

4977

Diag. Cht. No. 5530-4

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. ⁴ 4977
LOCALITY	
Pt. San Pedro	
Pt. Montara to 2 miles north of Mussel Rocks	
1929.	
CHIEF OF PARTY	
O.W. Swainson	

U. S. GOVERNMENT PRINTING OFFICE: 1928

4977

C. & G. SURVEY
L & A
APR 2 1930
Acc. No.

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 4 4977

CALIFORNIA COAST

1929

U.S.C. & G.S.S. PIONEER
O. W. Swainson, Commanding

D E S C R I P T I V E R E P O R T

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 4.

INSHORE HYDROGRAPHY COAST OF CALIFORNIA VICINITY OF SAN PEDRO Pt.

AUTHORITY

Director's Instructions dated April 9, 1929.

SCALE

The scale of this sheet is 1:20,000.

SURVEY METHODS

Sounding was done by hand lead only. The speed of the launch was regulated so that all vertical casts gave reliable soundings.

All fixes consisted of sextant angles observed on definite points which had previously been located by triangulation and topography.

LIMITS

This sheet covers the area between the approximate fifteen fathom curve and the shore. At the north end it joins hydrographic sheet No. 3 (field) and the old work on the San Francisco Bar, and extends south to the vicinity of Montara Point where it joins hydrographic sheet No. 5 (field).

DANGERS

The only new dangers which were found on this sheet are some which can be considered dangerous only to small boats because of their close proximity to the shore.

These dangers are as follows:

Lat. 37° - 36' + 1070 m.	
Long. 122° - 30' + 440m.	1½ fathom sounding.
Lat. 37° - 36' + 110 m.	Rock - bares about 2 feet
Long. 122° - 31' + 110 m.	at low water
Lat. 37° - 36' + 60 m.	Rock - bares about 2 feet
Long. 122° - 31' + 130 m.	at low water
Lat. 37° - 36' + 40 m.	
Long. 122° - 31' + 200 m.	Sunken rock

ANCHORAGES

This part of the coast does not furnish any anchorage for either large or small boats unless possibly a small boat might care to take advantage of the bay about three-quarters of a mile northeast of San Pedro Rock, to get protection from an easterly storm. In such cases, however, a small boat could usually go north to San Francisco or south to Half Moon Bay without any more danger than to anchor here.

When the wind blows from a westerly direction there is always a heavy swell running in this bay, so that it does not afford any protection at such times.

INVESTIGATION OF AREA ONE MILE NORTHEAST OF PT. SAN PEDRO.

This area was thoroughly sounded, bottom specimens taken, and watched for breakers, but no breakers were seen at that place and no good cause for any was found. The party was in this vicinity at times when the weather was quite heavy, but the only places any breakers were ever seen were on the rocks described above as dangers.

No rocky bottom was found in this area until within about one-quarter mile of the shore. The area outside of that was all fine gray sand.

It is the writer's belief that sometimes during very heavy westerly weather that there might be an occasional breaker in seven or eight fathoms of water with a smooth sand bottom, because for a distance of about one mile north of Pt. San Pedro the swell is much heavier than at any other point on the sheet. This is probably affected in some manner by currents flowing around Pt. San Pedro.

COMPARISONS WITH PREVIOUS SURVEYS.

At the junction with the old work on the San Francisco Bar the discrepancies do not exceed one fathom with the exception of one case, and in this one case it is less than two fathoms. The exact locations of these discrepancies will not be noted because in all cases the new work gave the deeper sounding.

In comparing the new work with chart 5530 it is also noted that most of the new sounding in this area is slightly deeper than that shown on the chart.

The rocks described under paragraph headed "dangers" are not shown on chart 5530, and the character of the bottom north of Pt. San Pedro is sandy instead of rocky.

TIDES

The tide gauge at Drakes Bay was used in the reduction of tides for this sheet.

Earl O. Heaton

Earl O. Heaton,
H. & C. Engineer.

Approved and forwarded:

O. W. Swainson

O. W. Swainson,
H. & C. Engineer,
Chief of Party.

STATISTICS - HYDROGRAPHIC

SHEET NO. 4.

Date 1929	Day Letter	Volumm	Visual Positions	Statute Miles	Leadline Soundings	Boat
Sept. 19	a	1	75	13.0	300	MIANUS
20	b	1	13	2.7	50	"
24	c	1	71	14.8	251	"
25	d	1	54	9.7	217	"
26	e	1	41	6.2	153	"
27	f	1	71	13.7	227	"
Oct. 3	g	1 & 2	87	17.7	332	"
4	h	2	109	23.7	355	"
5	j	2	78	18.2	283	"
10	k	2	84	17.7	255	"
11	l	2 & 3	103	24.5	337	"
14	m	3	69	14.3	237	"
22	n	3	121	26.9	455	"
24	p	3	109	20.7	109	"
25	r	3	15	3.0	41	"
28	s	4	7	1.5	20	"
30	t	4	126	29.5	426	"
31	u	4	104	24.9	353	"
Nov. 1	v	4	85	18.1	247	"
4	w	5	63	16.1	210	"
5	x	5	69	14.2	207	"
8	y	5	16	3.7	59	"
Totals			1570	339.8	5,316	

April 19, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4977

Locality: California (Point Lobos to Point San Pedro)

Chief of Party: O. W. Swainson in 1929
Plane of reference is mean lower low water, reading
3.8 ft. on tide staff at Point Reyes
ft. below B. M.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.


Chief, Division of Tides and Currents.

Section of Field Records
Sheet No H 4977
Surveyed in 1929
Chief of Party J. W. Swanson
Surveyed by E. O. Heaton
Protected by G. R. Fish
Soundings Plotted by J. C. Ellerbe Jr.
Verified & Inked by H. M. Blossom

1. The records conform to the requirements of the general instructions.
2. The plan and character of development fulfill the requirements of the general instructions.
3. The usual depth curves can be completely drawn within the limits of the sheet.
4. The field plotting was completed to the extent prescribed in general instructions.
5. The office draftsman did not have to do over any part of plotting done by field party, except as noted on statistical sheets. And there were 1372 soundings revised as a result of an error in transferring feet into fractions of a fathom.
6. An examination of the contemporary adjacent sheets will be made when those sheets are verified.

Respectfully submitted,
H. M. Blossom

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

AND REFER TO No. 11-WSW

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 28, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4977

Point ~~Martara~~^{on} to 2 ~~meters~~^{miles} North of Mussel Rocks

Surveyed in 1929

Instructions dated April 9, 1929

Chief of Party, O. W. Swainson.

Surveyed by E. O. Heaton.

Protracted and soundings plotted by G. R. Fish and J. C. Ellerbe.

Verified and inked by G. C. McGlasson.

1. The records conform generally to the general instructions in Hydrographic Manual.
2. The work conforms to the specific instructions. The spacing of lines and character of development conform to the specific instructions. However on the extreme southwest limits of this hydrography, additional work should have been done as this survey completely misses a development of Colorado Reef (sheet 835 a). There are indications here of a shoal which should have been investigated by the field party.
3. Junctions:
 - a. As the contemporary adjoining sheets are not yet completed, it will be necessary to await their completion before the junctions can be reviewed. The junction with sheet 835a (called for in the instructions) was made in so far as sounding lines only are concerned. As was stated above in paragraph 2, this sheet (4977) fails to develop Colorado Reef or to investigate the rocky shoal indications they obtained. The junction with the ship's sheets (Pioneer 1929) was not made, due, no doubt to the incompleteness of the work called for in the instructions.
4. Comparison with old surveys:
 - a. A comparison was made with the old surveys Nos. 2504, 835a and 456 and the soundings agreed very well in general. As has been stated before (paragraph 2 & 3) the new survey did not develop Colorado Reef around Lat. 37° 33', Long. 122° 32'. It is therefore recommended that sheet 835a be used in charting soundings in the area which it covers.

The new survey, 4977, should be used in preference to all other work in the remainder of the area covered. The old work may be used to fill in vacant places.

5. Notes to compiler:

a. The word "Breaks" which appears on chart 5530, about 1 1/2 miles northeast of Point San Pedro, should be expunged, (See descriptive report accompanying 4977). This area was very well developed and of sandy bottom. It is believed therefore that this break does not exist with the possible exception of a very severe westerly storm in which case most of the coast to about 5 or 6 fathoms is breaking anyway. Authority for this is a fisherman report (see letter 399, 1915).

b. The dangers listed in the descriptive report have been checked and found correct.

c. The rocks awash and sunken, shown on the hydrographic sheet and not shown on the topographic sheet were checked and should be accepted as shown.

6. Additional work:

a. No additional work is required within the limits of this sheet unless it is desired to further develop Colorado Reef sheet 835a. However this old sheet (835a, 1910) is believed complete.

7. Reviewed by I. E. Rittenburg, August, 1930.

Approved:

A. M. Sobieralski
Chief, Section of Field Records (CHARTS)

J. Borden
Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4977

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. 4

REGISTER NO. 4977

State California

General locality Pt. San Pedro
~~Northern California Coast~~

Locality Pt. Montara to 2 miles north of Mussel Rocks
~~Montara Pt. to beach south of Golden Gate.~~

Scale 1:20,000 Date of survey Sept. 19 - Nov. 8, 1929

Vessel MIANUS

Chief of Party O. W. Swainson

Surveyed by E. O. Heaton

Protracted by G. R. Fish

Soundings penciled by J. C. Ellerbe, Jr.

Soundings in fathoms ~~fathoms~~

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated April 9, 1929

Remarks:

11-WSW

August 28, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4977

Point Martara to ^{Miles} 2 meters North of Mussel Rocks

Surveyed in 1929

Instructions dated April 9, 1929

Chief of Party, O. W. Swainson.

Surveyed by E. O. Heaton.

Protracted and soundings plotted by G. R. Fish and J. C. Klerbe.

Verified and inked by G. C. McGlasson.

1. The records conform generally to the general instructions in Hydrographic Manual.
2. The work conforms to the specific instructions. The spacing of lines and character of development conform to the specific instructions. However on the extreme southwest limits of this hydrography, additional work should have been done as this survey completely misses a development of Colorado Reef (sheet 835 a). There are indications here of a shoal which should have been investigated by the field party.
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b. The dangers listed in the descriptive report have been checked and found correct.

c. The rocks awash and sunken, shown on the hydrographic sheet and not shown on the topographic sheet were checked and should be accepted as shown.

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a. No additional work is required within the limits of this sheet unless it is desired to further develop Colorado Reef sheet 835a. However this old sheet (835a, 1910) is believed complete.

7. Reviewed by I. E. Rittenburg, August, 1930.

Approved:

Chief, Section of Field Records (CHARTS)

Chief, Section of Field Work (H. & T.)

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4977..

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

Number of positions on sheet	.1585..
Number of positions checked	.331..
Number of positions revised	.6..
Number of soundings recorded	5218..
Number of soundings revised	1372..
Number of signals erroneously plotted or transferred	..0..

Date: *14 Aug. 1930*

Cartographer: *G. M. Blosson*

Completed report to sub 5072 after V & R Exchange 4-9-64