

36923692a

3692b(W.D.)

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Diag. Ch. No. 8152-1 & 8152-2

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*O. S. Tuttleman*  
Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 3692

LOCALITY:

*Marian Passage*

1914

CHIEF OF PARTY:

*T. H. Hardy*

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

36922a

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. 36922a

Register No. ~~2~~ Field No. 1

State . . . SE. Alaska, (~~Southeast~~) . . . . .

General locality . ~~West Coast~~ Prince of Wales Island. — W. Coast

Locality . . . . . Meares Passage. . . . .

Chief of party . F. H. Hardy, 1914 -- H. B. Campbell, 1925.

Surveyed by F. H. Hardy, L. O. Golbart, W. H. Stanford (1914); O. S. Reading (1925)

Date of survey Aug. 26th to Sept. 7th, 1914 - July 31st to Aug. 19th, 1925.

Scale . . . . . 1 - 20,000 . . . . .

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

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

Protracted by M. O. W. <sup>Witherbee</sup>, O. S. R. Soundings in pencil by M. O. W., C. I. A. and C. I. A. <sup>Slakson</sup>

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

Records accompanying sheet (check those forwarded):

Des. report,  Tide books, 4 Marigrams, 1 Boat sheets,

2 Sounding books, 1 Wire-drag books,  Photographs.

Data from other sources affecting sheet . . . . .  
4 volumes sounding records of Hydrographic Sheet 3692, Accession No. 39888.

Remarks:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

3692b

HYDROGRAPHIC TITLE SHEET

WIRE DRAG SUPPLEMENT

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. 3692b W.D.

State . . . . SE. Alaska (Southeast)

General locality ~~West Coast~~, Prince of Wales Island - W. Coast

Locality . . . . Mearns Passage and Sea Otter Harbor Entrance

Chief of party . . . H. B. Campbell

Surveyed by . . . . O. S. Reading

Date of survey . . . August 14-18 1925

Scale . . . . . 1 - 20,000

Soundings in . . . . feet

Plane of reference . Mean, Lower, Low Water

Protracted by O. S. R. . Soundings in pencil by O. S. R.

Inked by . . . O. S. R. . Verified by . . . . .

Records accompanying sheet (check those forwarded):

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

Sounding books,  Wire-drag books,  Photographs.

Data from other sources affecting sheet . . . . .

Remarks: Wire Drag supplement to hydrographic sheet of same area.

Meares Passage, S. E. Alaska.

Sounding lines were spaced 200 meters. Signals located by plane table, transferred from topographic sheet.

This work was done by two parties, the one in the "Cosmos", in charge of L. O. Colbert, Assistant, C. & G. Survey, with Mr. Harry Leypoldt, as left angle man and Hanson, writer, recording. The outside work from  $\triangle$  "Millar" to the southward was done by this party, with the exception of Bobs Bay.

Launch # 117 Mr. W. H. Stanford, W. O. in charge, Mr. Campbell, left angle man and Dr. Flynn, recording, did the work from the limits of that done in 1912 to  $\triangle$  "Millar" also Bobs Bay.

The area between signals "Art" and "Dive" is very foul. Most of the rocks bare at low tide and there are passage between each group for launches, but in heavy weather the whole area appears covered with breakers.

A quarter of a mile W. X S. of  $\triangle$  "Po" there are rocks awash at half tide with a kelp patch outside. A 4 fathoms sounding was obtained here but could not be developed on account of the heavy swell setting in at the time, and on the days following when in this vicinity.

The passage between Divers Rock (  $\triangle$  "Tre" ) and the point 1/2 mile to the Southeast (  $\triangle$  "John" ) is considered to be quite foul. It is full of kelp-patches and the bottom is very uneven and rocky. Launches coming from Forester Island and the West Coast of Dall Island are not advised to use it, but go to the westward of Divers Island.

A number of breakers were seen off the Southwestern end of the sheet. A number of sextant cuts were taken to these, five of the breakers were located. About one mile E. S. E. of  $\triangle$  "So" there is <sup>an</sup> area in which several breakers were seen, but only when there was a heavy swell running and but two of them were determined.

Respectfully

J. H. Harder

HYDROGRAPHIC STATISTICS FOR SHEET #3692

Meares Passage, W. Coast Prince of Wales Id. S. E. Alaska.

Party Str. "GEDNEY" F. H. Hardy, Comd'g.

Date 1914	Letter	Positions	Soundings.	Miles	Boat
Aug. 25	a	72	145	11.2	Cosmos
" 26	a	94	214	14.0	Launch 117
" 27	b	36	62	4.7	Cosmos
" 27	b	13	25	2.3	Launch 117
" 28	c	48	82	7.5	Cosmos
" 28	c	72	134	12.0	Launch 117
Sept. 1	d	92	164	15.8	Cosmos
" 1	d	140	179	13.5	Launch 117
" 2	e	103	171	16.3	Cosmos
" 2	e	131	337	13.5	Launch 117
" 3	f	115	188	16.0	Cosmos
" 3	f	119	252	13.3	Launch 117
" 4	g	69	122	6.0	Cosmos
" 4	g	27	53	2.7	Launch 117
" 7	h	93	124	8.0	Cosmos
" 7	h	117	309	10.5	Launch 117
		628	1058	85.5	Cosmos
		713	1503	81.8	Launch 117
TOTAL.....		1341	2561	167.3	

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET No.

3692a

MEARE'S PASSAGE

INSTRUCTIONS DATED FEBRUARY 27th, 1925.

FIELD No. 1.

This sheet includes the replotting of that part of four volumes of soundings of 1914, Accession No. 69888 which depends on signals erroneously located and the hydrography executed in 1925 to fill in gaps and disprove dangers shown on Chart 8151 edition of 1924. The signals north of the line Millar - Bob were correctly located by the 1914 survey. Hydrography north of this line has not been replotted. The areas not previously sounded in Latitude  $55^{\circ} 10'$ , Longitude  $133^{\circ} 21'$  to  $25'$  and Latitude  $55^{\circ} 12'$  Longitude  $133^{\circ} 24'$  were examined by 200 meter lines with development of indications.

#### GENERAL DESCRIPTION AND DIRECTIONS

No changes in the description or sailing directions as given in the Coast Pilot appear to be desirable unless a note about the sunken rocks on the north side of the south channel into Bob's Bay be added. A separate Coast Pilot report is submitted.

#### REPLOTTED HYDROGRAPHY

The replotting of the 1914 hydrography with the corrected locations of signals did not develop any gaps requiring additional soundings. Doubt as to the exact position of former signals and the large errors in the head of Diver Bay and the northern branch of the eastern anchorage in Bob's Bay made it necessary to resurvey these places. At the time of sounding in Hole in the Wall Anchorage the hydrographer was under the impression that the signals had been recovered and the 1914 hydrography could be replotted from them. A few lines were run with the idea of checking the former hydrography as this anchorage is much used by small fishing craft. The signals "War", "We" and "Do" were recovered and agree in relative distance with the 1914 survey. It is thought that sufficient soundings may be transferred from the 1914 smooth sheet using these signals and the topography to complete the survey of this anchorage.

#### DANGERS DISPROVED

The original cuts giving two doubtful positions of breakers in Latitude  $55^{\circ} 11'$  Longitude  $133^{\circ} 23' 2''$  when replotted with the corrected locations of signals all pass through or near known breakers. This has been noted in the remarks column of the original record (Vol. II, Positions 2 to 9 "H" day, Launch "Cosmos" Acc. No. 69888). Sufficient soundings were taken to indicate the general depth and the doubtful positions dragged to a minimum depth of 53 feet without sign of grounding.

The position of the E. D. Rock in Latitude  $55^{\circ} 10' 9''$ , Longitude  $133^{\circ} 19' 4''$  was similarly sounded and dragged to 42 feet without indication of shoal water.

The rock awash and the 12 fathom soundings shown about  $\frac{3}{4}$  of a mile N. W. of the island at the entrance to Sea Otter Harbor (Latitude  $55^{\circ} 07'$  Longitude  $133^{\circ} 15' 4''$ ) were examined when a ten foot sea was running against a current abbing out of the harbor. There were no lumping or breaking seas. Rocks with  $2\frac{1}{2}$  fathoms at lower, low water over them were breaking in other localities. It is considered probable that the line of 14 to 11 fathom soundings is 10 fathoms too shoal. The area was dragged from 64 to 72 feet with the improvised drag.

The dragging is plotted on a separate sheet for clearness and a separate descriptive report has been submitted for it.

#### DANGERS AND SHOAL SOUNDINGS

There are two points of the rock awash about 300 meters south of  $\Delta$  Tal (Eastern side of Cape Felix). The western summit bares 6 feet and the eastern about one foot above mean lower low water. These rocks were located by topography.

A reduced sounding of  $2\frac{1}{2}$  fathoms was obtained on the sunken rock 1200 meters south of  $\Delta$  Tal. This sounding may not be the minimum depth. The seas were lumping over the rock at the time and a more favorable opportunity to obtain the least water did not occur.

A rock awash at low water was located by hydrographic cuts 544 meters  $65^\circ$  True from  $\Delta$  Tal.

A kelp patch near the 10 fathom sounding on Chart 8151 at the entrance to Arena Cove was investigated by carefully feeling the bottom with the hand lead. Four and ~~one-fourth~~ fathoms was the least water found.

The bottom between  $\Delta$  Nut and  $\odot$  Cent off Lontana Point is broken with kelp over most of it. A small passage between the kelp can be used by launches.

The rock awash about 400 meters southwest of  $\Delta$  Nut was not breaking when the station was visited by the topographer. Neither it nor the ten fathom sounding 1000 meters west of  $\Delta$  Nut was investigated by the hydrographer on account of the lack of time on the last days of the survey.

The rock  $209^\circ$  True, 2250 meters from  $\Delta$  Nut is of considerable extent and the breakers roll over it for some distance. Some poor inter-sections may be due to this. The rock is visible in the troughs of the breakers at low water.

The improvised drag hooked 42 feet grounded on the 8 fathom spot, 1320 meters  $144^\circ$  from  $\Delta$  Nut. A small amount of growing kelp was found. Feeling with the hand lead gave a least depth of 30 feet.

The outer of the sunken rocks, southwest of the large island at the entrance to Bob's Bay, Latitude  $55^\circ 11'3$ , Longitude  $133^\circ 14'5$  was located by the hydrographer 100 meters southwest of the position on Chart 8151. The least water found ( $2\frac{1}{2}$  fathoms) may not be the minimum depth because the kelp was so thick as possibly to obscure a small projection or boulder. The sunken rock 360 meters north of this sounding was located by the topographer while it was breaking. No breakers other than these ~~two~~ were observed but doubtless other sunken rocks exist in the kelp closer inshore. There are no rocks awash in this vicinity.

The  $1-4/6$  fathom rock 375 meters  $23^\circ$  (True) from  $\Delta$  Outer on the north side of the large island at the entrance to Bob's Bay breaks frequently and should be shown on the chart. It was verified by the topographer but not visited by the hydrographer.

A rock bare at high water is located just north of  $\odot$  Ex at the southern side of the south channel into Bob's Bay.

The middle arm of the Eastern side of Bob's Bay is very foul. It is practicable only to pulling boats.

Rocks make out in both directions from the point between the south eastern arm and the branch leading north from the head of the main. The point should be given a wide berth in entering the branch.



The shoal in the center of Diver Bay (The large bay south of Bob's Bay) was verified. A minimum depth of 3 feet was obtained on a small projection of it. The kelp on this shoal was quite small and did not show until within 200 meters of it. ✓

The topography of Hole in the Wall Anchorage was done near high water. The hydrographer obtained cuts on two rocks at the head of the anchorage, one of which was found later to differ in position from those shown in the previous survey. Probably three rocks should be shown. The water is too shoal to warrant a special investigation. ✓

The 10 fathom detached kelp 600 meters, 216° (True) from  $\Delta$  Last was examined while returning from wire drag work. A least depth of 4 fathoms was obtained feeling with the hand lead. ✓

#### CHANNELS

The limits of the southern channel to Bob's Bay were developed. The sunken rocks to the north were well marked by kelp in 1925 but are too exposed to the sea for this to be depended upon.

Additional soundings were taken in the channels between the kelp patches from Diver Islands to  $\Delta$  Last. The sea was too rough to investigate sunken rocks but these channels are practicable for launches with local knowledge.

#### ANCHORAGES

Hole in the Wall Anchorage gives perfect protection from the sea with excellent holding bottom in six to two fathoms. No currents strong enough to make steering difficult were noticed at its entrance. The rocks at the head of the anchorage which cover at high water are not visible until very close to as the water is usually discolored by forest seepage from the streams nearby. The anchorage is much used by smaller fishing vessels.

The Southeastern Arm of Bob's Bay affords excellent protection and good holding bottom of dark soft mud in 6 to 9 fathoms. No severe storms occurred while the survey was in progress, but these anchorages should give better protection than any others in the vicinity.

#### SURVEY METHODS

The usual survey methods were followed with the exception of the sounding intervals. When sounding with Wire the launch was backed to a dead stop before letting the lead go. With an <sup>in</sup> experienced crew and unfavorable weather the launch often fell off course ninety degrees or more. The recorder though a very good stenographer had great difficulty in recording. The officer taking left angle was experienced and could easily handle the plotting. On account of the above the hydrographer spaced the one or two soundings at <sup>distances</sup> equal intervals between the positions by eye from the wake of the launch. When this was uncertain a position was taken at every sounding. The bottom was generally so irregular that with the hand lead, the actual time of sounding was recorded and the soundings taken as frequently as the leadsman could get them accurately regardless of interval.

Respectfully submitted,  
*Respectfully forwarded*  
 H. B. Campbell  
 H. B. Campbell & Co. Ltd.

*J. D. Reading*

## STATISTICS FIELD -- HYDROGRAPHIC SHEET No. 1.

AREA 3.8 Sq. Mi.

Date	Day	Vol.	Miles	Soundings	Positions	Boat
July. 31	a	1	6.7	52	52	Wire Drag Tender No. 2
Aug. 1	b	1	10.3	222	91	" " " " "
" 3	c	1	15.5	153	150	" " " " "
" 5	d	1	4.0	51	45	" " " " "
" 11	e	1	4.2	74	43	" " " " "
" 13	f	2	12.0	168	118	" " " " "
" 19	g	2	4.0	142	57	" " " " "
			----	----	---	
			56.7	862	556	

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET NO. 3692b

Dangers in Meare's Pass and Sea Otter Harbor.

This sheet supplements Hydrographic Sheet No. to show the work done with an improved wire drag to disprove three doubtful obstructions in Meare's Passage and one off the entrance to Sea Otter Harbor. As considerable sounding had been done in the vicinity of the reported rocks it was considered necessary for the sake of clearness to plot the dragging on a separate projection.

DANGERS DISPROVED -

The position of the E. D. rock in Latitude  $55^{\circ} 10' 9''$ ; Longitude  $133^{\circ} 19' 4''$  was dragged to a depth of 42 feet and the area for 300 meters in all directions around it to a depth of 36 feet with no signs of grounding. The drag hooked 42 feet grounded 900 meters NW x W of the position near the 8 fathom spot on Chart 8151. (Position 29A). Later, soundings and feeling with the hand lead obtained a least depth of 30 feet (Positions 1, 2 and 3g) at this point. Some growing kelp was present, making it impracticable to verify this least depth by dragging with the outfit available. Considerable time was spent feeling for the least depth. The shoal is of small extent and rocky.

The two P. D. rocks in Latitude  $55^{\circ} 11'$ , Longitude  $133^{\circ} 23' 2''$  were dragged to a depth of at least 53 feet for a radius of 300 meters from their positions with no signs of grounding. As the plotting of the cuts giving the original doubtful positions with the corrected location of signals showed that all the cuts passed through or near known breakers (See notes in original 1914 sounding records, Sheet 3692) it was not considered necessary to enlarge this area.

The area within 400 meters of the position of the rock awash three fourths of a mile NW of the island at the entrance to Sea Otter Harbor shown on Chart 8151 was dragged to a least depth of 64 feet with no signs of grounding. As this locality had been visited when rocks with three fathoms over them at low water were breaking, it is certain that no rock awash exists either near the area dragged or within a mile to the north of it.

OUTFIT AND METHODS -

A twelve hundred foot drag with three four hundred foot sections and 200 foot towlines was used. Four collapsible canvas buoys of the type used on the standard launch wire drag were available. 30 lb. sounding leads were used for intermediate weights and two of them lashed together, 60 lbs. for end weights. A selvage wire of three 14 gauge strands was used for bottom wire. Two toggle cedar floats were used at each section as the standard 1/8" stranded wire floats were too small to support this wire. It was noticed that the drag had excessive lift and needed heavier weights and longer towlines but the project was so small that it was considered sufficient to hook the drag deeper and test it continuously, rather than take the time necessary to change the outfit. The drag depth was continually being tested by the Natoma during "A" day and by a skiff with an outboard motor on "B" day. Sufficient officers were not available for the double control method. Wire Drag Tender No. 2 (28 H.P.) was used for the guide launch and Motorsailer No. 8610 for the end launch.

SPLITS AND INSUFFICIENT LAPS -

Due to lack of practice there are several splits and insufficient laps which materially reduce the dimensions of the area covered but which were not considered important enough to warrant holding up the party to drag them.

There are insufficient laps between positions 8, 11 and 25 "A" day; splits between 43 and 46 also 48 and 55 "A" day.

Engine trouble prevented the dragging of the insufficient lap between positions 2 to 7 and 23 to 28 "B" day. A number of soundings had been taken there previously and the area visited when three fathom rocks were breaking. It was not considered important enough to delay the party another day.

Respectfully submitted,

*O J Reading*

*Respectfully Forwarded*

*H B Campbell*

*H G C. Condy Natoma*

3692b

STATISTICS FIELD --- WIRE DRAG SHEET No.

*Field No. 1A*

Date	Letter	Volume	Drag Length feet.	Positions	Miles Stat.	Soundings
Aug. 14, 1925	A	1	1200	74	10.4	1
Aug. 18, 1925	B	1	1200	38	5.0	0
				---	----	
				112	15.4	

AREA 3 Sq. Stat. Mi.

VEC  
Feb. 25, 1915  
L. P. S.

HYDROGRAPHIC SHEET 3692.

West Coast Prince of Wales Island, Southeast Alaska,  
by Asst. F. H. Hardy in 1914.

TIDES.

	Waterfall Cannery ft.
Mean lower low water, or plane of reference on staff	8.7
Lowest tide observed " "	8.4
Highest " " " "	19.2
Mean range of tide	8.1

February 19, 1926.

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in  
3 volumes of sounding records for

HYDROGRAPHIC SHEET 3692 A and B

Locality: S. E. Alaska

Chief of Party: H. B. Campbell in 1925

Plane of reference is

4.0 ft. on tide staff at Bob's Bay

For reduction of soundings, condition of records satisfactory  
except as checked below:

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



Chief, Division of Tides and Currents.

Only adverse criticism given.

EXAMINATION OF HYDROGRAPHIC SHEETS  
*Sections* by the  
DIVISIONS OF FIELD WORK AND FIELD RECORDS.

Sheet No. 3692 *Alaska*

1. + Are numbers of hydrographic sheets adjoining limits of work shown? ..... *No.*.....
2. Are transferred soundings of adjacent hydrographic sheets made to show that ground has been covered? ..... *No.*.....
3. + Is sheet of proper size? .....
4. + Is sheet well laid out, no additions required? .....
5. Are limits of hydrography regular? ..... *No.*.....
6. + Are positions of signals accentuated by light dot of black ink to assist plotting? ..... *No.*.....
7. + Are tidal stations plotted on sheet? ..... *Deep water*.....
8. Is area of work completely covered? ..... *No.*.....
9. Are critical soundings and dangers shown distinctly? .....
- 10.+ Is the control good? .....
- 11.+ Are positions of signals clearly shown? .....
12. Are soundings well distributed? ..... *No.*.....
13. Are shoals carefully and sufficiently developed? .....
14. Do soundings cross satisfactorily? .....



15. Is existence or non-existence of a reported shoal determined?  
.....
16. Is least sounding over bar probably determined by check soundings or diagonal sounding lines crossing same? .....  
.....  
.....
- 17.+ Are projection and plotting checked? .....
18. Is the scale of this sheet sufficient to show the necessary details in the navigable channels? .....  
.....
19. +Is the shoreline shown? .....
- 20.+ Is there an accompanying list of plane table or sextant positions of signals? .....
21. Has sufficient attention been given to the development of channel? .....  
.....
22. Are sufficient bottom characteristics shown? .....
23. Are sounding lines normal to coast? .....
24. Have suspicious soundings been investigated? .....
25. Are ranges or bearings given for important shoals? *No.*.....  
.....
- 26.. Are sailing directions given? .....

- 27. Is the general hydrography in the entire area properly developed? .....
- 28. Are shallow channels for motor boats sounded? .....
- 29. Is there a note as to coloration of water in or near mouths of rivers and bays? .....
- 30. Is there any information given as to obtaining fresh water? .....
- 31. Are there proper intervals between soundings? .....
- 32. Are projecting points of land and reefs determined by sufficient lines with soundings at close intervals run at right angle to direction of points? .....
- 33. Is there sufficient data to draw depth curves? .....
- 34. Are shoal areas remote from shore properly developed by independent system of buoy signals placed in the vicinity of shoal? .....
- 35. Are soundings obtained at docks in harbor? .....
- 36. \*Is there a full list of data effecting sheet given? *No* .....
- 37. Are description of hydrographic signals and marking of same recorded? *No* .....
- 38. Is there a list of land marks given? *No* .....

- 39.+ Does descriptive report give date of instructions? .....
- 40. Are small islets and rocks distinctly shown? .....
- 41. Is information relative to anchorage given? *No* .....
- 42. #Are survey methods explained sufficiently? *No* .....
- 43. Are geographical names given on sheet? .....
- 44. Are coast pilot notes given? .....
- 45. Is the unit of soundings given in title? .....
- 46. Are sufficient depth curves shown? .....
- 47. Are aids to navigation shown? .....
- 48. Are grass or kelp indications shown? .....
- 49. Are sailing courses shown on sheet? *No* .....
- 50. Is descriptive note given as to visibility of shoals? .....
- 51. Are dangers fully described in descriptive report? .....
- 52. Is the character of reefs described on sheet? .....
- 53. Are beaches indicated where vessels in distress could be safely beached? *No* .....
- 54. Are standard symbols used in drafting? .....
- 55. Is information relative to currents given? *No* .....
- 56. Is there a statement as to certainty or probability of least depth over dangers given? .....
- 57. Is the existence of certain shoals doubtful? .....
- 58. Is a general description of coast given? .....

- 59. Is information relative to commercial importance given? .....  
.....
- 60. Does the descriptive report cover one or a moderate number of  
sheets? .....  
.....
- 61. Are descriptions of headlands given? .....  
.....
- 62. Is the nature of shoals whether coral rock or sand shown on  
sheet? .....  
.....
- 63.+ Is the position of the tide gauge well selected? Is the tidal  
data sufficient for the reduction of soundings over the area  
of the sheet? .....  
.....
- 64.+ Have projection lines been numbered around all the edges? ...  
.....
- 65.+ Has the geographic position of one of the triangulation points  
on the sheet been inked near the bottom edge of the sheet?  
.....  
.....
- 66. Was the speed of the sounding boat such as to allow vertical  
readings of the leadline? .....  
.....
- 67. Were lines of soundings run along the axis of narrow channels?  
.....  
.....
- 68. Have rocks or shoals seen from the sounding boat in passing  
been definitely located? .....  
.....
- 69. Have charted shoals reefs, or rocks been investigated? .....  
.....
- 70.+ Have sounding records been kept in approved form? .....  
.....

71. Are Wire drag surveys required? .....

72. Is the area between the soundings taken and the shore indicated or described as being covered by reefs, etc. as the case may be? .....

Other Remarks .....

The forgoing points marked by a cross (+) and the following additional points are to be considered for wire drag hydrographic sheets.

73. What additional areas, if any, in the locality covered by the sheet should be dragged? .....

74. Number of small areas inside limits of work missed by drag (few, moderate number, numerous) .....

75. Are shoals discovered with drag clearly shown? .....

76. Were shoals later covered by drag set at suitable depth? .....

77. Are all areas missed by drag clearly shown? .....

78. Are overlaps ample? .....

79. Do effective depths conform to instructions under which the work was done? .....

80. If work was done before present practice as regards effective depths was adopted, should the area be re-dragged to conform to the present practice? .....

81. Are all shoals discovered shown on current issue of chart? ....

JAN 1919

Hydrographic Sheet # 3692.  
Meares Passage, S. E. Alaska.

Positions plotted by field party and generally taken as correct, only an occasional verification being made when necessary to locate position. Position 30<sup>a</sup> day (red) was found in error and changed. This should be considered if already charted and sounding on this line selected. Position of 30<sup>a</sup> is about 150 M S by E of Sig. Las.

Soundings pencil plotted by field party and found correct.

The work can be considered good; the dangerous spots discovered being well developed and the soundings do not indicate any additional danger spots than those examined.

Records are clear, nothing being left to be a matter of guess work.

John D. Torrey  
11/16/15

Soundings plotted in feet.

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No.

9-VEC

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

March 18, 1926.

REPORT ON VERIFICATION OF HYDROGRAPHIC SHEET No. 3692a.

The drafting conforms to the general instructions for field work.

The time intervals were carefully adhered to in the plotting of the soundings.

The positions were well protracted.

The sounding records are complete.

There were a number of soundings taken on shoal spots that were not recorded as they were feeling for the shoalest soundings.

The development was sufficient with the exception of a small area south of triangulation "Nut."



H. R. Edmonston,  
Field Records Section.

Section of Field Records.

Report on Wire Drag sheet No. 3692<sup>7</sup>.

Locality: Muro Passage, S. E. Alaska.

Surveyed in: 1925.

Instructions dated: Feb. 27, 1925.

Chief of Party: H. B. Campbell.

Surveyed by: O. S. Reading.

Projected and inked by: O. S. Reading

Verified & Area and Depth sheet by: H. E. MacLaren

1. The records conform to the requirements of the general instructions
2. The method and character of operations fulfil the requirements of the general instructions
3. The plan and extent of development satisfy the specific instructions.
4. The plotting was completed to the extent prescribed in the general instructions.
7. Except for <sup>inking</sup> a small section of line omitted the office draftsman did not have to do over any part of drafting done by the field Party.
8. A clearance depth sufficient for surface navigation in the particular locality was found on all reported shoals examined by the field Party (2) except on rock E.D.



Lat.  $55^{\circ}11'$  Long  $133019'$  (app.) where the area was dragged to an effective depth of 45' instead of 50' as prescribed in general instructions Paragraph 245. It will be noted that the shallowest <sup>charted</sup> depth in the immediate vicinity of this reported danger is 78'

(F) The two reported dangers south of Arena Cove were covered to an effective depth of 54'. However, ~~the~~ two splits occur in this development rather close to the chart location of the dangers.

(G) The reported danger at the mouth of Sea Otter Harbor was examined and the particular locality dragged to an effective depth of 64'. An insufficient overlap of lines occurs directly north of the chart location of the reported shoal.

9. Remarks: This examination of these reported dangers would indicate that they do not constitute menaces to safe navigation.

10. Rating of the work { a. Character and scope of drag operations - excellent  
b. Field drafting - excellent

Respectfully submitted

H. E. MacEwan

S.P.E.

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 11-DRM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON April 26, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 3692<sup>a</sup>

Meares Passage, Alaska

Surveyed in 1925

Instructions dated February 27, 1925.

Chief of Party, F. H. Hardy (1914), H. B. Campbell (1925).

Surveyed by F. H. H., H. B. C.

Protracted by M. O. Witherbee and O. S. Reading.

Soundings plotted by M. O. W. and C. I. Aslakson.

Verified and inked by H. R. Edmonston.

1. This sheet comprises all of the work done in 1925 as well as a replotting of the major portion of the work on H. 3692 (surveyed in 1914). Hence all the work of 1914 south of a line from  $\Delta$  Millar to  $\odot$  Bob with the exception of the work in Hole in the Wall Anchorage will be superseded by this sheet (3692<sup>a</sup>).

The replotting was necessitated by the fact that the topographic signals and the shoreline on which the 1914 survey was based were erroneously located and the discrepancies so great as to make it impracticable to use the old sheet (H. 3692). North of the line  $\Delta$  Millar to  $\odot$  Bob, the signals were found correct and therefore that work was not replotted.

2. The records conform to the requirements of the General Instructions.
3. The plan and extent of the survey satisfy the specific instructions except that it appears that on one or two places the lines should have been run closer inshore.
4. No cross lines were run and the bottom is too irregular to permit of a comparison of adjacent sounding lines.

5. In general the information was sufficient for drawing the usual depth curves.
6. The junctions with the adjacent surveys are satisfactory except in the area south and west of  $\Delta$  Nut (lat.  $55^{\circ} 11 \frac{3}{4}'$ , long.  $133^{\circ} 21'$ ) and in the vicinity of the 10 fathom spot in lat.  $55^{\circ} 10'$ , long.  $133^{\circ} 20 \frac{1}{4}'$ . In both these places gaps were left in the work.
7. The field plotting was completed to the extent prescribed in the General Instructions and was well done. None of the work had to be done over by the office cartographer.
8. With the exception of the areas mentioned in Paragraphs 3 and 6 no further leadline surveying is required within the area covered by this sheet. This statement is made considering the broken character of the bottom. While it is true that additional lines over some of the shoals would doubtless disclose less water, yet no assurance would be had that the least water was obtained. It is therefore recommended that when opportunity affords this area should be wire dragged.
9. Attention is called to the statement by the hydrographer that no rocks awash exist off the southwest end of the large island at the entrance to Bobs Bay. The present chart shows 6 such rocks. (See page 2, paragraph 10 of Descriptive Report).
10. For the purpose of assisting the cartographer in making corrections to the chart, a summary of the important changes disclosed by this survey are given below:
  - a. A  $2 \frac{1}{2}$  fathom sounding in lat.  $55^{\circ} 11'$  1470 meters, long.  $133^{\circ} 24'$  640 meters in place of the sunken rock symbol now shown. ✓
  - b. In Arena Cove in lat.  $55^{\circ} 12'$  1560 meters, long.  $133^{\circ} 23'$  370 meters a least depth of  $4 \frac{2}{6}$  fathoms was obtained where 10 fathoms is charted. ✓
  - c. A 5 fathom sounding in lat.  $55^{\circ} 11'$  450 meters, long.  $133^{\circ} 20'$  where the chart shows 8 fathoms. ✓
  - d. A 4 fathom sounding in lat.  $55^{\circ} 09'$  1170 meters, long.  $133^{\circ} 14'$  970 meters where 10 fathoms is at present charted. ✓
  - e. A  $3 \frac{2}{6}$  fathom sounding in lat.  $55^{\circ} 11'$  450 meters, long.  $133^{\circ} 14'$  530 meters where no depths are charted here at present. ✓
11. The character and scope of surveying and the field drafting are excellent.
12. Reviewed by A. L. Shalowitz, March, 1926.

E. S.

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DEM

WASHINGTON

March 31, 1926

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet H. 3692<sup>b</sup>

Meares Passage, Alaska

Surveyed in 1925

Instructions dated February 27, 1925

Chief of Party, H. B. Campbell.

Surveyed by O. S. Reading.

Protracted and inked by O. S. R.

Verified and Area and Depth Sheet by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions.
2. The plan and extent of the survey satisfy the specific instructions.

This work was intended as an investigation of 3 obstructions in Meares Passage and one off the entrance to Sea Otter Harbor now shown on C. & G. S. chart 8151. These obstructions were located by the survey of 1914 and plotted with erroneous locations of signals. The 2 rocks awash marked P. D. in approximately latitude 55° 11 1/2', longitude 133° 23' were covered by a drag of 54 feet effective depth and the surrounding area dragged to depths ranging from 53 to 72 feet with no signs of grounding. The cuts locating these rocks on the 1914 survey when using the corrected locations for the signals plot these cuts through or near known breakers. (See Descriptive Report, this sheet). It is therefore conclusive that these rocks do not exist in their present location on the charts and should be removed therefrom.

The sunken rock marked E. D. in latitude 55° 11', longitude 133° 19 1/2' was sufficiently dragged over to disprove its existence in the charted location. While the edge of the drag on each drag strip plots close to the charted location of the rock, there is sufficient evidence of the manoeuvring of the drag to justify the conclusion that no such obstruction exists.

in the charted location that would be a menace to surface navigation. The rock may therefore be removed from the charts. It is interesting to note in this connection that a 43 ft. drag grounded about 850 meters northwest of the rock and a 5 fathom sounding was obtained. The spot was not subsequently cleared.

The rock awash in latitude 55° 07', longitude 133° 15 1/4' was cleared by a 64 ft. effective depth drag without grounding. This together with the fact that the spot was visited at a time when rocks with 3 fathoms over them at low water were breaking, is conclusive evidence that the rock does not exist in the charted location. It may therefore be removed from the charts.

3. The line of 11 to 14 fathom soundings (from H. 4191) about 500 meters north of the last mentioned rock was dragged over by a 71 ft. drag. While these soundings appear very doubtful in the light of the later hydrographic work in this vicinity, they should not be considered disproved by the drag work, inasmuch as the only sounding less than the depth of dragging is the 11 fathoms which was cleared by the drag when the test showed an 18 ft. lift. Such excessive amounts of lift at certain times make it uncertain as to the exact depth of dragging at other times, at least insofar as disproving soundings that are but 5 ft. less than the drag depth.

However, although the drag work carries no added weight for disproving these soundings, there seems to be ample evidence by the other sounding surveys, which show no such shoaling in this vicinity, that an error must have been made in reading the soundings on that line. The records for H. 4191 were examined but nothing suspicious was noted.

Removal of  
these soundings  
from charts  
approved by  
Chief of Field  
work (L.O.C.)  
Apr. 20, 1926.  
A.L.S.

4. Attention is called to the very excessive corrections for lift, occasioned by the insufficient weights on the drag. Inasmuch as tests were made at very frequent intervals, the drag work is considered adequate for the purpose of disproving the existence of the several charted obstructions.
5. The least water was not obtained over the 5 fathom shoal in latitude 55° 11 1/4', longitude 133° 20'. A 43 ft. drag grounded here on August 14 but no sounding was obtained. Later on August 19 the hydrographic party obtained a 5 fathom sounding in this vicinity after feeling around for three quarters of an hour. The descriptive report says that on account of growing

help the improvised equipment was not suitable for clearing this spot.

This spot should be dragged whenever work is again done in this locality.

6. There are two small splits and one case of insufficient overlap in the drag work. While it would have been desirable to have covered these, it is not believed sufficient to cast any doubt on the adequacy of the drag work in disproving the obstructions for which the work was done.
7. The character and scope of the surveying and field drafting are excellent.
8. Reviewed by A. L. Shalowitz, March, 1926.