5772

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.* 19.

LOCALITY

Southern California Coast

San Luis Obispo Bay

193 4

CHIEF OF PARTY

O. W. Swainson, H. & G. Engr.

U. S. GOVERNMENT PRINTING OFFICE: 1933

18703 applied Extension RD/RCS - 8-27-80

Form 537

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 19

REGISTER NO. 5772

State California

General locality Southern California Coast

Locality San Luis Obispo Bay

Scale 1:10,000 Date of survey Oct. to Dec., 19 34

Vessel STR. PIONEER. Stbd. M. S.; Port M. S., and Launch VIRGINIA

Chief of Party O. W. Swainson

Surveyed by O. W. Swainson, H. J. Healy, M. E. Wennermark, R. Harwood

Protracted by H. J. Pulskamp, Draftsman

Soundings penciled by H. J. Pulskamp

Soundings in fathoms ~~feet~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by H.J.Healy, M.E.Wennermark

Inked by J.S.Evans & Kane & Bennett

Verified by J.S.Evans

Instructions dated November 18, 19 32

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT

TO ACCOMPANY SHEET FIELD NO. 19.

AUTHORITY

The hydrography accomplished on this sheet was executed in accordance with instructions dated November 18, 1932, Project 120.

LOCALITY

The sheet constitutes a resurvey of San Luis Obispo Bay. From Longitude 120° 38' to Long 120° 46', and south to Latitude 35° 07'.

CONTROL

The hydrographic lines were controlled by visual fixes on triangulation stations; and topographic stations located by Harold Clarke, Surveyor, in 1934. A list of all signals used is attached inside the front cover of Vol. 1 of the records.

SURVEY METHODS

The inshore work on this sheet is all hand lead soundings obtained from launches. The eastern section of this sheet up to Bird Rock was surveyed by Lieutenant (j.g.) Henry J. Healy, using the starboard motor sailer. From Bird Rock to Avila Rock was surveyed by Lieutenant (j.g.) M. E. Wennermark, using the port motorsailer. The balance of the inshore work was surveyed by R. Harwood, Surveyor, using the chartered launch VIRGINIA. The Str. PIONEER joined the southern limit of the launch work and carried the hydrography south to Latitude 35° 07'. The PIONEER used visual control and obtained soundings with the fathometer.

A regular system of sounding lines was run over the entire area, in general about 80 meters apart. All shoals and rocks were transferred from the previous survey and these were thoroughly investigated. Buoys were placed at the approximate positions of these spots and a lead line was used to determine the shoalest depth. The shoalest sounding and position were recorded in the record.

A wire sweep was used as a means to locate two rocks. A sketch of this sweep and a description will be found on page 37, Vol. 10, of the records for this sheet.

Two overlays showing the areas covered by the sweep are attached to this sheet. This sweeping should not be considered as wire drag work but only as a means to locate the rocks found.

One overlay for K day, starboard motorsailer, is also attached to this sheet. This overlay shows further development south and east of Bird Rock. The soundings on this overlay are in close agreement with those on the smooth sheet and the shoalest soundings were transferred to the smooth sheet. All these sdgs are now plotted on smooth sheet. J.S.E.

DANGERS

It will be noted that the bottom over this area is very irregular and there are numerous rocks and shoals. The following list shows the least depth found on the many rocks and shoals. It also shows the depth shown on the old survey, No. 1270.

	Positions		Depth New survey Fms	Old survey. Fms
1.	Lat. 35° 08.35'		~~8-1/4~~ 7¾	not shown
	Long. 120	46.05		
2.	35	07.86	2-4/6	2-4/6
	120	44.27		
3.	35	08.83	~~8-1/2~~ 7¾ 7 JTW	8-1/2
	120	43.27		
4.	35	09.~~60~~ 63	~~7-1/4~~ 5 5/6	7
	120	43.27		
5.	35	09.52	~~6-5/6~~ 6 1/6	6-1/2
	120	43.05		
6.	35	09.52	2-1/6	2-2/6
	120	43.63		
7.	35	09.~~60~~ 77	5-1/2	not shown
	120	43.~~65~~ 75		
8.	35	09.75	5-1/2	6-1/2
	120	43.75		
9.	35	09.72	4-5/6	6
	120	43.58		
10.	35	09.67	4-4/6	6-1/4
	120	43.46		
11.	35	09.6	5-2/6	6-1/4
	120	43.5		
12.	35	09.66	5-2/6	6-3/4
	120	43.35		

	Position		Depth New survey Fms	Old Survey Fms
13.	Lat. 35°	09.65'	5-5/6 ✓	5-3/4 ✓
	Long. 120°	43.25		
14.	35	09.51	5-4/6 ✓	6-1/4 ✓
	120	43.1		
15.	35	09.52	5-1/2 ✓	7-3/4 ✓
	120	43.00		
16.	35	09.85	4-4/6 ✓	4-3/4 ✓
	120	43.68		
17.	35	09.84	4-1/2 ✓	5-1/4 ✓
	120	43.60		
18.	35	09.85	5-1/2 ✓	5... ✓
	120	43.53		
19.	35	09.88	4-2/6 ✓	4-1/2 ✓
	120	43.20		
20.	35	09.97	5-2/6 ✓	5-1/2 ✓
	120	43.42		
21.	35	10.09	5-2/6 ✓	5-1/4 ✓
	120	43.80		
22.	35	10.15	2-1/2 ✓	2-1/2 ✓
	120	43.5		
23.	35	10.05	4-2/6 ✓	4-3/4 ✓
	120	43.2		
24.	35	10.05	4-1/6 ✓	- - - ✓
	120	43.15		
25.	35	10.13	3-2/6 ✓	3-1/2 ✓
	120	43.10		
26.	35	10.25	2-1/2 ✓	2-4/6 ✓
	120	43.05		
27.	35	10.15	2-1/6 ✓	3 ✓
	120	43.00		
28.	35	09.95	3-4/6 ✓	5-1/2 ✓
	120	42.96		

	Position		Depth ~~Old~~ New Survey Fms	~~New~~ Old Survey Fms
29.	Lat. 35° 09.96'		4 ✓	4-1/2 ✓
	Long. 120 42.75			
30.	35	09.97	2-4/6 ✓	4
	120	42.70		
31.	35	09.97	5 ✓	5-1/2 ✓
	120	42.48		
32.	35	09.71	5-1/2 ✓	4-3/4 ✓
	120	42.83		
33.	35	09.68	3-4/6 ✓	6-3/4 ✓
	120	42.75		
34.	35	09.70	3 ✓	5-3/4 ✓
	120	42.65		
35.	35	09.70	3-1/2 ✓	4-1/2 ✓
	120	42.65		
36.	35	09.78	4 ✓	4-1/4 ✓
	120	42.35		
37.	35	09.75	5-5/6 ✓	6 ✓
	120	42.40		
38.	35	09.65	4 ✓	4
	120	42.50		
39.	35	09.55	3-4/6 ✓	4-1/2 ✓
	120	42.85		
40.	35	09.38	5-2/6 ✓	7-1/4 ✓
	120	42.83		
41.	35	09.36	5-5/6 ✓	6-1/4 ✓
	120	42.95		
42.	35	09.27	6 1/2	6-3/4 ✓
	120	42.86		
43.	35	09.32	5-1/2 ✓	5-3/4 ✓
	120	42.77		
44.	35	09.36	~~5-1/4~~ 5 3/6	4-1/4 ✓
	120	42.72		

	Position		Depth New Survey Fms	Old Survey Fms
45.	Lat. 35° 09.16 Long. 120 42.55		5-1/2 ✓	8-1/2 ✓
46.	35 08.52 120 42.78		9-1/4 ✓	13-1/4 ✓
47.	35 08.48 120 42.22		7-1/4 ✓	7-1/2 ✓
48.	35 08.60 120 41.68		5-1/2 ✓	6-1/4 ✓
49.	35 08.76 120 41.15		1-5/6 ✓	not shown ✓
50.	35 08.75 120 41.02		4-5/6 ✓	do ✓
51.	35 08.99 120 41.15		4-5/6 ✓	do ✓
52.	35 09.09 120 40.85		1-5/6 ?	do ✓ location questioned C.P.E.
53.	35 08.38 120 40.50		2-5/6 ✓	2 ✓
54.	35 09.73 120 44.78	Lansing Pk	3 ✓	5 ✓
55.	35 09.69 120 45.03		2-1/6 ✓	5 ✓

COMPARISONS WITH PREVIOUS SURVEYS

No. 1270 - Agreement with the present survey is very good, A few of the shoals were not checked and a few new shoals were found. The list of dangers shows the shoals with the shoalest sounding of the new survey also the shoalest sounding of the old survey. The few shoals not checked were unimportant due to their closeness to the rocks and shore.

No. 1461 - In fair agreement with present survey.

JUNCTIONS

This sheet joins sheets No. 18 and 46 on the south and sheet No. 110 on the west; the junctions were satisfactory.

FATHOMETER DATA

The data for the reduction of fathometer soundings are attached to this report; also a copy of the reducers used is attached inside the front cover of volume 1 of the sounding records.

ANCHORAGES

The data on anchorages is fully covered in the 1934 edition of the United States Coast Pilot, Pacific Coast.

Henry J. Healy,
Jr. H. & G. Engineer,
U. S. Coast and Geodetic Survey.

Forwarded:

O. W. Swainson,
H. & G. Engineer,
Chief of Party,
Commanding PIONEER.

CHIEF OF PARTY'S REPORT

OF INSPECTION OF HYDROGRAPHIC SHEET AND RECORDS.

This sheet was protracted and plotted by H. J. Pulskamp, draftsman, after completed, it was turned over to Lieutenant (j.g.) Henry J. Healy for verification. He checked the plotting by placing the cover sheet over the boat sheet and also by picking a few positions at random and replotting them. Whenever there was any doubt he called the matter to my attention.

O. W. Swainson

O. W. Swainson,
H. & G. Engineer,
Chief of Party,
Commanding PIONEER.

RECOMMENDATION FOR ADDITIONAL WORK

This bay is extensively used by tankers which load at the Union Oil Dock. It was noted that a portion of the bay has previously been wire dragged. Due to the very uneven character of the bottom of the bay and its extensive use by oil tankers, it is recommended that the entire bay be completely wire dragged.

It is also recommended that the previous survey, No. 1270, be used with the present survey in charting all shoal soundings.

O. W. Swainson

O. W. Swainson,
H. & G. Engineer,
Chief of Party,
Commanding PIONEER.

POSITION OF AIDS TO NAVIGATION

Position of Light Whistle buoy #3.

127b SMS, Sheet #110

(Nut 22°- 29'
(Pier
(Obis 69 - 00

Position of Bell buoy, Souza Rock

77F Launch VIRGINIA Sheet #19

(Price 58°- 45'
(Pier
(Obis 27 - 33
Wale 20 - 15

Position of Sparbuoy #5 black.

11L Launch VIRGINIA

(Nut 43°- 36'
(End
(Babe 97 - 89
Pier - End 31°- 21'

Position of Sparbuoy striped red and black.

12L Launch VIRGINIA

(Ite 57°- 02'
(Pier
(Is 64 - 16
Bri - Pier 32°- 27'

Position of Nun buoy Howell Rock

188H Launch VIRGINIA

(Ite 55°- 02'
(Nut
(Flag 36 - 48
Off - Nut 44°- 35'

Six mooring buoys are maintained by the Union Oil Co. The positions listed were taken by the Launch VIRGINIA.

21K, 22K, 1L, 2L, 3L and 10L

NATURAL OBJECTS RECOMMENDED FOR LOCATION OF AIDS TO NAVIGATION

White Rock, 1933.

Avila Rock, 1933

Chimney on House back of Avila, 1933

San Luis Obispo Lighthouse, 1933.

Pecho Rock, 1933. ?

STATISTICS

Sheet Field No. 19 Str. PIONEER, 1934.

Day	Boat Used	St.Mi. Sndg. Lines	No. of Fath.	Sndgs. Hndld	No. of Pos'ns
A	Ship	61.1	1550		202
B	"	49.1	1557		196
C	"	21.6	468		62
D	"	16.5	413		50
E	"	7.6	181		26
F	"	54.7	1280		164
G	"	24.4	492		94
	total	235.0	5941		794
a	SMS	13.8		339	93
b	"	19.1		584	123
c	"	20.1		622	140
d	"	18.2		526	119
e	"	16.0		686	120
f	"	16.7		486	117
g	"	16.8		422	110
h	"	- -		37	37
j	"	1.4		51	13
k	"	6.9		125	66
m	"	- - Wire sweeping -			27
	total	129.0	5941	3878	965
			9819		

Day	Boat Used	St.Mi. Sndg. Lines	No. of Sndgs. Hndld.	No. of Pos'ns.
A	"Virginia"	5.4	277	58
B	"	12.2	370	102
C	"	28.5	767	207
D	"	14.9	336	93
E	"	1.5	64	16
F	"	10.7	403	131
G	"	5.2	217	47
H	"	29.0	611	187
J	"	11.8	213	81
K	"	4.9	149	46
L	"	0.5	28	13
M	"	1.1	98	36
N	"	0.4	26	17
P	"	- -	21	21
	total	136.1	3580	1055
a	PMS	16.5	558	98
b	"	21.0	532	136
c	"	23.4	600	147
d	"	17.0	351	91
e	"	21.8	716	130
f	"	15.0	375	124
g	"	11.2	368	119
h	"	- -	3	3
j	"	2.8	81	36
k	"	0.8	21	11
l	"	- -	14	12
m	"	wire sweep	3	30
	total	129.5	3622	937
	Grand total	619.6	17021	3751

FATHOMETER CORRECTIONS

Sheet No. 19

Sheet 19 is inshore from sheet 46 and the work on these two sheets was done during the same period. The conditions of temperature and salinity were the same on the two sheets. The theoretical corrections are then the same for both sheets. Computation of the theoretical corrections is shown in the report of Fathometer Corrections, sheet 46.

Computation of Index Correction and the Final Fathometer Corrections is included in this report, as is a graph of the Final Corrections. In the table of Final Corrections, the corrections are shown to the nearest tenth fathom for every half fathom of depth to 25 fathoms. For depths of $25\frac{1}{2}$ to 100 fathoms the corrections are shown to the nearest half fathom.

For depths up to 25 fathoms, the fathometer corrections and tide reducers are entered in the sounding records to the nearest tenth fathom and the sum is reduced to the nearest half fathom and applied to the soundings.

The fathometer scale was uniform throughout.

ABSTRACT OF COMPARISONS
Sheet No. 19.

Date	Pos.	V. C.	Big Oscillator	
			#1 Hyd.	#3 Hyd.
10/27/34	17A	16.0	14.0	15.2
		15.3	14.0	15.2
		15.6	13.8	15.0
		15.2	14.0	15.0
		15.3	13.8	15.0
		15.3	13.8	15.0
	101A	21.6		21.2
		21.5		21.0
		21.5		20.9
	198A	18.4	16.5	17.5
		18.4	16.5	17.4
		18.5	16.5	17.5
10/28/34	152B	20.0	18.2	19.2
		20.1	18.2	19.0
		20.1	18.0	19.0
	196B	13.9	12.1	13.3
		13.9	12.0	13.0
		13.8	12.1	13.0
10/29/34	1C	14.7	12.5	13.8
		14.5	12.8	13.8
		14.4	12.6	13.6
		14.4	12.8	13.6
10/31/34	NoneD	15.6	13.8	14.6
		16.0	14.3	14.8
		16.0	14.2	15.0
		16.1	14.5	15.1
	1D	19.0	17.0	18.2
		19.0	17.0	18.0
		18.9	17.0	18.0
		18.9	17.0	18.0
	None D	19.4	17.8	18.7
		19.4	17.8	18.8
11/20/34	41F	23.9	21.9	22.8
		23.9	21.6	22.7
		24.0	21.9	22.8
	164F	19.3		18.5
		19.4	17.6	18.5
11/21/34	66G	19.1	18.0	18.7
		19.2		18.6
		19.1		18.8

COMPUTATION OF INDEX CORRECTION
Sheet No. 19.

Date	Pos.	V.C.	#3 Hydro. Big Oscillator				#1 Hydro. Big Oscillator			
			Fath. Rdng.	Theor. Cor'n	Crtd. Fath.	I.C.	Fath. Rdng.	Theor. Cor'n	Crtd. Fath.	I.C.
10/27/34	17A	16.0	15.2	-0.2	15.0	+1.0	14.0	+0.8	14.8	+1.2
		15.3	15.2	-0.4	14.8	0.5	14.0	0.8	14.8	0.5
		15.6	15.0	-0.3	14.7	0.9	13.8	0.8	14.6	1.0
		15.2	15.0	-0.4	14.6	0.6	14.0	0.8	14.8	0.4
		15.3	15.0	-0.4	14.6	0.7	13.8	0.8	14.6	0.7
		15.3	15.0	-0.4	14.6	0.7	13.8	0.8	14.6	0.7
	101A	21.6	21.2	+0.3	20.9	0;7				
		21.5	21.0	0.3	20.7	0.8				
		21.5	20.9	0.3	20.6	0.9				
	198A	18.4	17.5	0.1	17.6	0.8	16.5	0.9	17.4	1.0
		18.4	17.4	0.1	17.5	0.9	16.5	0.9	17.4	1.0
		18.5	17.5	0.1	17.6	0.9	16.5	0.9	17.4	1.1
10/28/34	152B	20.0	19.2	0.2	19.4	0.6	18.2	1.0	19.2	0.8
		20.1	19.0	0.2	19.2	0.9	18.2	1.0	19.2	0.9
		20.1	19.0	0.2	19.2	0.9	18.0	1.0	19.2	0.9
	196B	13.9	13.3	-0.6	12.7	1.2	12.1	0.6	12.7	1.2
		13.9	13.0	-0.6	12.4	1.5	12.0	0.6	12.6	0.7
		13.8	13.0	-0.6	12.4	1.4	12.1	0.6	12.7	1.1
10/29/34	1C	14.7	13.8	-0.5	13.3	1.4	12.5	0.7	13.2	1.5
		14.5	13.8	-0.5	13.3	1.2	12.8	0.7	13.5	1.0
		14.4	13.6	-0.5	13.1	1.3	12.6	0.7	13.3	1.1
		14.4	13.6	-0.5	13.1	1.3	12.8	0.7	13.5	0.9
10/31/34	None D	15.6	14.6	-0.3	14.3	1.3	13.8	0.8	14.6	1.0
		16.0	14.8	-0.3	14.5	1.5	14.3	0.8	15.1	0.9
		16.0	15.0	-0.3	14.7	1.3	14.2	0.8	15.0	1.0
		16.1	15.1	-0.2	14.9	1.2	14.5	0.8	15.3	0.8
	1D	19.0	18.2	+0.1	18.3	0.7	17.0	1.0	18.0	1.0
		19.0	18.0	0.1	18.3	0.7	17.0	1.0	18.0	1.0
		18.9	18.0	0.1	18.1	0.8	17.0	1.0	18.0	0.9
		18.9	18.0	0.1	18.1	0.8	17.0	1.0	18.0	0.9
	None D	19.4	18.7	0.1	18.8	0.6	17.8	1.0	18.8	0.6
		19.4	18.8	0.1	18.9	0.5	17.8	1.0	18.8	0.6
11/20/34	41F	23.9	22.8	0.4	23.2	0.7	21.9	1.1	23.0	0.9
		23.9	22.7	0.4	23.1	0.8	21.6	1.1	22.7	1.2
		24.0	22.8	0.4	23.2	0.8	21.9	1.1	23.0	1.0
	164F	19.3	18.5	0.1	18.6	0.7				
		19.4	18.5	0.1	18.6	0.8	17.6	1.0	18.6	0.8
11/21/34	66G	19.1	18.7	0.1	18.8	0.7	18.0	1.0	19.0	1.1
		19.2	18.6	0.1	18.7	0.5				
		19.1	18.8	0.1	18.9	0.2R				

Average I. C. #3 Big FRSD = +0.91
Average I. C. #1 Big FRSD = +0.91

COMPUTATION OF FINAL FATHOMETER CORRECTIONS

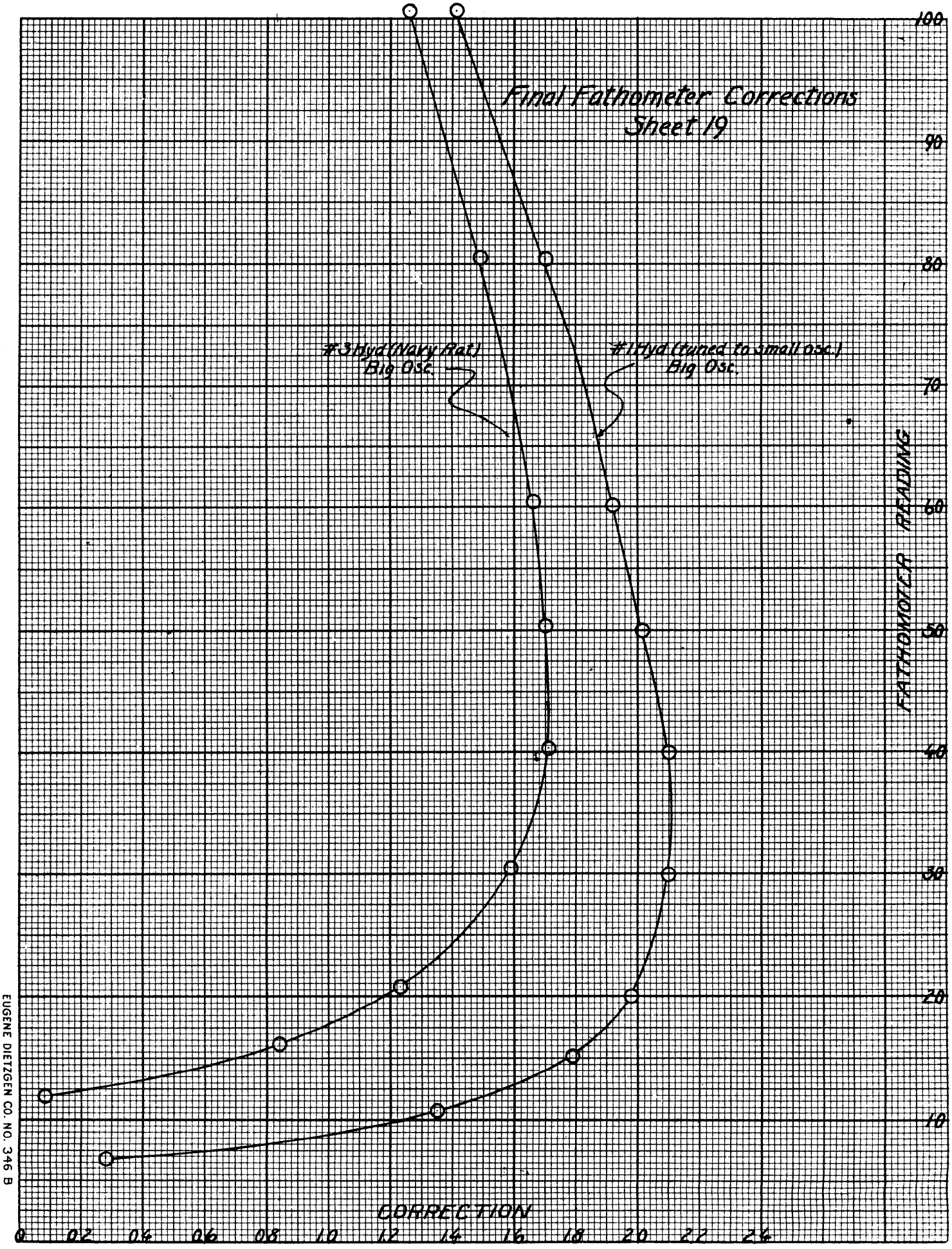
Sheet No. 19.

	No. 1 Hyd. - Big Osc.			No. 3 Hyd. - Big Osc.		
Depth	Theor. Cor'n.	I.C.	Final Cor'n	Theor. Cor'n.	I. C.	Final Cor'n.
7	-0.63	+0.91	+0.28	-2.49	+0.91	-1.58
12	+0.44		1.35	-0.83		+0.08
17	0.88		1.79	-0.07		0.84
22	1.07		1.98	+0.32		1.23
32	1.19		2.10	0.68		1.59
42	1.19		2.10	0.80		1.71
52	1.10		2.01	0.79		1.70
62	1.01		1.92	0.75		1.66
82	0.79		1.70	0.58		1.49
102	0.50		1.41	0.35		1.26
122	+0.3		1.2	+0.1		1.0
152	-0.3		0.6	-0.4		0.5

FINAL FATHOMETER CORRECTIONS

Sheet 19.

Fath. Rdg.	Corn #1 Big	Fath. Rdg.	Corn #3 Big
10	+1.2		-1.0
10½	1.3		-0.7
11	1.4		-0.4
11½	1.4		-0.2
12	1.5		+0.1
12½	1.6		0.2
13	1.6		0.3
13½	1.6		0.4
14	1.7		0.5
14½	1.7		0.6
15	1.8		0.7
15½	1.8		0.7
16	1.8		0.8
16½	1.8		0.9
17	1.9		0.9
17½	1.9		1.0
18	1.9		1.0
18½	1.9		1.1
19	1.9		1.1
19½	1.9		1.1
20	2.0		1.2
20½	2.0		1.2
21	2.0		1.2
21½	2.0		1.3
22	2.0		1.3
22½	2.0		1.3
23	2.0		1.3
23½	2.0		1.4
24	2.0		1.5
24½	2.0		1.5
25	2.0		1.5
25½ - 77	2.0	25½ - 100	1.5
77½ - 100	1.5		



EQC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 28, 1935

Division of Hydrography and Topography:

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

Tide Reducers are approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET 5772

Locality San Luis, Obispo Bay, California

Chief of Party: O. W. Swainson in 1934
Plane of reference is mean lower low water, reading
2.6 ft. on tide staff at Port San Luis
14.6 ft. below B.M. 6

Height of mean high water above plane of reference is 4.5 feet.

Condition of records satisfactory except as noted below:

Paul P. Whitney

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

Survey No. H5772

GEOGRAPHIC NAMES
CALIFORNIA

Date. May 20,1935

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
	~~Fossil Point~~	----------			
	Avila	Same			
	----------	San Luis Obispo Bay			
	Point San Luis	Same			
		~~Pismo Landing~~			
	----------	Souza Rock			
		White Rock			
		Avila Rock			
		Whaler I			
		Smith I			
		Atlas Rk.			
		Lansing Rk.			
		Bird Rk			

APPROVED NAMES
UNDERLINED IN RED
H. L. Flemer

(M-136)

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5772

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

Number of positions on sheet	3751
Number of positions checked	186
Number of positions revised	32
Number of soundings recorded	17,021
Number of soundings revised	1%
Number of signals erroneously plotted or transferred	2 omitted; now plotted.

Date:

Verification & Ink by J.S. Evans Time: 31 Da. - 4 Hrs.

Inked by Kane & Bennett Time: 5 Da - 0 Hrs.

Review by R.J. Christman Time: 33½ hrs.

(Field corrections)

HYDROGRAPHIC SURVEY NO. H5772

Smooth Sheet 1 3 Overlays

Boat Sheet 4

Sounding Records 13 Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) See Letter 418(1935)

Statistics Yes

Approved by Chief of Party O. W. Swainson

Recoverable Station Cards (Form 524)

Special Chart for Lighthouse Service (Circular Nov. 30,1933)

Remarks

Verifier's Report on Sweep on H-5772.

Overlays of field party were inspected. These overlays cannot be used to show a swept area. Comdr. Swanson very evidently did not intend that they should. Purpose of sweep was to save time in locating shoals.

Verifier of hydrographic sheet has verified positions of shoals.

Aug. 22, 1934. Submitted,

J. MacCormick

FIELD RECORDS SECTION
Verification Report on H-5772

August 21, 1935.

1. The records conform to requirements, except that the day letters on the covers of 7 volumes were in black. These are now changed to the proper colors. ✓
2. The depth curves are complete within the limits of the survey, with the exceptions of the 1,2,and 3 fm. curves which are broken inshore in the usual manner. ✓
3. The field plotting was complete with the following exceptions: the sdgs. recorded as flashes or strays were not plotted; these have been placed on the smooth sheet and are respectfully referred to the reviewer for acceptance or rejection. The courses for K day (red) as shown on a tracing cloth overlay, were plotted by the verifier. Foul areas, kelp, breakers, and notes from the boat sheets, were omitted. Strays were rejected R.F.L. ✓
4. Considerable extra work was necessary on this sheet. The shoreline and topographic information was so poorly delineated and placed that it was necessary to erase the entire work of the field plotter, except docks, and redraft completely. The stations and signals were found to check accurately. It is the opinion of the verifier that the shoreline and rocks were transferred from the topo. sheets by a tracing which not only shrunk but was transferred without the necessary adjustment in such cases. No photocomp. is available in this area. Numerous positions and coures had to be replotted, and respaced for proper time interval. In general, the verifier would say that this sheet was carelessly plotted, particularly in consideration of the important developement and dangers in this area. ✓
5. The junctions with available contemporary adjacent sheets are satisfactory. H-5831 (1934), on the west, is not yet verified.
6. Remarks: The list of dangers, rocks, and shoals, in the descriptive report has been compared. A few as marked are found to be erroneously tabulated. In addition to the shoreline discrepancy, the heights of islets were labeled in black ink contrary to the usual practice of labeling in red. The low water, and foul area lines, were apparently drawn in ink and later erased, obliterating a large percentage of the inshore sdgs. The depth curves as drawn by the field plotter were satisfactory with the following exceptions: the 4, and 6 fm. curves were drawn unnecessarily. The 10 fm. curve was not controlled by the 1/4 fm. fractions between 10 and 11 fms. The wire drag areas have been inspected and the verifier finds that the boat sheet for the Souza Rock location is not accurately plotted. About 5% of the sdgs. between 6, and 7 fms. were plotted in 1/4 fms. instead of 1/6 fms. The boat sheets have been used as the authority for additional information on rocks, kelp, breakers, etc. Two signals GAY, and TEL, on docks, were omitted; these are now plotted. Any remaining evidence of a sunken dock, north of White Rock is apparently questioned on the boat sheet; the verifier has plotted this dock in pencil for the consideration of the reviewer. Leaders are penciled to those sdgs. recorded as flashes or strays, as referred to in para. 3, of this report. A prominent rock at 66k (red) located on the boat sheet at lat. 35-09.1, long. 120-40.8, is in conflict with the records; a note is written on the smooth sheet to this effect. ✓

The topography was taken from the following sheets: 6273, 6274, 6285, 6286, (all 1934). ✓

Respectfully submitted,

T. S. Evans

T. S. Evans.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5772 (1934) - FIELD NO. 19

San Luis Obispo Bay, Southern California Coast, California
Surveyed in October - December, 1934
Instructions dated November 18, 1932 (PIONEER)

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

Chief of Party - O. W. Swainson.
Surveyed by - O. W. Swainson, H. J. Healy, M. E. Wennermark, and R. Harwood.
Protracted by - H. J. Pulskamp.
Soundings penciled by - H. J. Pulskamp.
Verified and Inked by - T. S. Evans, Kane and Bennett.

1. Condition of Records.

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

a. Day letters on the covers of 7 sounding books were in black. They have been changed to the proper color in the office.

b. Smooth sheet was plotted in fathoms instead of in feet for depth unit as provided in par. 152, Hydrographic Manual. The soundings have been inked in fathoms and fractions.

c. The Descriptive Report does not mention features added to the chart since the prior surveys (see par. 8a(2) and (3) of this review). In other respects the Report is satisfactory.

2. Compliance with Instructions for the Project.

The plan and extent of development are in accordance with the instructions for the project except that the following soundings plotted on the smooth sheet by the verifier in the office should have had further investigation.

* These soundings have been proved to be erroneous by W.D. H-6122 (1936)

a.	An	8-1/2*	in lat.	35° 08.37',	long.	120° 46.30';	covered with effective depth of	60 ft.
b.	A	7-1/4*	" "	35° 08.3' ,	"	120° 44.4' ;	" " " "	62 "
c.	A	7-1/4*	" "	35° 08.57',	"	120° 44.30';	" " " "	62 "
d.	An	8-1/2*	" "	35° 08.5' ,	"	120° 44.0' ;	" " " "	62 "
e.	A	7-1/4*	" "	35° 08.37',	"	120° 43.85';	" " " "	62 "

B.R.

These soundings were recorded under "Remarks" with notes indicating that they were considered as a Flash or a Stray. Due to the character of the bottom as indicated by Souza Rock and also because the 7-3/4 fathom shoal in lat. 35° 08.35', long. 120° 46.05' was similarly recorded as "2 Flashes at 12 fms." and only later located by an improvised drag, they have been placed on the smooth sheet in pencil pending further investigation. They should not be charted at this time.

3. Shoreline.

Shoreline and signals were transferred from T-6273, T-6274, T-6285, and T-6286, all of 1934.

The plotting of the one hydrographic signal (Jet) was checked from the records.

4. Sounding Line Crossings.

Depths on crosslines resulting from the development are in good agreement and soundings on adjacent lines are consistent.

5. Depth Curves.

Within the limits of the survey, the usual depth curves may be satisfactorily drawn including portions of the 1 and 2 fathom curves.

6. Junctions with Contemporary Surveys.

Junctions with H-5749 (1934) and H-5748 (1933-34) to the south and with H-5831 (1934) to the west are satisfactory.

7. Comparison with Prior Surveys.

a. H-290 (1851).

This is a small scale reconnaissance survey showing a few soundings along the coast. All the information on the sheet has been adequately covered by later surveys.

b. H-302 (1852).

This is a preliminary survey of San Luis Obispo Bay on scale 1-10,000. All the information on the sheet is adequately covered by later surveys.

c. H-1270 (1875).

This survey on scale 1-10,000 is a close development of San Luis Obispo Bay. It is in good agreement with the present survey but there are a number of indications of shoals that have not been satisfactorily disposed of by the 1934 survey and they are shown on H-5772 (1934) in color. With the indicated additions the 1934 survey is considered adequate for charting purposes but if a larger scale chart should be constructed the information on the present survey may be supplemented from H-1270 (1875). Special attention is directed to the following:

(1) Reference to the sounding records shows that the 4 foot depth charted in lat. 35° 10.3', long. 120° 43.1' should be 4 fathoms, the depth curve having been omitted in the original plotting.

(2) The 17 foot depth (charted) lat. 35° 10.3', long. 120° 44.45' probably no longer exists. The wharf has been constructed since the above survey was made and it is likely that the rock would be marked if it still existed. However, as the present survey does not show any sounding on the exact spot and no reference is made to it in the Descriptive Report it has been shown on H-5772 (1934) in color.

See note at bottom of letter from field party of Nov. 2, 1935 attached to this report. A.L.S. 9/10/36

(3) The 19 foot depth charted in lat. 35° 09.7', long. 120° 42.8' is probably an error in charting as it falls on a 4-3/4 fathom sounding (29 feet) on the above survey and no other authority for it was found. It should be expunged from the chart.

d. H-1461 (1879-80).

This survey, scale 1-10,000, covers the eastern part of San Luis Obispo Bay and the agreement with the present survey is generally good. Two shoal soundings have been carried forward to H-5772 (1934) and the above survey may be superseded, as the present survey shows a much closer development of the area.

e. H-3101 (1910).

This survey, scale 1-10,000, covers the approach to San Luis Obispo Bay. The regular hydrography was supplemented by a wire drag set to 8 fms. (uncorrected) and cruising with a sentry set at 12 fathoms. Depths are in good agreement with the present survey. The 48 foot spot charted in lat. 35° 08.35', long. 120° 46.1' is derived from this survey. The 1934 survey found a least depth of 7-3/4 fathoms in this location and an 8 fathom spot about 50 meters to the north. The latter was not shown by the 1910 survey. Soundings on H-5772 (1934) are adequate for charting purposes but the 1910 survey has not been superseded because of the wiredrag and sentry work shown on it.

f. H-3358 (1912).

This is a wire drag survey plotted on scale 1-20,000. Nearly all the soundings shown on it have been transferred to H-5772 (1934) in color. The soundings that have not been transferred approximate the depths shown on the present survey. The 15 foot sounding (charted) in lat. 35° 10.35', long. 120° 44.4' falls under the present wharf and therefore need no longer be charted. It has, however, been carried forward to the present survey. (See letter from Union Oil Co. attached to this report). A.L.S. 9/10/36

g. See Addenda attached to this review.

8. Comparison with Chart No. 5386.

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs except as follows:

(1) The Port San Luis Wharf and the Union OilWharf are taken from Bp. 23795 (1929) and Bp. 23796 (1928), respectively.

(2) The former standard of chart 5386 gives the authority for the extension of the jetty to its present representation on the chart as chart letter 71 of 1914 but the letter was missing from the files. The part shown by broken lines was not covered by the present survey, otherwise it is in agreement with the chart.

(3) The wharf at Oilport (shown in broken lines) lat. 35° 10.4', long. 120° 42.3', is derived from Bp. 12138 (1907). A news note recorded on the Old Standard 5386 states that it was washed away in 1907, also see Desc. Rep. H-3101 of 1910, chart letter 425 of 1916 and Bp. 23784 (1931). The present survey does not show any indication of the wharf. (See par. 10, this review).

(4) See Addenda II attached to this review.

b. Aids to Navigation.

The Fl W whistle buoy "3" (lat. 35° 09.1', long. 120° 44.75') and Buoy N2 (lat. 35° 09.4', long. 120° 43.8') are charted about 100 meters west by north and west by south, respectively, of the positions given by the present survey.

The bell buoy in lat. 35° 07.85', long. 120° 44.35' has been changed to "(Fl R) Gong" and is charted about 50 meters west of the position shown on the present survey. (L. H. N. M. No. 25 of 1935).

The other aids are in substantial agreement with the charted positions.

9. Field Plotting.

While the signals were accurately transferred from the topographic sheets, the shoreline and other detail were poorly delineated and it was necessary to revise a large amount of the transferred topography. Numerous positions were found to be erroneously plotted. These were corrected in the office.

The depth unit used was fathoms and fractions instead of feet as required by par. 152, Hydrographic Manual.

10. Additional Field Work Recommended.

The survey in general is satisfactory but the following items have been referred to the wire drag party of the Steamer GUIDE, working in this vicinity. Additional work has been accomplished. See letter attached to Desc. Report. R.J.C. Jan. 9, 1936

a. A rock with a least depth of 1-5/6 fathoms in lat. 35° 09.1', long. 120° 40.8'. This is the position as plotted on the smooth sheet and on the boat sheet, but when plotted according to the angles recorded in the sounding record (pos. 66K, red) it falls 500 meters 152° from the above position. There is no supporting evidence in the record as it is a detached position taken while returning to the ship at the end of the day. 1 5/6 as plotted on smooth and boat sheet retained. See letter attached.

b. The 2-5/6 fathom spot in lat. 35° 10.3', long. 120° 44.45', see par. 7c(2) of this review.

c. A definite recommendation relative to the charted wharf discussed in par. 8a(3). Not to be charted.

d. The soundings noted in par. 2 of this review should be examined with the wire drag. These soundings are proven to be erroneous by W.D. H-6122 (1935) 7/6/36 B.R.

11. Note to Compiler.

The soundings left in pencil on the smooth sheet in the approach to San Luis Obispo Bay are not to be charted pending further investigation. See par. 2 of this review.

12. Superseding Old Surveys.

Within the area covered, the present survey with indicated additions supersedes the following surveys for charting. For other prior surveys see par. 7c, e and f of this review:

H- 290 (1851)	in part.
H-302 (1852)	entirely.
H-1461 (1879-80)	in part.

13. Reviewed by - R. J. Christman, September 9, 1935.

Examined and approved:

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

L. O. Colbert
Chief, Division of Charts.

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

G. F. Rude
Chief, Division of H. & T.

I

Addenda to Review of H-5772 (1934)

7. Comparison with Prior Surveys.

9. Chart Letter 111 dated Feb. 21, 1912, is diagrammed as hydrographic information. It is an advance report of an examination of Lansing Rock giving the least depth as 24-8/10 feet. The wire drag survey of March - April 1912 (H-3358) gives the depth as 25 feet but a 23 foot sounding about 250 meters to the southeast of it has been charted as Lansing Rock. The present survey gives 18 feet (3 fathoms) as the depth in Lansing Rock as now charted.

Reviewed by - R. J. Christman, Dec. 4, 1935.

Inspected by - A. L. Shalowitz.

Applied to drawing of Chart 5302-May. 19, 1936- J.W.

Addenda II to Review H-5772 (1934)

Addenda to par. 8(a.)

(4) The 30 foot Rk off the wharf in lat. 35°10.19', long. 120°44.39', originates with Chart Letter 425 of 1916. The depth is derived from the report of a rock 4 feet high, 35 feet south of the middle of the wharf, the surrounding depths as shown on H-1270 (1875) being 5-3/4 fathoms. An examination of the sounding records shows that the actual reduced soundings are 35 feet and 31 feet should be accepted as the depth over the rock for future charting purposes.

Chart letter 425 of 1916 also reports three rocks (not charted) lying eastward of the former wharf in approximate lat. 35°09.90', long. 120°44.90', rising 3 and 4 feet above the general level of the bottom. The present survey shows a 3-4/6 fathom sounding surrounded by 4-1/2 to 5 fathoms and the present survey is considered adequate for charting purposes.

Reviewed by - R. J. Christman, July 1936.

Inspected by - A. L. Shalowitz.

COPY

See Reply attached herewith

22-RS
1995 GU 4

September 17, 1935.

To: Commanding Officer,
Coast and Geodetic Survey,
Ship GUIDE,
510 Customhouse,
San Francisco, California.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Additional field work, vicinity San Luis Obispo Bay.

Under separate cover there are being forwarded to you photostats of two sections of hydrographic sheet No. 5772, San Luis Obispo Bay. This work was accomplished by the Ship PIONEER in 1934. The review of this sheet has just been completed. Certain questions have arisen which it is desired to have cleared up by your party while working in that locality,

The 1-5/6-fathom sounding on a rock shown in latitude 35° 09'.1, longitude 120° 40'.8, was plotted on both the boat and smooth sheets using the position WAS-LOT-BOX, 39° 12', 38° 26'. However, in the record book the fix is recorded as WAS-NEY-BOX. As recorded, the position plots 500 meters, 152° from the position plotted by the field party. The correct location of this rock should be determined.

The 2-5/6-fathom sounding in latitude 35° 10'.3, longitude 120° 44'.5, is carried forward from survey H-2170 of 1875, where it is shown as 17 feet. The sounding was taken before the present wharf was built. The new survey in 1934 does not show this sounding. The locality should be examined sufficiently to prove or disprove the existence of this shoal or rock.

The wharf at Oilport, which is shown in broken line on chart No. 5386, latitude 35° 10'.4, longitude 120° 42'.3, was carried forward from blueprint No. 12138, 1907. According to an item in the San Francisco Chronicle, it was washed away in 1907. In 1919 and 1926 field parties of this Bureau reported that it had washed away and it probably would not be rebuilt. The survey of last year shows no indication of remains of this wharf. However, a definite recommendation, relative to expunging it from the chart, is desired.

In connection with your wire drag work in this locality, the following soundings which were recorded as flashes or strays should be examined at an effective depth of not less than 10 fathoms:

(a)	8½	fathoms	in lat.	35°	08!37,	long. 120° 46!3
(b)	7¼	"	" "		08!3	" 44.4
(c)	7¼	"	" "		08.57	" 44.3
(d)	8½	"	" "		08.5	" 44.0
(e)	7¼	"	" "		08.37	" 43.85

(Signed) R. S. Patton

Director

cc. San Francisco
PIONEER

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

For Chief 20 25- 80 KTA 82 CKG Mr Christman

1935 NOV - 6 - PM 12:0

20

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY
Steamer GUIDE, P. O. Box 1197,
Oakland, California,
November 2, 1935.

To: The Director, U. S. Coast and Geodetic Survey,
Washington, D. C.

From: The Commanding Officer, U.S.C. & G.S.S. GUIDE.

Subject: Additional work, vicinity of San Luis Obispo Bay.

Reference: Director's letter 22 RS 1995 GU 4, dated 9-17-35.

It is recommended that the "WAS-LOT-BOX" fix mentioned in paragraph two of reference be used for the location of the 1 5/6 fathom sounding, in accordance with the investigation described below.

Search was made for the 1 5/6 fathom sounding in both locations given. No sounding near that depth was found at either spot, although 3 5/6 fathoms was found in nearly the exact spot using the "WAS-NEY-BOX" fix. An attempt was made to wire drag the latter spot with three fathoms effective depth. No continuous lines could be dragged due to repeated grounds on other spots as shown on the enclosed tracing. However, the drag caught on a 3 fathom spot 110 meters before reaching the spot indicated, and, on being cleared and dropped immediately, it caught, (due to slack wire in a deep bight), on a 4 fathom spot 120 meters beyond. It is not thought possible that the wire could have cleared 1 5/6 fathoms, if such existed, between these two spots. It is recommended that the 1 5/6 fathoms be not shown in the second position indicated in above reference but that the soundings shown on the enclosed tracing be shown.* Due to foul ground and kelp no drag examination could be made of the first named spot, and though not even an indication was found with the lead, it could be shown at that spot as a safety measure. The area is so foul that it would not be misleading in any case.

(attached to this report)

Disposed of in accordance with this recommendation. A.L.S.

It was also impossible to drag in the location of the 2 5/6 fathoms sounding mentioned in paragraph three of above reference, because of interference by the dock and by the mooring buoys. The

Acknowledged ..... on
Date
Form 501 ..... Initials

*. These soundings will be added to smooth sheet upon receipt of wire drag sheet covering this area. A.L.S.

hand-lead was dragged back and forth over the spot in search of rock indications. Nothing but smooth sand bottom and even depth was found. The tracing supplied indicates that the wire-drag of 1912 (H-3358) covered this spot, and also the adjoining 15 feet spot shown on Chart No. 5386, with a 21 feet effective depth. It is recommended that they be removed from the chart. } See note below

An officer was detailed to investigate, at low tide, the possibility of old piles remaining at the location of the old wharf at Oilport mentioned in paragraph four of above reference. He reported that no trace remains except some negligible ruins on the bluff. It is impracticable to drag so close to the beach or close enough to bottom to state positively that there are no sub-surface remains, but it is not believed there are any which would menace any craft liable to venture into that area, and it is recommended it be removed from the chart.

All of the spots listed under paragraph five of above reference were dragged, as directed, with an effective depth of over 60 feet. All were cleared.

F. H. Hardy

F. H. Hardy,
Chief of Party, C. & G. S.,
Commanding Ship GUIDE.

Note

The 2¾ fms. sounding was barely cleared by a 23 foot drag on H-3358 (1912), but it is not conclusive. The only sounding recorded in the present examination is a 4⅝ fms. about 100 m. away (H-6122). (See also Descriptive Report, H-6122, pg. 4, par. 1 under "Comparison with Chart 5386"). Since no soundings are recorded directly over the 17, it is being retained until disproved. Existence tacitly confirmed by letter from Union Oil Co. attached to this report. The 15 foot spot referred to above originates with the wire drag of 1912 (H-3358) but was not cleared by that survey. However, since it was found to fall practically under the dock which was built subsequent to the wire drag survey of 1912, it was not considered of importance now and its omission from the chart is recommended. (See Review, par. 7f, H-5772). A.L.S. 9/10/36

9.T.S.
KTM

82-LEF

August 29, 1936.

Union Oil Company of California,
San Luis Obispo,
California.

Gentlemen:

Enclosed is a section of our Chart 5386, covering the vicinity of the Union Oil Dock in San Luis Obispo Bay, California.

Encircled in red on this chart is a rocky shoal with depths of 15 and 17 feet over it. Both depths originate with surveys by this Bureau made prior to the construction of the dock, the 17 having been located in 1875, and the 15 in 1912. Recent surveys by this Bureau indicate that this shoal no longer exists, but the evidence is not conclusive.

This office would like to know whether you have any information which shows that this shoal was removed at the time the dock was built or at any time subsequent thereto.

Both soundings retained on H-5772 (1934). See reply 9/2/36 attached to this report.

Thanking you for any assistance you may give us in this matter, I am

Very truly yours,

(Signed) PAUL C. WHITNEY

Acting Director.

Enclosure.

80

Union Oil Company of California

PRODUCERS AND REFINERS OF
CRUDE OIL, FUEL OIL, ROAD OIL AND ASPHALT,
UNION GASOLINE, KEROSENE AND DISTILLATE,
'RED LINE' LUBRICATING OILS AND GREASES.

August 29, 1936

82-LEF

San Luis Obispo, California
September 2, 1936

1936 SEP 8 AM 9 52

Department of Commerce
U. S. Coast and Geodetic Survey
Washington

Gentlemen:

We return herewith section of your Chart 5386 covering the vicinity of the Union Oil Dock in San Luis Obispo Bay, California.

The rocky shoal which you have encircled in red on the map, is still there and as far as we know is in its original condition.

Very truly yours,

R. V. Rosbrough

Superintendent
Northern Division

RVR:ELW

41

120 40

BOX

LOT

NEY

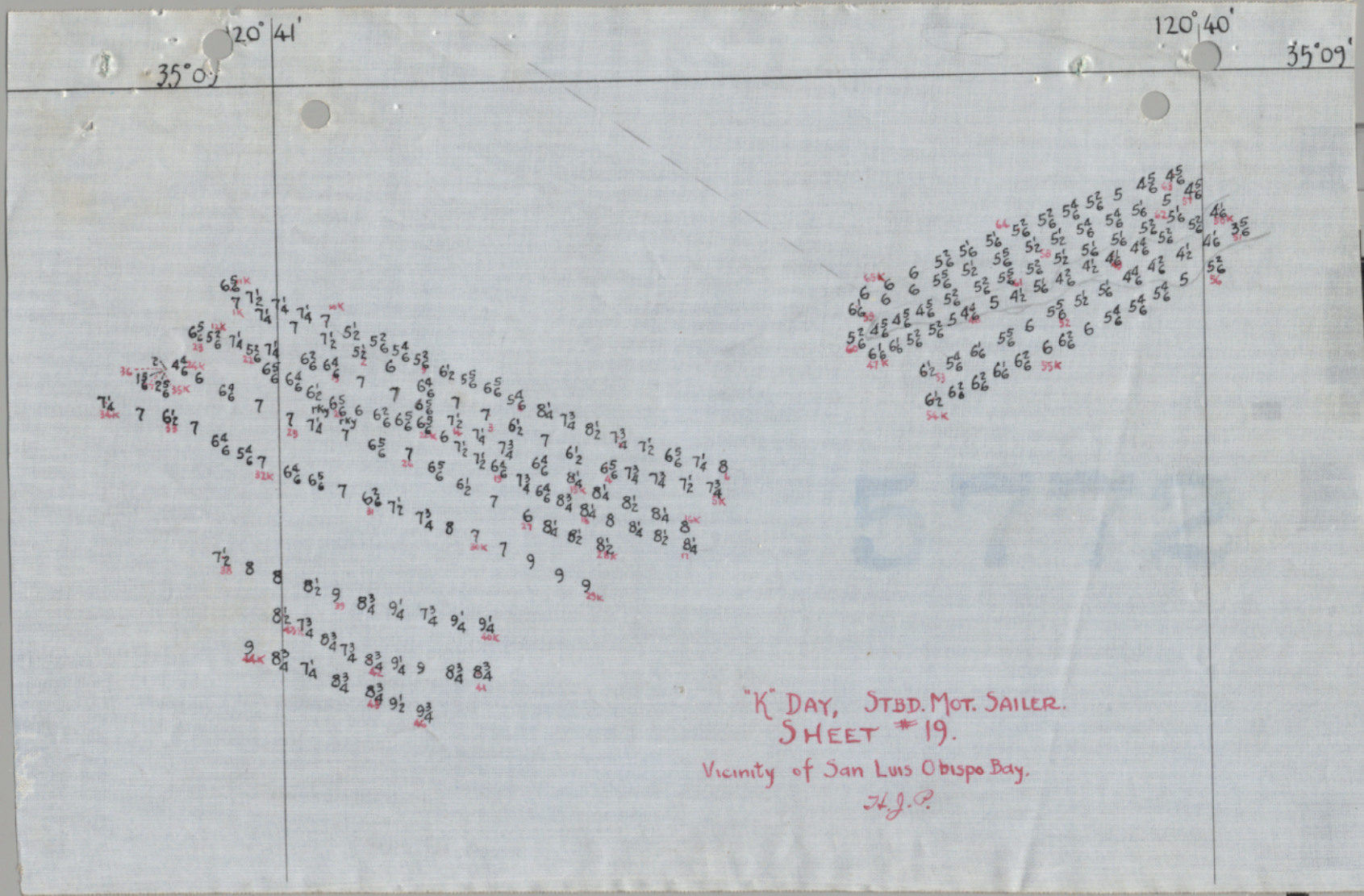
WAS

35 09

BIRD ROCK

These soundings reported as advance information by field party in Chart Letter 945 of 1935. Remaining soundings may be applied to Chart from this tracing pending receipt of wire drag sheet covering this area, after which they will be transferred to hydro. sheet (H-5772).
A.L.S.

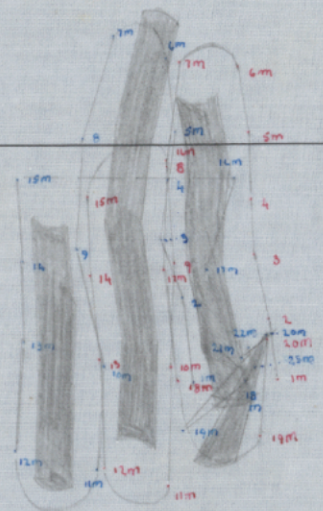
SOUNDINGS ON SHOAL SPOTS FOUND DURING INVESTIGATION AS DIRECTED IN DIRECTORS LETTER OF SEPT. 17, 1935, 22-RS-1995 GU4.



"K" DAY, STBD. MOT. SAILER.
SHEET #19.
Vicinity of San Luis Obispo Bay.
H.J.P.

34°08'

34° 08'



Overlay for Sheet 19
Area Swept to
Locate Shoal.

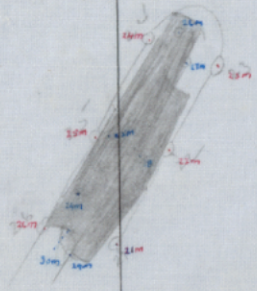
5772

120°45'

120°44'

34° 09'

34° 09'



Overlay for Sheet 19
Area Swept to
Locate Shoal.

5772

34° 08'

34° 08'

120° 46'

120° 45'

25 Jan 15, 1936
Calif

H-5772. Applied To chart Extension (1878) 8-8-80 8-27-80
35°09' To 35°25" R Richmond Pac