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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: <u>California</u>	
11-0013	
DESCRIPTIVE REPORT.	
WIRE DRAG	Sheet No. <u>4463a</u>
	<u>4463b</u>
LOCALITY:	
<u>San Francisco Bay</u>	
<u>Naval Anchorage</u>	
1925	
CHIEF OF PARTY:	
<u>H. B. Campbell</u>	

DESCRIPTIVE REPORT
TO ACCOMPANY
WIRE DRAG SHEETS Nos. _____
ANCHORAGES SOUTH OF GOAT ISLAND, SAN FRANCISCO BAY.
SCALE 1:10,000
MARCH 1925

Instructions dated
January 17th, 1925.

Descriptive Report to Accompany Wire Drag Sheets Nos. _____

Anchorage South of Goat Island San Francisco Bay.

Instructions: In compliance with the Director's instructions dated January 17th, 1925, a wire drag examination was made from March 10th to 28th, 1925, to prove conclusively whether or not there existed a 32 or 25 foot spot in the anchorages south of Goat Island, San Francisco Bay.

Results: Bearing in mind that the obstruction might be a spar or mast of a wreck and inclined with the current, the reported positions were covered eight times not only with but against and across the current in both directions. An area of 1-1/4 square mile around the reported positions and extending two-thirds of a mile each way with the flow of the current was covered. No obstructions were found above a depth of 42 feet below mean lower low water. The drag depth was constantly being tested while dragging. As to be expected, the bottom is littered with wreckage for the drag fouled repeatedly during the first few days of the work, when the floats did not sustain the wire. After satisfactory floats had been obtained and the drag was operating satisfactorily, all places were swept several times where the drag had hung up when dragging on the bottom due to poor toggles without any indication of fouling. The drag depths of different days vary considerably both because of the toggle trouble at the beginning and because in maneuvering the drag we sometimes found it necessary to go into about six fathoms of water.

Character of Reports: There seems to be no doubt that the men of the Lighthouse Service obtained the shoal sounding of twenty-five feet as reported. They also had a lead line fouled at the position but with more than twenty-five feet of leadline out. It would appear that there must have been drifting submerged wreckage which has either sunk to the bottom or drifted to another locality.

There was an impression that this spot was the wreck of the "May Flint". I was informed verbally at the office of the Lighthouse Inspector that the wreck of the "May Flint" was not at the reported position and also that the wreck had been blasted down to a depth of about thirty-five feet by a contract let by the U. S. Engineers.

Survey Methods: A wire drag outfit with standard (1920) buoys and weights was borrowed from the Goat Island Station of the Lighthouse Service. The wooden toggles did not properly sustain the wire after the first day's use and considerable time was lost thru the drag fouling wreckage on the bottom.

The 1/8" ground wire was old and the hard service while fouled on the bottom weakened it so much that much time was lost with parted wire. Some 3/16 inch stranded ground wire and standard toggles were then obtained from the "Discoverer". By using this wire and one lighthouse and one standard toggle when the latter became waterlogged, no further trouble was experienced with the outfit.

A 30 foot motorsailer was borrowed from the "Discoverer" for an end launch and the "Natoma" used for guide launch, with the speed launch testing the drag depth, for two days. It proved difficult for the "Natoma" to slow down sufficiently for the short drag used and a second motorsailer was borrowed from the "Discoverer" for a guide launch. Drag depths were then tested by the "Natoma". On account of varying currents, courses, apparatus, etc., the drag was tested continuously while underway. The only four officers were available (one of these being detailed from another vessel) one of them was used for testing the drag. The testing of the drag was considered more important than the better control of the position of the drag which might have been obtained with three officers on the guide launch.

The strong tidal currents greatly hindered the work. Dragging was possible only for about two hours around slack water with the launches and outfit available.

Currents: The effect of the wind on the current on some days was very marked and should be brought to the attention of the Division of Tides and Currents. It was found that with a moderate to fresh breeze from the south, that is, blowing out of South San Francisco Bay, the current changed from flood to ebb somewhat earlier than predicted and that the strength of the ebb was much greater directly after the change than when there was no wind. It was found under these conditions that by the time of the predicted change from flood to ebb, the current would be so strong that it was impossible to drag against it with two thirty foot motorsailers on a 1,000 foot drag.

Tides: A portable automatic gauge was installed on the north side of the fire boat wharf between Piers 22 and 24, Rincon Point. It was out of order for five days when dragging was done. A simultaneous comparison was made with the automatic gauge on the Presidio wharf and tidal reducers interpolated from it for these days.

Plotting: The plotting of the work was done on two smooth sheets in order to avoid excessive confusion of the different days work over the same area.

Respectfully submitted,

H B Campbell

H. B. Campbell, H.&G.E., U.S.C.&G. Survey.
Commanding NATOMA.

Statistics Wire-drag Sheet No.

Date, 1925	Letter	Volume	Positions	Angles	Miles, Statute
March 12	C	1	41	246	3.2
" 13	D	1	15	90	1.4
" 17	F	1	17	100	0.9
" 18	G	1	48	288	2.4
" 19	H	1	23	134	1.5
" 20	I	1	43	258	3.7
" 23	J	1	15	90	0.5
" 24	K	2	39	234	2.7
" 27	L	2	23	138	2.3
" 28	M	2	37	222	3.8
Total			301	1800	22.4

Area 1.24 square statute miles

field records.

July 22, 1925.

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
1 volumes of sounding records for

HYDROGRAPHIC SHEET 4463 A

Locality: anchorages south of Goat Island, S. F. Bay, California.

Chief of Party: H. B. Campbell in 1925.

Plane of reference is Mean lower low water and is
1.9 ft. on tide staff at Rincon Point, San Francisco Bay, Calif.

For reduction of soundings, 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 wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each 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.

July 22, 1925.

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
1 volumes of sounding records for

HYDROGRAPHIC SHEET 4463 B

Locality: Anchorages South of Goat Id., San Francisco Bay, California.

Chief of Party: H. B. Campbell in 1925

Plane of reference is mean lower low water and is
1.9 ft. on tide staff at Rincon Point, San Francisco Bay, Calif.

For reduction of soundings, 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 wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each 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.

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ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND REFER TO NO. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON August 25, 1925.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet H. 4463^a and ^b.

Examination of Reported Shoal in San Francisco Bay.

Surveyed in 1925.

Instructions dated January 17, 1925.

Chief of Party, H. B. Campbell.

Surveyed by H. B. Campbell.

Protracted by A. J. Hoskinson, M. O. Witherbee.

Verified and inked by A. L. Shalowitz.

Area and Depth Sheet by A. L. Shalowitz.

1. The work comprised an examination of the 32 ft. spot found on W. D. 3967 and the 25 ft. spot reported by the Lighthouse Bureau in the same vicinity.
2. The work was done in conformity with the General Instructions and specific instructions.
3. A careful analysis of the drag work shows conclusively that neither of the two spots exists. The drag was passed over the particular area not less than eight times in various directions and under different current conditions in order to eliminate the possibility that the drag might have slipped over the obstructions. The effective depths ranged from 38 to 43 ft. without any indication of grounding. The groundings on E and F day in the vicinity of the reported 25 were due to sagging of the drag on account of the failure of the toggles properly to support the wire. These two days' work were omitted after a consultation with the Chiefs of Field Records and Field Work, and hence no soundings are shown on the sheet in this locality. The two other groundings that occurred on G and H days about 1/2 mile south of the reported 25 were also omitted for the same reason.
4. The overlaps are sufficient. Two splits were developed by the verification, both ⁰very small extent. The first lies about 700 meters north by east of the reported 25 and the second which is practically a point split lies about 500 meters southeast of the 25. This latter split was in reality covered by the work on F day.

but inasmuch as the whole of F day was omitted a split had to be shown.

5. The field plotting was left in pencil, the limits of the work only being inked. The plotting of the b sheet was well done, but the a sheet contained numerous errors, apparently caused by the confusion of too many lines.

The inking was completed in the office and on account of the great complexity of the work and the extreme importance that the work be correctly shown, a far greater number of positions were verified than would ordinarily be the case.

6. No additional work is necessary here and the two spots may be definitely considered as not existing. These have already been removed from the charts.
7. There is no verification report for this sheet, the substance having been incorporated in this review.
8. Rating of work {
 { Field work - excellent.
 { Field drafting - 4463^a, good; 4463^b, excellent.
9. Reviewed by A. L. Shalowitz, August, 1925.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

~~WIRE-DRAG~~
HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4463a Field sheet A (Nos. 1 & 2)

State California 4463b

General locality San Francisco Bay

Locality Naval Anchorage

Chief of party H.B.Campbell

Surveyed by H.B.Campbell

Date of survey March 1925

Scale 1:10000

Effective depths in ~~Soundings in~~ feet

Plane of reference Mean Lower Low Water

A.J.Hoskinson

Protracted by M.Q.Witherbee Soundings in pencil by

A.L.Shalowitz

Inked by M.Q.Witherbee . Verified by A.L.S.

Records accompanying sheet (check those forwarded):

Des. report, Tide books, 3 Marigrams, 1 Boat sheets,

Sounding books, 3 Wire-drag books, Photographs.

Data from other sources affecting sheet One sheet Comparison of simultaneous observations of tides, and one graph for reduction of tides at Presidio to Rincon Point

Remarks: The work is plotted on two smooth sheets covering the same area.