

5164

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Form 504
Ed. June, 1928

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

U. S. COAST & GEODETIC SURVEY
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APR 4 1932

State: California

Acc. No. _____

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 3. 5164
Hydrographic

LOCALITY

Northern Coast,

Point Reyes to lat. ~~38-10.5~~

Abbott's Lagoon and Vicinity

1:20000

1931.

CHIEF OF PARTY

L. C. Johnson.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5164

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. 3

REGISTER NO. 5164

State California

General locality Northern Coast ~~(outside)~~

Locality Point Reyes to ~~Lat. 38° 19.5'~~ Abbott's Lagoon and Vicinity

Scale 1 - 20,000 Date of survey July - November, 1931

Vessel Chartered Launch " POINT REYES "

Chief of Party L. C. Johnson

Surveyed by L. C. Johnson

Protracted by K. B. Jeffers

Soundings penciled by K. B. Jeffers

Soundings in fathoms ~~feet~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by *[Signature]*

Verified by *[Signature]*

Instructions dated April 29, 1930.

Remarks: Makes a Junction at Point Reyes with sheets

~~H4974~~ H 4974 & H4979

Descriptive Report

to accompany

Hydrographic Sheet, Field No.3.

(a) Date of Instructions.

This survey was made in accordance with instructions from the Director, dated April 29, 1930. ✓

(b) Limits and Scale.

This sheet makes a junction with Hydro. Sheet, Field No. ⁵¹⁶³ 2 in latitude $38^{\circ} - 10.5$, longitude $122^{\circ} - 59.0$, and runs shoreward in an easterly direction. ✓

The southern end of this sheet makes a junction with Hydro. Sheets 4974, and 4979, just south of Point Reyes. ✓

The scale of this sheet is 1 - 20,000. ✓

(c) Survey Methods.

There were no unusual methods used in the execution of the hydrography shown on this sheet. Positions were obtained by visual fixes throughout. ✓

The chartered Launch POINT REYES was used throughout. The hand lead was used in depths up to 15 fathoms, from a sounding chair located 10 feet abaft the beam on the starboard side, for soundings of greater depths, a hand sounding machine located in the stern was used. ✓

(d) Discrepancies.

Just south of Pt. Reyes, the soundings shown from 3L to 8L inclusive, were recorded approximately 1 fathom too deep. At this particular location, the wind blows very strongly from the northwest most of the time, and on L day it was especially strong; and before the lead could reach the bottom, the launch would be blown off course and the leadline bowed. The soundings as plotted, all appear to be at least 1 fathom too deep when compared with other soundings in the same vicinity. ✓

1 fathom
has been
subtracted
from the
soundings
affected.

A small shoal 1600 meters WNW of Point Reyes Lighthouse was found to have a least depth of 13 fathoms, surrounded by depths of 20 fathoms. The shoal is of small area. Considerable time was spent in drifting over this area, and all of the shoal soundings were recorded, during the time when these soundings were taken, the wind was very strong, and it was necessary to maneuver the launch at each sounding, in order to keep the sounding wire vertical, this procedure was followed at each sounding. ✓

From a point 350 meters NW of signal Ela, latitude $38^{\circ} - 02.6$, longitude $122^{\circ} - 59.65$, the sounding lines running north were carried into a depth of 2 fathoms. From this same point, going south, it was necessary to wait for the location of signals and shoreline by the topographer, and when they were finally furnished, the weather would not permit of the sounding lines any closer to the beach than shown. The inshore lines of soundings were taken on the edge of the breakers.

The location and description of the two sunken rocks 250 meters west of Pt. Reyes Lighthouse, has been furnished the Office, and shown on Topo. Sheet, Field No. C, and described in that report.

(e) Anchorage.

There are no anchorages within the limits of this sheet.

(f) Comparison with previous surveys.

A comparison was made with all the available previous surveys, and found to be satisfactory except where noted.

(g) Geographic Names.

All geographic names in general usage are shown on Topo. Sheet, Field No. C.

(h) Statistics.

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

Respectfully submitted,

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

Statistics for hydrographic sheet, field No. 3,

To accompany Descriptive Report.

Total number of positions-----	932
Total number of soundings-----	3297
Statute miles of sounding lines-----	157.6

Approval Sheet

To accompany Hydrographic Sheet, field No. 3,

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&GS.

Section of Field Work
Surveyed in 1931.

Report on H 5164.

Chief of Party L. C. Johnson

Surveyed by L. C. J.

Projected by K. B. Jeffers

Soundings plotted by K. B. J.

Verified and Inked by L. S. Straw.

1. The records conform to the requirements of the General Instructions.
2. The Character and plan of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions, with the exception of running sounding lines to two fathoms south of signal El lat. $38^{\circ} 02.6'$ and long. $122^{\circ} 59.65'$ due to difficulties experienced in the field. See Descriptive Report H 5164 page 2.
4. The sounding line crossings are adequate for this survey.
5. The usual depth curves can be completely drawn in depths from 2 to 20 fathoms in the area north of signal El (see paragraph 3 of this report.) and south of signal El only the 10 and 20 fathom curves are shown.
6. The field plotting was completed to the extent prescribed in the Hydrographic Manual, and was exceptionally well executed.

H 5164 2

7. The overlaps of sheets H 4974 and H 4979 put on by the Field were inaccurately transferred and in the same color. This was the only drafting done over in the office.

8. The junctions of this sheet (H 5164) with H 4974, H 4979 and H 5169 are satisfactory. The junction with H 5163 will be considered when that sheet is verified.

9. The value of the soundings on "L" day from positions 3 & 8 are questioned due to the circumstances under which they were obtained, and their disagreement with the soundings on "K" day and with the transferred soundings of H 4979. They are therefore shown in pencil until they are accepted or rejected as the Reviewer may see fit.

10. Further surveying is not required to fully develop important areas within the limits of this sheet except in the vicinity referred to in paragraph 3 of this report.

Respectfully Submitted

L. S. Straw

June 28, 1932.

AND REFER TO No. 82-DRM

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

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5164
Point Reyes to Abbotts Lagoon and vicinity, California

Surveyed July to November 1931
Instructions dated April 29, 1930

Hand lead and machine soundings - Three point control

Chief of Party, L. C. Johnson
Protracted and soundings plotted by K. B. Jeffers
Verified and inked by L. S. Straw

1. The records are in accord with the requirements of the Hydrographic Manual.
2. The inshore work off Point Reyes and for 3 miles to northward fails to develop the 5 fathom and lesser curves. This was due to the prevailing heavy swell towards the end of the working season. In other areas the survey satisfies the specific instructions.
3. Soundings are consistent; an allowance of 1 fathom was made for inclined wire on a few soundings just south of the extreme end of Point Reyes. There are no cross lines. The two sunken rocks off Point Reyes are specially mentioned in letter No. 71 of 1932. The sounding record shows estimated depth of 3 feet over them at MLLW. though they were indicated by the rock awash symbol on the boat sheet.
4. Depth curves are satisfactory, except as noted in paragraph 2.
5. Junctions with survey sheets H. 4974, 4979, 5169 are satisfactory. Sheet H. 5163 joins to northward but has not yet been inked.

Comparison with H. 890 (survey of 1866) shows a number of minor differences in the details along shore. The two sunken rocks off Point Reyes are shown as high water islets on the former survey; near the north end of the sheet a number of features shown on the former survey by a modified island or reef symbol are shown on H. 5164 as rocks awash and sunken rocks. The depths in general are in very good agreement. There is an indication of the 13 fathom bank located and developed by the later survey in lat. 38°00'.3, long. 123°02'.2.

6. Recommendation: It is recommended that this sheet (H. 5164) supersede the former surveys for charting purposes for the area covered, except the inshore work just north of Point Reyes where heavy weather prevented the development of the 5 fathom and lesser curves. The old work can be used to fill in this area.

No further surveys are deemed necessary in the area covered by

by this sheet.

7. Reviewed by R. J. Christman, July 1932.

Memo. by A. L. Shalowitz

There is a very good agreement between this survey (machine soundings) and the offshore fathometer survey H. 5169. There is seldom more than 1 fm. difference.

The sunken rocks off Point Reyes noted in paragraphs 3 and 5 of this review have been applied to Chart 5599 and a notice to mariners issued. There is a possibility that these rocks are awash at some low stage of the tide since they are shown as bare rocks on the 1866 survey (a symbol which has been found to have been used rather carelessly on the old sheets; many rocks awash being indicated as though they were bare rocks). There is no positive information on the present survey that they are not awash rocks except the estimated 3 feet of water at position 52-53 K. However, inasmuch as they have already been published as sunken rocks, it is well to allow them to remain so. The note "breaks in a swell" has been added to the hydrographic sheet.

Other recommendations of reviewer are concurred in.

Sheet inspected by A. L. Shalowitz.

Approved:

A. M. Bohieralski
Chief, Section of Field Records

J. B. Borden
Chief, Section of Field Work

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *45164*

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

Number of positions on sheet	<i>932</i>
Number of positions checked	<i>143</i>
Number of positions revised	<i>4</i>
Number of soundings recorded	<i>3297</i>
Number of soundings revised	<i>17</i>
Number of signals erroneously plotted or transferred	<i>0</i>

Date: *June 28, 1932*

Cartographer: *E. H. H. H.*

(For section of Field Records, Chart Div.)

June 1, 1931

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5164

Locality Point Reyes to Abbott's Lagoon, 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.

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

Applied to CRA 5599 by H.S. Smith Oct 3/36

Approved 5601 Helmer 11/21/63

Approved 5072 thru 5599 & 5603 & direct.

Earl M. Hoag 4-17-64