

# 4985

Diag. Cht. No. 5502-2 & 5602-2

Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R S Patton, Director

C. & G. SURVEY  
L. & A  
APR 10 1930  
Acc. No.

State: CALIFORNIA

DESCRIPTIVE REPORT

Topographic } Sheet No. 24 4985  
Hydrographic }

LOCALITY  
Pt. Arena  
~~GREENWOOD LANDING~~  
to  
ARENA COVE  
TO GREENWOOD LANDING  
CALIFORNIA

1929

CHIEF OF PARTY  
E. B. T. Siems, H. & G. Eng'r.

U. S. GOVERNMENT PRINTING OFFICE: 1928

4985

JUN - 2 1937

DESCRIPTIVE REPORT  
TO ACCOMPANY HYDROGRAPHIC SHEET, NO. 24

SCALE 1:20000

GREENWOOD LANDING TO ARENA COVE  
CALIFORNIA

PARTY OF THE STR. DISCOVERER

Instructions Dated March 25, 1929. F.B.T. Siems, H. & G.E., Comdg.

Surveyed by F.B.T. Siems, Robert W. Knox and George L. Anderson.

August to September, 1929.

Ship; Starboard and Port Motor Sailer

LIMITS:

This survey extends from just south of Greenwood Landing, lat.  $39^{\circ} 07'$ , southward to Arena Cove, lat.  $38^{\circ} 53'$ , and from the beach westward to a junction with ship sheet number 43 of the present field season.

SURVEY METHODS:

Standard survey methods were followed in the surveying of this area. The launch work was supplemented by considerable hand-lead work from the ship, and a few of the outer lines were run with fathometer red light. Several of the ship lines were re-run, as there was some evidence of the leadman of the first lines mis-reading the leadline. Thereafter the reading was always checked by an officer or experienced chief petty officer.

DANGERS:

The coast line from the northern end of the sheet to latitude  $39^{\circ} 04'$  is quite rocky and precipitous, and there are several off-lying islets and breakers, the more important of which are:

A group of three islets in lat.  $39^{\circ} 05' 1350$  m, long.  $123^{\circ} 43' 200$  m

A rock awash at  $\frac{1}{2}$  tide in lat.  $39^{\circ} 05' 360$  m, long.  $123^{\circ} 42' 1140$  m

A sunken rock with 4 fathoms of water in lat.  $39^{\circ} 03'$  1350 m, long.  $123^{\circ} 43' 210$  m. This was mentioned in paragraph 15 of the instructions of March 25, 1929. ✓

South of latitude  $39^{\circ} 04'$  the shore line is relatively gentle sloping sand beach. ✓

A reef makes off to the north of Point Arena, terminating with Arena Rock. Two breakers constitute the outer group, in lats.  $30^{\circ} 58' 1070$  m and  $30^{\circ} 58' 1260$  m and long.  $123^{\circ} 44' 1280$  m. ✓

Of the two, the southerly one breaks in a light swell; in a heavy swell the northern one breaks, ~~and~~ about once every fourth time the southerly one breaks. The northerly one was located by sextant cuts from the ship.

ANCHORAGES:

There are no anchorages in the area included on this sheet. ✓

COMPARISON WITH PREVIOUS SURVEYS:

No discrepancies with the bromide of the previous survey have been noted except the more northerly of the two breakers making off Point Arena which has already been mentioned under DANGERS.

\* \* \* \*

Some of the bottom specimens have not been plotted on the smooth sheet in the more congested sounded areas.

*Robert W. Knox*

Robert W. Knox,  
Jr. H. & G. Engr.

Approved and forwarded:

*F. B. T. Siems*

F. B. T. Siems,  
H. & G. Engr.,  
Commanding.

*see additional notes on p. 4*

DATE-1929	LETIER	VOL.	POSITION	SOUNDINGS		MILES (STAT) 'SDG. LINE	VESSEL
				H.L.	WIRE		
Aug. 5	a	1	124		247	16.7	S.M.S.
17	b	1	163		307	24.5	"
18	c	1	73		323	15.7	"
19	d	2	78		241	13.2	"
20	e	2	62		153	10.3	"
21	f	2	29		62	4.1	"
Sept. 8	g	2	147	220	177	20.5	"
9	h	2	66	20	109	9.4	"
25	j	2	37		37	2.5	"
25	j	1	14		14	1.5	P.M.S.
Aug. 18	a	1	80	343		17.4	"
19	b	1	52	108	55	8.5	"
20	c	1	51		106	7.1	"
27	d	1	91	179	49	8.9	"
Sept. 7	e	1	133		255	25.9	"
8	A	1	55		125	12.5	SHIP
12	B	1	5		20	0.6	"
Oct. 30	C	1	48		128	9.7	"

ADDITIONAL NOTES:

A shoal with a least depth of 13 fathoms, surrounded by a general depth of 20 fathoms, was developed in latitude  $38^{\circ} 56.4'$ , longitude  $123^{\circ} 45.1'$ . There is no indications of this shoal on bromide of sheet 1508. ✓

On "~~M~~" day, August 17, the beginning of the ships leadline work on this sheet, there were no men aboard with experience to read leadline with sufficient reliability, and the work on later days after gaining more experience should be used in preference to that of the first days work at the crossings or along lines close to one another. ✓

An officer was assigned to check every sounding at the time it was taken on days A. B. & C. which was later than "M" day. (The irregularity in day letters occurred in originally planning to plot this work on sheet 42 instead of 24. See volume 1 of ship work for sheet 24) ✓

REMARKS AND RECOMMENDATIONS FOR ADDITIONAL SURVEYS:

The field and office work of this sheet ~~was~~ done under my supervision, no additional work is considered necessary except that a complete wire drag survey is recommended for the broken bottom areas off Point Arena within the 30 fathom curve, extending southward to Arena Cove. (See recommendation for sheet #25).

The coast from Point Arena north to Nose Rock is comparatively unimportant, it is indented and coasting vessels do not steam close to shore.



F.B.T. Siems,  
H. & G. Engr.,  
Commanding.

(FOR THE FILES OF FIELD RECORDS SECTION)

April 22, 1930.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in  
volumes of sounding records for


HYDROGRAPHIC SHEET 4985

Locality: California (Vicinity of Point Arena)  
F. B. T. Siems in 1929

Chief of Party:  
Plane of reference is mean lower low water, reading  
0.0 ft. on tide staff at Point Arena  
~~1.6 ft. on tide staff at Mendocina City~~  
1.6 ft. on tide staff at Mendocina City

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. 4985  
Surveyed in 1929  
Chief of Party - F. B. T. Liema  
Surveyed by - F. B. T. Liema, Robert W. Knox, and  
George L. Anderson  
Projected by - J. R. Rulbottom  
Soundings plotted by - Robert W. Knox  
Verified and Lined by - G. C. McElrosson

1. The records conform to the requirements of the general instructions.
2. The plan and character of development fulfill the requirements of general instructions.
3. The usual depth curves can be completely shown within the limits of this 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 drafting done by field party except as noted on statistical sheet.
6. An examination of the contemporary adjacent sheets will be made when these sheets are verified.

Respectfully submitted,  
G. C. McElrosson



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4985

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. 24

REGISTER NO. 4985

State CALIFORNIA

General locality Northern Coast Pt. Arena

Locality Greenwood Landing to Arena Cove to Greenwood Landing

Scale 1:20,000 Date of survey Aug. 18 to Oct. 30, 1929

Vessel Starboard and Port Motor Sallers, Ship.

Chief of Party F. B. T. Siems,

Surveyed by F. B. T. Siems, Robert W. Knox and George L. Anderson

Protracted by I. R. Rubottom

Soundings penciled by Robert W. Knox

Soundings in fathoms mean

Plane of reference mean lower-low water

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated March 25, 1929

Remarks:

SECTION OF FIELD RECORDS

REVIEW OF HYDROGRAPHIC SURVEY NO. 4985 (1929) FIELD NO. 24

Point Arena to Greenwood Landing, California  
Surveyed in Aug. - Oct. 1929. Scale 1:20,000  
Instructions dated March 25, 1929 (DISCOVERER)

Hand Lead Soundings.  
Fathometer Soundings.

3 Point fixes on shore signals.

Chief of Party - F. B. T. Siems.  
Surveyed by - F. B. T. Siems, R. W. Knox, G. L. Anderson.  
Protracted by - I. R. Rubottom.  
Sounding Pencilled by - R. W. Knox.  
Verified and inked by - G. C. McGlasson.

1. Condition of Records.

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

- a. No index of important hydrographic information was placed in the sounding records (Par. 60b).

The Descriptive Report is complete and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The survey complies with the instructions for the project.

3. Shoreline and Signals.

The shoreline and signals originate with T-4502 (1929) T-4503 (1929) and T-4504 (1929), all three being on a scale of 1:10,000. Due to the difference in scale of the contemporary topographic surveys and the present survey, only the details of islands and rocks that fall within the actual sounded areas have been transferred to the present survey. For all details of rocks and shoreline inshore of the sounded area and within the limits of the present survey see T-4502-3-4 (1929).

4. Sounding Line Crossings.

Crosslines, as well as the general system of parallel lines, show good agreement.

5. Depth Curves.

The 10 and 20 fathom depth curves can be completely drawn and the 5, 3 and 2 fathom partially. The shoaler depth curves cannot be completely drawn due to the decidedly uneven bottom close to shore.

6. Junctions with Contemporary Surveys.

The junctions with H-4984 (1929), H-4986 (1929), H-4987 (1929) and H-4990 (1929) are satisfactory.

7. Comparison with Prior Surveys.

a. H-241 (1851) and H-401 (1854).

These two reconnaissance surveys are on scales of 1:1,000,000 and 1:375,000 respectively. The few soundings that fall within the area of the present survey are over a mile apart and furnish insufficient information for making a comparison between these old surveys and the present survey.

b. H-1508 (1881) and H-1535-6-7 (1882).

These four surveys are a continuous survey by the same Chief of Party and are on a scale of 1:10,000 whereas the present survey is on 1:20,000. In spite of the fact that the present survey is on a smaller scale, in general, it contains more detail than these former surveys. Several rocks and shoal soundings, which were not disproved by the present survey, were brought forward from these former surveys to the present survey and are shown in color. These former surveys and the present survey are in good general agreement except as follows:

- (1) The dry rock on H-1536 (1882) at Lat.  $39^{\circ} 06.5'$ , Long.  $123^{\circ} 42.9'$ , originating with T-1305 (1871), plots about 30 meters west of the outer one of a group of dry rocks on the present survey. The difference is believed due to an erroneous location of the rock on the old survey, and the representation on the present survey should be accepted for charting.
- (2) The 2 fathom spot at Lat.  $38^{\circ} 58.6'$ , Long.  $123^{\circ} 44.8'$ , which originates with H-1535 (1882), is shown as a sunken rock, breaking in a light swell, and should be charted as a sunken rock with 13 feet of water on it and marked "Breaks in Light Swell." The other sunken rock at Lat.  $38^{\circ} 58.7'$ , Long.  $123^{\circ} 44.8'$ , which "Breaks in Heavy Swell" originated with the present survey.
- (3) The 4-1/4 fathom sounding, shown in color on H-1536 (1882), and originating with chart letter 492-(1926) has been further developed on the present survey and should be charted as 4 fathoms.

8. Comparison with Chart 5502 (New print dated Aug. 17, 1936)  
and Chart 5602 (New print dated Aug. 8, 1936).

a. Hydrography.

Within the area of the present survey the charts are based on surveys discussed in the foregoing paragraphs and contain no additional information that needs consideration.

b. Aids to Navigation.

The only aid to navigation within the area of this survey is Pt. Arena Lighthouse which was located by triangulation and is charted correctly.

9. Field Plotting.

The field plotting was adequate and accurate.

10. Additional Field Work Recommended.

In view of the irregular bottom of this area a wire drag survey within the 30 fathom curve was recommended by the Chief of Party. (See page 5 Desc. Rep.) This recommendation is concurred in.

11. Superseding Old Surveys.


Within the area covered, the present survey with indicated additions from prior surveys, supersedes the following surveys for charting purposes:


H- 241 (1851)	in part
H- 401 (1854)	" "
H-1508 (1881)	" "
H-1535 (1882)	" "
H-1536 (1882)	" "
H-1537 (1882)	" "

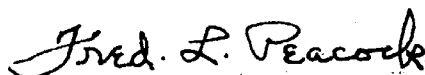
12. Reviewed by Charles R. Bush, Jr., August 12, 1936.

Inspected by R. J. Christman, Sept. 14, 1936.

Examined and approved:

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

  
L. O. Pollock,  
Chief, Division of Charts.

  
Fred. L. Peacock,  
Chief, Section of Field Work.

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

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4985...

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

Number of positions on sheet	1232..
Number of positions checked	.646..
Number of positions revised	.19....
Number of soundings recorded	.3112..
Number of soundings revised	.329....
Number of signals erroneously plotted or transferred	..0....

Date: *6 June 1930* .....

Cartographer: *A. M. Blosser* .....

Applied to drawing of Chart 5502 - June 2, 1937 - J.F. Walker  
Applied to chart 5602 June 21, 1937 G.H.S.  
Applied to chart 5703 Sept. 22, 1937 G.H.S.

39-03.7  
123-113.2

(1536)

July 19