

5169

5169

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R.S. Patton, *Director*

DESCRIPTIVE REPORT

Topographic } *Sheet No.* 5169
Hydrographic } *Field #41*

LOCALITY

Northern Coast

Pt. Reyes to Duncans Lndg.

1:40000

1931-32

CHIEF OF PARTY

K.T. Adams, F.L. Peacock

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 7 1932

Acc. No. _____

State: California

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET FIELD NO. 41

COAST OF CALIFORNIA

U.S.C. & G.S.S. GUIDE

1931 - 1932

INSTRUCTIONS:

Instructions for the hydrography on this sheet are dated September 29, 1931. ✓

CHARACTER OF WORK:

The hydrography on this sheet is all fixed position hydrography. The soundings were all obtained by the fathometer, red light method (direct). ✓

LIMITS:

The work on this sheet comprises about 270 square statute miles of previously uncompleted area extending northward from Latitude 37°-58' north, in the vicinity of Point Reyes. It joins hydrographic Sheet Field No. 42 on the northwest, and it overlaps inshore fixed position hydrography executed by the chartered launch party of Lieutenant (j.g.) L. C. Johnson during the seasons 1930 and 1931, on the east. On the west it overlaps fathometer hydrography of the Ship DISCOVERER executed in 1929, Sheet Registry No. 4988 and Section 4993. On the south, it overlaps hydrography of the Ship DISCOVERER shown on Sections 4980a and 4979. ✓

DATES OF SURVEY:

Hydrography on this sheet began on November 17, 1931, and continued, during such weather as permitted the necessary seeing of signals, to completion on January 7, 1931.

The hydrography on Sheet Field No. 42 was executed concurrently with this sheet between the dates mentioned.

On November 30, 1931, the command of the Ship GUIDE and the supervision of this work was transferred from Lieutenant-Commander K.T. Adams to Lieutenant-Commander Fred. L. Peacock. Each of these two Chiefs of Parties exercised close supervision of the portions of the work executed during the respective times they were in command. ✓

CONTROL:

The control for the hydrography on this sheet consisted of existing triangulation stations and topographicly located signals as per the list appended to this report. The topographic signals had been located by the party of Lieutenant (j.g.) L. C. Johnson and their positions were obtained from him.

TIDE REDUCERS:

Soundings obtained prior to December 13, 1931, were reduced from the records obtained from a portable automatic gauge in operation at Fort Ross Cove.

On December 13th, this tide gauge installation was wrecked by a storm.

Under date of December 17th, the Washington Office telegraphically authorized tidal reduction of hydrography subsequent to December 13th, using modified San Francisco tide station tides. Accordingly all soundings subsequent to December 13th, have been reduced by the tidal records obtained from the San Francisco tide station modified by the difference in time and range of tide at the two stations.

APPARATUS CORRECTION:

The apparatus correction, consisting of constant fathometer correction and the velocity of sound correction for the density, temperature and depths of the waters sounded, was obtained by consideration of 53 comparative soundings with wire, 47 surface temperatures, 3 intermediate temperatures, 48 bottom temperatures and 6 salinity determinations, all obtained in the area of Sheets Field Nos. 41 and 42 during the progress of the hydrography.

The apparatus correction proved to be less than 1.7 feet for all depths on this sheet up to the maximum depth sounded, namely, 64 fathoms. As the depth unit used in recording the soundings on this sheet was 1/2 fathom, the effective apparatus correction was zero.

A detailed report of the study of the velocity and constant fathometer correction for this area has been submitted.

Registering Sheave No. 204-H was used in obtaining the comparative soundings with wire. This sheave has no correction.

BOTTOM CHARACTERISTICS:

Thirty-four bottom characteristics were obtained on this sheet. These are distributed over the whole area but not as uniformly

as could be wished. It is deemed however, that, together with those obtained previously in this area, they will prove adequate.

DANGERS:

The least sounding obtained on this sheet is 16 fathoms in the overlap with Lieutenant (j.g.) Johnson's work. In general the slopes are very easy throughout the entire area. There are a number of localities where the bottom is very flat for considerable distances. Apparently no dangers exist until inshore of the junction with the work of Lieutenant (j.g.) Johnson's party.

DISCREPANCIES:

Positions 1-A to 11-A:

This line lies in the overlap with Lieutenant (j.g.) Johnson's work.

There appears to have been some doubt of signals at the time the line was run. Position 11 is obviously in error. The soundings along the portion of the line Position 1 to Position 10 agree well with other adjacent soundings on this sheet but do not show shoal soundings in passing over the shoal in the vicinity of Latitude 38°-00.3', Longitude 123°-02.3' as determined by Lieutenant (j.g.) Johnson. It is recommended that this line be rejected unless this apparent discrepancy can be cleared by further comparison with Lieutenant (j.g.) Johnson's completed work.

Positions 1-E to 14-E:

Trouble with signals was experienced when this line was run. It was rejected in the field by Lieutenant-Commander Adams and was later resounded.

This line has been rejected. It doubtless belongs further offshore and probably runs along the edge of the shoal found by Johnson. It is unnecessary for additional information. A.L.S.

Positions 8-F and 9-F:

Recorder indicated by note in sounding volume that he was uncertain of his readings hereabouts. The portion of sounding line between positions 18-L and 19L covers the same area and shows that the soundings between positions 8-F and 9-F are in error. They have therefore been rejected in the sounding volume.

Latitude 38°-18'.0 N, Longitude 123°-07'.0 W:

In this vicinity there is a small area containing a few apparent discrepancies between adjacent soundings to the extent of two fathoms.

It is entirely possible, however, that all soundings are correct and in any event the shoaler soundings do give the general characteristic depth of the area.

Positions 32-T to 45-T:

Along this portion of line some difficulty was experienced

in maintaining the regular position interval with strong fixes due to poor visibility. The sounding volume explains fully how the smooth plotting was effected and the position of the soundings as smooth plotted is believed to be accurate. ✓

GENERAL:

A few other instances in which lines crossed with a discrepancy of one fathom were noted. This amount of discrepancy is always possible without error in position or soundings in connection with the depth unit used. The majority of crossings are exact. ✓

Respectfully submitted,

Fred. L. Peacock
Fred. L. Peacock,
Lieutenant-Commander, C & G S.

H. C. Applequist
H. C. Applequist,
Ensign, C & G Survey.

Respectfully forwarded,
approved:

Fred. L. Peacock
Fred. L. Peacock,
Chief of Party from December 1, 1931.
U.S.C. & G.S.S. GUIDE.

SHEET NO. 41.
Statistics.

Day	Date	Sta. Mi.	Soundings		Positions	Volume
			Fathometer	V.C.		
A	Nov. 17, 1931	40.9	266	2	87	I
B	18,	108.1	634	3	171	I
C	19,	48.0	269	3	75	I
D	20,	70.9	418	1	115	I & II
E	23,	55.0	333	2	94	II
F	24,	55.7	282	2	82	II
G	25,	111.5	579	2	159	II
H	Dec. 4,	102.3	537	6	160	III
J	9,	31.2	157	2	49	III
K	10,	20.2	110	1	34	III
L	11,	45.5	236	1	72	III
M	15,	44.1	213	1	59	III
N	16,	2.0	12		5	III
P	17,	34.5	180	2	51	III
Q	Jan. 2, 1932	41.0	229		67	III & IV
R	3,	53.1	407		81	IV
S	4,	38.6	210	2	60	IV
T	5,	38.7	180	1	51	IV
U	6,	18.7	84	1	26	IV
V	7,	16.6	100	2	34	IV
Total		976.6	5436	34	1532	

TOTAL AREA - 270 Square Statute Miles.

SHEET FIELD NO. 41.

Topographic Signals Furnished By Lieutenant L.C. Johnson.

Name	Latitude o ' "	D.M. Meters	Longitude o ' "	D.P. Meters
Ace	38 03	878.2	122 59	3.7
Bid	38 14	763.0	122 59	936.9
Eba	38 07	948.6	122 57	365.9
Jef	38 01	240.2	123 00	210.0
Keg	38 00	1569.9	123 00	419.0
Lip	38 00	1173.7	123 00.	580.3
Look	37 59	933.0	122 58	412.0
Red	38 02	276.2	122 59	905.1
Sty	38 23	12.0	123 04	874.0
Tan	38 02	289.6	122 59	722.6

SHEET FIELD NO. 41.

List Of Triangulation Signals.

Point Reyes Light House, 1906
Drake, 1929
Foster, 1906
Tomales Bay, 1906
Trainer, 1930
Tetong, 1930
Bodega, 1906
Bodega Hill, 1860
Bodega Head, 1906
Bodega Rock, 1930
Dry Creek, 1860
Peaked Hill, 1906
Ross Mountain, 1925
Black Tank, 1930
Lone Bare Tree, 1929

The hydrographic name of each station has been underlined.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

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. 5169

Point Reyes to Duncans Landing, Calif.

Surveyed November 1931 to January 1932

Instructions dated September 29, 1931 (GUIDE)

Chiefs of Party, K. T. Adams, F. L. Peacock

Surveyed by K.T.A., F.L.P., H. P. Odessey, H. J. Healy.

Protracted and soundings plotted by H. C. Applequist.

Verified and inked by John G. Ladd.

Fixed position fathometer soundings, offshore.


1. The records conform to the requirements of the Hydrographic Manual.
2. The plan and the extent of development satisfy the specific instructions.
3. Soundings are consistent. The depths were recorded to the half-fathom; the agreement at line crossings is good.
4. Depth curves are satisfactory; the 50 fathom curve is the only continuous curve drawn on the sheet.
5. Junctions:
This sheet (H. 5169) joins offshore sheets 4980a, 4993, 4988, 5171; and inshore sheets 5164, 5163, 5162. The latter two are not verified and inked at this writing. The junctions and overlaps are satisfactory.

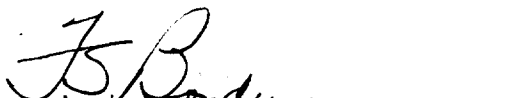
Comparison was made with chart 5502 and sheet H. 889 (survey of 1866). There is good agreement in depths and also in bottom characteristics excepting that H. 5169 shows "rky" in deep water southwest of Bodega Head. Some of the bottom characteristics from the old survey have been transferred in red to the new survey.

6. Recommendation: In view of the closer development, this sheet (H. 5169) should supersede the former survey (H. 889). No further surveys are deemed necessary in this area.
7. Reviewed by R. J. Christman, July 1932.

Sheet inspected and recommendations approved by A. L. Shalowitz.

Approved:


Chief, Section of Field Records


Chief, Section of Field Work

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5169

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. 41.

REGISTER NO. 5169

State California.

General locality ~~California Coast~~ Northern Coast

Locality Point Reyes to ~~Bodega Head~~ Duncans Lndg.

Scale 1 - 40,000 Date of survey November, 1931 - January, 1932.

Vessel U. S. C. & G. S.S. GUIDE.

Chief of Party K.T. Adams and Fred. L. Peacock.

Surveyed by K.T. Adams, Fred. L. Peacock, H.P. Odessey, and H.J. Healy.

Protracted by H. C. Applequist.

Soundings penciled by H. C. Applequist.

Soundings in fathoms ~~feet~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by *John G. Ladd*

Verified by *J. G. L.*

Instructions dated September 29, 1931

Remarks:

May 2, 1932

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5169

Locality Point Reyes to Duncan's Landing, California Coast

Chief of Party: K. T. Adams in 1931-1932

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

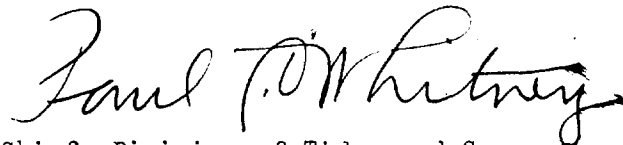
5.5 ft. above datum of tabulations at San Francisco (Presidio)

10.3 ft. below B. M. 173

Allowance made for time of tide on working grounds -0.65 hr. earlier than
at San Francisco

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.



Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H:5169.

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

Number of positions on sheet	1532
Number of positions checked	240
Number of positions revised	2
Number of soundings recorded	5436 <i>Fath.</i> 34 <i>V.C.</i>
Number of soundings revised	5
Number of signals erroneously plotted or transferred	<i>None</i>

Date: *July 1st* 19*32*

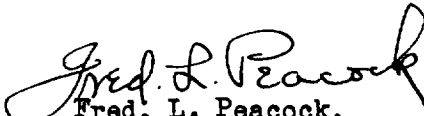
Cartographer: *John S. Reed*

STATEMENT
TO ACCOMPANY
HYDROGRAPHIC SHEET FIELD NO. 41
COAST OF CALIFORNIA
U.S.C. & G.S.S. GUIDE
1931 - 1932

The field work subsequent to November 30, 1931, was carefully supervised by the undersigned.

The smooth plotting has been accomplished under his general supervision.

The completed smooth sheet has been inspected and is approved.


Fred. L. Peacock,
Chief of Party, C. & G. Survey,
Commanding Ship GUIDE

Oakland, California,
March 25, 1932.

A-5169 (1931-32)

Applied to Ch. 5599. Oct 3/36 by O.A. Gaudin
Ch. 5601 CR Wittman 11/21/63
Comp appd to New Ch. 5072 H.V.R. Post direct of part H.V.R. 503
Earl W. Prognize 4-17-64