by a depth of 21 feet. *? on edge of 21ft strip R.L.* ✓

29. Position 6Q. N touched momentarily at a drag depth of 37 feet at a point halfway between positions 6 and 7Q. The drag depth was plotted. Not dragged over as it was on the edge of known shoal water. ✓

30. Position 12Q. F grounded at a drag depth of 37 feet. No soundings obtained. Not dragged over as ground was on edge of known shoal water. ✓

31. Position 19Q. Drag aground at buoy 5 and F. Position 20Q, buoy 1 aground. The drag depth was 37 feet. The least sounding obtained was 32 feet. Attempts on T day to cover these grounds ✓

*N.P. shoaler grounding at pos 6t (sounding record)  
R.L.*

at lesser depth resulted in a minimum drag depth of 20 feet, grounding at the same place and a 15 foot sounding was obtained. Position 23Q to 33Q were rejected as drag failed to clear in reversing and no new area was covered.

32. Position 41Q. Drag grounded between buoys 2 and 3 at a depth of 38 feet. At 44Q drag grounded at N with 29 foot sounding obtained between 2 and 3.

33. Position 52Q. Drag aground at buoy 1 at a depth of 38 feet. No soundings obtained. This area had been dragged to a depth of 27 feet on "P" day. A 26 foot sounding later obtained in this locality.

34. Position 61Q. Drag aground between 2 and 3 at a depth of 37 feet. No soundings obtained. This area had been covered to a depth of 27 feet on "P" day.

35. Position 11R. N aground at a depth of 39 feet. Guide launch came in, pulled N clear and continued line. Drag depth plotted.

36. Position 17R. Drag aground at a depth of 38 feet. The drag was wrapped around this shoal which was known to exist. A minimum sounding of 13 feet was obtained on "D" day during 1925 on this shoal.

37. Position 8S Drag aground between buoys 6 and 7. The drag, at a depth of 37 feet, was wrapped around this shoal which extended from a small island. The limits of the shoal were obtained by taking positions at the buoys. The end launch reversed and carried its end of the drag through the channel while buoy 6 remained aground. At position 23S buoy 6 came off. Pos. 30S - F aground.

38. Position 20T. Drag grounded between buoys 3 and 4 at a depth of 16 feet. This drag was taken through to definitely establish the location of the shoal and to disprove the existence of a shoal shown on the old chart as being farther to the eastward. See appendix paragraph (j) supplemental descriptive report Register 4511a.

39. Position 25T. The drag at a depth of 38 feet was brought up against a known shoal. No soundings by wire drag party, Hydrographic 26 feet in this locality.

40. Position 31T. The drag grounded on the same shoal as

of positions 21 and 42 of "Q" day, at a depth of 23 feet.

41. Position 39T. The drag, at a depth of 20 feet was again brought up against the shoal and grounded. No soundings obtained.

42. Position 46T. Drag aground at F at a depth of 38 feet. This shoal was known. The guide launch carried its end of the drag around. There is some doubt as to where buoys 6 and F actually were. For this reason the last two sections of the drag were rejected. After the grounding and the limit of the effective dragged area is shown as a dotted line around the shoal. See R day for further work done in the doubtful area. N.P.

43. Position 49-50T N touched momentarily, drag depth of 38 feet plotted. Apparently covered by a previous drag of 38 feet on P day. This area is near the edge of channel.

Prepared by:

George A. Nelson,  
Aid, C. & G. S.

Examined and approved:

*H. Williams*  
Commanding Officer,  
U. S. C. & G. S. Ship EXPLOREER,

F. B. E. Siers,  
Commanding Officer,  
U. S. C. & G. S. Ship EXPLOREER.

PYBUS BAY WIRE DRAG STATISTICS.

DATE	LETTER	VOL.	LENGTH OF DRAG	NO. OF POSITIONS.	MILES STAT.	SDGS.
Oct. 8, 1926	J	4	2200	100	1.4	10
Oct. 9, 1926	K	4	1200-2700	185	2.0	14
Oct. 11, 1926	L	5	6600-2700	131	8.4	6
Oct. 12, 1926	M	5	2700	126	7.3	5
Oct. 13, 1926	N	5	2400	135	6.7	0
Oct. 14, 1926	P	6	2400-1200	168	4.2	10
Oct. 16, 1926	Q	6	1200	138	2.5	4
Oct. 18, 1926	R	7	2700	33	1.0	0
Oct. 19, 1926	S	7	2700	53	2.5	0
Oct. 20, 1926	T	7	2400-2100	126	4.0	0
TOTALS	10	4		1195	40.0	49

(11)

February 10, 1927.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
5 221' 1. volumes of sounding records for

HYDROGRAPHIC SHEET 4511B

Locality: S. E. ALASKA

Chief of Party: F.B.T. Siems

Plane of reference is M L L W  
7.2 ft. on tide staff at Fybus Bay Cannery.

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.

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

November 7, 1927.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4511<sup>b</sup>  
(Additional Work)

Pybus Bay, Southeast Alaska

Surveyed in 1926

Instructions dated Feb. 14, 1925 (EXPLORER)

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

Surveyed by F. B. T. Siems.

Protracted and inked by G. A. Nelson.

Verified and area and depth sheet by R. L. Johnston.

1. The records conform to the requirements of the General Instructions.
2. The methods and character of the survey conform to the requirements of the General Instructions.
3. The depth and extent of dragging satisfy the specific instructions, except in the vicinity of the two and a half fathom shoal shown on the old chart at latitude  $57^{\circ} 17'.2$ , longitude  $133^{\circ} 58'.4$ . This old position (erroneously plotted) is passed by the drag with an effective depth of forty-five feet and definitely disproved, but the new (replotted) position is barely within the limits of the seventeen foot drag strip. The overlap is insufficient to reject the sounding.
4. (a) Eleven feet was found by the drag in latitude  $57^{\circ} 17'.3$ , longitude  $133^{\circ} 58'.9$ . No clearance depth was obtained here, but it is probable the least water was found.  
  
(b) Fifteen feet was found by the drag in latitude  $56^{\circ} 19'.0$ , longitude  $134^{\circ} 05'.6$ . No clearance depth was obtained here. It is off the northernmost of the Midway Islands and it may have been impracticable to carry the drag closer.  
  
(c) A clearance depth was obtained over all other shoals of importance. While there were many soundings and groundings obtained with the drag that were not cleared, they are either close inshore or known shoals, developed by hydrography.

5. Most of the supplemental hydrography is beyond the limits of the drag work. It is plotted on a separate sheet (Hyd. 4511<sup>a</sup>), and will be reported on under that number.
6. The overlaps are ample. There are no splits within the limits of drag work except on known shoals, developed by hydrography.
7. No immediate additional work is necessary, but if a drag party should again be in this vicinity it would be desirable to definitely disprove the existence of the two and a half fathom spot, mentioned in paragraph 3. There is a shoal shown on Hyd. 4511<sup>a</sup> which is beyond the limits of the drag work which might be further examined. (Lat. 57° 19'.0, long. 134° 06'.4.)
8. The wire drag work was partially plotted in pencil on the smooth sheet and the most complicated areas were plotted on five sheets of vellum, which are now filed as boatsheets.
9. These were verified and then transferred and inked by the office draftsman.
10. The drag groundings are listed in the descriptive report and are also entered in the smooth sounding record. Nearly all of these have been plotted, but some are of little importance as they are close to shoaler depths on the hydrographic sheet. All soundings and drag groundings, shoaler than the hydrography have been added to the hydrographic sheet in blue.
11. Character and scope of surveying - very good.  
Quality of field drafting - excellent.
12. Reviewed by R. L. Johnston, November, 1927.

*Sheet inspected by  
A.L.S.*

Approved:

*A. M. Sobieralski*  
Chief, Section of Field Records (Charts)

---

Chief, Section of Field Work (H. & T.)

POST-OFFICE ADDRESS: 202 Burke Building, Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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

OCT 28 6 41 AM '26

Juneau, Alaska,  
Oct. 15th, 1926.

To: Director, Coast & Geodetic Survey,  
Washington, D. C.

From: Commanding Officer, U. S. S. EXPLORER,  
Juneau, Alaska.

Subject: Field work Pybus Bay, Register 451lb.

Referring to drag depth tracing of register 451lb the area N.E. of the middle Southwest Island about Lat.  $57^{\circ} 17'$ , Long.  $134^{\circ} 03-1/3'$  shown as having been dragged to 38 feet should be verified as the photostat of the drag sheet appears, although indistinctly, as having been dragged to 35 feet.

2. Information as to which depth is correct is desired inasmuch as the area was dragged again this year with a 36 foot drag and it grounded on the previous 47 foot shoal.

  
F. B. T. Siems,  
Commanding Officer.

FBTS  
HMT.

10-LE

October 29, 1926.

To: Commanding Officer, H. & M. Div. for filing  
Coast and Geodetic Survey,  
Ship EXPLORER,  
202 Burke Building,  
Seattle, Washington.

Through: Inspector, Seattle Field Station.

From: Director, U. S. Coast and Geodetic Survey.

Subject: Field Work Pybus Bay, Sheet H 4511b.

Referring to your letter of October 15, the smooth sheet shows that the 47 foot shoal northeast of the middle South-west Island in Pybus Bay, was covered by an effective depth of 38 feet with the drag. Two or three positions which effect the plotting of the drag strip were obtained by using the right tangent of Taf Island. It is considered that the smooth plotting is correct but a recheck cannot be made of these positions without recourse to the boat sheet and the topographic sheet. Both of the latter sheets have been forwarded to you for your use and have not yet been returned.

It is noted that you failed to state what depth was found on examination after the grounding of the drag drawing 36 feet. You will please advise, at your earliest convenience, the least depth found.

(Signed) R. L. Faris

Acting Director.

POST-OFFICE ADDRESS: 202 Burke Building, Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY  
U.S.C. & G.S.S. EXPLORER.

November 10th, 1926.

To: Director, Coast & Geodetic Survey,  
Washington, D. C.

Through: Inspector, Coast & Geodetic Survey,  
Seattle, Washington.

From: Commanding Officer, U. S. S. EXPLORER

Subject: Field work, Pybus Bay, Sheet H 4511b

Referring to your letter of October 29th, in regard to the least depth found, will state that no sounding was taken after grounding as it was believed that the spot had been passed over by a slightly shoaler (35 feet) drag last year.

2. Apparently there is some discrepancy as it now appears that the drag which passed over the spot last year was deeper, having an effective depth of 38 feet, than the one which hung up this year which has an effective depth of 37 feet using 7.1 feet on the staff at Pybus Bay Cannery wharf as M.L.L.W.

3. This is the same staff as used last year but last year the value used for M.L.L.W. was 6.0 feet. This value (6.0 feet) was obtained by water levels from Captain Heck's bench marks on the east side of the bay. After reviewing the data and making a comparison with Sitka (last year's tides) it was decided that the value of 7.1 feet obtained by the comparison was the better and should be used.

4. This makes the discrepancy between the drag of last year (which passed over the shoal) and the one of this year (which hung up) two feet. A careful rechecking of the actual tides and hook up may clear this up.

F. B. T. Siems,  
Commanding Officer.

POST-OFFICE ADDRESS: 202 Burke Building, Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY  
U.S.C. & G.S.S. EXPLORER.

November 10th, 1926.

NOV 17 8 59 AM '26

To: Director, Coast & Geodetic Survey,  
Washington, D. C.

Through: Inspector, Coast & Geodetic Survey,  
Seattle, Washington.

From: Commanding Officer, U. S. S. EXPLORER

Subject: Field work, Pybus Bay, Sheet H 4511b

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*F. B. T. Siems.*

F. B. T. Siems,  
Commanding Officer.

*by Roland D. Horne*

IN REPLY ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

November 19, 1926.

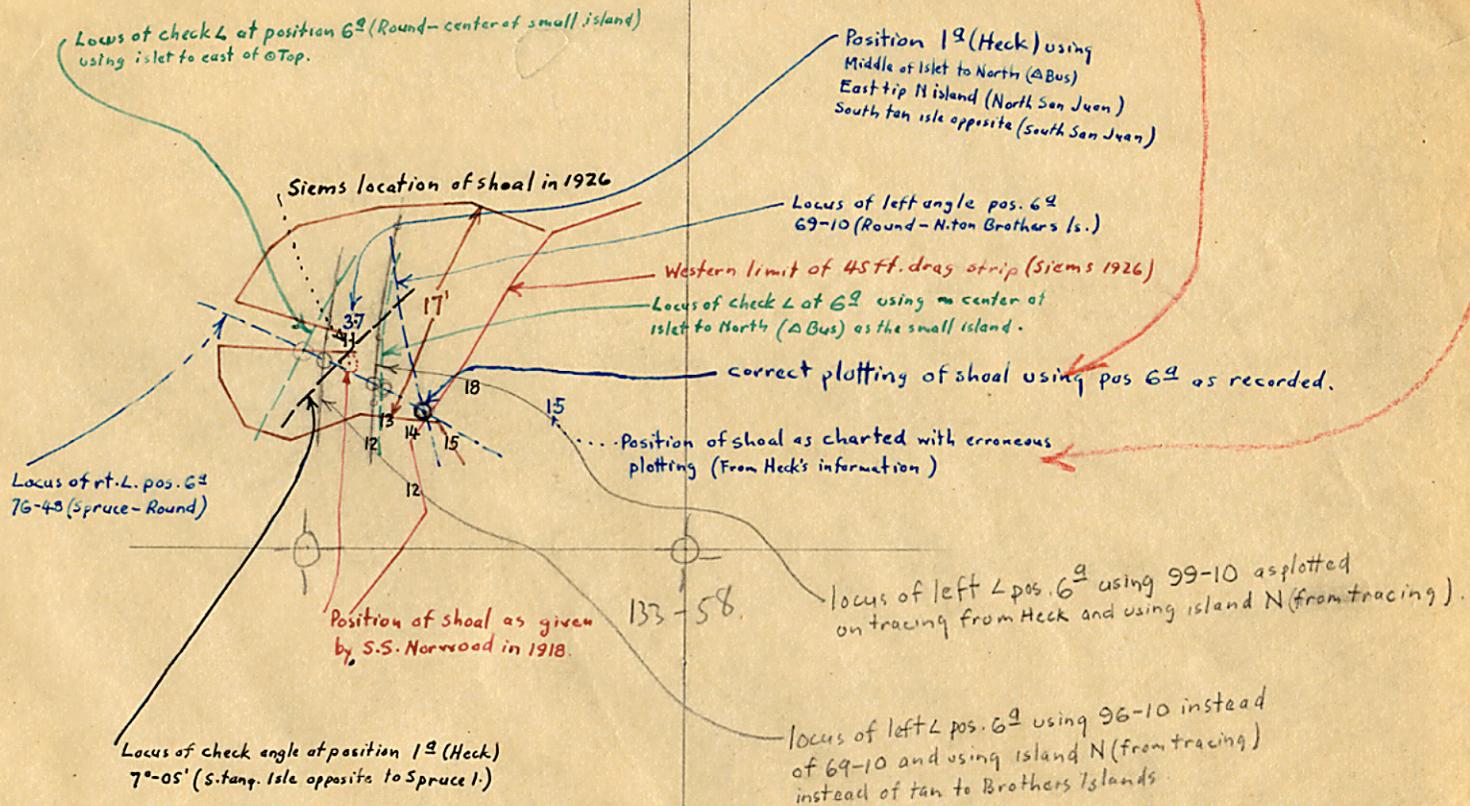
Memorandum Re Drag Work on H. 4511<sup>b</sup>.

Referring to paragraphs 3 and 4 of Explorer's letter of Nov. 10, 1926, it should be noted that the effective depth of 38 feet of the drag strip in question is based on a value of 7.2 feet for M.L.L.W. and not 6.0 feet as supposed by the field party. This plane of 7.2 was computed in the field by G. A. Nelson and forwarded to this office on December 16, 1925. This value was subsequently checked in the office without change. Therefore the work of last year and the work of this year are based on the same reading of the staff, thus making the discrepancy between the drag work of last year and this year 1 foot instead of 2 feet as noted in the above letter.

The actual tide reducer at the time the drag passed over the obstruction would tend to increase the effective depth by a few tenths. As the data for this year's work are not yet available, it is impossible to obtain the actual tide reducer at the time of grounding.

It is suggested that this matter be held in abeyance until all the data are in the office and then a proper evaluation can be made.

57-181



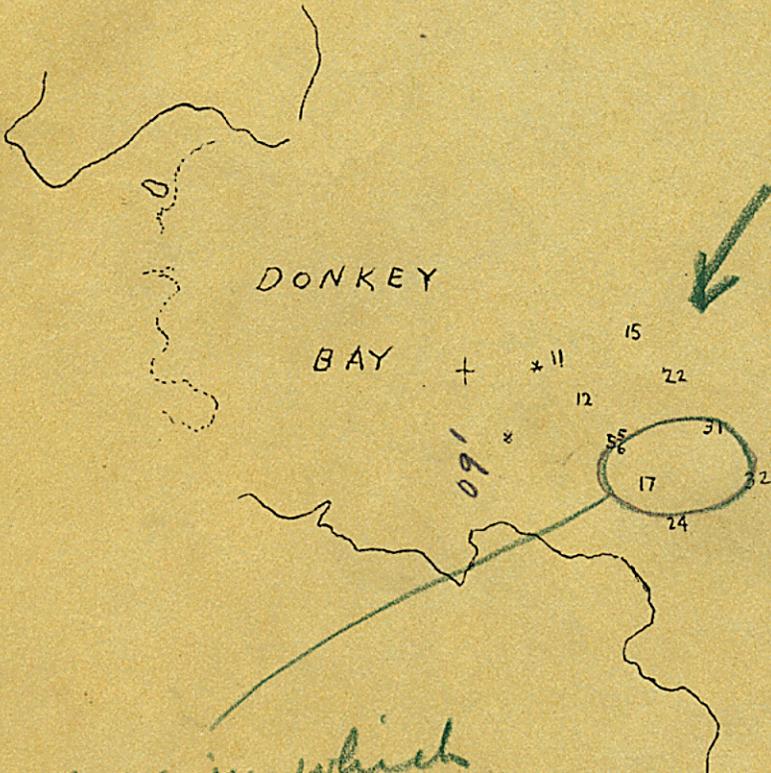
This position for 15 ft. to be used on new chart and not this

Scale 1-20,000

Sketch showing all the angles used for locating 15 foot shoal at entrance to Pybus Bay from Heck's data of 1920 (H-4143, vol. 1 pg. 1 sdgs.). To be referred to when additional drag work is done. 2 shoals to be shown at present in this vicinity. A.L.S. (Mar. 17, 1927).

+

+ 21'



Sdgs taken 1926

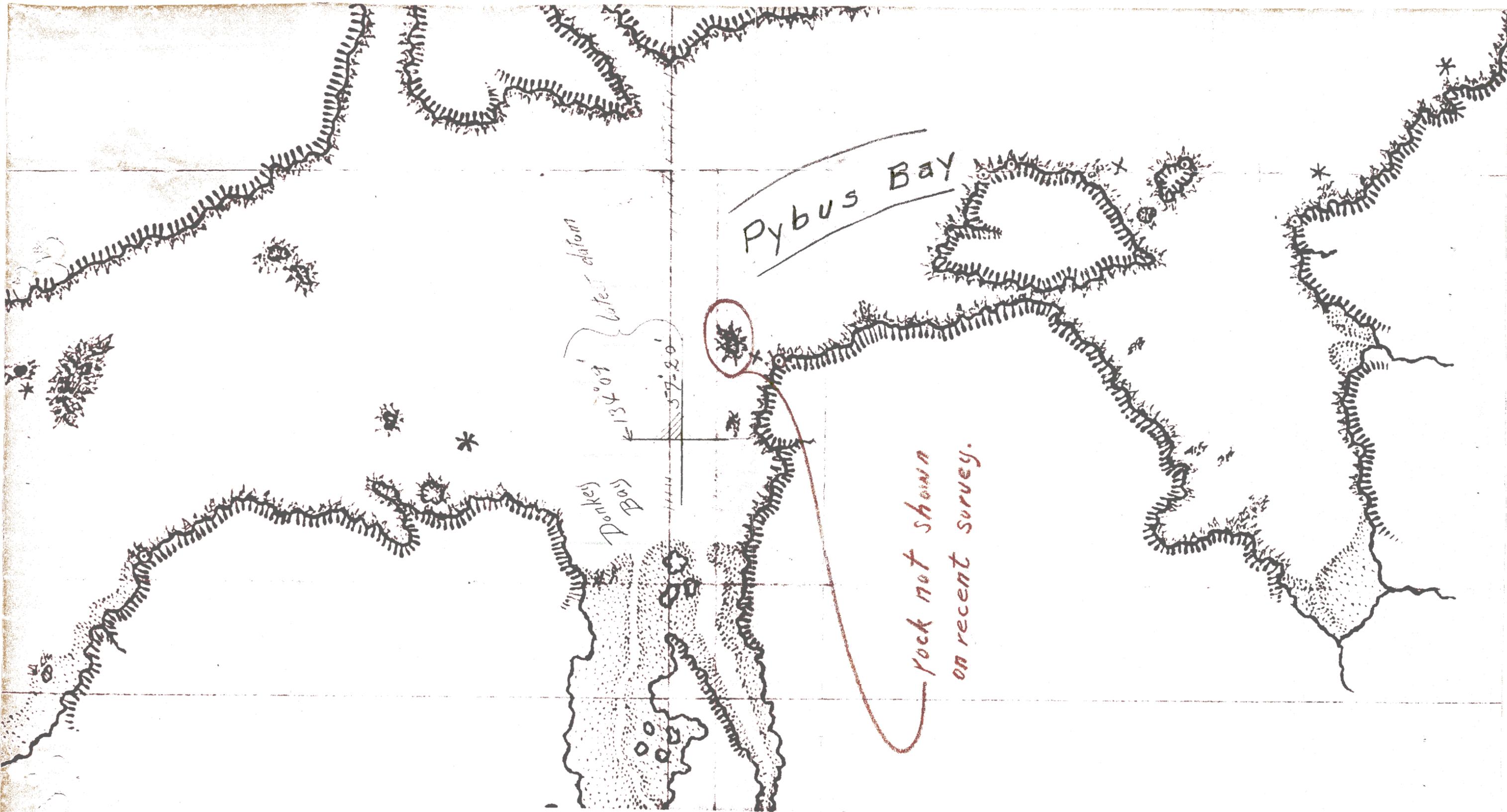
DONKEY

BAY

+ 57'-20'

134'-06'

area in which  
rock is shown  
on old survey



Photographed from original TOP. Sheet No. 1964 in the Archives of the U.S. Coast and Geodetic Survey. Surveyed in 1889. Scale of photostat, 1:20,000. Wash.DC. Div.Charts. Nov.23, 1926.