4978

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.* 5 4978

LOCALITY

Pillar Point

Half Moon Bay to Pt. Montara

1929

CHIEF OF PARTY

O.W.Swainson

U. S. GOVERNMENT PRINTING OFFICE: 1928

4978

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 5. 4978

VICINITY OF MONTARA POINT

CALIFORNIA.

U.S.C. & G.S.S. PIONEER
O. W. SWAINSON - COMDG.
1929

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 5.

VICINITY OF MONTARA POINT

CALIFORNIA

AUTHORITY

Director's Instructions dated April 9, 1929.

SCALE

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

SURVEY METHODS

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

All fixes were obtained by sextant angles observed on definite objects previously located by triangulation and topography.

LIMITS

This sheet covers the area between the shore and the approximate 16 fathom curve, except for the area including Colorado Reef which was surveyed in 1910. The Northern limit is hydrographic sheet No. 4 (field) and the southern limit is Bell Buoy "2PP"at Pillar Point.

DANGERS

No dangers which are not charted were found on this sheet.

ANCHORAGES

There are no anchorages for any type of boat along this section of the coast. It is a very rocky area where heavy swells are usually present.

COMPARISONS WITH PREVIOUS SURVEYS

At the junction of this sheet and the Colorado Reef development of 1910 the soundings agreed as well as could be expected in an area with such a rough bottom.

In comparing with chart 5520, the following soundings with less depth than shown on the chart were found:

Lat. 37° 30' 1586 m.) Long. 122° 31' 744m)	10 fathom sounding.
Lat. 37° 30' 890 m.) Long. 122° 31' 460 m.)	10 fathom sounding.
Lat. 37° 30' 682 m.(Long. 122° 30' 1376m.)	3½ fathom sounding.

Lat. 37° 30' 85 m. Long. 122° 31' 64 m.	8¼ fathom sounding.
Lat. 37° 30' 170 m. Long. 122° 30' 949 m.	6 1/6 fathom sounding.
Lat. 37° 29' 1500m. Long. 122° 30' 1372m.	11 fathom sounding.
Lat. 37° 29' 940 m. Long. 122° 30' 320 m.	Sunken Rock (On chart 6520 this is marked 21 ft. outer breakers).

The area between the above mentioned sunken rock and Sail R ock is foul and full of sunken rocks.

Bell Buoy "2PP" checks fairly well with the charted position as it varies by only 100 meters in longitude.

TIDES

The tide gauge at Princeton on Half Moon Bay was used for reduction of tides on this sheet.

Earl O. Heaton

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

Approved and forwarded:

O. W. Swainson

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

STATISTICS HYDROGRAPHIC SHEET NO. 5.

Date 1929	Day Letter	Vol.	Visual Positions	Statute Miles	Leadline Soundings	Boat.
Nov. 6	a	1	44	7.0	142	MIANUS
7	b	1	141	23.9	432	"
8	c	1	67	11.7	203	"
12	d	1 & 2	115	14.0	293	"
13	e	2	104	15.8	289	"
Totals			471	72.4	1359	

ECM
LQC.

FOR FILES OF FIELD RECORDS SECTION

May 17, 1940

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 4978

Locality: California (Piller Point)

Chief of Party: O. W. Swainson in 1939
Plane of reference is mean lower low water, reading
3.4 ft. on tide staff at Princeton, Half Moon Bay
14.3 ft. below B. M. 4

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.

R.W.

Chief, Division of Tides and Currents.

Section of Field Records

Sheet No 4978
Surveyed in 1929
Chief of Party O.N. Swanson
Surveyed by E.C. Heaton
Protracted by L.R. Fish
Soundings Plotted by J.C Ellerbe Jr.
Verified and Inked by L.M. McGlasson

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 draftsmen did not have to do over any part of drafting done by field party, except as noted on statistic sheet.
6. The junction with adjacent sheets are found to be satisfactory.

Respectfully submitted,

L.M. McGlasson

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

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4978

Pt. Montara to Half Moon Bay, Cal.

Instructions dated April 9, 1929 (PIONEER)

Chief of Party, O. W. Swainson

Surveyed by E. O. Heaton

Protracted by G. R. Fish

Soundings plotted by J. C. Ellerbe, Jr.

Verified and inked by G. C. McClasson

1. The records conform to the requirements of the general instructions.

2. The work conforms to the requirements of the specific instructions with the exception that paragraph 22 was not fully complied with. There are several shoal soundings shown on the boat sheet 4978 which were evidently transferred from the old sheets 835, 835a, 835b which were not found by this party nor investigated fully.

3. Junctions: The junction with H. 4977 on the north is adequate.

The junction with 835a is adequate but soundings do not agree very well due to the rocky, uneven nature of the bottom.

4. Comparisons with old work.

a. Only those features which fell within the limits of the hydrography were considered in this review. The new topography, sheet T. 4524, should supersede the old work on 1019 and 933. On page 2, paragraph 6, descriptive report for T. 4524 is a statement as to the non-existence of a group of sunken rocks off ⊙ Wood. This group is shown on the old topographic sheet, hydrographic sheet 835b and this sheet, 4978 (see pos. 12 a - 15 a, H. 4978). It is recommended that this group be retained as originally shown on H. 835b. Sunken rocks shown on H. 4978 were verified from the records. Page 2, descriptive report for H. 4978 says that sunken rocks in Lat. 37° 29' 940 m., Long. 122° 30' 320 m. is shown on chart 5520 as 21 ft. outer breakers. The old sheet, 821, shows this 21 ft. sounding about 50 meters west of the sunken rock. It is recommended that both be retained.

b. The bottom here is very uneven and rocky. There are numerous shoal soundings on all the sheets (835, 835a, 835b, 821 and 4978) which do not appear on the others. The old sounding records have not yet been found so no examination of the old work could be made. It is noted that considerable doubt is attached to the work on 835a due to the method of establishment of the control for that sheet (see descriptive report for 835a, paragraphs 2, 3 and 4). However, as the sounding records are not available, the hydrography could not be examined.

5. Notes to Compiler:

It is recommended that all sheets (835, 835a, 835b, 821 and 4978) be used in compiling data for charting with equal weight, using the shoalest soundings from all until:

(a) The old records are found and the old hydrography examined,

(b) A complete resurvey is made paying particular attention to proving or disproving doubtful or critical soundings.

6. Additional work:

Additional work is required in this area to prove or disprove the existence of shoals shown on 835, 835a, 835b and 821. Due to the doubt in the control used on 835a, this area should be resurveyed. It is realized that the bottom here is very uneven and broken and considerable time must be spent in searching for these shoals. It is believed that a wire drag survey is necessary to completely prove or disprove these shoals.

7. Reviewed by I. B. Rittenburg, September 3, 1930.

Approved:

K. T. Adams
Chief, Section of Field Records (Charts)

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

L. O. Colbert

G. Rude

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4978

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. 5

REGISTER NO. 4978

State California.

General locality Pillar Point ~~Northern California Coast.~~

Locality Half Moon Bay to ~~Montara~~ Pt. Montara

Scale 1:10,000 Date of survey Nov. 6 - Nov. 13, 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 ~~feet~~

Plane of reference Mean Lower Low Water.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated April 9, 1929

Remarks:

GPO

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

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4978

Pt. Montara to Half Moon Bay, Cal.

Instructions dated April 9, 1929 (PIONEER)

Chief of Party, O. W. Swainson

Surveyed by E. Q. Heaton

Protracted by G. R. Fish

Soundings plotted by J. C. Kllerbe, Jr.

Verified and inked by G. C. McGlasson

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Part of all of this area W.D. in 1934

7. Reviewed by I. E. Rittenburg, September 3, 1930.

Approved:

Chief, Section of Field Records (Charts)

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

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4978.

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

Number of positions on sheet	471
Number of positions checked	224
Number of positions revised	2
Number of soundings recorded	1359
Number of soundings revised	134
Number of signals erroneously plotted or transferred	1

Date: 8-22-1930

Cartographer: L C McGlasson

H- 4978 (1929)

Comp. appd to cbt 5072 of the V&R [signature] 4-9-64