

5294

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director



State: California

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic

Sheet No. 3

5294

LOCALITY

Pacific Coast

Approaches to San Gregorio Creek

to Purisima

19...32

CHIEF OF PARTY

F. L. Peacock

5294



DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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REG. NO. 5294

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. 5294

State California

General locality Pacific Coast

Locality Approaches to San Gregorio Creek to Purisima

Scale 1:10,000 Date of survey July 18, 1932 to, 19
September 1, 1932

Vessel Chartered Launch ROGUE

Chief of Party Fred. L. Peacock

Surveyed by A. N. Stewart

Protracted by ~~E. A. Foster and E. B. Garnett~~ E. W. Smith

Soundings penciled by ~~E. B. Garnett~~ E. W. Smith

Soundings in fathoms feet

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated April 4, _____, 1932

Remarks: Positions by visual sextant fix. Leadline soundings.

RWW 9/15/92

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET FIELD No.3

Coast of California
U.S.C. & G.S.S. GUIDE
1932.

INSTRUCTIONS: Instructions for the hydrography on this sheet are dated April 4, 1932.

LOCALITY: The work on this sheet is the inshore launch hydrography extending from approximately Latitude 37° 24' to 37° 10', along the California Coast.

LIMITS: This sheet covers about 20 square miles (statute), of hydrography. It joins Launch Sheet No. 2 on the north, Launch Sheet No. 4 on the south, and Ship Sheet Nos. 43 and 44 on the west. H-5245

CHARACTER OF WORK: The hydrography on this sheet is all fixed position launch hydrography. The soundings were all obtained by the hand lead.

The depth range is from 4/6 of a fathom to 20 fathoms, however the major part of the work is within the 15 fathom curve.

The line spacing is approximately 75 meters inside the ten fathom curve and is approximately 150 meters outside the 10 fathom curve. Development has been made in shoal and irregular areas.

Cross lines are spaced approximately $3\frac{1}{2}$ miles apart.

The position interval is in general three minutes with supplemental positions at radical changes of course and speed.

The scale of this sheet is 1:10,000.

DATE OF SURVEY: Work on this sheet began July 18, 1932, and was concluded on September 1, 1932.

CONTROL: The control for the hydrography on this sheet consists of triangulation of the 1931 scheme executed by Lieutenant C. D. Meany, plotted on the North American 1927 adjusted datum, one triangulation station located by the Ship GUIDE'S Party in 1932 and hydrographic signals located by the 1932 topographic unit of the Ship GUIDE'S party.

TIDAL REDUCERS: Tidal reducers for the sounding on this sheet were obtained from the portable automatic tide gage located at Bregante

Wharf, Princeton, Half Moon Bay, and portable automatic tide gage located on Ano Nuevo Island. A correction of minus five minutes was applied to the Princeton gage and a correction of plus five minutes was applied to the Ano Nuevo gage. It was considered unnecessary to apply any correction for range at either station.

For further information on the subject of tidal reductions the reader is referred to the season's tidal report, which covers all the tidal work of the party on the Ship GUIDE from April 28, 1932 to February 28, 1933.

LEADLINE CORRECTIONS:

It should be noted that considerable trouble was had during the season due to the shrinkage of the leadlines. Leadlines were checked before and after each days work. The leadlines used were mahogany, Phosphor bronze wire center, No. 8 braided tiller line; furnished by the Washington Office.

BOTTOM CHARACTERISTICS:

From approximately the five fathom curve to shore the bottom is in general either gravel or rocky. Beyond the five fathom curve the bottom is in general fine gray or brown sand. An exception to the general bottom characteristics beyond the five fathom curve is on the shoal developed in approximate latitude 37-18.5 and approximate longitude 122-27.0.. Here the bottom is rocky in contrast with the prevailing sandy bottom in similiar depths.

SHOALS: A rough area centering near latitude 37-18.5 and longitude 122-27.0 was thoroughly developed. The least depth found was 12 fathoms in latitude 37-18.7 and longitude 122-27.1. It is believed that the developement given insures against the existance of any danger to ordinary navigation in that area.

In the nothern part of this sheet in approximately latitude 37-23.25 and longitude 122-25.8 a shoal was developed and the least depth found was 6 5/6 fathoms. There appears to be no other dangers on this sheet beyond the shoal water immediately adjacent to the shore.

JUNCTIONS: The junctions with Launch Sheets Nos. 2 and 4 and Ship Sheets Nos. 43 and 44 are good.

DISCREPANCIES: In a very few instances closely adjacent soundings differ by as much as two fathoms. These have been carefully considered with respect to the character of the bottom in their immediate vicinity and it is believed that all these soundings are correct and that no discrepancies or erroneous soundings occur on this sheet.

In comparing this work with that of previous work, (No. 556), it was found that they compare favorably. Most of the work checks within a fathom except where new shoals have been found and developed on this survey.

Respectfully submitted,

L. W. Swanson
L. W. Swanson,
Jr. H. & G. E.

A. Newton Stewart
A. Newton Stewart,
Jr. H. & G. E.

Respectfully forwarded:

Approved:

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

LIST OF SIGNALS
to accompany
HYDROGRAPHIC SHEET FIELD NO. 3

TRIANGULATION

Hydrographic Name	Location
Isima	Isima 1931
Mex ₂	Mex ₂ 1932
Water	Water Tank 1931

TOPOGRAPHIC

	Topographic Sheet C	
Ban	"	"
Bar	"	"
Bel	"	"
Bug	"	"
Bul	"	"
Barn	"	"
Dog	"	"
Don	"	"
Dot	"	"
Die	"	"
Dim	"	"
Dip	"	"
Fag	"	"
Gay	"	"
How	"	"
Iron	"	"
Lop	"	"
Lot	"	"
Man	"	"
Nob	"	"
Pat	"	"
Pen	"	"
Pet	"	"
Pod	"	"
Red	"	"
Roc	"	"
Sig	"	"
Sin	"	"
Sot	"	"
Spy	"	"
Tap	"	"
Tan	"	"
Til	"	"
Ton	"	"
Tres	"	"
Tub	"	"
Whit	"	"

STATISTICS
to accompany
HYDROGRAPHIC SHEET FIELD NO.3

Date 1932	Day	Statute Miles Sounding Line	No. of Positions	No. of Soundings.
7-18	a	2.1	17	76
7-19	b	8.0	51	216
7-20	c	15.0	73	284
7-21	d	21.0	109	350
7-22	e	15.5	79	285
7-23	f	24.5	133	445
7-29	g	16.5	77	264
7-30	h	24.0	101	344
7-31	j	20.2	94	298
8-2	k	17.4	76	246
8-3	l	12.7	54	171
8-4	m	29.0	127	451
8-5	n	24.0	112	391
8-11	p	14.9	72	273
8-12	q	27.5	135	504
8-13	r	30.6	152	538
8-14	s	22.6	136	487
8-15	t	19.6	113	285
8-16	u	19.8	121	318
8-17	v	19.6	141	411
9-1	w	5.1	34	91
		389.6	2057	6728

Area in square statute miles 20.3

STATEMENT
to accompany
HYDROGRAPHIC SHEET FIELD NO. 3
Coast of California.
U. S. G. & G. S..S. GUIDE
1932

The smooth sheet protracting of this sheet from "a" day through "e" day was done by E. A. Foster, civil engineering hand. The protracting was completed and the penciling of the soundings thereon was done by Mr. E. E. Garnett, civil engineering hand under the direct supervision of Lieutenant L. W. Swanson.

Lieutenant Swanson has drawn the depth curves and verified at least ten per cent of the positions and soundings. The completed smooth sheet has been inspected and is approved. However, in as much as the plotting of this sheet was done by temporary employees, it is recommended that office verification be correspondingly rigid.

*Original smooth sheet sent
replotted in the office etc*

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

Oakland, California.
August 4, 1933.

VARIATION OF SOUNDING METHOD IN DEPTHS TOO GREAT FOR ORDINARY HAND
LEAD SOUNDING: ✓

The deeper soundings on this sheet were obtained by a slight modification of the usual hand lead sounding.

Whenever the depth became so great that any difficulty was experienced in obtaining vertical lead line casts at regular sounding speed the launch engine clutch was disengaged at the command "Sound", and was re-engaged when the sounding had been obtained. This method was resorted to because of the small amount of work necessary outside the fifteen fathom curve and was particularly feasible in that the launch was equipped with pilot house control which enabled the helmsman to view the operations of the leadsman and control the engine accordingly.

Another consideration was the exceptional ability of the two leadsmen and their consistent cooperation in advising the hydrographer with respect to the proper speed to enable them to obtain vertical soundings under the conditions of depth, wind and sea being encountered.

A fourteen pound lead was used for all soundings outside the ten fathom curve.

Although a hand wire sounding machine was installed on the launch, ready for use, the method detailed above was favored, since in the opinion of the hydrographer it gave better control of the sounding line and was faster.

The regularity with which the engine clutch was manipulated appeared to insure satisfactory accuracy with respect to the spacing of soundings intermediate between positions.

All recorded soundings were made with the lead line vertical and all doubtful soundings were rejected at the time.

Respectfully submitted,

A. Newton Stewart

A. Newton Stewart,
Jr. H. & G. Engineer,
U.S.C. & G. Survey
Hydrographer.

*For further information regarding
this letter see Div. Rept. H-5296*

August 18, 1933.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5294

Locality Approaches to San Gregorio Creek to Purisima, South of Half Moon Bay,
(Coast of California.)

Chief of Party: Fred L. Peacock in 1932

Plane of reference is mean lower low water, reading
3.1 ft. on tide staff at Princeton, Half Moon Bay
13.7 ft. below B. M. 4

1.4 ft. on tide staff at Ano Nuevo Island
17.8 ft. below B. M. 1

Height of mean higher high water above plane of reference is 5.5 feet at
Half Moon Bay and 5.2 feet at Ano Nuevo Island.

Condition of records satisfactory except as noted below:

Harriman
Chief, Division of Tides and Currents

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *H5294*

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

Number of positions on sheet	<i>2057</i>
Number of positions checked	<i>13</i>
Number of positions revised	<i>1</i>
Number of soundings recorded	<i>6728</i>
Number of soundings revised	<i>23</i>
Number of signals erroneously plotted or transferred	<i>✓</i>

Date: *April 18, 1934.*

Cartographer: *Paul W. Eherr.*

Section of Field Records

REVIEW OF HYDROGRAPHIC SHEET NO. 5294

Approaches to San Gregorio Creek to Purisima, California
Surveyed July-Sept. 1932
Instructions dated April 4, 1932 (Guide)

Chief of Party - F. L. Peacock.
Surveyed by - A. N. Stewart.
Protracted and soundings penciled by - E. W. Smith.
Verified and inked by - P. H. Scherr.

1. The records conform to the requirements of the Hydrographic Manual.
2. The plan and extent of development conform to the regulations and satisfy the specific instructions.
3. Soundings are consistent and the agreement in depth at crossings is good. The irregular area (least water 12 fathoms) centering in lat. $37^{\circ}18'.5$ long. $122^{\circ}27'.0$ seems to be adequately developed. The shoal ridge ($6 \frac{5}{6}$ least depth) in lat. $37^{\circ}23'.2$ long. $122^{\circ}25'.85$ was developed by split lines but no special search for least depth seems to have been made.
4. Depth curves are satisfactory, except that the development close inshore was prevented by breakers, a moderate sea breaking in about 12 feet of water along this coast.
5. Junctions with adjacent contemporary survey sheets (5296, 5245, 5395 and 5365a) are adequate.
6. Comparison with H. 556 (1856) H. 825 (1863) and H. 871 (1865) shows fair agreement in depths. The greater development of the new survey discloses a number of shoal spots close inshore that are however not a danger to navigation. The shoal ridge mentioned in par. 3 was indicated by a $7 \frac{3}{4}$ on H. 825. Chart 5402 does not show anything in conflict with the present survey.

Several bare rocks from T. 1009 have been transferred to this sheet as rocks awash. The rocks were not found on the contemporary topographic survey, but no notation was made by the topographer regarding their non-existence.
7. The field drafting in general was satisfactory. The smooth sheet was accidentally destroyed and the present smooth sheet was entirely constructed in the office.
8. Recommendation. This sheet (H. 5294) with the indicated additions from previous surveys, should supersede all previous surveys for charting the area represented by it.

No further surveys are deemed necessary at this time. If further surveys become necessary, they should take the form of wire drag work.

9. Reviewed by R. J. Christman, May 3, 1934.

Inspection Note

The radio station mentioned in the descriptive report of topographic sheet 4793 in lat. $37^{\circ}23'.1$ long. $122^{\circ}24'.6$, may be useful as a landmark and should be located.

Inspected by - A. L. Shalowitz.

Examined and approved:

~~H. T. Adams,~~ *H. T. Adams*
Chief, Section of Field Records.

Francis S. Borden
Chief, Section of Field Work.

R. O. Robert
Chief, Division of Charts.

G. H. de
Chief, Division of H. & T.

Supplementary Report
to accompany

DESCRIPTIVE REPORT
HYDROGRAPHIC SHEET-- FIELD No.3

Coast of California
U.S.C. & G.S.S. Guide
1932

STATEMENT: The smooth sheet as plotted and submitted by the Field Party was lost after arriving in the Washington Office. This necessitated a new projection and re-plotting of the sheet by the Washington Office force.

REPORT: The following points were called to attention while plotting the sheet:

1. The Triangulation stations were plotted on North American 1927 (adjusted datum). ✓
2. Several Topographic stations appearing on the boat sheet do not appear on the Topographic Sheet for this area, nor was any information for their location found in the hydrographic field records. However, only one of these stations in question ^{was} used in the Hydrography, and that in locating a "breaker" and this location was transferred from the boat sheet. | *What station*
3. No comparison with adjoining sheets or old surveys ^{was} made as the original comparison by the Field Party is considered sufficient. | *int.*
4. A tracing of the original smooth sheet (used in the office for checking the positions against the boat sheet) was available. The positions as plotted were checked against this tracing, thereby, serving as a very accurate check as the work progressed. Several errors were in this way detected and corrected. ✓
5. In plotting soundings it was found time intervals of equal length in consecutive positions checked very poorly. This is especially true outside the 10-fathom curve but also appears in shoaler depths. This is likely due to the method of using hand lead for sounding for all depths. --"disengaging the clutch at command--sound--and drifting until the sounding was completed". No record is made showing length of time of drifting. This probably accounts for the variation in time interval space and also for the occasional discrepancies in depths of close soundings.

Respectfully submitted--
Elbert W. Smith
Elbert W. Smith,
Junior Cartographic Engr.

Date: April 5, 1934.

