

4819

Diag. Cht. No. 5702-2

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: <u>OREGON</u>	
11-5613	
DESCRIPTIVE REPORT.	
Hydro.	Sheet No. <u>6</u> ⁴⁸¹⁹ <u>4819</u>
LOCALITY:	
Coast of Oregon Cape Sebastian	
Rogue River Reef	
Rogue River Reef to Cape	
and Hubbard Mound	
Sebastian	
192 ^B .	
CHIEF OF PARTY:	
A.P. Fatti	

4819

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC

SHEET NO. 6 (Field Number), NORTH ROCK TO CAPE SEBASTIAN.

DATE OF INSTRUCTIONS.

Instructions covering this survey were dated March 19, 1928.

LIMIT AND EXTENT.

This sheet covers the area from Latitude $42^{\circ} 33'$ to Cape Sebastian, Oregon, and makes a junction with Sheet 4 (Field No.) Sheet 4505, Sheet 1945 and Sheet 1946.

SURVEY METHODS.

All signals used on this sheet were located by triangulation in 1924 and by topography shown on sheet F and G. For list and character of signals used see page 2 Vol. 1 Sounding record of this sheet.

Soundings from the beach to 15 fathoms were taken with the hand lead, beyond that depth soundings were obtained with the Standard Coast Survey Hand Sounding Machine, using stranded wire.

Chartered Launch Rogue was used on this Survey.

DANGERS AND SHOAL SOUNDINGS NOT INDICATED ON CHART 5951.

1. A rock with 31 Feet at MLLW over it and marked by anchored kelp,

Lat. $42^{\circ} 31'$ (88 meters).
Long. $124^{\circ} 27'$ (89 ").
Position of least sounding is Vol. 3; 137g.

2. A rock with 31 Feet at MLLW over it,

Lat. $42^{\circ} 30'$ (1766 Meters).
Long. $124^{\circ} 26'$ (580 ").
Position of least sounding is Vol 1; 69a.
Chart 5951 shows a sounding of $8\frac{1}{2}$ Fathoms at this spot.

3. A rock with 8 Feet at MLLW over it,

Lat. $42^{\circ} 30'$ (927 Meters).
Long. $124^{\circ} 27'$ (1115 ").
Position of least sounding is Vol. 2; 97g.
This rock shows a breaker. In this vicinity, no indication was found of the $6\frac{1}{2}$ Fathom spot shown on Sheet 1945.

4. A rock with 17 Feet at MLLW over it,

Lat. $42^{\circ} 30'$ (1126 Meters)
Long. $124^{\circ} 27'$ (50 Meters).

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Position of least sounding is Vol. 3; 136 g.

This rock was marked by anchored kelp.

Chart 5951 shows no indication of this rock; however there is a $2\frac{1}{2}$ Fathom PD shown on Chart 5951 about 650 yds. east of this rock and it is believed that they are the same rock as no indication of the PD was found at the spot indicated on Chart 5951.

6. A rock with 24 Feet at MLLW over it,

Lat. $42^{\circ} 30'$ (859 Meters).

Long. $124^{\circ} 26'$ (759 ").

Position of least sounding is Vol.3; 130g.

7. A breaker with 2 Fathoms close to it,

Lat. $42^{\circ} 30'$ (710 Meters).

Long. $124^{\circ} 26'$ (173 ").

Position of breaker is Vol. 1; 71b.

This breaker comes between sounding lines on Sheet 1945.

8. Rock awash at $\frac{1}{2}$ tide,

Lat. $42^{\circ} 30'$ (1065 Meters).

Long. $124^{\circ} 25'$ (876 ").

Position of this rock is Vol. 1; 110a. This rock is not shown on sheet 1945.

9. A rock with 13 Feet at MLLW over it and marked by anchored kelp,

Lat. $42^{\circ} 30'$ (147 Meters).

Long. $124^{\circ} 26'$ (566 ").

Position of least sounding is Vol.3; 1h.

10. A rock with 29 Feet at MLLW over it,

Lat. $42^{\circ} 30'$ (46 Meters).

Long. $124^{\circ} 26'$ (1190 ").

This rock is marked by anchored kelp. Position of least sounding is Vol.3; 39k. Least sounding shown on Chart 5951 and sheet 1945 is $13\frac{3}{4}$ Fathoms.

11. A rock with 32 Feet at MLLW over it and marked by kelp,

Lat. $42^{\circ} 30'$ (0 Meters).

Long. $124^{\circ} 26'$ (900 ").

Least shown on Sheet 1945 is $12\frac{1}{2}$ Fathoms.

413; 42k

12. A rock with 25 Feet at MLLW over it,

Lat. $42^{\circ} 29'$ (1362 Meters).

Long. $124^{\circ} 27'$ (286 ").

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Position of least sounding is Vol.3; lk.
This rock is marked by anchored kelp.

13. A rock with 2 Feet at MLLW over it,

Lat. $42^{\circ} 29'$ (177 Meters).
Long. $124^{\circ} 26'$ (924 ").
Position of least sounding is Vol. 3; 41 h.

14. A rock with 26 Feet at MLLW over it,

Lat. $42^{\circ} 28'$ (1410 Meters).
Long. $124^{\circ} 27'$ (140 ").
Position of least sounding is Vol.3; 48 h.

15. A rock with 18 Feet at MLLW over it,

Lat. $42^{\circ} 27'$ (1570 Meters).
Long. $124^{\circ} 30'$ (270 ").
Sheet 1945 shows a sounding of $6\frac{1}{2}$ fathoms west of this sounding which should be retained.
Chart 5702 and 5951 show a sounding of $2\frac{1}{2}$ Fathoms at this spot which should be retained.
Position of least sounding is Vol. 1; 6b.

16. A rock awash at MLLW

Lat. $42^{\circ} 26'$ (1800 Meters).
Long. $124^{\circ} 29'$ (968 ").
Chart 5951 shows a sunken rock symbol here.
Position of this rock is Vol.3; 26 k.

17. A rock with 6 Feet at Mllw over it,

Lat. $42^{\circ} 26'$ (1700 Meters).
Long. $124^{\circ} 29'$ (817 ").
There is no indication of this rock on Chart 5951.
Position of least sounding is Vol. 3; 27k.

18. A rock with 13 Feet at MLLW over it,

Lat. $42^{\circ} 26'$ (70 maters).
Long. $124^{\circ} 28'$ (1060 ").
Position of least sounding is Vol.3; 31k.
Chart 5951 shows a sunken rock symbol here.

19. A breaker in moderate sea.

Lat. $42^{\circ} 24'$ (1650 Meters).
Long. $124^{\circ} 29'$ (355 ").
Chart 5951 shows a sounding of $2\frac{3}{4}$ fathoms which should be retained and noted as marked by kelp. This rock shows a breaker in heavy NW weather. Position of this breaker is Vol.2; 8e.

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20. A rock with 20 Feet at MLLW over it, ←

Lat. $42^{\circ} 25'$ (850 Meters).
Long. $124^{\circ} 28'$ (30 ").

Chart 5951 shows a least sounding of 7 fathoms at this location.
Position of least sounding is Vol. 2; 6e.

21. A rock with 6 Feet at MLLW over it, ←

Lat. $42^{\circ} 25'$ (1072 Meters).
Long. $124^{\circ} 27'$ (1020 ").

This rock is marked by anchored kelp.
Chart 5951 shows a sunken rock symbol at this spot.

22. A rock marked by kelp with 21 Feet at MLLW over it, ←

Lat. $42^{\circ} 25'$ (1349 Meters).
Long. $124^{\circ} 27'$ (1189 ").

There is no indication of this rock on sheet 1945 or chart 5951.
Position of least sounding is Vol. 2; 4e.

23. A rock with 11 Feet at MLLW over it, ←

Lat. $42^{\circ} 20'$ (348 Meters).
Long. $124^{\circ} 26'$ (453 ").

Chart 5951 shows a breaker about 250 yards west of this position,
which is a mislocation of this rock.

The position of the least sounding is Vol. 2; 66 d.

COMPARISON WITH PREVIOUS SURVEYS.

At the junction of sheets 1945 and 1946 single soundings of $5\frac{1}{2}$ and $10\frac{1}{2}$ fathoms are shown. This spot was investigated but the least water found was 14 fathoms. In cruising and working in this vicinity in heavy weather a watch was kept for breakers at this spot but none were ever seen. It is therefore believed that the position of this sounding is mislocated on sheet 1946 and that this shoal is the same as the one described in the 1st. paragraph under the heading Dangers etc. The position of this $5\frac{1}{2}$ fathom sounding on sheet 1946 should be replotted to ascertain the feasibility of the above explanation.

Numerous soundings were taken on the $6\frac{3}{4}$ Fathom spot at the junction of 1945 and 1946 and the least water found was 5 Fathoms one Foot at MLLW. ←

The $6\frac{1}{2}$ Fathom spot west and near the area marked "Breakers" about 3 miles north of Rogue River Reef on 1945 was investigated by a close system of sounding lines and considerable time was

spent in watching for breaks. No indication was found of this sounding- the least found was 16 fathoms as shown on Hydrographic sheet no.6. The position of this sounding should be replotted on Sheet 1945 as it is believed that it is in error.

The area west of North West Rock was investigated and numerous soundings were taken on the spot where Chart 5702 and Chart 5951 show an "obstruction reported". Soundings over 20 Fathoms were obtained here. Considerable time was spent in watching for a break in heavy weather in this location but none was seen. The $2\frac{1}{2}$ fathom spot that has been added to Chart 5951 in this vicinity was verified by the fact that 3 Fathoms at MLLW was obtained close to this spot.

Chart 5951 shows a rock close to and to the eastward of the letter R in Rogue or about 300 yards SE of the south tip of North West Rock. There is no rock here.

All the visible rocks and sunken rocks in Rogue River Reef and vicinity were verified and are correctly shown on Topo. Sheet No.G and smooth sheet No.6.

During the period of this survey several Freighters of the Nelson Steamship Line were seen passing between the Rogue River Reef and the Mainland and North Rock and the Mainland. It is recommended that this channel be wire dragged. This channel is not safe for strangers and should not be used by vessels with local knowledge in other but fair weather.

REDUCTION OF SOUNDINGS.

The reference plane for the reduction of soundings is MLLW 4.64 Feet on gauge at Port Orford where the tide gauge was located for this work.

All soundings on smooth hydrographic sheet are in Fathoms at MLLW. Soundings on Boat Sheet are in Fathoms approximately reduced by predicted tides.

Respectfully Submitted,

Chief of Party.
U.S.C. & G.S.

STATISTICS SHEET NO.6. (Field No.).

Date 1928	Letter	Volume	Positions	Soundings	Miles Stat.	Vessel.
Aug.3	a	1	114	337	22.2	Rogue
" 7	b	1	71	173	11.0	"
" 8	c	1&2	120	231	22.0	"
" 10	d	2	109	218	28.1	"
" 22	e	2	8	7	1.0	"
Sept.10	f	2	68	110	4.5	"
" 28	g	2&3	140	271	19.6	"
Oct. 16	h	3	67	155	10.5	"
" 17	j	3	35	97	6.5	"
" 18	k	3	43	67	6.0	"
TOTALS			775	1666	131.4	

Area 22 Sq. Naut. Miles.

January 12, 1928. EAL

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4819

Locality: **FRANKFORT to S. SEBASTIAN, COAST OF OREGON.**Chief of Party: **A. P. Ratti in 1928.**Plane of reference is **Mean lower low water, reading,
4.8 ft. on tide staff at Port Orford, Oregon.**

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.

Paul C. Whitney

Chief, Division of Tides and Currents.

Section of Field Records
Hydrographic Sheet No. 4819
Cape Sebastian, Rogue River Reef and Hubbard Mound, Oregon
Surveyed in 1928
Instructions dated March 19, 1928

Chief of Party - A. P. Ratti
Surveyed by - A. P. Ratti and J. B. Reed
Protracted by - T. A. Nelson and J. B. Reed
Soundings plotted by - J. B. Reed
Verified and Inked by - J. J. Jarman

1. The records conform to the requirements of the General Instructions.

2. The plan and character of development fulfill the requirements of the General Instructions.

3. The usual depth curves can be completely drawn.

4. In general, the field plotting was completed to the extent prescribed in the General Instructions.

However, the following omissions were noted:

a. No attention was paid to notes in the records concerning kelp and it was necessary for the office draftsman to add these symbols to the sheet.

b. The notation "Rk" was omitted by the field draftsman when plating soundings over sunken rocks. There were something like ten omissions.

Authority for these notations came from the descriptive report.

c. The "Breaker" notation was omitted in several instances.

5. The junction with H4517 is satisfactory. The junction with H4505 on the west is satisfactory below the parallel $42^{\circ} 25'$. Above the parallel $42^{\circ} 31'$, there are some discrepancies in the junction with H4505. The work on H4505 was done with sounding tubes until the work on this sheet was secured by means of the machine or lead line. Captain Sabieralski suggested that it might be wise to reject all tube soundings from H4505 in the above locality which do not agree with the lead line soundings on this sheet. The tube

soundings have been plotted in pencil on this sheet and the office draftsman is awaiting further orders.

A similar case occurs on the south where a junction with H4489 is affected. The tube soundings of H4489 have been left in pencil pending a decision by the reviewer.

On approximately Lat. $42^{\circ} 27'$ to Lat. $42^{\circ} 28'$ and Long. $124^{\circ} 30'$ to Long. $124^{\circ} 31'$, there is a close development which is entirely overlapped by H4505. There is a sharp disagreement between several of the soundings of the two surveys and no adjustment has been made. Upon the suggestion of those in authority, the office draftsman did not go completely into these discrepancies but merely made a few preliminary investigations in order to facilitate the work of the reviewer. A photostat enlargement of the area in question on H4505 will be found attached to H4819. A tracing of the above photostat will be attached to this report under the

title of "Tracing A". In order to secure a check on "Tracing A", a piece of tracing paper was placed over H4519 and several of the critical soundings of H4505 were plotted thereon. It was necessary to plot the triangulation stations Griggly and Suter in order to secure the proper control in plotting positions from the records of H4505. (These signals were plotted on H4519 by the verifier and checked by J. J. Walker). The tracing resulting from the above operation is labeled "Tracing B" and the positions of soundings on this tracing do not agree with the positions of soundings on "Tracing A". This difference between the two tracings is puzzling and the verifier is at a loss to explain it. The signals involved on both sheets have been checked and no error was discovered. Several positions were checked on H4505 and no error was found. However, due to the close development on H4505, it was discovered that

quite a few soundings were plotted slightly out of position in order to get them in and that this small error has been magnified on the photostat enlargement. A concrete example is the original plotting of the seven fathom sounding on 174505 at Lat. $42^{\circ} 27' 12.56$ meters and Long. $124^{\circ} 30' 36.5$ meters. The above statement probably explains some of the discrepancies between the two tracings. Shrinkage or ^{expansion} may have something to do with the difference in location of the soundings on the two tracings, although from a casual examination it does not appear to be excessive on the two sheets (174819 and 174505).

Remarks: The sunken rock symbol in Lat. $42^{\circ} 30' 709$ m and Long. $124^{\circ} 26' 170$ m does not belong to the two fathom sounding nearby but is a separate fix which locate a breaker. See Records (nos. 715, page 52 of Vol. 1.

I'm checking this sheet,

• Every position seemed to be off by about the same amount and in the same direction. This condition was attributed to either a protractor in poor adjustment or to shrinkage and as it was slight no corrections were made.

Soundings on H 4505 are all tube with exception of one day. This particular day fall within the area questioned above and its positions are marked with red day letters. The tube soundings have green day letters.

The area questioned above on H 4505 has been enlarged to a 10000 scale on the same sheet and this enlargement although agreeing in general with the original is not an exact duplicate.

The curves in the questioned area of H 4519 have not been inked pending the investigation by the reviewer.

The verifier of H 4505 failed to include fractions with soundings below nine fathoms.

Report by

Note

J. J. Jarman

The rock awash located in Lat. $42^{\circ}-26'-1718m$ and Long. $124^{\circ}-29'-130m$ was first shown as a rock awash on the topographic sheet and smooth sheet respectively. The records show (p. 109 - page 52, vol 2) that the rock, bare 12 feet M.L.L.W. An investigation of the tides in this locality shows that it is impossible for the above rock to be awash since the diurnal tide is 6 feet and the extreme tide 8 feet (checked by the records and by Division of Tides) using the extreme tide of 8 feet (since such a tide was experienced during the period of the survey) a notation, "bare 4 feet at High water" was entered and the rock changed to a bare rock on the smooth sheet and topographic sheet respectively.

Using high water on the extreme 8 foot tide instead of the diurnal 6 foot tide, the notation opposite bare rock in Lat $42^{\circ}-26'-1707m$ and Long. $124^{\circ}-29'-410m$ on both sheet was changed from 10 to 8 feet above high water in order to make it conform to records and smooth sheet.

Authority for above - E.P.E and A.T.G. 1307 J.J.G.

Section of Field Records
Report on Hyd. Sheet No 4819
From Lat. $42^{\circ}-33'$ to Cape Sebastian, Oregon
Surveyed in 1928

Instructions dated March 19, 1928. (Lieut A.P. Ratti)

Chief of Party - A. P. Ratti

Surveyed by - A. P. Ratti and J. B. Reed

Protracted by - G. A. Nelson and J. B. Reed

Plotted by - J. B. Reed

Verified and inked by - J. J. Jarman

1. The records conform to the requirements.
2. The plan and character of development conform to the requirements of the general instructions
3. The plan and extent of the supplemental work was left largely to the judgement of the chief of party. Such specific instructions as were issued, were carefully carried out, but there are quite a number of shoal indications

on the old sheets, which were not mentioned in the orders, which should have been examined further. For example A. 1945 shows a $3\frac{1}{2}$ fathom spot in a surrounding depth of 7 fathoms, in Lat. $42^{\circ}-26.6'$, Long. $124^{\circ}-27.6'$. Also a shoal with 18 feet, in Lat. $42^{\circ}-27.3'$, Long $124^{\circ}-28'$ in a surrounding depth of 9 and 10 fathoms.

Numerous new shoals were discovered. Some of these are shown by a single sounding. It is presumed that each of these is the result of a detailed examination, with only the shoalest sounding recorded, although this is not stated in the records.

Par. 26 a in the instructions calls for the development of soundings of $5\frac{1}{4}$, $10\frac{1}{2}$ and $8\frac{3}{4}$ fathoms shown at the junction of A. 1945 and A. 1946. The $8\frac{3}{4}$ fathom spot was verified and a least depth of $5\frac{1}{2}$ fathoms obtained. While the chief of party intimates that the $5\frac{1}{4}$ fathom spot and "breaker", shown in Lat. $42^{\circ}-31.4'$, Long $124^{\circ}-26.7'$ on A. 1946, does not exist, on account of the

extremely irregular bottom, it is considered that the work on H. 4819 does not disprove the existence of this rock and it should be retained. The plotting on H. 1946 was verified and the positions checked closely. On account of the comparatively distant signals, used in locating these soundings on H. 1946, there is a possibility that there may have been an error in the observations, but this is not evident from the records. No additional sounding is recommended over this reef as only a wire drag could disprove its existence. (Approved by A. M. S.)

Par. 26 b in the instructions call for an investigation in the area marked "breakers" about 3 miles N.N.E. of Rogue River Reef, of the $6\frac{1}{4}$ fathom spot on the west side and the $8\frac{1}{4}$ fathom spot on the east side.

No indication was found of the $6\frac{1}{4}$ fathom spot. The least depth obtained was 16 fathoms.

A careful replotting of the lines on H. 1945 failed to show any trace of this sounding in the records. It is believed to be erroneously plotted and a note has been placed on H. 1945 to that effect.

The position of the $8\frac{1}{4}$ fathom sounding was verified on H. 1945. The new work shows $9\frac{1}{4}$ fathoms close to it and this sounding is believed to be all right. A rock with 4 fathoms over it was found close to the $2\frac{1}{2}$ fathom P.D. spot, ^(Authority Letter 265-195) while another rock with $2\frac{5}{8}$ fathoms

was located less than a half mile W.N.W. from it. It is therefore recommended that the $2\frac{1}{2}$ PD be removed from the chart Ann. May 1929.

(Par. 26 i Instructions) The 12 fathom sounding in Lat $42^{\circ}-28.3'$, Long $134^{\circ}-30.3'$ was examined and a least depth of 10 fathoms obtained.

(Par. 26 j Instructions) A development of the reported obstruction (Authority Lighthouse Notice to Mariners 24-1925), in approximately Lat $42^{\circ}-27.7'$, Long $124^{\circ}-31.0'$, failed to show any depth under 25 fathoms. It is possible that the position of the obstruction was not accurately obtained. This point should be passed over with the drag in order that the obstruction may be removed from the chart if disproved. ^{while nature of the bottom makes wire dragging of the whole area desirable, the statement by the chief of party should be given weight and the note removed from the chart A.M.S. May 1929.}

A least depth of 3 fathoms was obtained approximately 250 meters east of the charted $2\frac{1}{2}$ fathom spot (Authority Letter 329-1925) in Lat. $42^{\circ}-27.8'$, Long. $124^{\circ}-30.4'$. The chief of party

recommends that this spot be retained. If possible this spot should also be passed over with the drag.
O.K. Arms.

4. Very few cross lines were run, but a comparison of adjacent lines, show good agreement.

5. The information is only sufficient for drawing the curves in some places.

6. The junction with H. 4817 on the north is satisfactory. The hydrography on H. 4505 does not agree well with the work on the northern limits of this sheet. This work was accepted and tube soundings under 11 fathoms on H. 4505 were rejected.

The western edge of this work does not overlap the eastern limits of H. 4505, between Lat. $42^{\circ}-30'$ and Lat. $42^{\circ}-32'$. Below Lat. $42^{\circ}-24'$ the junction with H. 4505 is satisfactory.

The development in the area west of Rogue River Reef is difficult to compare with the development of the same area on H. 4505, due to the fact that on the latter sheet positions were obtained from comparatively distant signals and the slight irregularities in the protracting cause duplication of shoal

6
soundings where only one shoal probably exists.
(See verifiers report) The soundings on H. 4819 in
this area were accepted, where they differ with
H. 4505, and a compilation made accordingly.
It should also be noted that many of the
soundings on H. 4505 are tube soundings.

The junction on the south with H. 4489,
shows poor agreement. As the soundings on H. 4489
are all tube soundings, they should be superseded
by the work on H. 4863, which checks this sheet,
(H. 4819) and will be placed on this sheet when H. 4863
has been verified.

7. With the exception of the omission of the
word "Rock", "Breakers" and kelp symbols over sunken
rocks, the usual amount of field drafting
was well done. The protracting is slightly off
over the entire sheet, due either to shrinkage
or a protractor in poor adjustment. The error
was too small to warrant reprotracting.

8. Character and scope of surveying - good.
More work might have been done around the
limits of Rogue River Reef and more

development of shoal indications on the old sheets.

9. The chief of party recommends that the channel, between Rogue River Reef and the mainland and North Rock and the mainland, be wire dragged. Should this be undertaken there are several other spots over which the drag should be passed. The reported obstruction, shown on chart No. 5951, north west of Rogue River Reef and the $5\frac{1}{4}$ fathom spot in Lat $42^{\circ}-31.4'$, Long $124^{\circ}-26.7'$, both of which have been partially discredited.

Reviewed by R. L. Johnston

April 11, 1929.

Approved

A. M. Sobersalski

J. S. Borden

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4819

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 6.

REGISTER NO. 4819

State OREGON

General locality Pacific Coast Cape Sebastian
Cape Sebastian, Rogue River Reef and Hubbard Mound.
Locality ~~Rogue River Reef To Cape Sebastian~~

Scale 1-20000 Date of survey Aug. 3 to Oct. 18, 1928.

Vessel Chartered Launch Rogue.

Chief of Party A.P. Ratti

Surveyed by A.P. Ratti and T.B. Reed

Protracted by G.A. Nelson and T.B. Reed

Soundings penciled by T.B.R.

Soundings in fathoms feet--

Plane of reference MLLW 4.84 Ft. Port Orford

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated March 19, 1928.

Remarks: This sheet makes a junction with Reg. No. 4505
Sheet 4 (Field No.) and supplements soundings on Reg. 1945.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *48-19*

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

Number of positions on sheet . *775*.
Number of positions checked *279*.
Number of positions revised . *32*.
Number of soundings recorded . *1666*
Number of soundings revised . . *73*
Number of signals erroneously
plotted or transferred . . . *None*.

Date: - - - *March 27, 1929* - - -

Cartographer: - *James J. Garman* -