

5872

WIRE DRAG SURVEY.

5872

WIRE DRAG SURVEY.

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. WIRE DRAG 2

State California

LOCALITY

California Coast

Pt. Miramontes, to Pt. Montara Pt.

193 4

CHIEF OF PARTY

F.H.Hardy

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

J. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

OCT 7 1935

Acc. No. _____

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 **5872**

REGISTER NO.

State CALIFORNIA

General locality CALIFORNIA COAST

Locality ~~POINT MIRAMONTES~~ ^{Pt} TO ^{SD} ~~POINT MONTARA~~ ^{Pt.}

Scale 1 : 10,000 Date of survey JULY 22 to AUG. 9, 1934

Vessel Chartered Launches PT. REYES (Guide Launch) & FLORENCE (End Launch)

Chief of Party F. H. Hardy

Surveyed by G. C. Jones

Protracted by I. T. Sanders

Soundings penciled by _____

Soundings in fathoms ~~MMH~~ DRAG DEPTHS IN FEET.

Plane of reference M L L W

Subdivision of wire dragged areas by R. H. McCarthy Jr.

Inked by R. H. McCarthy Jr.

Verified by Jamcormick

Instructions dated May March 31, 1934

Remarks: Dual control Wire Drag, Positions by Visual Fixes.

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET FIELD NO. 2
Project H. T. 184
Coast of California
U.S.C. & G.S.S. GUIDE
1934

INSTRUCTIONS: Instructions for the wire drag on this sheet are dated ~~March~~ ^{May} 31, 1934, and Office Letter dated April 2, 1934. ✓

CHARACTER OF WORK: Control for the wire drag on this sheet was by means of visual fixes. ✓

Dual control was used for all the work on this sheet. ✓

The effective depth range is from 14 to 76 feet. ✓

The position interval was usually five minutes, with supplemental positions at radical changes of course and speed. ✓

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

This sheet includes that portion from Point Miramontes to six tenths of a miles south of Point Montara, and from approximately 1/3 mile off the shore to the 20 fathom curve. There is a split about Southeast Reef and the buoy marking that Reef. ✓

The area of the work on this sheet is 17.5 square statute miles. ✓

CONTROL: Control for the work on this sheet consisted of hydrographic signals over triangulation stations of the 1931 scheme executed by Lieutenant C. D. Meany, plotted on the North American 1927 Adjusted Datum. ✓

T. 4524 (1929)

H. 5345 (Born sheet) (1933)

Shoreline and Topographic signals from Pillar Point to Point Montara were transferred from Topographic Sheet T 5345, and Shoreline and Topographic signals "Gull" to "Pod" were transferred from Topographic Sheet T 4786. ✓

Dates of Survey: The work on this sheet began July 22, 1934 and was completed August 9, 1934. ✓

TIDAL REDUCERS: Tidal reducers for the work on this sheet were obtained from the Princeton Portable Automatic Tide Gage. ✓

For further information on this subject the reader is referred to the Season's Tidal Report. ✓

OVERLAPS OF BUOY PATH LINES: In Latitude 37 27.1 and Longitude 122 27.65 the overlap of buoy path lines on B and H days is slightly less than 300 feet, for a very short distance. At the place of the least overlap there is a buoy position, on each line. ✓

Overlap sufficient G.R.

In Latitude 37 28.5 to 37 28.75 and Longitude 122 28.15

OVERLAPS Cont.

the overlap of buoy path lines on G and H days is approximately 300 feet, or 3/4 of a section. The lines are relatively straight. OK

It is felt because of strong control in each of the above cases, that the overlap of these buoy path lines is sufficient.

Throughout the rest of the sheet the overlap of buoy path lines is more than sufficient.

JUNCTIONS: The overlapping junctions with Wire Drag Sheet Field No. 1 on the north and Wire Drag Sheet Field No. 3 on the south are more than sufficient.

The overlap of drag lines at the beginning and ending of lines, on this sheet are good.

GROUNDINGS:

Pos. No. Letter Day	Latitude & Longitude	Grounded Eff. Depth	Least Sounding Depth	Cleared Eff. Depth	Depth Plotted	
1 7 A	37 28.94 122 29.48	35 ft.		18 ft.	* See reference this grounding	✓
2 22 B	37 27.08 122 27.42	22	3 4/6fms.	18 ft.	3 4/6 fms.	✓
3 38 B	37 27.96 122 28.39	22	3 2/6	Not cleared	3 2/6	✓
4 32 C	37 27.06 122 26.96	16	2 5/6	Not cleared	2 4/6 Eff. length of upright.	✓
5 37 C	37 26.7 122 27.01	16	2 4/6	Not cleared	* See 2 4/6 reference this grounding.	✓
6 4 D	37 26.6 122 27.4	37	5 5/6	27	5 5/6 " "	✓
7 21 D	37 28.17 122 28.8	36	5 5/6	Not cleared	5 5/6	✓
8 9 E	37 27.8 122 28.15	31 near N 5		23	5	✓
	37 27.6 122 28.05	31	5 1/6	23	5 1/6 between buoys #4 & #5	✓

GROUNDINGS Cont.

Pos. No. Letter Day	Latitude & Longitude	Grounded Eff. Depth	Least Sounding Depth	Cleared Eff. Depth	Depth Plotted
9 17 H	37 27.55 122 28.06	28 ft.	4 1/6 fms.	23 ft.	4 1/6 & 4 2/6 fms/ Same shoal as 9 E.
10 39 H	37 29.4 122 29.1	35		19	5 5/6 Eff. length of upright. * See reference this grounding.
11 14 J	37 30.73 122 31.15	28	4 4/6	22	4 4/6

*On position 7 A the drag apparently does not ground on the sounding taken in the vicinity of this grounding. In plotting and inking the drag strip, it was taken into consideration that the drag would have grounded and apparently did ground on the developed shoal on H 5365b. This shoal is 75 meters west of the tender sounding Pos. No. 1 a. It should be noted that the drag was aground 30 seconds before Pos. No. 7 A, page 4, volume 1, line twenty five. Tender Pos. 1 "a" falls on another developed shoal on H 5365 b with a depth of 4 5/6 fathoms, 4 feet less than the tender sounding. Two other soundings (5 2/6, 6) were taken this day, all three are plotted.

The grounding on position 38 B was not cleared as it was too near Southeast Reef.

The groundings on positions 32 C and 37 C were not cleared as they were very close to the beach and it was felt they did not warrant this extra work.

The least sounding depth obtained on the grounding at 32 C was 2 5/6 fathoms. The drag grounded with an effective depth of 16 feet. Thus the upright length has been plotted.

*After clearing the drag at 37 C, it was hooked down to 40 feet (not effective depth) to drag a line outside the reef. The drag grounded. No positions were taken by either launch as they were maneuvering to start new line. The tender investigated and a sounding of 4 1/2 fathoms was obtained. This sounding was not cleared.

*After clearing the drag on the grounding at 4 D and while maneuvering to start new line "N2" fouled. The tender investigated and a sounding of 5 2/6 fathoms was obtained. This sounding is plotted in Latitude 37 26.91 and Longitude 122 27.37. It was cleared with an effective depth of 21 feet.

On position 9 E the drag grounded at two places, near "N" and between buoys No. 4 and 5. Both groundings were cleared with an effective depth of 23 feet.

GROUNDINGS: Cont.

*On position 39 H there is a note stating that the "N" buoy is towing over sand. Guide Launch stopped, End Launch proceeded with other end of drag.

A sounding the effective length of the upright at "N" has been plotted.

In plotting and inking the drag strip the line was ended at 3:00 P.M. on position 39 H, the time that it was noted that the "N" buoy was towing over sand. From H 5365 b the "F" and #7 buoys were towing over sand at a few seconds after 3:00 P.M., in depths as shown on the above survey 3 to 6 feet less than the effective upright lengths. This evidently occurred approximately five minutes before it was noted in the record book.

COMPARISON WITH PREVIOUS SURVEYS: Comparison with H 5365a. (200)

The grounding in Latitude 37 27.08, Longitude 122 27.42 with a least depth of 3 3/4 fathoms is within a few meters of 5 1/6 fathoms.

The sounding taken on D day where "N" fouled, Latitude 37 26.91, Longitude 122 27.37 is in depths of 7 1/2 to 7 3/4 fathoms. The grounding approximately 1/3 of a mile south in Latitude 37 26.6, Longitude 122 27.4 with a least depth of 5 5/6 fathoms is in depths of 5 4/6 to 6 fathoms.

The two groundings on C day close to the beach Longitude 122 27 are in depths of 3 5/6 to 4 5/6 fathoms.

Comparison with H 5365b.

The effective upright length, plotted where the "N" buoy was towing over a sandy bottom falls in depths of 6 4/6 to 7 1/2 fathoms.

The two soundings on positions No. 2 and 3 "a" day in Latitude 37 28.6, Longitude 122 29.2 are plotted. Both fall on developed shoals. However these two soundings are one foot shoaler than any sounding shown in this vicinity on the above mentioned sheet.

The grounding in Latitude 37 28.17, Longitude 122 28.8 with a least depth of 5 5/6 fathoms, falls in depths of 6 2/6 to 7 3/4 fathoms.

The grounding in Latitude 37 27.96, Longitude 122 28.39 with a least sounding depth of 3 2/6 fathoms, falls on the southern part of a developed shoal. This sounding is 2 feet less and approximately 50 meters south of the least depth shown on this development.

The 5 fathom sounding obtained on the grounding Latitude 37 27.8, Longitude 122 28.15, is near a least depth of 6 fathoms on H 5365b.

COMPARISON WITH PREVIOUS SURVEYS: Comparison with H 5365b.

In Latitude 37 27.55, Longitude 122 28.06, the least depth found on the grounding was 4 1/6 fathoms, three soundings are plotted on this shoal. They fall in depths of 7 3/4 to 11 fathoms.

Comparison with H 4978.

The grounding in Latitude 37 30.73, Longitude 122 31.15 with a least sounding depth of 4 4/6 fathoms, falls in depths of 6 1/6 fathoms. A sounding of 5 fathoms was also obtained by the tender within 25 meters of 7 1/4 fathoms on the above survey.

COMPARISON WITH CHART 5520: Corrected to April 22, 1935.

* Feb. 8, 1935, latest new print date of chart on file; Dec. 17, 1935 G.R.

All of the soundings obtained on groundings are charted except as follows.

The 5 5/8 fathom effective upright length plotted in Latitude 37 27.4, Longitude 122 29.1

The 3 2/6 fathom sounding in Latitude 37 27.96, Longitude 122 28.39.

The 2 4/6 fathom effective upright length plotted in Latitude 37 27.06, Longitude 122 26.96. This grounding falls within the charted 3 fathom curve.

It was noted that the following charted wire drag groundings are charted 1 foot less than the final reduced depths obtained on this survey.

Final Reduced Sounding	Charted Depth	Latitude	Longitude
5 5/6	34 ft.	37 28.17	122 28.8
5	29	37 27.8	122 28.15
3 4/6	21	37 27.08	122 27.42
4 1/2	26	37 26.49	122 27.01

PERSONNEL AND LAUNCHES: Lieutenant Commander Jones was in charge of this work and also in charge of the Guide Launch. Lieutenant (j.g.) Chovan was in charge of the End Launch.

The launches used were the chartered launches POINT REYES (Guide Launch) and FLORENCE (End Launch)

Forwarded, Approved,

G. E. Jones, In Charge Wire Drag. F. H. Hardy, Chief of Party, C & G. S. Commanding Ship GUIDE.

Respectfully submitted,

Jr. H & G. E. C. & G. Survey.

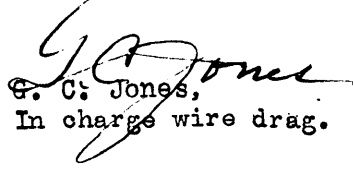
SUPPLEMENTAL NOTES

DESCRIPTIVE REPORT

WIRE DRAG SHEET FIELD NO.2

The shoal soundings secured on Wire Drag Tender positions 1c, 2c and 3c were too close to breakers to cover safely with the drag, particularly 2c and 3c.

It should be noted that the dragging was done while the entire party (including the officer in charge on dragging of this nature) was inexperienced and in some cases the drag was grounded closer to danger than should have been the case. Further the equipment was much less effecient than that now in use and a launch finding itself too close when setting out or taking up could not avoid the danger so readily.


G. C. Jones,
In charge wire drag.

LIST OF SIGNALS
to accompany
WIRE DRAG SHEET FIELD NO. 2

TRIANGULATION

Hydrographic Name	Location
Mon	Point montara Lighthouse, 1921
Pass	Radio Compass Station, Tank, 1929
Tank	Pillar Point, Tank, 1929
On	Pillar Point 2, House North of, Stack 1931
Whale	Whale, 1929
Pil	Pillar point 2, 1916
Sail	Sail Rock, 1931
Shed	Shed, 1929
Boat	Princeton East Dock South Boat Davits, 1931
Ban	Mirmar, Dock Banner, 1931
Bun	Sand Bunkers, Box on pole, 1931
Cross	Half Moon Bay, Cross on Church, 1931
High	Half Moon Bay, High School Flag Pole, 1931
All	House. So. of Moon-dream Cafe, Chimney, 1931
Moon	Moon 2, 1931

TOPOGRAPHIC

Located on Topographic Sheet T 5346

Yel	Gab	Red
-----	-----	-----

Located on Topographic Sheet T 4786

Gull	Pow	Spire	At	Low	House
White	Tan	Who	Box	Wat	Pod
Lone					

STATISTICS

DRAG						TENDER		
DATE	DAY	VOL.	STATUTE NO.	POS	DRAG	NUMBER		
1934			MILES		LENGTH	SOUNDINGS	POSITIONS	
JULY	22	A	1	0.6	13	2400	3	3
	23	B	1	3.0	76	2400	4	4
	24	C	1	3.6	83	2400	3	3
	25	D	1	3.8	82	2400	3	3
	26	E	1	0.6	23	2400	2	3
Aug.	3	F	1	2.0	53	2800	-	-
	4	G	1	3.5	73	3200	-	-
	5	H	2	2.6	93	3200	3	2
	6	J	2	1.3	27	4000	4	4
	7	K	2	4.0	81	4000	-	-
	8	L	2	6.5	134	7000	-	-
	9	M	2-3	7.0	131	3200-7500	-	-
			TOTALS	38.5	869		22	22

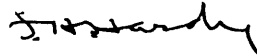
AREA 17.5 SQUARE STATUTE MILES.

STATEMENT
to accompany
WIRE DRAG SHEET FIELD NO. 2

The protracting and plotting of buoy positions was done by Lieutenant (j.g.) I. T. Sanders.

The drag areas were subdivided and inked by Mr. R. H. McCarthy Jr. draftsman, under the direct supervision of Lieutenant (j.g.) L.W. Swanson.

The completed smooth sheet has been inspected and is approved.



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

Oakland, California.

Date Oct. 10, 1935

GEOGRAPHIC NAMES

Survey No. 5872 W.D.

5402

Chart No. 5520

5530

Diagram No. 5530-4

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
✓	Pt. Montero Pt	same			
	<u>San Vicente Creek</u>	"		not on H 5872	
✓	<u>Colorado Reef</u>	"			
✓	<u>Seal Cove</u>	"			
	<u>Whaleman Harbor</u>	"	hold - being referred to SF office		
✓	<u>Pillar Point</u>	"			
✓	<u>Sail Rock</u>	"			
	<u>Denniston Creek</u>	"		not on H 5872	
	<u>El Granada</u>	" 5402		"	
	<u>Princeton</u>	" 5520		"	
	} different locations				
✓	<u>San Agustin Creek</u>	"		"	
	<u>Deer Creek</u>	"		"	
	<u>Arroyo Medio</u>	"		"	
	<u>Miramar</u>	" 5520		"	
	<u>Airport Landing</u>	" 5402			
✓	<u>Halfmoon Bay (Bay)</u>	"			
✓	<u>Southeast Reef</u>	"			
	<u>Pilarcitos Creek</u>	"		not on H 5872	
✓	<u>Miramontes Pt.</u>	"			
		<u>Halfmoon Bay (P.O.)</u>		not on H 5872	
		names approved 10/23/35			
		K.T.A.			

TIDE NOTE FOR HYDROGRAPHIC SHEET

October 28, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
6 volumes of sounding/and wire drag
records for

HYDROGRAPHIC SHEET 5872

Locality Point Miramontes to point Montara, California coast.

Chief of Party: F. H. Hardy in 1934

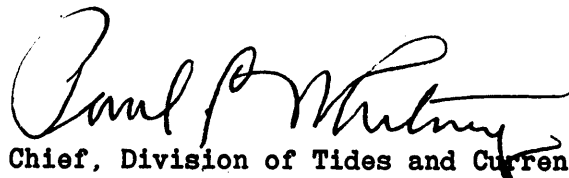
Plane of reference is mean lower low water, reading

2.2 ft. on tide staff at Princeton

14.6 ft. below B.M. 5

Height of mean high water above plane of reference is 4.8 ft at Princeton.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **5872**

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

Number of positions on sheet	... 869
Number of positions checked	... 14
Number of positions revised	... 0
Number of soundings recorded	... 27
Number of soundings revised	... 0
Number of signals erroneously plotted or transferred	... 0

Date: **Nov. 8, 1935.**

Verification by **J. A. Mc Cormick**

Time: **11 hrs.**

Review by

B. Pizzari

Time: **15 1/2 hrs.**

HYDROGRAPHIC SURVEY NO. 5872 W.D.

Smooth Sheet Yes

Boat Sheets 2

Sounding Records Yes Vols. 6 W.D.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. 1

Landmarks for Charts (Form 567) ~~Yes~~ None

Statistics Yes

Approved by Chief of Party yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service No
(Circular Nov. 30, 1933)

Remarks _____

Verifier's Report on H-5872 were drag.

Records:
Records conformed to specifications.

Drafting:
Drafting was excellent. Very few changes were made by verifier.

Junctions:
Junction was made with H-5862 on the south. Sheet to the north has not yet been received.
Soundings and groundings were transferred to H-5365a (1932), H-5365b (1932) and H-4978 (1929).

Nov. 8, 1935. Submitted,
Jamel Ormick

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5872 W.D. (1934) FIELD NO. 2

Miramontes Pt. to Montara Pt., California Coast, Cal.

Surveyed in July, Aug., 1934

Instructions dated May 31, 1934 (GUIDE), Office Letter Apr. 2, 1934

Wire Drag with Hand Lead Soundings. 3 Point fixes on shore signals.

Chief of Party - F. H. Hardy.

Surveyed by - G. C. Jones.

Protracted by - I. T. Sanders.

Subdivision of wire dragged areas by - R. H. McCarthy, Jr.

Inked by - R. H. McCarthy, Jr.

Verified by - J. A. McCormick.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual and S. P. 118, except as follows:

- a. No bottom characteristics were recorded on the soundings obtained at drag groundings.
- b. The numbers of the drag positions at time of groundings were not entered in the remarks column in the sounding record. (Page 36, S. P. 118). These entries were made in the office.
- c. Cuts to the groundings were not recorded, nor were, in a number of cases, the nearest buoy to the groundings recorded. (Page 32, S. P. 118).
- d. Position angles on shoals were not checked by taking an angle to a fourth object. (Page 33, S. P. 118).

The Descriptive Report is clear and comprehensive and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

- a. The plan, character and extent of the survey comply with the instructions for the project. This survey is well executed and shows that careful consideration was given to such matters as overlaps, lift, and proper speed.
- b. A split exists in the vicinity of latitude $37^{\circ}28'$, longitude $122^{\circ}28'$, caused by the buoy marking Southeast Reef. The split falls in an area on H-5365b (1932) which shows depths of $9\text{-}\frac{3}{4}$ and 10 fathoms. Although this area is not so closely developed as on the shoal proper, the bottom appears fairly uniform and it is believed no danger exists.

- c. No statement was made concerning the drag equipment used, but the descriptive report of H-5712 (1934) states that a report on equipment used will be forwarded. It is assumed that standard drag equipment was used.

3. Shoreline and Signals.

The shoreline originates with T-4524 (1929) and T-4786 (1932) and the topographic signals were obtained from a control sheet (now registered as boat sheet for H-5345 (1933)) and T-4786 (1932).

4. Junctions with Wire Drag Surveys.

This work is joined on the north by H-5887 (1934) and on the south by H-5762 (1934). The junctions with both of these contemporary drag surveys are satisfactory.

5. Comparison with Latest Hydrographic Surveys.

H-4978 (1929), H-5345 (1933), H-5365a and b (1932), H-5395 (1932-34)

The present survey covers portions of the above surveys and the effective depths of the drag are consistent with the depths shown on these surveys.

6. Comparison with Chart No. 5402 (New Print dated Aug. 6, 1935)
Chart No. 5520 (New Print dated Feb. 8, 1935)
Chart No. 5530 (New Print dated Feb. 20, 1935)

The soundings shown on the above charts do not conflict with the effective depths of the drag. The following soundings were charted from advance information from the field party (Chart Letter 708 (1934)), and are 1 foot shoaler than shown on the verified smooth sheet. They should be changed to conform to the depths shown on the latter sheet:

<u>Charted Depth</u>	<u>Latitude</u>	<u>Longitude</u>
34	37°28.17'	122°28.8'
29	37°27.8'	122°28.15'
21	37°27.08'	122°27.42'
26	37°26.49'	122°27.01'

7. Field Plotting.

The protracting and plotting of dragged areas, as well as the subdivision of drag strips were well done.

8. Results of Survey.

- a. The survey shows the areas to be clear of offshore dangers to surface navigation.

b. The following are the more important shoals located by the present survey:

- (1) The 4-4/6 fathoms in latitude 37°30.73', longitude 122°31.15', falls in between a 6-1/6 and an 8-1/4 fathoms on H-4978 (1929) and was cleared by an effective depth of 22 feet.
- (2) The 4-1/6 fathoms in latitude 37°27.55', longitude 122°28.06', falls in between two 11 fathoms on H-5365b (1932), clearance depth 23 feet.
- (3) The 3-4/6 fathoms in latitude 37°27.08', longitude 122°27.42', falls in depths averaging 8 fathoms on H-5365a (1932) with a clearance depth of 18 feet.


9. Additional Field Work Recommended.


No additional field work is required.

10. Reviewed by - G. Risegari, Dec. 18, 1935.


Inspected by - A. L. Shalowitz.

Examined and approved:


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


Chief, Section of Field Work.


Chief, Division of Charts.


Chief, Division of H. & T.

25 for 15, 1936
cut

Applied to Chart 5402 - Feb 21, 1936 R.M. Z

app'd to det 5072 thru det 5520 and other groups - *Ernst*
4/14/64