

5098

Diag. Cht. No. 5502-2

Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. Patton, Director

State: California.

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DESCRIPTIVE REPORT

~~Topographic~~  
Hydrographic } Sheet No. 5. 5098

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LOCALITY

~~From one mile south of Rocky Pt. to~~  
~~to Dry Creek.~~

Northern California  
River  
Approaches to Russian, and Vicinity

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1930.

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CHIEF OF PARTY

L. C. Johnson.

U. S. COAST & GEODETIC SURVEY  
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5098

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5098

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. ~~5(1930) Office No. 5098~~

REGISTER NO. 5098

State..... California .....

General locality..... Northern Coast Cal. .....

Approaches to Russian River and Vicinity

Locality ~~one mile south of Rocky Pt. 2 to Dry Creek~~ .....

Scale 1 = 10,000 Date of survey July - November, 1931

<sup>Sept.</sup> ~~Sept.~~ October 1930

Vessel..... Chartered Launch "POINT REYES" (1931) .....

Chief of Party..... L.C. Johnson .....

Surveyed by..... L.C. Johnson .....

Protracted by Robert A. Marshall, (1930) L.C. Johnson, (1931) .....

Soundings penciled by R.A.M. (1930) L.C.J. (1931) .....

Soundings in fathoms ~~Feet~~ .....

Plane of reference..... MLLW .....

Subdivision of wire dragged areas by.....

Inked by.....

Verified by.....

Instructions dated..... April 29 ....., 1930.

Remarks: Work shown with blue day letter, performed in 1930

Work shown with green day letter, performed in 1931.

## Descriptive Report

to accompany

Hydrographic Sheet, Register No. 5098. (1931 work)

### (a) Date of Instructions.

This survey was executed in accordance with the Director's Instructions dated April 29, 1930. ✓

### (b) Limits and Scale.

This sheet makes a junction with Sheet, field #4, 1930, at the northern end in latitude  $38^{\circ} - 27.8'$ , longitude  $123^{\circ} - 10.9'$ , the junction running shoreward in a northeasterly direction. The southern end joins with Sheet, field # 1, 1931, in latitude  $38^{\circ} - 22.5'$ , longitude  $123^{\circ} - 05'$  to  $06.2'$ , the junction running shoreward in a northeasterly direction. ✓

### (c) Survey Methods.

No unusual methods were resorted to in the hydrography shown on this sheet. Positions were obtained by the usual sextant angles. ✓

All signals were plotted from a list of plane table positions furnished from Topographic Sheet, field " B " and " C " 1930, or were located by triangulation. ✓

### (d) Dangers.

All existing dangers have been reported upon in the descriptive report that accompanied smooth Hydrographic Sheet, field #5, 1930, with the following exceptions: ✓

Arched Rock, latitude  $38^{\circ} - 26.0'$ , longitude  $123^{\circ} - 07.55'$ , the largest arched rock in the vicinity with an average of 6 fms. on every side but to the eastward, where no soundings were taken. This rock is 85 ft. high. ✓

Gull Rock, a large round rock, latitude  $38^{\circ} - 25.5'$ , longitude  $123^{\circ} - 07.2'$ , 105 ft. high, has from 5 to 7 fms. clear around it. ✓

A rock just barely awash at M.L.L.W. latitude  $38^{\circ} - 25.1'$ , longitude  $123^{\circ} - 06.77'$  in from 4 to 6 fms. ✓

A 12 ft. rock, latitude  $38^{\circ} - 24.68'$ , longitude  $123^{\circ} - 06.55'$ , in from 7 to 9 fms. ✓

A pair of rocks, awash at M.L.L.W. latitude  $38^{\circ} - 24.45'$ , longitude  $123^{\circ} - 06.4'$  in 7 to 9 fms. of water. ✓

Rocks awash at L.W. three in the group, latitude  $38^{\circ} - 23.1'$  longitude  $123^{\circ} - 05.28'$ , have 6 fms. to seaward. ✓

(d) Dangers, (continued)

Rocks awash at H.W. two in the group, latitude  $38^{\circ} - 22.9'$  ✓  
longitude  $123^{\circ} - 05.2'$ , have 7 fms. to seaward.

Just south of Duncans Lndg. there are numerous rocks awash, ✓  
plainly visible. This party was unable to investigate these rocks any  
further, due to draft of launch and the usual heavy swell.

(e) Discrepancies.

The junction of this sheet with the southern end of Sheet,  
field #4,1930, and with the northern end of Sheet, field # 1,1931,  
is very good. There are no discrepancies throughout the sheet.

(f) Anchorage.

There are no anchorages on this sheet. At the mouth of the  
Russian River, inside the jetty, still under construction, there is  
sufficient room for several small craft, used as pleasure boats on  
the river.

South of Rocky Point, at Duncans Lndg. there was at one time  
considerable shipping, but this was discontinued several years ago.  
The Landing is a small rocky cove, and at no time during the past sea-  
son could it be called a suitable anchorage for craft of any size.  
The entrance is too small and too dangerous for launches of seagoing  
size, and too much exposed to the weather for smaller craft.

(g) Coast-line.

From Duncans Lndg. the coast-line continues in a nearly  
straight line of high, broken cliffs, indented here and there by gulches  
and the Russian River.

A jetty was under construction at the entrance to Russian  
River, and when completed, was to prevent the barrier of sand and gravel  
from forming during the dry season, across the mouth of the river.  
A jetty was mentioned in the 1930 Descriptive Report for this same  
sheet, but said jetty was partially destroyed during the winter of  
that year. The project was still under construction when this party  
was in that vicinity, and it was deemed unsafe for the launch and  
party to enter the river, as breakers were always present. The aim of  
the construction company was to have a controlling depth of at least  
12 feet in the channel; however, the latest unverified information  
claimed the project as unfinished.

Directly north and south of the river entrance, the shore is  
bordered by rocks of various sizes and shapes, the most prominent of ✓  
which have been described under "Dangers".

(h) Comparison with Previous Surveys.

A bromide of Hydro Sheet, Register No. 1462b shows a rock or small island in latitude  $38^{\circ} - 25.0$ , longitude  $123^{\circ} - 06.95$ , N. A. datum. This rock was not found nor shown on Topo Sheet No. 4595, surveyed in 1930, and was not found by the hydrographic party in 1931, and is therefore believed to be non-existent. Further comparison proved to be satisfactory.

*See Review, (C) par 6*

(j) Geographic Names.

Geographic names in general usage are shown on the Topo Sheets No. B and No. C, 1930.

(k) Tide Data.

All the hydrography on this sheet is referred to a portable automatic tide gauge maintained at Fort Ross Cove, Fort Ross, Calif.,

(l) Conclusion.

This sheet was returned from the Office for completion. The soundings shown in pencil were obtained this past season. Soundings taken this season, 1931, begin with LF and are in two volumes, numbered 3 & 4.

Accompanying this report is a table of statistics, and a tide data sheet, also an approval sheet.

Respectfully submitted,

*L. C. Johnson*

L. C. Johnson,  
Jr. H. & G. E. Chief of Party, C&GS.

Statistics for hydrographic sheet, No. 5098

To accompany Descriptive Report.

Total number of positions-----	633
Total number of soundings-----	2179
Statute miles of sounding lines-----	89.5

Approval Sheet

To accompany Hydrographic Sheet, No. 5098

This sheet and records pertaining to same have been examined  
and are approved.

*L. C. Johnson*

L.C. Johnson, Jr. H. & G. E.  
Chief of Party, C&GS.

Section of Field Records

Sheet No. H-5098

Report on H-5098

Chief of Party: L. C. Johnson  
Protracted by R. A. Marshall  
Verified + Inked by G. H. Street

Surveyed in 1930

Surveyed by L. C. J.  
Soundings plotted by R. A. M.  
Topography inked by Field Party

1. The records conform to the requirements of the General Instructions. ✓
2. The usual depth curves can be drawn. ✓
3. The field plotting was completed to the extent prescribed in the General Instructions. ✓
4. It was necessary for the office draftsman to move a rock awash 30 meters to the N.E. (330 meters west of "Tex"). On the smooth this rock was marked "not on topos" but was found to be on T-4595 and corresponds with the corrected position. This rock was originally plotted incorrectly because position "44c" was not protracted correctly. ✓
5. The junction with H-5097 is good. ✓
6. This sheet was not completed due to instructions to close the field work not later than Nov. 1, 1930. The boat sheet was returned to the field. ✓
7. The quality of the field drafting is good. ✓

Respectfully submitted,  
G. H. Street

Oct. 7, 1931

July 24, 1931

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 5098

Locality Approaches to Russian River and vicinity, Northern Coast of Calif.

Chief of Party: L. C. Johnson in 1930  
Plane of reference is mean lower low water, reading  
5.2 ft. on tide staff at Fort Ross  
7.1 ft. below B. M. 1

Condition of records satisfactory except as checked below:

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

*W. H. Hammer*  
Chief, Division of Tides and Currents.

(For Section of Field Records, Chart Div.)

June 1, 1932.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 5098 - Vols. 3 and 4\*

Locality Approaches to Russian River and vicinity, Northern Coast of California

Chief of Party: L. C. Johnson in 1931

Plane of reference is mean lower low water, reading

3.6 ft. on tide staff at Fort Ross

7.0 ft. below B. M. 1

Condition of records satisfactory except as checked below:

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

\* See note submitted July 24, 1931, for report on tide reducers for Vols. 1 and 2 of 1930.

*Paul Whitney*  
Chief, Division of Tides and Currents.

Descriptive Report

to accompany

Hydrographic Sheet No.5. (1930 work)

(a) Date of Instructions.

This work was performed in accordance with the Directors instructions dated April 29, 1930.

(b) Limits and Scale.

This sheet makes a junction with Sheet #4 at the northern end, Lat. 38 - 27.8', the junction running shoreward in a northeasterly direction. The southern end of the work shown on this sheet ends in Lat. 38 - 22.5', Long. 123 - 05.7, being the extremities of two long lines. The Long. for the northern junction is 123 - 10.9.

(c) Survey Methods.

No unusual methods were resorted to in performing the hydrography on this sheet. Positions were obtained by the usual sextant angles.

All signals were plotted from a list of plane table positions furnished from Topographic Sheet, field No. B and No. C, this party, or were located by triangulation, and furnished by Lieut. J.H. Brittain.

(d) Dangers.

Mile  
Out Rocks, a small patch of rocks, off the Russian River, about 0.8 of a mile SW of the jetty, this patch has 9 to 10 fathoms all around.

Half Mile Rocks, lie about 0.5 of a mile SSW of the jetty in about 7 fathoms of water. These rocks are from six to ten feet high.

A rock awash at H.W. lies 0.5 of a mile west of the entrance to the Russian River in 5 to 6 fathoms of water, but foul to the northward.

380 meters west of the jetty at the entrance to the Russian River is a rock approx. 60 ft. high, with 3 to 6 fathoms to the south and west, but foul to the north.

(e) Discrepancies.

The junction of the southern end of Sheet No. 4 and the northern end of Sheet No. 5 is satisfactory.

975 meters W x S  $\odot$  Fin, position 9 - 10, E day, a  $6\frac{1}{2}$  fathom spot was found with 12 fathoms all around it. Two cross lines were run and no indication of less water was found.

H 14626 shows  $4\frac{3}{4}$  in vicinity  
R. J. H.

(f) Comparison with Previous Surveys.

The hydrography on this sheet was compared with the hydrography of previous surveys and found to be satisfactory. ✓

(g) Anchorage.

There are no anchorages on this sheet. At the mouth of the Russian River, inside of the jetty, there is sufficient room for several small craft, but they are for the most part, river boats, and never crossed the bar at the entrance.

(h) Russian River Entrance.

A jetty was under construction at the entrance to the Russian River, on the southern bank. This jetty was being built by the State of California, with funds supplied jointly by a private firm and the State. The private firm was engaged in dredging sand out of the river at the entrance. The sand was loaded onto a small barge and towed out past the jetty at high tide, and only in the smoothest weather attainable, by a small launch. The barge was then turned over to a waiting tug, and conveyed to San Francisco. ✓

A mooring buoy for the use of the outside tug was placed 190 meters WxS from the end of the jetty. ✓

It was deemed unsafe to try and enter the river with the Chartered Launch "Rogue", due to a continuous breaking of the swells at the entrance. Throughout the season, the hydrographic party never saw the entrance free from breakers. ✓

Recent newspaper reports state that a large part of the new jetty has been washed out by the heavy swells. These reports have not been verified by personal observation. ✓

(j) Geographic Names.

Geographic names in general usage are shown on the topographic sheets of this party, Field No. B and C. ✓

(k) Tide Data.

All hydrography on this sheet is referred to a portable automatic gauge maintained at Fort Ross Cove, Fort Ross, California. ✓

(l) Conclusion.

This sheet was not completed due to instructions to close the field season, not later than November 1, 1930. ✓

Accompanying this report is a table of statistics, and a tide data sheet. ✓

Respectfully submitted,

*L. C. Johnson, Jr.*

L. C. Johnson, Jr., H. & G. E. Chief of Party.

Statistics for Hydrographic Sheet, field No.5.

Total Number of Positions-----	350
Total Number of Soundings-----	1362
Statute Miles of Sounding Lines-----	54.3

APPROVAL SHEET

to accompany Hydrographic Sheet " 5 "

Vicinity Rocky Pt2. to Dry Creek, California.

This sheet has been examined and is approved; the records  
pertaining to this sheet have been examined and are approved.

*L. C. Johnson*  
L.C. Johnson, Jr. H. & G. E.  
Chief of Party, C. & G. S.

22-AM

*Field w/c  
from charts 4523*

May 18, 1931.

To: Lieutenant (j.g.) Leonard G. Johnson,  
U. S. Coast and Geodetic Survey,  
Box 2512,  
San Francisco, California.

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

Subject: Hydrographic Sheet No. 5 (H 5096).

Replying to your telegram of May 11, 1931, requesting the southern limits of hydrographic sheet No. 5 (H 5096), it is considered desirable that work be continued southward on that sheet. With this in view the boat sheet is being returned to you by registered mail.

When you are ready to smooth plot the remaining hydrography you will please make request for the smooth sheet.

The first day's work on this sheet during the current season should carry the letter following that used on the last day of the 1930 season.

Acting Director.

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5098  
Approaches to Russian River and vicinity, Northern  
California.

Surveyed Sept. - Oct. 1930; Aug. - Sept. 1931.  
Instructions dated April 29, 1930, (L. C. Johnson).

Chief of Party - L. C. Johnson.

Surveyed by - L. C. Johnson.

Protracted and soundings plotted by - R. A. Marshall,

Verified and inked by - G. H. Streeter - J. D. Torrey

1. The records conform to the requirements of the Hydrographic Manual.
2. The plan and extent of development satisfy the specific instructions.
3. Soundings are consistent. There are no crosslines. Due to the exposed nature of the coast very little development was carried into less than 5 fathoms.
4. Depth curves. - The 10 fathom curve can be completely drawn; a few sections only of the 5 fathom and lesser curves are developed.
5. Junctions with adjacent sheets H. 5162, H. 5171 and H. 5097 are satisfactory.
6. Comparison with H. 1462a and H. 1462b (survey of 1879) shows a very good agreement in the deeper areas. Off the entrance to the Russian River, H. 5098 shows deeper water than the earlier survey, 1 to 2 fathoms. A part of the difference may be due to the fact that in the earlier surveys sounding was continuous with time recorded only on positions. This makes the spacing of soundings on the sheet only approximate. The earlier survey (H. 1462) does not make a clear distinction between rock symbols. The later survey clears up most of the uncertainties. The following discrepancies are noted:
  - (a) Two small islands (lat.  $38^{\circ}27'.9$  long.  $123^{\circ}09'.45$ ) shown on the earlier surveys (T. 1430b and H. 1462b) were not found, see Descriptive Report T. 4595. No note was made in the sounding record of H. 1462b though a line passed close to northward of the outer rock. It is believed that they do not exist. Capt. ~~Gilbert~~ recommends their omission from the charts.
  - (b) Sheet 1462b shows a rock in lat.  $38^{\circ}25'.0$  long.  $123^{\circ}06'.9$ . A study of the original sounding record shows that this should have been plotted as a depth of " $6\frac{1}{2}$  rky", 100 meters westward of the plotted position or close northward of position 9r on the sheet. A depth of  $6\frac{1}{2}$  is shown on H. 5098 in brown.
  - (c) A 2 fathom depth is shown in brown on H. 5098 in lat.  $38^{\circ}24'.83$  long.  $123^{\circ}06'.3$  near a  $4\frac{5}{6}$ . The earlier survey shows deep water inshore from this 12 foot spot.
  - (d) A few minor discrepancies have been adjusted on the sheet.

Chart 5502 follows H. 1462b in the delineation of rocks along this part of the coast. Many of the rocks shown as islets are really rocks awash as shown on H. 5098.

7. Recommendation. - This sheet (H. 5098) should supersede all previous surveys for charting purposes of the area covered by it. There is considerable

Report H. 5098.

uncertainty in the plotting of the inshore development on H. 1462b and the deeper areas are in good agreement with this sheet. No further surveys are deemed necessary at this time. When the importance of the Russian River district warrants the publishing of a large scale chart the foul area north-westward of the river entrance to the 4 $\frac{1}{2}$  (brown) in lat. 38°27'.4 long. 123°09'15 should be further developed. The entire coast line requires dragging to give assurance that all rocks have been revealed.

8. The field drafting shows carelessness in making transfer from topographic sheet to smoothhydrographic sheet. A number of rocks were omitted and several wrong symbols were used; the differences were not supported by notes in the records and the hydrographic sheet has been corrected accordingly.

9. Reviewed by R. J. Christman, December 6, 1932.

Inspected: E. P. Ellis.

Approved: A. M. Sobieralski, Chief, Field Records Section.  
(Signed)

Three rocks awash from H. 1462b have been plotted in lat. 38°26'.8, long. 123°08'.5.

None of the sounding lines of H. 5098 (with 3 and 4 feet of tide) noted any of these rocks. The notes on the sounding line of H. 1462b (3.5 feet of tide) are very definite. The sounding line of H. 5098 as it passes the outermost rock has a break in the line and the note in the record "jog right" which was taken as confirmation of the old survey.

*L. O. Solbert*

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. **5098**

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

Number of positions on sheet	<b>.350.</b>
Number of positions checked	<b>.141.</b>
Number of positions revised	<b>...2.</b>
Number of soundings recorded	<b>.138.2</b>
Number of soundings revised	<b>...14.</b>
Number of signals erroneously plotted or transferred	<b>.....</b>

Date: ... **Oct. 7, 1931** .....

Cartographer: ... **J. H. Streeter** .....