5861

5861

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.* 82

LOCALITY

Santa Barbara Channel

Southern California Coast

1934
1935

CHIEF OF PARTY

O. W. Swainson

U. S. GOVERNMENT PRINTING OFFICE: 1933

Form 537

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. 82 5861

REGISTER NO.

State California

General locality Southern California Coast

Locality Santa Barbara Channel

Scale 1:80,000 Date of survey July, 1934-Feb., 1935

Vessel Str. PIONEER

Chief of Party O. W. Swainson

Surveyed by O. W. Swainson

Protracted by G. A. Nelson

Soundings penciled by G. A. Nelson and W. M. Scaife

Soundings in fathoms ~~feet~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by J.C. McKenney

Verified by Jamcormick

Instructions dated June 23, 1934

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET FIELD NO. 82

1:80,000 Scale

O. W. Swainson, Commanding

AUTHORITY

The hydrography accomplished on this sheet was done in accordance with instructions dated June 23, 1934, for project HF187.

LOCALITY

California coast, Santa Barbara Channel - From Latitude 34° 07½' N on the south to Latitude 34° 18' N on the north and from Longitude 119° 52' W on the east to Longitude 120° 35' W on the west.

JUNCTIONS

The hydrography on this sheet makes satisfactory junctions as follows: on the north with sheet field No. 50; on the east with sheet registry No. 5030 and sheet field No. 52; on the south with sheet field No. 53 and sheet field No. 42; and on the west with sheet field No. 122.

SURVEY METHODS AND CONTROL

All soundings lines on this sheet are controlled by visual fixes on triangulation signals, topographic signals and one hydrographic signals on shore. The soundings were obtained by the fathometer. A few stops were made and vertical wire soundings were obtained, also bottom characteristics and temperatures were obtained. These data were used to compute the fathometer corrections.

DISCREPANCIES

There are no discrepancies within the limits of the sheet.

DANGERS

There are no dangers within the limits of this sheet.

COMPARISON WITH PREVIOUS SURVEYS

The following is a list of discrepancies between the old survey, H1370, and the present survey:

* See review, par. 7a

Pos.	H 1370		Field No. 82		
14 F'	- 169 fms.	Present survey shows	- 270 fms.	}	These old soundings were evidently recorded 100 fms. in error.
15 F'	- 195 "	" " "	- 295 "		
16 F'	- 232 "	" " "	- 258 "		
(Soundings on both 122 and 82 disprove this, should not be used for charting.)					
18 W	- 227 "	" " "	- 207 "		Reject sounding 227 fms.
14 0	- 311 "	" " "	- 273 "	}	A vertical case near position 15 0 (H1870) shows these old soundings to be too deep. Reject and give new work preference.
15 0	- 321 "	" " "	- 283 "		
16 0	- 341 "	" " "	- 295 "		
17 0	- 356 "	" " "	- 303 "		
18 0	- 366 "	" " "	- 315 "		
19 0	- 350 "	" " "	- 319 "		

H 1370 Field No. 82

Pos. 1 A' - 319 fms. Present survey shows 293 fms. Reject. Give new work preference.

From H-1045(1949) See review par 7b	291	"	"	"	302	"		These old soundings are a little too shoal.
	290	"	"	"	306	"	(Interpolated)	
JGL.	285 ✓	"	"	"	311	"		
14 P	333	"	"	"	319	"	Accept 319.	See review par. 7a
18 C	312	"	"	"	284	"	Accept 284.	
4 U	320	"	"	"	302	"	Accept 302.	
18 P	345	"	"	"	321	"	Accept 321.	
14 Y -	141 ✓	"	"	"	210	"	Due probably to displacement.	

It is recommended that these old soundings be rejected and the soundings from the new survey used for charting purposes.

A copy of 1370 is attached to the smooth sheet and the discrepancies are circled in red ink. ✓

TIDES

The tidal reducers used were obtained from the Santa Barbara tide gage. ✓ A copy of the tide curves used is attached to this report.

FATHOMETER CORRECTIONS

A list of the fathometer corrections used is attached to this report, ✓ also a list is attached inside the front cover of Volume No. 1 sounding record.

Henry J. Healy.
Henry J. Healy,
Jr. H. & G. Engineer.

Approved and forwarded:

O. W. Swainson
O. W. Swainson,
H. & G. Engineer,
Commanding Ship PIONEER.

CHIEF OF PARTY'S REPORT

OF INSPECTION OF SMOOTH SHEET .

This sheet was protracted by Lieutenant G. A. Nelson, and the soundings penciled by Lieutenants W. M. Scalfe and G. A. Nelson.

The sounding records were examined very carefully by Lieutenant H. J. Healy to ascertain that all hydrographic information contained was properly exhibited onthe smooth sheet.

All points of doubt were brought to my attention for action.

O. W. Swainson

O. W. Swainson,
H. & G. Engineer,
Commanding PIONEER.

FINAL FATHOMETER CORRECTIONS
HYDROGRAPHIC SHEET FIELD NO. 51.

#3 & 4 Big FRSD		#1 & 2 Big FRSD		#1 Small FRSD		#1 Small FR x 6	
Depth	Cor'n.	Depth	Cor'n.	Depth	Cor'n.	Depth	Cor'N.
14- 19	+ 1	13- 87½	+ 2	50- 58	+ 2½	100-125	- 1
19½- 32½	+ 1½	88-100	+ 1½	58½- 90	+ 2	126-185	- 2
33- 63	+ 2	101-149	+ 1	90½-100	+ 1½	186-240	- 3
63½-100	+ 1½	150-200	0	101-152	+ 1	241-305	- 4
101-140	+ 1	201-265	- 1	153-210	0	306-365	- 5
141-200	0	266-320	- 2	211-270	- 1	366-430	- 6
		321-385	- 3	271-335	- 2	431-485	- 7
		386-440	- 4	336-400	- 3	486-545	- 8
				401-455	- 4		
				456-505	- 5		

#3 & 4 Big FRSD		#1 Big FRSD	
Depth	Cor'n.	Depth	Cor'n.
11	+ 0.1	8½	+ 0.8
12	+ 0.2	9	+ 0.9
12½	+ 0.3	9½	+ 1.0
13	+ 0.4	10	+ 1.1
14	+ 0.5	10½	+ 1.2
14½	+ 0.6	11	+ 1.3
15	+ 0.7	11½	+ 1.4
15½	+ 0.8	12-12½	+ 1.5
16½	+ 0.9	13-13½	+ 1.6
17½	+ 1.0	14-14½	+ 1.7
18½	+ 1.1	15-15½	+ 1.8
19½	+ 1.2	16-17	+ 1.9
21	+ 1.3	17½-18½	+ 2.0
23	+ 1.4	19-21	+ 2.1
26	+ 1.5	21½-27	+ 2.2

An additional correction of -2½ fathoms for No. 1 Big is applied for Long Dash or FR x 6.

No. 1 Small FRID is same as FR x 6.

STATISTICS

HYDROGRAPHIC SHEET FIELD NO. 82

Date	Day	Statute Miles of Soundings	Number of Soundings	Number of Positions
7/27/34	A	116.0	618	119
10/2/34	B	98.0	564	100
10/3/34	C	33.4	187	37
10/4/34	D	102.3	696	103
10/5/34	E	46.0	433	48
10/8/34	F	79.0	405	77
2/6/35	G	74.2	412	74
2/7/35	H	94.9	788	112
2/8/35	J	69.0	645	86
Totals:		712.8	4748	756

LIST OF COMPARISONS

HYDROGRAPHIC SHEET FIELD NO. 82

Date	Day	V.C.	Fathometer					Bottom
			1-Big FRLD	1-Big FRSD	1-Sm. FRLD	1-Sm. FRx6	1-Sm. FRSD	
July 27, 1934	80 A	295.2						
"	81 A	298.5	302		302			
Oct. 2, 1934	53 B	319.5			328	330		gn.M
"	100 B	294.0						
Oct. 3, 1934		196.6			200	201	197	
		197.0	199	197	198	200	197	
		197.5	199	197	198	200	197	
Oct. 4, 1934	1 D	272.0		276	278	279	277	
	79 D	250.2			255	255		gn. M.
Oct. 5, 1934	1 E	279.9			289	290		gn. M.
	10 E	192.0	192.5		192	195	191	gn. M.
Feb. 6, 1935	11 G	255.5			262			
		240.0			242	244	240	gn. M.
Feb. 7, 1935	42 H	69.1		68.3			66.8	
		66.9		65.0			64.3	
		67.7		65.5			65.5	
	94 H	56.4		54.4				gn. M.
		56.4		54.2				" "
		56.2		54.0			54.5	" "
		55.8		53.6			54.0	" "
Feb. 8, 1935	21 J	52.3		51			52	" "
		52.3		52				
		52.1		52			52	

HYDROGRAPHIC SURVEY NO. 5861

Smooth Sheet yes

Boat Sheet 1

Sounding Records 3 Vols. _____

Descriptive Report yes

Title Sheet yes

List of Signals vol 1

Landmarks for Charts (Form 567) offshore sheet

Statistics yes

Approved by Chief of Party yes

Recoverable Station Cards (Form 524) none

Special Chart for Lighthouse Service (Circular Nov. 30,1933) none

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5861.

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

Number of positions on sheet	756
Number of positions checked	10
Number of positions revised	0
Number of soundings recorded	4748
Number of soundings revised	27
Number of signals erroneously plotted or transferred	.....

Date:

Verification by J.A. McCormick, J.C. McKenney — Time: 18 hrs. ~~5 hrs.~~ 15 hrs.

Review by John G. Ladd — Time: 10 hrs.

Cadd'l. Verification " " " — " 2 hrs.

Survey No. 5861

GEOGRAPHIC NAMES

Date. Sept. 5, 1935

Chart No. 5202

Diagram No. 5202-2

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
	Santa Barbara Channel	same			

(M-136)

LAC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

September 7, 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 5861

Locality Santa Barbara Channel, Southern California

Chief of Party: O. W. Swainsen in 1934-1935
Plane of reference is mean lower low water reading
3.6 ft. on tide staff at Santa Barbara
16.5 ft. below B.M. 1
3.5 ft. on tide staff at Prisoners Harbor
11.8 ft. below B. M. 1

Height of mean high water above plane of reference is 4.6 feet at Santa Barbara; 4.3 feet at Prisoners Harbor.

Condition of records satisfactory except as noted below:

Paul A. Whitney

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5861 (1934-35) - FIELD NO. 82

Santa Barbara Channel, Southern California Coast, California
Surveyed in July, 1934 - February, 1935
Instructions dated June 23, 1934 (PIONEER)

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

Chief of Party - O. W. Swainson.
Surveyed by - O. W. Swainson.
Protracted by - G. C. Nelson.
Soundings penciled by - G. C. Nelson and W. M. Scaife.
Verified and Inked by - J. A. McCormick and F. C. McKenney.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

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

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project, altho relatively few bottom characteristics were obtained, while this is a deep sea survey, bottom characteristics should have been obtained at least at every vertical cast sounding. In view of the general good agreement with the prior survey, additional bottom characteristics from H-1370 (1877) have been carried forward to the present survey.

3. Shoreline and Signals.

Since this is an offshore survey no shoreline is shown. The topographic signals originate with T-4859 (1933), T-4880 (1933), T-4881 (1933), T-4882 (1933), T-4906 (1934), T-4907 (1934) and T-4911 (1934).

4. Sounding Line Crossings.

The cross lines together with the parallel adjacent lines are in good agreement.

5. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

a. Satisfactory junctions are made with H-5830 (1934) on the north, H-5030 (1930) and H-5850 (1932-35) on the east, and H-5773 (1933-35) on the south.

b. The junction with H-5776 (1933-35) on the west is satisfactory. Some differences in depths are noted between the two surveys but considering the depths involved they are not excessive.

c. The junction with H-5860 (1935) on the south will be considered in the review of that survey.

7. Comparison with Prior Surveys.

a. H-1370 (1877).

This survey, on a scale of 1-100,000, covers all of the area of the present survey. While the agreement is generally good, there are a number of discrepancies between the two surveys. These are all listed in the descriptive report, pg. 1 and 2 under "Comparison with Previous Surveys". The more important of these differences are the following:

(1) The charted 169 fathom sounding at lat. 34° 14.3', long. 120° 31.4' and the charted 195 fathom sounding at lat. 34° 15.5', long. 120° 31.2' fall on the present survey in depth of 100 fathoms deeper. The present soundings, combined with those on H-5776 (1933-35), cover the area fairly closely and clearly indicate that these two soundings are in error in either depth or position. For this reason these soundings should be disregarded in future charting.

(2) The charted 141 fathom sounding at lat. 34° 08.8', long. 120° 13.7' falls on the present survey on a slope in depth of 190 fathoms (interpolated). The position controlling this sounding is considered to be slightly out of position since a relatively small displacement would cause the depth to be in agreement with the present survey. The 141 fathom sounding should therefore be disregarded in future charting.

The other differences, more or less minor, have all been investigated. No basis for rejection could be found except that it is probable that the greater depths on the old survey are due to a slight inclination of the wire.

In view of the fact that the comparative soundings indicate that the fathometer was functioning properly and there is therefore no reason to question the accuracy of the present survey. The recommendation by the field party that the present work supersede the previous survey for charting purposes is concurred in.

b. H-1045 (1869) and H-1221 (1874).

These two surveys make very small overlaps with the present survey. The agreements are satisfactory with the exception of the 285 (charted), 290 and 291 fathom soundings from H-1045 (1869) at approximate lat. 34° 17.5', long. 120° 06.5' which fall on the present survey in depth of about 310 fathoms. An examination of the sounding records for H-1045 (1869) shows that the fixes controlling the three soundings are extremely weak, being practically revolvers. The positions of these soundings as shown on the old survey are therefore doubtful and these soundings should be disregarded in future charting.

8. Comparison with Chart No. 5202 (Corrected to October 18, 1934).

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Work Recommended.

No additional field work is required.

11. Superseding Old Surveys.

Within its limits the present survey with the indicated additions from previous surveys supersedes the following surveys for charting purposes:

H-1045 (1869) in part.
H-1221b (1874) " "
H-1370 (1877) " "

12. Reviewed by - John G. Ladd, October 15, 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.

H. S. Borden
Chief, Section of Field Work.

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

Applied to Chart 5116 - L. O. Colbert
Dec. 1935
Applied to Chart 5202 - Mar 30, 1936 L. M. Gleckler
Applied to drawing of Chart 5302 - Mar. 31, 1936 - J. F. Walker
Applied to Chart 5066 11/30/63 John P. Wein
" " " 5066 EXT 11-11-71 R. J. Duncan

25 Dec 31, 1935

Add'l

CHT 5066 EXT FULLY APP'D AFTER V.R. & I 11-11-71 RJD