

6238 WIRE DRAG

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

DESCRIPTIVE REPORT
WIRE DRAG
~~Hydrographic~~
~~Hydrographic~~ } Sheet No. 21-37

State Oregon

LOCALITY
Cape Blanco
The Heads to Blacklock Point

~~Cape Blanco~~

1937

CHIEF OF PARTY
F. H. Hardy

U. S. GOVERNMENT PRINTING OFFICE

CP

WIRE DRAG
6238

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET NO. 21-37
Project H.T.-206
VICINITY OF CAPE BLANCO, OREGON
U.S.C. & G.S.S. GUIDE
1937

(1) INSTRUCTIONS: This work was executed under Director's Instructions dated May 31, 1934, and Supplemental Instructions dated May 2, 1935 and March 6, 1937.

(2) CHARACTER AND LIMITS OF WORK: This sheet covers the area in the vicinity of Cape Blanco from The Heads to Blacklock Point. The inshore area dragged was to the limits of kelp, charted rocks and shoal water; the offshore area was to deep water as indicated by a limiting line drawn on a chart furnished the party by the Washington Office. On the southern end, the sheet joins Wire Drag Sheet No. 1-37, scale 1:10,000. No work was accomplished to northward of this sheet.

(3) The scale of this sheet is 1:20,000.

(4) This sheet was not completed. Work was discontinued on authority contained in the Director's letter dated August 20, 1937, approving recommendations of the Chief of Party by letter dated August 16, 1937.

(5) The position interval was five minutes throughout the sheet except at beginning and ends of lines and radical changes in course and speed.

(6) Dual control and visible fixes were used throughout.

(7) Effective depths ranged from ¹⁹20 to 70 feet.

(8) CONTROL AND DATUM: This sheet is on the final adjusted North American datum of 1927. Shore topographic signals were taken from sheets, "A" and "B" of 1937. Shoreline was obtained from the bromides of topographic sheets of 1928, as were the topographic signals which consisted of offlying rocks. None of the topographic features, offlying rocks, etc., were located by this party, and those shown on the sheet were transferred from the bromides of sheets of 1928. If any discrepancy of position, etc., exists it is due to our error in transferring. Only one signal was located by sextant cuts, Signal LAST, which fell outside the limits of the northernmost topographic sheet. See Rev. for other sheets

(9) DATES OF SURVEY: The survey was made between July 19th and August 10, 1937, inclusive.

(10) TIDAL REDUCERS: Tidal reducers for this sheet were taken from the portable automatic tide gage operated at Port Orford. See attached Tidal Data Sheet.

(16) "C" day: The party got underway at 4:00 a.m. and began dragging southwest of Blanco Reef at 5:45 a.m., the weather being too rough to continue work at the northern end of the sheet. The drag grounded at Buoy No. 17 at Position No. 3, later pulling around the shoal to between buoys 13 and 14. The seas were too rough and the current too strong for the tender to properly search for least water, but they obtained a position of the grounding and the effective drag depth of 42 feet was plotted, tender Position 1c. Field work in this area closed before this shoal could be cleared. At Position 6C, the drag was also aground at Buoy 5, but it is believed that the drag sank while reversing at Position 5, the area being cleared on "D" day. However, it is believed that there are several pinnacle rocks in this general area with a least depth but slightly less than the drag depth of "D" day since the drag also grounded when set out on "N" day, Page 54 of Record No. 2. Further field work on "C" day was prevented by increasing wind and seas.

(17) "D" day: The party left the anchorage at 4:15 a.m. and began dragging southwest of Blanco Reef at 6:08 a.m., the weather being overcast with gentle northwest breeze. At the guide launch, the bight of the drag was to westward, but due to sea and weather only a portion of the drag could be seen. Since the end launch did not state the condition of the drag at their end, it was thought best to show a split here on the smooth sheet, (see paragraph 38). The drag grounded at Position 9, but both launches continued towing to keep a strain on the drag. The guide launch continued taking positions to cover additional area, but since the end launch stopped taking positions at Position 11, their line is shown to end there. However, the tender positions 1 and 3d, taken immediately after the guide launch ended their line on Position 15, prove that buoys 14 and 12 respectively were still hard aground at these positions, and the final line was so drawn. The groundings are shown at positions 1 to 4 d, tender record. Field work on this sheet was discontinued before these rocks could be cleared with the drag. Fog shut in by the time the drag was picked up at 9:00 a.m., preventing further work on this sheet, but work was continued on the sheet to southward at Port Orford where the fog did not penetrate.

(18) "E" day: The weather was foggy, but began to lift at 6:00 a.m. when the party got underway. Dragging began close inshore at 7:20 a.m., but the end launch, which was farthest offshore, was in the fog at intervals, and frequently was unable to get fixes on time. Dragging ended at 10:25 a.m. when fog shut in completely. At end launch Position 32, it was stated that "F" buoy might be aground. Since the buoy continued to move after this position it is believed certain that the apparent grounding was due to the thick kelp patch which the drag was skirting. At the end of the day the guide launch stated that the drag appeared to be aground between buoys 5 and 6, but this was probably due to numerous crab pots here. Fog shut in preventing investigation, and the drag could not be seen clearly at this time. The area was cleared on "J" day without grounding, (see paragraph 26).

(19) "F" day: The party got underway at 4:00 a.m. and began dragging at the north end of the sheet at 6:35 a.m., the weather being overcast and hazy with a moderate northwesterly breeze. The drag was set out and picked up three times and each time it parted on shoals a short time after dragging began, so all drag work was rejected. At Position 2, page 29, Volume 1, the drag grounded on the same shoal as at Position 10B. ^{4 fms. port} The tender sounded here for one hour, but could not find the shoal which probably consists of a sharp pinnacle rock or mast of a wreck. Position of grounding shown at tender position 2f. The effective drag depth on "F" day of 24 feet was shown at this position. It was cleared on "G" day with an effective depth of 19 feet.

(20) The drag was set out twice again and both times parted at Buoy No. 10, probably on the shoal described in paragraph 21, at positions 1 to 3 g, tender record. On page 33, Position 10F, the record states that the drag was aground about buoy 4 or 5. This was not investigated since the drag had parted and shoal was apparently the same as the previous ^{4 fms.} grounding at Position 2f, the parted drag having permitted the deeper section of the drag to ground here rather than being covered at 19 feet as intended. Further work on this day was prevented by increasing wind and sea.

(21) "G" day: The party got underway at 4:00 a.m. and began dragging at the north end of the sheet at 6:46 a.m., the weather being hazy with light northwesterly airs. The end launch, farthest offshore, had difficulty in seeing signals through the haze, so the guide launch took out to the end launch at each position to assist in plotting their positions. The drag grounded on Position 7G, the location of the grounding being shown at tender positions 1 to 3g. ^{6 5/6 fms. port} The tender searched for more than one hour without finding the obstruction. The drag was hard aground when it was picked up and had to be broken out by the launch engines, at which time soundings were also taken from the guide launch with the ground wire vertical at the obstruction, but it could not be found. Since, as mentioned in paragraph 20, we believe Buoy No. 10 grounded here twice on "F" day, this effective depth of 6 5/6 fathoms was plotted. However, as mentioned in paragraph 15, the drag on "B" day was towed for some distance past the location as shown at Position 10B, and it would appear that the drag passed over this shoal with an effective depth of 58 feet. It may be that both launches drifted for awhile, permitting the drag to rise, but this is uncertain now. It is recommended that this obstruction be investigated further when work is continued here in the future, especially since it was cleared at an effective depth of only 28 feet on this same day.

(22) The drag was picked up and set out again at which time the above grounding was cleared, but the drag grounded again on Position 18 on the obstruction located at tender Position 1b, described in paragraph 15. Since the effective drag depth here was 25 feet, and the area had been previously covered on this day at 20 feet, no further sounding was done. The drag depth of 25 feet was plotted here instead of the sounding of 29 feet obtained on "B" day. The drag hit this rock between buoys 1 and ^{actual 29 fms.}

2 just as Position 18 was being taken, and immediately pulled around to Buoy No. 2 which went hard aground on the rock as was definitely shown when the drag was picked up. For the final bight of drag here connect end launch Position 18 with Buoy No. 2 on this rock.

(23) The drag was then reversed and towed north to resume dragging again in the southerly direction. The drag finally grounded again on the sharp rock with 26 feet over it, shown at tender Position 4g. This rock was cleared on "H" day with an effective depth of 21 feet.

(24) "H" day: The party got underway at 5:00 a.m. and began dragging off Blacklock Point at 7:08 a.m., the weather being clear with gentle northwesterly breeze. The drag grounded at the locations shown by tender positions 1 and 2h, which mark rocks with least depths of 24 and 18 feet respectively. These were not cleared by the drag, (see paragraph 36).

(25) The drag was then picked up and set out again and finally grounded on the rock at tender Position 3h. The effective depth of the drag at the grounding was 28 feet and the tender could not find any less depth, so the effective drag depth was plotted here. The rock was cleared on "N" day with an effective depth of 36 feet. The drag was picked up and set out again, but seas became too rough to continue and no further work was accomplished on this day.

(26) "J" day: The weather was bad with a fresh northwest breeze, and the party did not get underway until 7:00 a.m. After laying-to for about one hour, we attempted to drag in the shelter of Blanco Reef, but soon had to give it up. The smooth sheet shows very little overlap at the beginning of the days work, but actually the drag was in a wide bight to southward as shown on the boat sheet and as stated in the record. The drag was set out in a bight due to the restricted channel here which prevented setting it out in a straight line.

(27) "K" day: The party got underway at 5:00 a.m. and began dragging at the northern end of the sheet at 7:10 a.m. The weather was bright and hazy with a moderate northwest breeze. On this day the outside strip was dragged with a 10,000 foot drag, and dragging was carried on all day without grounding. At Fox Rock, the guide launch had to wait for the end launch to catch up, and the bight of the drag at Position 58 is shown in pencil to prove that no split was caused by reversing, the current setting strong to southeastward here. removed from sheet

(28) "L" day: The party was delayed by fog but got underway at 7:45 a.m. when the fog began to clear, the wind being a moderate northwest breeze. We began dragging northeastward of Orford Reef at 9:02 a.m. with the current against the drag. The drag grounded near "N" buoy at 10:00 a.m., but increasing wind and sea made it difficult for the tender to sound. The position of grounding being close to the guide launch was located by cuts from the guide launch and the upright depth of 29 feet was plotted. This obstruction is close to a charted 19 foot shoal to westward and a 11 foot shoal to northwestward, so is considered unimportant and was not cleared by the drag. The drag was then reversed and pulled off the obstruction

easily as the current was setting southeastward, and dragging was resumed. The remainder of the drag work was not plotted on the smooth sheet since there is some uncertainty as to the bight of the drag and very little additional work was accomplished. However, after reversing a second time the drag grounded between buoys 16 and 17. The seas being too rough for the tender to sound, the end launch obtained a position when picking up drag, the drag being still hard aground, and the drag depth of 35 feet was plotted at this position, No. 1-1. The grounding was cleared on "N" day with an effective depth of 25 feet.

(29) "M" day: Fog delayed the party until 5:10 a.m. when fog clearing inshore permitted drag work to begin eastward of Orford Reef. No groundings were had on this strip. The drag was then set out southward of Blanco Reef, and grounded on the guide launch topline near "N" buoy shortly after Position 24M. The topline parted at the guide launch and the end launch pulled the topline around the rock until the topline caught on the rock at the fittings and toggle at the end of the third section. The tender took a position at "N" buoy and then sounded on the shoal, but fog shut in preventing a position on the shoal. The least depth of 32 feet was plotted 300 feet north-northwest of the position of "N" buoy, the current and strain from the end launch having swung "N" buoy in this relative direction from the shoal. The shoal was cleared on "N" day with an effective depth of 19 feet. Fog prevented further work on this day.

(30) "N" day: The party got underway at 5:00 a.m., the weather being cloudy and overcast with scattered fog. We began dragging south of Cape Blanco at 6:33 a.m. and grounded immediately due to the restricted channel here which prevented setting the drag out in a straight line, and which permitted the drag to ground before towing began. This frequently happens when we set out the drag in depths only a few fathoms greater than the drag depth. The lengths of the uprights were all checked later and found correct. When the launches were towing, buoys on both sides of the grounding would sink below the surface too deep to be seen indicating that the drag was grounded much deeper than the effective depth of the drag. This area had already been cleared with an effective depth of 38 feet. Tender positions 1 to 4n locate the shoals, ranging in depth from 41 to 45 feet. ^{6 5/16 + 7 fms plotted}

(31) The drag was picked up and set out again west of Cape Blanco. The drag grounded near "N" buoy on position 24N, but the end launch continued towing to cover as much area as possible. Fog shut out signals at the guide launch and the grounding was marked by an anchored toggle, so that the guide launch could fix positions by keeping the launch at the grounding and taking bearings to "N" buoy. The end launch was able to see high signals over the fog which was low-lying. Both launches obtained positions at the end of the strip. The grounding was located by tender position 5n with a least depth of 23 feet. This rock was cleared later in the day at an effective depth of 19 feet. Another rock was found by the tender at Position 6n, with a least depth of 27 feet, where the drag was not grounded. This had been cleared already this day with an effective depth of 25 feet.

22 + 23'
(tide change)

(32) A short drag was then set out to cover this shoal area and was grounded at Position 34N. Tender positions 7 and 8n, show the location of these rocks with least depths of 19 and 14 feet respectively. These rocks were considered too close to the reef here to try to clear with the drag. The drag, therefore, avoided these shoals when it was later reversed and dragging was resumed to southward, this time without grounding.

(33) The drag was set out again but fog shut out signals before dragging could begin. When picking up the drag it was found to be grounded at No. 9 buoy in approximate Latitude 42° 48.8', Longitude 124° 36.0'. It undoubtedly sank while setting out since the area had been covered on "D" day. However, as stated in paragraph 16, there are probably pinnacle rocks here with but slightly less depth than as cleared on "D" day.

(34) A period of stormy weather set in after this day and work was discontinued as stated in paragraph 4.

(35) LIST OF GROUNDINGS:

Pos.No.	Latitude & Longitude	Grounded Eff. Depth feet	Least Sdg. Depth Fms.	Cleared Eff. Depth Feet	Depth Plotted Fms.	Remarks
1 a	42° 53.43 124° 32.61	35	5 1/6	25	5 1/6	See paragraph 14.
1 b	42° 53.25 124° 33.54	25	4 5/6	20	4 1/6 ^{From "C" day}	Grounded on 18G See paragraph 15 & 22
1 c	42° 48.22 124° 36.15	42	15	Not Cleared	7	See paragraph 16. Upright length plotted
1 d	42° 48.35 124° 35.16	45	6	Not Cleared	Not Plotted	Shoaler water found very near. See par. 17.
2 d	42° 48.35 124° 35.16	45	5	Not Cleared	5	See paragraph 17.
3 d	42° 48.46 124° 35.17	40	5 2/6	Not Cleared	Not Plotted	Shoaler water found very near. See par. 17.
4 d	42° 48.46 124° 35.17	40	5	Not Cleared	5	See paragraph 17.
2 f	42° 53.47 124° 32.78	24	-	19	4	No shoaler water found less than general depths. See par. 19.
1g & 3g	42° 53.60 124° 33.76	41	13 1/2 14	At junction of 25-28 ft. strips	6 5/6 ^{From "F" day}	No shoaler sdg. found. See paragraph 20 & 21.
4 g	42° 52.00 124° 33.65	33	4 2/6	21	4 2/6	See paragraph 23.
1 h	42° 51.10 ²³ 124° 34.15	31	4	Not Cleared	4	See paragraph 24.
2 h	42° 51.23 ¹⁰ 124° 34.15	21	3	Not Cleared	3	See paragraph 24.
3 h	42° 50.15 ⁰ 124° 35.50 ⁴⁹	28	-	23 26	4 4/6	See paragraph 25.
1-1	42° 48.30 124° 34.13	35	-	25	5 5/6	See paragraph 28.
"1" day	42° 49.3 124° 33.9	29	-	Not Cleared	4 5/6	Upright length plotted Located by cuts by GL. See paragraph 28.

Pos.No.	Latitude & Longitude	Grounded Eff. Depth	Least Sdg. Depth	Cleared Eff. Depth	Depth Plotted	Remarks
	Lat. Long.	Feet	Fms.	Feet	Fms.	
1 m	42° 49.32' 124° 35.55'	34	5 2/6	19	5 2/6	See paragraph 29.
1 n	42° 48.40' 124° 33.835'	35	6 5/6	38	6 5/6	Drag aground before launch started towing. See paragraph 30.
2 n	42° 48.373' 124° 33.862'	25	7	38	7	Drag aground before launch started towing. See paragraph 30.
5 n	42° 49.856' 124° 35.50'	30	3 5/6	19	3 5/6	See paragraph 31.
6 n	42° 50.04' 124° 35.48'	-	4 1/2	26	4 1/2	Not grounded at this point. See par. 31.
7 n	42° 49.767' 124° 35.45'	19	3 1/6	Not Cleared	3 1/6	Shoals too close to reef to try to clear. See paragraph 32.
8 n	42° 49.789' 124° 35.44'	19	2 2/6	Not Cleared	2 2/6	Shoals too close to reef to try to clear. See paragraph 32.

(36) SPLITS: The split in Latitude 42° 51.2', Longitude 124° 34.3' was intentional, due to the fact that the shoals here are close inshore and would have required a very shoal effective depth to clear. The days on which drag work could be done here were so few, due to stormy and foggy weather, that we tried to cover the most important areas in the limited time available. This split should probably be covered with a short drag when work is resumed in this vicinity. The dragmaster was confident that the 4 fathom and 3 fathom soundings are the least depth on those particular rocks, but there may be others in the split area.

(37) There is a small split at the end of "N" day in Latitude 42° 49.1', Longitude 124° 35.4'. This split is so close to the inshore limits of the work that it is unimportant.

(38) At the beginning of "D" day, Latitude 42° 28.5', Longitude 124° 37.0', there is an area shown as a split since the exact bight of the drag at the end launch was not stated. It is possible that the drag might have been in an "S" curve, with bight at the guide launch to westward as stated in the record. This area should be covered later, including the 9 fathom sounding shown on the chart north of Signal NIL.

(39) A large undragged area is shown between "N" and "D" days in approximate Latitude 42° 48.5', Longitude 124° 35.0'. On the boat sheet, some of this area is shown as covered on "L" day, but since some of this work is uncertain, and since additional work must be done here at some future time, this was not included on the smooth sheet. However, as shown on the boat sheet, the drag passed over the main part of the ship channel here and we are reasonably certain that all the area so covered is clear.

(40) ADDITIONAL WORK NEEDED: In addition to the areas described under the heading of "Splits", paragraphs 36, 38 and 39, there are two other areas where wire drag work should be done when work is resumed in this vicinity. All this additional work can be done without signal building since there are sufficient natural objects for control.

(41) It was noticed that ships frequently pass inside of Fox Rock. Therefore it is very important that the area between it and Orford Reef be dragged.

(42) Close to westward of the dragged area on "E" day, between Latitude 42° 47.0' and Latitude 42° 48.2', is an area of very thick kelp. Between this kelp patch and Orford Reef is a passage used by fishing boats where the kelp was thin during the time we were working here. It might be advisable to drag this area if kelp conditions permit, and the dragged area should extend southward to overlap with the dragged area on "K" day and to eastward to overlap with the dragged area on "M" day.

(43) MISCELLANEOUS: Anchored crab pots throughout this area were a source of considerable trouble.

Fox Rock bares 9 feet at M.L.L.W., instead of 10 feet above high water as charted and as given in the Coast Pilot. *In 1937, Suppl. 1-15-25*
(See pos. 52K, Vol. 3 - G.L.)
Shown on Smith sheet is bare 2' at H.W. M.M.

Orford Reef lighted whistle buoy, southwest of Fox Rock, was located by cuts from the end launch on "K" day. *(see position 52K, Volume 2)*
(See pos. 59, 61A, Vol. 4 - E.L.)

Heavy seas, wind and strong currents sometimes prevented the proper testing of the drag. Frequently the drag grounded before it could be tested. At times the seas were too rough for the tender to come alongside the guide launch to get the dragmaster, and at other times when he did get aboard the tender he had to remain there for the remainder of the day.

(44) COMPARISON WITH PREVIOUS SURVEYS AND CHART: No soundings were noticed on the chart or on previous hydrographic sheets which were shallower than the effective depths dragged.

(45) PERSONNEL AND EQUIPMENT: Lieutenant Wm. D. Patterson was in charge of this work and in charge of the guide launch. Lieutenant (j.g.) Walter J. Chovan was in charge of the end launch. Chartered Launch FLORENCE was used for the guide launch, and chartered Launch VIRGINIA was used for the end launch. Standard wire drag equipment was used.

(46) WEATHER: This is a very difficult place to work due to continuous high winds and prevailing fog. Good days are very rare and much of this survey was done on days that in other areas would have been considered too bad for field work. This is the worst area for continuous high winds that the writer has seen in over twenty years of service.

Respectfully submitted,

Wm. D. Patterson
Wm. D. Patterson,
H. & G. Engineer,
C. & G. Survey.

Approved, forwarded:

F. H. Hardy
F. H. Hardy, Chief of Party, C. & G. S.,
Commanding Ship GUIDE.

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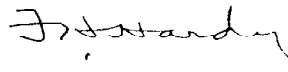
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STATEMENT
to accompany
WIRE DRAG SHEET FIELD NO. 21-37
1937

The plotting and protracting of buoy positions was performed
by Ensign H. G. Conerly.

The drag areas were subdivided and inked by Ensign H. G.
Conerly.

The completed smooth sheet has been inspected and is approved.



F. H. Hardy,
Chief of Party, C. & G. S.,
Commanding Ship GUIDE.

STATISTICS
to accompany
WIRE DRAG SHEET FIELD NO. 21-37
1937

Date 1937	Day Letter	Volume	Positions	Statute Miles	Drag Length in Feet	Tender Positions	Soundings	
July 19	A	1	17	2.1	10,000	1	1	
20	B	1	10	1.2	7,200	1	1	
21	C	1	3	0.5	7,200	1	1	
24	D	1	15	2.3	7,200	4	4	
25	E	1	38	5.7	7,200	0	0	
28	F	1	--	--	7,200	2	0	
30	G	1	37	4.8	7,200	4	2	
Aug. 1	H	1	33	4.5	7,200	3	2	
3	J	1	9	0.9	6,400	0	0	
6	K	2	101	15.4	10,000	0	0	
7	L	2	14	2.5	7,200	1	0	
8	M	2	24	4.1	7,200	1	1	
10	N	2	50	3.7	7,200	8	8	
					4,000			
TOTALS		2	351	47.7			26	20

AREA = 38.5 square statute miles.

Verification Report of Wire Drag Survey No. 6238 Field No. 21-37.

Cape Blanco Oregon

Chief of Party- F. H. Hardy.

1. Condition of Records.

The Descriptive Report was very complete, and clearly discussed all matters of importance.

The recording of the work in the sounding volumes in general is satisfactory; there were, however, a few errors and omissions as listed below:

(a) Two cases were found where in the record of a fix, a zero (0) was made almost exactly like a six (6). Another where the name of a signal was crossed out and the name of the correct signal used written above it; only the first signals' name appeared in the Guide Launch Records. The above mistakes were corrected with a blue pencil.

not mentioned in Rev. Report.

(b) Depth Diagrams: Not all of the depth diagrams were marked as checked by the field party, however it is assumed that they were checked since all of them were found to be consistent with the recorded effective depth changes and the plotting on the Drag Sheet. *See page 66 of this report.*

(c) No check angles were obtained on the first four positions on "n" day (Tender) Ref. page 32, S. P. No. 118.

Accepted weather foggy.

(d) See Rev., par. 1 for other items.

2. Control and Shore Line.

The control for this survey is from T-6565(1937), T-6566a(1937), T-4217(Add'l Work 1928), T-4360(1928), T-4361(1928), T-4362(1928) and Hydrographic signal LAST, See Vol. 2, *Index* for cuts.

The shore line is from the above mentioned 1928 topographic surveys. The shore line was accurately transferred from the bromides of the 1928 topographic surveys by the field party, and check the original sheets satisfactorily. A few of the features at the off shore signals had been omitted, probably because they were not distinct on the bromides; these have been transferred, in the office, from the original surveys to the Drag Sheet.

3. Aids to Navigation.

Orford Reef lighted whistle buoy was located by ^{*boat pos. and sextant*} cuts; see page 13 of Vol. 3.

4. Junctions with Contemporary Wire Drag Surveys.

This survey (H-6238 WD-1937) joins H-6240a WD (1937) on the south. This junction appears to be satisfactory, but will be considered in the verification of that survey (H-6240a WD-1937).

5. Field Plotting.

The field plotting of positions and drag strips as well as the effective depth subdivisions thereof was accurately executed. See Rev., par. 7 for additional items.

6. Remarks.(a) Overlap of drag strips.

In Lat. $42^{\circ} 45.4'$ Long. $124^{\circ} 32.6'$ the overlap of the drag strips is a little less than one section of the drag (400 ft.). See page 31 S.P. No. 118. However, the strips are fairly straight here and at no point is the overlap less than ~~one half~~ ^{3/4} of the length of a section. The overlap is considered adequate. *no comment made in Rev.*

For discussion of the undragged area in approximate Lat. $42^{\circ} 48.5'$ Long. $124^{\circ} 35.0'$ see paragraph 39 of the Descriptive Report. ✓

(b) Splits.

The splits are adequately discussed in paragraphs 36, 37, 38 and 39 of the Descriptive Report. ✓

The limits of the splits have been checked and found to be substantially correct. ✓

The gap in the work mentioned in paragraph 38 has not been inked, but is left in pencil pending action by the reviewer. *Disposed of*

(c) Effective Depths.

In some cases, close to the end of a strip the effective depth, due to a change in the stage of the tide, was not plotted because of the small increase in the effective depth. See notes by the field party on pages 44 and 54 of Vol. 2 and page 31 of Vol. 3. *inspected. omissions accepted. H.W.M.*

(d) Groundings and Soundings not cleared by the drag.

A well arranged table called "List of Groundings" appears under paragraph 35 pages 7 and 8 of the Descriptive Report. It was not possible to obtain a fix at the grounding in Lat. $42^{\circ} 49.32'$ Long. $124^{\circ} 35.55'$ position 1 "m" on account of fog. The $5 \frac{2}{6}$ fathom sounding is plotted 300 feet (91.4 m) NNW ($337^{\circ} 30'$) from the three point fix with check angle in Lat. $42^{\circ} 49.27'$ Long. $124^{\circ} 35.53'$. ✓

No fix was obtained at 5 "n" in Lat. $42^{\circ} 49.86'$ Long. $124^{\circ} 35.5'$. The $3 \frac{5}{6}$ fathom sounding is considered to be approximately in its true position. See page 16 of Vol. 1 (Tender). ✓

(e) Weather Conditions.

The weather conditions were not favorable during the progress of the work on this survey - see paragraph 46 page 9 of the Descriptive Report. ✓

Verified by



Leo S. Straw

March 10, 1938.

GEOGRAPHIC NAMES

Survey No. H-6238 W. D.

Name on Survey	<div style="display: flex; justify-content: space-between; font-size: small;"> On Chart No. 5752 On previous survey No. 5882 On U. S. Coast and Geodetic Survey Maps Orford From local information On local Maps P. O. Bonds or Maps USCP Rand McNally Atlas U. S. Light List </div>									
	A	B	C	D	E	F	G	H	K	
(The Heads)	✓	*	✓			✓	✓			1
Kloogeh Rock	✓	T-347				✓				2
Fox Rock	✓	H-1300				✓				3
(Orford Reef)	✓	T-1131				✓	✓			4
NW Rock	✓	T-1131				✓				5
Pyramid Rk	✓	T-1131				✓				6
(Blanco Reef)	✓	T-1130				✓				7
(Cape Blanco)	✓									8
Gull Rock	✓	T-1130	✓			✓				9
Castle Rock	✓	T-1130	✓			✓				10
Tower Rock	✓	T-1130	✓			✓				11
Blacklock Pt.	✓	*	✓			✓	✓			12
Oregon	✓									13
Tichenor Rock	5952	T-347				✓				14
Black Rk	✓	T-1131								15
Victoria Reef	✓									16
Large Brown Rock	✓	T-1131				✓				17
Long Brown Rock	✓	T-1131				✓				18
Best Rock Rock	✓	Best's Rock				✓				19
Square White Rock	✓	T-1131				✓				20
Seal Rock	✓	T-1131				✓				21
Flat Rock	✓	T-1131								22
Conical White Rock	✓	T-1131				✓				23
Flat Black Rock	✓	T-1131								24
Arch Rock	✓	T-1131				Arch on Fin Rk				25
West Conical Rock	✓	T-1131				✓				26
Steamboat Rock	✓	T-1131				✓				27
SE Black Rock	✓	T-1131				✓				M 234

Names underlined in red approved
 on 3/11/38
 by *RAE*

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H -6238 W. D.

~~Next~~

received Feb. 14, 1938
registered Feb. 18, 1938
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20	✓		Pages 1, 2, 8 and 9
22	✓	APP	" " " "
24			
25	✓	POD	Pages 2, 9
26			
30			
40			
62			
63			
82			
83	✓	BR	sent sheet for inspection.
88			
90			

Dr Studde →

RETURN TO

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

✓

rac

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 28, 1938

Division of Hydrography and Topography:

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

Plane of Reference

~~Tide Reductions~~ approved in
5 volumes of/sounding records for
wire drag and

HYDROGRAPHIC SHEET 6238

Locality The Heads to Blacklock Point, Oregon Coast

Chief of Party: F. H. Hardy in 1937

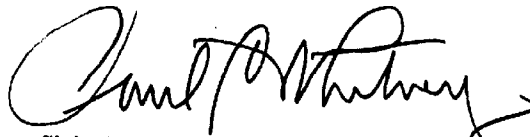
Plane of reference is mean lower low water, reading

1.9 ft. on tide staff at Port Orford

19.5ft. below B.M. 1

Height of mean high water above plane of reference is 6.6 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Note: Ink only the names
in brackets () on this
sheet.

	Remarks	Decisions
1	T-347 "Chimarten Head" (in pencil)	
2		
3		
4		
5	a descriptive name	
6		
7		
8		USGB decision
9		
10		
11		
12	T-1130 "Rocky Point"	
13	For Title Only	
14		
15	a descriptive name	
16	a part of Orford Reef	
17	a descriptive name	
18	a descriptive name	
19	T-4361 "Table Rock". No comment in D.R. why this name was used in place of Best Rock	
20		
21		
22	a descriptive name	
23	" "	
24	" "	
25	" "	
26		
27		
M 234		

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6238 (1937) W.D. FIELD NO. 21-37

The Heads to Blacklock Point, Cape Blanco, Oregon
Surveyed in July-August, 1937, Scale 1:20,000
Instructions dated May 31, 1934, May 2, 1935 and Mar. 6, 1937 (GUIDE)

Wire Drag with Hand Lead Soundings. Dual Control on Shore Signals.

Chief of Party - F. H. Hardy.
Surveyed by - Wm. D. Patterson.
Protracted by - H. G. Conerly.
Soundings plotted by - H. G. Conerly.
Verified and inked by - Leo S. Straw.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that on N day, Pos. 22 in latitude $42^{\circ} 50.1'$, longitude $124^{\circ} 35.5'$, the uprights at buoys N to 3 were noted as having been shortened but the time at which the change was begun was not noted nor was any disposition made in smooth sheet plotting. The time of starting was estimated in the office and the entire depth change plotted as effective at pos. 21N.

The Descriptive Report is clear and very comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The portion of the survey completed satisfies the instructions for the project (see paragraph 9, this review).

3. Shoreline and Signals.

- a. The shoreline originates with planetable surveys: T-4217 (1928) Ad. Wk., T-4360 (1928), T-4361 (1928), and T-4362 (1928).
- b. The control originates with graphic control sheets; T-6565 (1927) and T-6566a (1937) and is supplemented by 1928 planetable surveys T-4217 Ad. Wk., T-4360, T-4361 and T-4362. One hydrographic signal "LAST" was also used, the sextant cuts being listed in the index of Vol. 2.

4217

4. Junctions with Contemporary Wire Drag Surveys.

The junction on the south with H-6240a (1937) W.D. will be considered in the review of that survey.

5. Comparison with Latest Hydrographic Surveys.

H-1300 (1871), H-1946 (1889), H-4452 (1924), H-4479 (1924)
H-4486 (1925), H-4813 (1928), H-4814 (1928 and H-4815 (1928)
Scales 1:10,000 to 1:40,000

Portions of these surveys taken together cover the entire area of the present survey. The depths shown thereon are consistent with the effective drag depths.

6. Comparison with Chart 5952 (New Print dated July 19, 1937).
Chart 5702 (New Print dated July 17, 1937).
Chart 5802 (New Print dated Dec. 14, 1937).

a. Hydrography.

The charts contain no soundings that conflict with the effective drag depths on the present survey. Several soundings on the charts, added as hand corrections from advance information taken from the boat sheet of the present survey and reported in Chart Letters 526, 566, and 580 of 1937, differ slightly in position or depth from those on the smooth sheet. Particular attention is called to the 5 fathom depth in latitude $42^{\circ} 50.1'$, longitude $124^{\circ} 35.7'$ on Chart 5752 which varies 130 meters in position and 5 feet in depth from the $4\text{-}1/6$ fathom sounding obtained on the present survey. The information in the chart letters should be superseded by the present survey in future charting.

Fox Rock in latitude $42^{\circ} 46.1'$, longitude $124^{\circ} 38.1'$ is charted as baring 10 feet at HW from information originating with T-4361 (1928). The D. R. (paragraph 43) states that this rock bares 9 feet at MLLW which corrected for range of tide reduces to "bare 2 feet at HW". This should be corrected on charts 5952 and 5702. Chart 5802 has been previously corrected.

b. Aids to Navigation.

The whistle buoy in latitude $42^{\circ} 45.'$, longitude $124^{\circ} 39.'$ and the light on Cape Blanco agree closely with the charted positions and satisfactorily mark the features intended.

7. Field Plotting.

Field protracting, plotting and subdivision of drag strips were well done and conform to the requirements of the Hydrographic Manual and Special Publication No. 118 except as follows:

- a. Bottom characteristics obtained at actual soundings at groundings were not shown on the smooth sheet. These were added in the office.
- b. At the beginning of D day, latitude $42^{\circ} 48.7'$, longitude $124^{\circ} 36.9'$ the drag bight was shown as a straight line. The D. R. (paragraph 17 and 38) states that the bight at the Guide Vessel was to the westward and since the bight at the End Vessel was not noted (note in records states to eastward but is crossed out) it is possible that the total bight had

an "S" shape. Since this "S" shape bight at the End Vessel extended eastward of the straight line representation, the latter representation was incorrect. In the office, the straight line representation was accepted from the guide vessel to the middle of the drag and thence a bight extending eastward drawn to the End Vessel.

The exact delineation of this bight is of particular importance because of the charted 9 fm. shoal here originating with H-4813 (1928). In the former case, the drag included the shoal and in the latter it was found to be just outside the shoal.

8. Results of Survey.

a. Shoals discovered and clearance depths obtained.

- (1) A 7 fm. grounding in latitude $42^{\circ} 48.2'$, longitude $124^{\circ} 36.2'$ falling in depths of 15 fms. on H-4813 (1928). Least depth not found and not cleared.
- (2) Two rocks with least depths of 5 fms. in latitude $42^{\circ} 48.4'$ longitude $124^{\circ} 35.2'$ falling in depths of $8\text{-}\frac{3}{4}$ to 11 fms. on H-4813 (1928). Not cleared.
- (3) A grounding of $5\text{-}\frac{5}{6}$ fms. in latitude $42^{\circ} 48.3'$, longitude $124^{\circ} 34.1'$ falling in depths of $9\text{-}\frac{1}{2}$ fms. on H-4813 (1928). No hand lead sounding was obtained. Cleared by a 25 foot drag.
- (4) Two rocks with least depths of $6\text{-}\frac{5}{6}$ and 7 fms. in latitude $42^{\circ} 48.4'$, longitude $124^{\circ} 33.8'$ falling in depths of 11 fms. on H-4813 (1928). Cleared by 38 foot drag.
- (5) A grounding of $4\text{-}\frac{5}{6}$ fathoms in latitude $42^{\circ} 49.3'$, longitude $124^{\circ} 33.9'$ falling in depths of 7 fms. on H-4813 (1928). This grounding was not cleared but is fairly close inshore and near two detached shoals with least depth of $1\text{-}\frac{5}{6}$ and $3\text{-}\frac{1}{6}$ fms. on the NW which are shown on the 1928 survey.
- (6) A shoal with least depth of $5\text{-}\frac{2}{6}$ fathoms in latitude $42^{\circ} 49.3'$, longitude $124^{\circ} 35.55'$ falling in depths of 10 fms. on H-4813 (1928). Cleared by 19 foot drag.
- (7) In the vicinity of latitude $42^{\circ} 50.0'$, longitude $124^{\circ} 35.5'$, several shoal spots, mostly pinnacle rocks with least depths of $2\text{-}\frac{2}{6}$ to $4\text{-}\frac{1}{2}$ fms. including one $4\text{-}\frac{4}{6}$ fm. grounding were obtained which fall in depths of $5\text{-}\frac{1}{2}$ to $9\text{-}\frac{3}{4}$ fms. on H-4813 (1928), of these, the $4\text{-}\frac{4}{6}$ fm. grounding (no sound-

ing) and 4-1/2 fathom sounding were cleared with a 19 and a 22 to 23 foot drag; the 3-5/6 fathom sounding was cleared with a 19 foot drag and the 3-1/6 and 2-2/6 fathom soundings were not cleared. These shoal spots are close to the foul area off Cape Blanco.

- (8) Two sunken rocks with least depths of 3 and 4 fathoms in latitude 42° 51.15', longitude 124° 34.15' falling in depths of around 8 fathoms on H-4813 (1928). These are at the edge of a split and were not cleared.
- (9) A sunken rock with least depth of 4-2/6 fathoms in latitude 42° 52.0', longitude 124° 33.7' falling in depths of about 9 fathoms on H-4813 (1928), cleared by 21 foot drag.
- (10) A grounding of 4-1/6 fathoms (actual sounding 4-5/6 fathoms) in latitude 42° 53.26', longitude 124° 33.5' falling in depths of 13-1/2 fathoms on H-4813 (1928). Cleared by 20 foot drag.
- (11) A sunken rock with least depth of 5-1/6 fathoms in latitude 42° 53.4', longitude 124° 32.6' falling in depths of about 9-3/4 fathoms on H-4813 (1928). Cleared by 19 and 25 foot drag.
- (12) A 4 fathom grounding in latitude 42° 53.5', longitude 124° 32.8' falling in depths of 11 fathoms on H-4813 (1928). One hour's search with lead line failed to find shoal. Cleared by 19 foot drag.
- (13) A 6-5/6 fathom grounding in latitude 42° 53.6', longitude 124° 33.8' falling in depths of 16-1/2 fathoms on H-4813 (1928). Over one hour's search with the lead line failed to find this feature which was later cleared by a 25 to 28 foot drag strip.

b. Effective Depths.

The effective depths of the various drag strips are sufficient to insure safety to surface navigation to within approximately 1/2 to 1 mile of Orford Reef and 2 miles of the shoreline between Cape Blanco and Blacklock Point.

c. Splits and insufficient overlaps.

- (1) A split exists in latitude 42° 51.2, longitude 124° 34.3' and falls in depths of 8-1/4 to 9 fathoms on H-4813 (1928).
- (2) A small split exists in latitude 42° 49.1, longitude 124° 35.45' and falls in depths of 12-1/2 fathoms on H-4813 (1928).

- (3) An area of insufficient overlap exists in the vicinity of latitude $42^{\circ} 53.2'$, longitude $124^{\circ} 34.2'$ because of the uncertainty in the bight of the drag at pos. 22 G. The line was started in a southerly direction at pos. 19 G with the bight normal to the south and at pos. 22 G the bight was noted as straight and so plotted. With this plotting the overlap with other strips is only 150 meters and there is a strong possibility that the bight was still leading slightly to the south.
- (4) The overlap in latitude $42^{\circ} 48.3'$, longitude $124^{\circ} 32.8'$ is considered insufficient particularly in view of the grounding noted in the records at pos. 38 E but not investigated because of fog. The grounding was apparently cleared with a similar effective depth on J day (see par. 18 and 26, descriptive report) but the overlap is only about 100 meters regardless of the shape of the bights.

9. Additional Field Work Recommended.

The survey was not completed because of adverse weather conditions. When work is resumed in this locality the survey should be extended to the limits specified in par. 5 of the instructions of March 6, 1937. The following additional work is also necessary in order to complete the portion of the survey already covered:

- a. Soundings and groundings discussed in paragraphs 8a(3) and 8a (13), this review, should be cleared with effective depths more commensurate with the depths of the groundings.
- b. Uncleared soundings and groundings discussed in paragraphs 8a (1), 8a (2), and 8a (8), this review, should be cleared.
- c. Additional strips should be run to cover splits and areas of insufficient overlap discussed in paragraphs 8c (1) and 8c (4), this review.
- d. Holidays in latitude $42^{\circ} 48.6'$, longitude $124^{\circ} 34.8'$, and latitude $42^{\circ} 48.4'$, longitude $124^{\circ} 36.9'$, should be dragged; in the latter case with an effective depth within a few feet of the 9 fathom depth charted in this vicinity from H-4813 (1928).

10. Note to Compiler.

Attention is called to the treatment of several hand corrected shoal soundings and the charted elevation of Fox Rock discussed in paragraph 6a, this review.

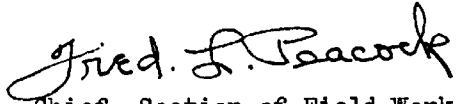
11. Reviewed by - Harold W. Murray, March 28, 1938.

Inspected by - A. L. Shalowitz and J. A. McCormick.

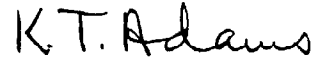
Examined and approved:



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



Fred. L. Beacock
Chief, Section of Field Work.



K. T. Adams
Chief, Division of Charts.



G. W. Hinde
Chief, Division of H. & T.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6238** W. D.

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

Number of positions on sheet	<i>377</i>
Number of positions checked	<i>38</i>
Number of positions revised	<i>1</i>
Number of soundings recorded	<i>20</i>
Number of soundings revised	<i>0</i>
Number of signals erroneously plotted or transferred	<i>0</i>

Date: *Mar. 12, 1938*

Verification by

L. D. Straw

Time: *45 hr.*

Review by

Time:

HYDROGRAPHIC SURVEY NO. H-6238 Wire Drag

Smooth Sheet Yes

Boat Sheet Two

Sounding Records One Vols. _____

Wire Drag Records Four Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. #2

Landmarks for Charts (Form 567) None

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

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

Remarks _____

13
Aug. 10, 1938

Applied to CMT 5952 - July 1938

D.A.S.