

4975

Diag. Cht. No. 5402-2 & 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 } Sheet No. ² 4975
Hydrographic }

LOCALITY

Northern Coast California

Frank Valley to Double Pt.

1922

CHIEF OF PARTY

O. W. Swainson

4975

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

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 2. 4995

INSHORE HYDROGRAPHY

COAST OF CALIFORNIA.

VICINITY OF BOLINAS
BAY

U. S. C. & G. S. S. PIONEER

O. W. SWAINSON COMMANDING

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 2.

INSHORE HYDROGRAPHY

COAST OF CALIFORNIA

VICINITY OF BOLINAS BAY

AUTHORITY

Director's Instructions dated April 9, 1929.

SCALE

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

SURVEY METHODS

Soundings were taken by hand lead only. The speed of the launch was regulated so that all casts gave reliable vertical soundings. Bottom specimens were taken at intervals.

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

LIMITS

The western limit joins launch hydrographic sheet No. 1 at Double Point and extends east to join with the old survey of San Francisco Bar. It develops an area from the approximate 15 fathoms depth curve to the shore line.

DANGERS

Off Double Point there are a number of rocks, some of which bare at low water and others awash. These rocks are close in and the area along the shore line is foul.

Duxbury Reef, off Duxbury Point, was developed as close in as pos-

sible; the area near the reef is irregular and foul.

In Bolinas Bay a few rocks were found which were awash at low tide.

These rocks are as follows:

1220 meters	165°	True from Topo.	Signal Bluff	-	1/2 fm.
1024	"	164	"	"	4/6 fm.
950	"	166	"	"	5/6 fm.
810	"	159	"	"	0 fm.
700	"	175	"	"	5/6 fm.

Along the shore line, from Rocky Point to the eastern limit of the sheet, there are many rocks. These rocks are practically all within two hundred meters from the shore.

ANCHORAGES

Bolinas Bay is a good anchorage for small boats when the wind is from the North and West. There is a Coast Guard Station and a commercial Dock in the Lagoon. Boats drawing approximately five feet can cross the bar at high water and anchor or tie up at the dock inside. The Coast Guard Station sounds the bar and notes the changes in the channel. They also put up ranges for the boats coming in over the bar.

CHANNELS

A survey was made in the lagoon for channels but it was found that only at high water a boat could cross to the eastern side.

INVESTIGATION OF SHOAL SHOWN ON CHART #5532.

An investigation was made of the 31 foot shoal 0.6 mile south of Franks Lagoon. This area was completely developed and no indication of the shoal was found.

COMPARISON WITH PREVIOUS SURVEYS

The new survey agrees with chart No. 5599 very well, with the exception of the 18 foot shoal south of Duxbury Point. This shoal spot was investigated but no indication of it was found.

The rock and 15 foot shoal, shown on chart 5532, Southeast of Duxbury Point were investigated but no indication of these were found.

A 1 4/6 fm. spot was found in Lat. $37^{\circ} 52' + 1570$ meters, Long. $122^{\circ} 41' + 431$ meters. This is probably the rock shown on the chart.

In comparing the new work with chart No. 5532 it was also found that most of the new soundings in this area are slightly deeper than those shown on the chart.

The junction of the new work with the bar survey also showed the new survey apparently deeper than the previous survey in that area.

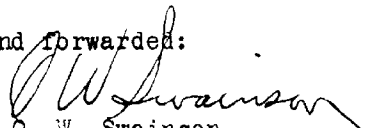
DUXBURY BUOY

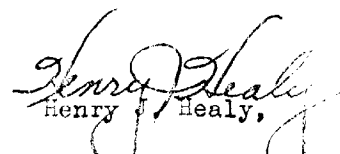
The whistle and light buoy marking Duxbury Reef was located by sextant fix. It was found that the position did not agree with the position shown on the chart. After this sheet was completed it was noted that the buoy was moved back to its charted position. The new position of the buoy was cut in by the ship.

TIDES

The tides recorded at Drake's Bay, with a correction of one half hour added to the time of high and low water, were used for the reduction of all soundings on the sheet.

Approved and forwarded:


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


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

STATISTICS - HYDROGRAPHIC SHEET NO. 2.

Date	Day Letter	Vol.	Pos. Vis	Stat. Miles	Soundings Leadline	Boat used.
July 15	a	1	45	9.9	158	MIANUS
16	b	1	78	17.1	294	"
19	c	1	23	5.6	89	"
23	d	2	73	19.	374	"
24	e	2	95	23.7	450	"
25	f	2	36	8.5	181	"
26	g	2	76	18.4	373	"
29	h	3	81	19.2	400	"
30	i	3	22	5.2	108	"
31	k	3	46	6.4	179	"
Aug. 1	l	3	123	27.4	621	"
2	m	3-4	89	21.7	438	"
6	p	5	61	15.0	236	"
7	q	5	66	13.7	296	"
8	r	5	83	15.4	396	"
9	s	5	42	8.3	200	"
13-	t	5-6	46	12.4	174	"
14	u	6	106	25.6	437	"
15	v	6	101	24.6	481	"
16	w	6	73	14.8	285	"
19	x	6-7	71	17.6	249	"
20	y	7	96	19.7	346	"
21	z	7	119	23.0	353	"
22	a'	7	48	5.8	166	"
23	b'	7	48	12.5	188	"
26	c'	8	64	3.0	209	"
27	d'	8	92	16.2	294	"
28	e'	8	106	15.4	290	"
29	f'	8	86	15.4	260	"
30	g'	9	20	3.5	20	"
Nov. 14	h'	9	8	0.8	30	"
Oct. 11	a	9	48			DINGHY.
Nov. 14	a	10	37	4.9	37	MOTORSAILER.

8572

(FOR FILMS OF FIELD RECORDS SECTION)

Division of Hydrography and Topography:

April 13, 1930

Division of Charts:

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 4975

Locality: California (Vicinity of Bolinas Bay)

Chief of Party:

Plane of reference ^{is} W. Sawinson in 1929

3.8 ft. on tide staff ~~mean~~ lower low water, reading
Point Reyes

Time of tide 1/2 later than at Point Reyes

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.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

December 4, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4975

Surveyed in 1929

Chief of Party, O. W. Swainson

Surveyed by H. J. Healy and E. O. Heaton

Protracted by G. R. Fish

Soundings plotted by J. C. Ellerbe, Jr.

Verified and inked by H. E. MacEwen.

1. The records were well kept and conform to all requirements of the general instructions.
2. The plan and character of the development fulfill the requirements of the general instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. There are sufficient cross lines to form an adequate check on the work.
5. With the exception of the one, two and three fathom curves the depth curves can be completely drawn.
6. The field plotting was completed to the extent prescribed in the general instructions. It was necessary for the cartographer, however, to change about thirty to forty per cent of the fractional soundings because the field party's reduction of soundings to fractions was based on a different table than that given in the general instructions. This caused some confusion in the closely developed areas.
7. So far as applied, the junctions with adjacent sheets are satisfactory. (See Remarks, paragraph c.)
8. No further surveying is required to fully develop important areas within the limits of the sheet. (See Remarks, paragraph c.)
9. Remarks:
 - a. 670 meters 166° true from signal Bluff (Pos. 5 ra) the rock recorded on page 34 of volume No. 5 was plotted on the smooth sheet as bearing 3 feet at mean lower low water. The incomplete

note in the record "3' at 8:40 a.m." was interpreted to mean "bare 3' at 8:40 a.m."

- b. A thorough search through the records and an examination of the boat sheet failed to disclose a check on the position of a rock awash, described in the Descriptive Report as being "810 meters 159° true from Signal Bluff." Since this rock falls in an area sounded to a depth of 2 1/2 fathoms, and does not appear on the boat sheet or in the sounding records, the note in the Descriptive Report list of dangers is apparently without sufficient support to accept without question. It is requested that a photostat of this area be sent the Chief of Party for verification of this rock.
- c. The junction with sheet 4974 is incomplete between 32° 55' 30" and 56' 30" (approximately); there is a gap which in places reaches a width of 400 meters. This is at variance with paragraph 21 of the specific instructions, "Spacing of lines shall be 200 meters." This area falls outside the 10 fathom curve and the bottom is fairly even.
- d. Off station Hil (37°55' Lat., 122° 45' Long.) a rocky ledge is shown on chart 5599. This was taken from a survey made in 1859-60 by A. F. Rodgers. No evidence of this ledge was found at low water on T. 4520 by Swainson in 1929.
- e. At Lat. 37° 56', Long. 122° 46' (approximately) on chart 5599 may be seen what appears to be two exposed rocks. In an approximate location on this sheet two sunken rocks were located. It is assumed that these rocks are identical.
- f. At Lat. 37° 56' 30", Long. 122° 46' 39" and Lat. 37° 56' 35" Long. 122° 46' 42", chart 5599 shows what appear to be two exposed rocks. Transferred to this sheet the rock at Lat. 37° 56' 30", Long. 122° 46' 39" checks within thirty meters of a rock awash, located on T. 4519. These are undoubtedly identical. In the second instance the rock on the chart (Lat. 37° 56' 35", Long. 122° 46' 42") apparently taken from T. 807, falls between the 3 fathom curve and the 5 fathom curve. The spot is 150 meters from the nearest danger as located on this survey and on T. 4519 and falls close to a sounding of 2 1/2 fathoms. No mention was made on T. 4519 or in the descriptive report for this sheet concerning this rock. Since no close development was made of this spot there is still some question that it does not exist. This rock should be further investigated.
- g. Breakers located 500 meters southwest of Lake on T. 4519 were plotted as sunken rocks on this sheet.


- h. In the close development of the 31 foot shoal shown on chart 5532, south of Franks Lagoon only sufficient soundings were plotted to show the results obtained. No indication of the shoal was found.
- i. Chart 5532 shows a 1 foot sounding off Franks Lagoon (Lat. 37° 51' 18", Long. 122° 34' 25" approximately). This sounding falls 75 meters outside the development made to disprove the 31 foot sounding farther offshore. No mention is made in the descriptive report of this 1 foot sounding. An investigation shows that it was taken from sheet 2283. There is nothing on the present survey to disprove the existence of this sounding which in the records (17 f day, green - no sounding taken at the time) of 2283 is described as a sunken rock. Until further development is made this sounding should be retained.
- j. For further notes on comparison with previous surveys see descriptive report for this sheet.
- 10. Rating of work: (a) Character and scope of surveying - excellent,
(b) Field drafting - good.
- 12. Reviewed by H. E. MacEwen.

The 31 foot sounding in 37°51'.95, 122° 34'.7 appears on the first edition of chart 5532 published in 1903. It was not shown on charts prior to this date, and no authority could be found for it. An 8 1/4 sounding is found in the same spot on H. 456, and it is believed that the similarity of the figures 8 and 5 resulted in an error in engraving chart 5532.

In any event the development is considered sufficient to disprove the existence of the 31 foot sounding, and it should be omitted from the charts.

E. P. Ellis

Approved:


Chief, Section of Field Records (Charts)


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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

Mac T...

REG. NO. 4975

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. 2

REGISTER NO. **4975**

State California.

General locality Nothern California Coast.

Locality Frank Valley Golden Gate to Double Pt.

Scale 1:20,000 Date of survey July 15 - Nov. 14, 1928

Vessel Pioneer ~~MIANS, Motorsailer, & Dinghy~~

Chief of Party O. W. Swainson.

Surveyed by H. J. Healy & 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:

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

AND REFER TO Ndl-DECA

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

December 4, 1930.

SECTION OF FIELD RECORDS

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E. P. Ellis

Approved:

Chief, Section of Field Records (Charts)

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

Insp. E. P. Ellis

Applied to extension of Chrt. 5599 7-15-41 X.K.K.

applied to New chart thru date 5532 & 5599 *W. Boggs* 4-20-64