5640

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic / *Hydrographic* } *Sheet No.* 3 5640

State California

LOCALITY

California Coast

Lopez Rock to Little Slate Rock

1934

CHIEF OF PARTY

F.H. Hardy

U.S. GOVERNMENT PRINTING OFFICE: 1934

5640

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 5640

State California

General locality California Coast

Locality Lopez Rock to Little Slate Rock

Scale 1-10,000 Date of survey Aug. 19 to Sept. 28, 1934

Vessel GUIDE

Chief of Party F.H.Hardy

Surveyed by R.F.A. Studds, G.C.Mast and I. R. Rubottom

Protracted by T.M. Means

Soundings penciled by T.M. Means

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 and May 31, 1934, 192

Remarks: Visual Fix Hydrography, Soundings by Fathometer Wire and Hand Lead

GPO

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET FIELD NO. 3
PROJECT HT 184
Coast of California
U.S.C. & G.S.S. GUIDE
1934

INSTRUCTIONS:

Instructions for the hydrography on this sheet are dated April 4, 1932. The work was performed in accordance with the season's instructions dated May 31, 1934.

CHARACTER OF WORK:

The control for the hydrography on this sheet was done by means of visual fixes. The soundings were obtained by the fathometer, by wire, and by the hand lead. Five(5) wire soundings were taken by the ship for comparison with the fathometer.

The depth range is from less than 2 fathoms to 206 fathoms. The majority of the work is inside the 20 fathom curve.

Sounding line spacing is approximately 100 meters inside the 10 fathom curve, 150 meters to the 20 fathom curve and 200 to 300 meters outside the 20 fathom curve.

The position interval was usually two to three minutes, with supplemental positions at radical changes of course and speed.

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

LIMITS:

The hydrography on this sheet covers an area of approximately 11.5 square statute miles extending from Latitude 36-07.4(Little Slate Rock) to 36-01.5 (Lopez Rock).

The sheet is joined on the north by Launch Sheet Field No. 2, on the south by Launch Sheet Field No. 4 completed during the 1934 season, and on the west by Ship Sheet Field No, 41 completed during the 1933 season.

CONTROL:

Control for the hydrography on this sheet consisted of hydrographic signals over triangulation stations on the 1932 scheme executed by Lieutenant Charles Pierce, plotted on the North American 1927 adjusted datum and topographic signals located by the topographic unit of the party of the ship Guide accordong to standard practice.

DATES OF SURVEY:

Work on this sheet began August 19, 1934 and was concludedSeptember 28, 1934.

TIDAL REDUCERS:

Tidal reducers for the soundings on this sheet were obtained from the San Simeon and Monterey Portable Automatic Tide Gages.

For further infromation on the subject of tides the reader is referred to the 1934 season's tidal report which will be forwarded at a later date.

APPARATUS CORRECTIONS:

The apparatus corrections for the work on this sheet were applied only to the fathometer soundings. These consisted of corrections for temperature, salinity and comparative vertical casts.

The leadline and wire sheave were checked throughout the season and found to be correct.

A report on this subject will be forwarded at a later date.

BOTTOM CHARACTERISTICS:

The bottom characteristics in this area consisted mostly of fine grey and white sand. Rocky bottom was found off outlying rocks.

DANGERS AND SHOALS:

There is relatively deep water close to the shore throughout the length of this sheet.

Several off lying shoals were developed;

STATISTICS
to accompany
HYDROGRAPHIC SHEET FIELD NO.3

DATE 1934	DAY LETTER	NO. SOUNDINGS MACH	H.L.	NO. POSITIONS MACH.	H.L.	STAT. M. SDGS. MACH.	H.L.	MILES TO AND FROM	BOAT
8-22	a	130		74		10.3		10.5	m.s.
8-23	b	50	387	29	92	6.0	12.2	0.5	"
9-21	c	207	276	104	97	14.0	9.1	8.0	"
9-22	d	48	348	25	95	2.6	14.0	3.5	"
9-27	e	177	71	67	29	6.0	5.0	2.3	"
9-28	f	80		42		5.6		1.2	"
Total m.s.		692	1082	341	313	44.5	40.1	26.0	

		Fath R L	Fath RLx6	Fath R L	Fath RLx6	Fath		ship	V.C.
8-19	A	444		80		22.1	22.5	"	5
9-11	B	225		40		13.4	29.3	"	
9-14	C	153		33		8.8	7.2	"	
9-28	D	205	9	41	2	12.0		"	
Total Ship		1027	9	194	2	56.3	59.0		5

Total for Sheet.	Soundings	Postions	Miles of Soundings
	2815	850	140.9

AREA OF SHEET 11.5 square statute miles.

STATEMENT
to accompany
HYDROGRAPHIC SHEET FIELD NO. 3

The smooth plotting and the pencilling of the soundings thereon was done by Mr. T.M. Means, Draftsman, under the general supervision of Lieutenant (j.g.) L.W. Swanson.

Lieutenant Swanson has drawn the depth curves.

The completed smooth sheet has been inspected and is approved.

F.H. Hardy

Chief of Party
Coast and Geodetic Survey
Commanding Ship GUIDE

LIST OF SIGNALS
to accompany
HYDROGRAPHIC SHEET FIELD NO.3

TRIANGULATION

Hydrographic Name	Location
RING	Spring 1932
RAT	Rat 1932
STUN	Stung 1932
LOCK	Block 1932
GAM	Gamboa Point Derrick 1932
CON	Conical Rock East of Lopez Rock 1932
ROC	Lopez Rock 1932

TOPOGRAPHIC SIGNALS

Topographic Sheet B

Rock
Cliff
High
Pin
Abe
Boy
Cal
Dog
Elk
Fox
Gin
Hit
Ill
Jay
Kid
Lot
Mow
New
Old
Pad

Topographic Sheet C

Quad
Row
Sit
Tap
Unk
Off
Vat
Why
Ex
Yel
Zap
All
Beg
Cry
Dud
Ego
Fit
Get
Point
Hen
Ink
Jap
Kip
Lop
Use

DANGERS AND SHOALS CONTD.

Latitude 36-04.4 Longitude 121-36.8 $7\frac{3}{4}$ fm. shoal in 15 fathoms

Latitude 36-02.6 Longitude 121-35.3 $6\frac{1}{2}$ fm. shoal in 10 fathoms

ANCHORAGES:

There appear to be no suitable anchorages on this sheet.

JUNCTIONS:

The junctions with Launch Sheet Field no. 2 on the north and Launch Sheet Field No. 4 on the south and Ship Sheet Field No. 41 are uniformly good.

DISCREPANCIES:

The comparisons with photostats H2077 are good. There are differences approaching one and two fathoms, and in a few cases where the bottom is irregular, a slightly greater differenc may be found.

BOATS AND EQUIPMENT:

The inshore work was done by G.C. Mast and I.R. Rubottom in charge of the motorsailer. In general, lines beyond the 20 fathom curve were run by the ship, with R.F.A. Studds in charge.

The large oscillator and the port forward hydrophone bank were used throughout the season for fathometer soundings. The starboard sounding machine was used for all vertical casts taken for fathometer comparisons.

Angles were taken on the bridge of the Ship on the inshore side.

Respectfully submitted;
L.W. Swanson
Jr. H. and G.E.
Coast and Geodetic Survey

Forwarded;
Approved
F.H. Hardy
Chief of Party
Coast and Geodetic Survey

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5640

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

Number of positions on sheet	845
Number of positions checked	102
Number of positions revised	4
Number of soundings recorded	2815
Number of soundings revised	0
Number of signals erroneously plotted or transferred	0

Date: May 4, 1935

Verification by H. K. Eberlin Time: 7½ hrs.

Review by V. D. Behn. Time: ~~23~~ 25½ hrs.

(1)

Report on Hydrographic Sheet H-5640.
Surveyed in Aug. and Sept. 1934.
Chief of Party F. H. Hardy.
Surveyed by R.F.A. Studds, H.C. Mast and I.R. Robottom.
Protracted by T. M. Means.
Soundings plotted by T. M. Means
Verified and inked by H.K. Elderkin

1. The records conform to the General Instructions excepting that rocks noted in the remarks column often were not starred on the sounding to which the remark pertained. ✓

2. The 100 fathom curve can be completely drawn from the soundings on this sheet and the overlapping sheet H-5477. The 50 and 20 fathom curves can be completely drawn. The 10 fathom curve can be completely drawn excepting in Lat. 36-04.2, Long. 121-36.6 which is due to foul area. Portions of the 5, 3, 2 fathom curves can be drawn. The 1 and 0 curves could not be drawn. ✓

3. The field plotting in general was very good. ✓

4. It was not necessary to repeat or do over any of the field drafting.

5. Junctions with adjacent sheet H-5477 + H 5620 was good excepting in Lat. 36-06.1, Long. 121-39.0 where a transferred sounding of 97 fathoms from sheet H-5477 falls on a sounding of 77 fathoms at position 694. The ~~transferred~~ sounding was not transferred. The overlap from sheet ~~H-5620~~ see H 5 of rev and H5641 could not be made at this time as it has not been verified

6. Position 846 was rejected by the verifier and the sounding from 83-85 were plotted on time and course. Lat. 36-06.6, Long 121-37.8

7. Between positions 60-61d a rock was noted in the sounding volume, awash with a two foot tide. This rock was plotted by the field party as a sunken rock on the hydrographic sheet and also on the topographic sheet T-4874. It was changed by the verifier to a rock awash baring two feet at M.L.L.W. on both the hydrographic and topographic sheets. Lat. 36-02.58, Long. 121-35.28

Between positions 169-170c a rock was noted in the record book, awash with a two foot tide. It had been noted as a rock awash baring 5' at M.L.L.W. on topographic sheet T-4874. This was changed to a rock awash baring two feet at M.L.L.W. on the topographic sheet by the verifier. Lat 36.03.3 Long. 121-35.6

Between positions 166-167c a rock was noted in the sounding record as awash with a two foot tide and noted as a rock awash baring five feet at M.L.L.W by the field party on topographic sheet T-4874. It was changed by the verifier to a rock awash baring two feet at M.L.L.W. on the topographic sheet

Lat. 36-03.6, Long 121-35.7

7. (Cont.). Between positions 47-48 a rock was noted as awash with a six foot tide in the sounding record. This rock was noted as a rock awash bearing two feet at M.L.L.W. on topographic sheet T-4874. It was changed, by the verifier, on the topographic sheet to a rock awash ~~bearing 6' at M.L.L.W.~~ at MHHW Lat. 36-02.1, Long 121-34.8

see P9 of review

8. A 12 fathom sounding between positions 53-54 appears to be erroneous as it falls between two 18 fathom soundings in the same line and between 16 and 19 fathom soundings in adjacent lines Lat. 36-04.1, Long. 121-36.4.

9. Topographic signal JOY on topographic sheet T-4877 was named JAY on both the hydrographic boat and smooth sheets. It was used as JAY in the sounding records. No changes were made by the verifier. Lat. 36-06.1, Long. 121-37.3

Changed to JAY on T-4877

A note in pencil on topographic sheet T-4877 states that topographic signals "Rock-Slag" and "Abe-Side" were given two names each by the hydrographic field parties on hydrographic sheets H-5640 and H-5620. Rock and Abe were used on sheet H-5640 and Slag and Side on sheet H-5620 respectively.

Respectfully submitted

G. K. Elderkin

LAC

March 27, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5640

Locality Lopez Rock to Little Slate Rock, California Coast

Chief of Party: F. H. Hardy in 1934
Plane of reference is mean lower low water reading
2.5 ft. on tide staff at Monterey
12.5 ft. below B.M. 3

1.3 ft. on tide staff at San Simeon
20.0 ft. below B. M. 1

Height of mean higher high water above plane of reference is

5.3 feet at Monterey; 5.2 feet at San Simeon.

Condition of records satisfactory except as noted below:

H A Marmer

Acting Chief, Division of Tides and Currents.

Survey No. H-5640

GEOGRAPHIC NAMES

Date Feb. 11,1935 California

Chart No. 5302

Diagram No. 5302-2

Approved by the Division of Geographic Names, Department of Interior. ✳

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	----------	Lopez Rock ✓			
	----------	Little Slate Rock ✓			
	----------	Lopez Point ✓			
		Square Black Rock ✓			
		Dolan Rock ✓			

(M-136)

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5640 (1934)

Lopez Rock to Little Slate Rock, California Coast
Surveyed in August - September, 1934
Instructions dated April 4, 1932, May 31, 1934 (GUIDE)

Hand Lead and Machine Soundings. 3 Point Fixes on Shore Signals. Fathometer Soundings.

Chief of Party - F. H. Hardy.
Surveyed by - R. F. A. Studds, G. C. Mast, and I. R. Rubottom.
Protracted by - T. M. Means.
Soundings penciled by - T. M. Means.
Verified and Inked by - G. K. Elderkin.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

a. In general, no distinctive reference mark was made against the sounding or time to which notes in the "Remarks" column refer, as required by par. 76 of the Hydrographic Manual.

b. No copy of Landmarks for Charts on Form 567 accompanied this particular sheet.

The Descriptive Report is clear and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

The survey complies with the instructions for the project. However, additional lines in the vicinities of the minor submarine valleys, in lat. 36°03', long. 121°37' and lat. 36°02', long. 121°36.5', would have been desirable.

3. Sounding Line Crossings.

No system of cross lines was run. The agreement between parallel adjacent lines is generally good.

4. Depth Curves.

Within the limits of the survey the usual depth curves can be satisfactorily drawn including portions of the 2, 3 and 5 fathom curves.

5. Junctions with Contemporary Surveys.

a. The junction with H-5620 (1934) on the north is satisfactory.

b. The junction with H-5477 (1933) on the west is satisfactory with the possible exception of a 97 fathom sounding from H-5477 (1933) falling on a 77 fathom sounding in lat. 36°06.1', long. 121°39.0'. This difference may, however, be due to a steep slope at this point.

c. The junction with H-5641 (1934) on the south will be considered in the review of that survey.

6. Comparison with Prior Surveys.

a. H-290 (1851).

This is a reconnaissance survey on scale 1:375,000, having but 1 line of soundings which are spaced approximately 6 miles apart, in the vicinity of the present survey, and only 2 of which fall on the present survey. Because of the nature of the survey, it should be entirely superseded by the present survey.

b. H-2077 (1890-91).

The agreement with this survey is, in general, good, except as noted below:

(1) This survey shows 2 islets (lat. 36°05.8', long. 121°37.4') in pencil, and surrounded by the 3 fathom curve. The origin of these islets could not be determined. They should not be used in future charting, inasmuch as the shoreline and inshore rocks are shown in pencil and in general appear to be very carelessly drawn.

(2) A 5-5/6 fathom shoal (5-3/4 on this survey), lat. 36°04.4', long. 121°36.7', surrounded by depths of about 12 fathoms, was located on position 9e (Whaleboat). This sounding was transferred to the present survey, its position having been checked and the surrounding depths being in fair agreement with the present survey.

(3) A 2-5/6 fathom shoal (17 feet on this survey) and a 7½ fathom shoal (both charted) were located on line 52 - 53g (by the "Gig") lat. 36°04.2', long. 121°36.4'. There is some doubt as to the validity of these soundings inasmuch as they both fall on the same line and since the vicinity of the 2-5/6 fathom sounding had been previously developed to some extent in connection with another rock, positions 3 - 8f ("Gig"). However, the positions of these soundings have been checked and since it is considered that neither this survey nor the present survey disproves their existence, they have been transferred to the present survey.

7. Comparison with Chart No. 5302.

This chart, within the area covered by the present survey, is a compilation of the old surveys mentioned in the previous paragraph and, except as noted below, contains no further information that needs consideration in this review:

a. The sunken rock, lat. 36°02.7', long. 121°35.5', south of Gamboa Pt., has not been located by the present survey. This rock originates with T-2077 (1891), where it is shown by a sunken rock symbol marked "Breaker." No cuts are visible to this rock on T-2077 (1891) and no mention is made of this rock on either the present hydrographic or topographic surveys or on the old hydrographic surveys. In addition, several sounding lines were run near this spot on the present hydrographic survey and no mention made of this rock, although an erasure and note "from chart" on the boat sheet indicate that possibly this rock had been transferred from the chart and that the sounding lines were considered as disproving its existence. In view of the above, this sunken rock should be discontinued in future charting.

b. The 3-3/4 fathom sounding shown north of Square Black Rk. in lat. 36°04.4', long. 121°36.7' has not been verified by the new survey. It is believed that this sounding originates with the 5-3/4 fathom sounding on H-2077 (1890-91) mentioned in paragraph 6b(2) and evidently charted as 3-3/4. This 3-3/4 fathom sounding should not be charted in the future.

c. The sunken rock, lat. 36°04.2', long. 121°36.6', has not been located on the present survey. This sunken rock probably originates with the 2-5/6 fathom sounding on H-2077 (1890-91), lat. 36°04.2', long. 121°36.5', mentioned in paragraph 6b(3). The sunken rock was originally shown on Chart 5400 in the position of the 2-5/6 fathom sounding on H-2077 (1890-91). The charting of this rock as shown on the present chart should be discontinued.

8. Field Plotting.

The field plotting and protracting are satisfactory and conform to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended.

No additional field work is required other than the desirability of dragging this area, which will probably be accomplished under instructions to the "Guide."

10. Superseding Old Surveys.

Within the area covered, the present survey, with the indicated additions from previous surveys, supersedes the following surveys for charting purposes:

H-290 (1851) in part.
H-2077 (1890-91) " "

11. Reviewed by - V. D. Behn, May, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, C. K. Green.
Chief, Section of Field Records.

L. O. Colbert.
Chief, Division of Charts.

Acting Chief, Section of Field Work.

Chief, Division of H. & T.

Applied to drawing of Chart 5302 - Feby. 13, 1936 - J.F.W.

25 Jan 9, 1936
Earl