

FE 105

WIRE DRAG

Diagram No. 5530-5

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey ... Wire Drag

Field No. BO-1112 & 1113

Office No. FE-105

LOCALITY

State California

General Locality .. Entrance to San Francisco

Bay

Locality Over Wreck of USS Benevolence

1952

CHIEF OF PARTY
R.A. Marshall

LIBRARY & ARCHIVES

DATE August 26, 1952

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as;

FE No.2 1952

FE 105
WIRE DRAG

FENo.2 1952

Upper Gains
FE -105

Diag. Cht. No. 5530-5

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey WIRE DRAG SURVEY

Field No. BO-1112 & 111 Office No. F.E.No. 2, 1952 W.D.

LOCALITY

State CALIFORNIA

General locality ENTRANCE TO
SAN FRANCISCO BAY

Locality OVER WRECK OF
USS BENEVOLENCE

1952

CHIEF OF PARTY

Robert A. Marshall

LIBRARY & ARCHIVES

DATE AUG 26 1952

B-1870-1 (1)

FENo.2 1952

DESCRIPTIVE REPORT

to accompany

Special Wire Drag Survey
Over Wreck of USS BENEVOLENCE

Entrance to San Francisco Bay, California

Scale 1:20,000 13 - 19 August 1952

Ship BOWIE Robert A. Marshall
Chief of Party

R. M. Stone
Officer In Charge
of Wire Drag Survey

PROJECT:

The Wire Drag Survey was executed in accordance with the Director's Instructions dated 13 May 1952, Reference No. 21-rcc, D-1-W.

SURVEY LIMITS AND DATES:

Approximate limits of this wire drag survey are as follows:

Lat. $37^{\circ} 46'.5$ to $37^{\circ} 47'.3$

Long. $122^{\circ} 32'.0$ to $122^{\circ} 33'.6$

Field work began on 13 August 1952 and ended on 19 August 1952.

Two boat sheets were made, one for the Guide Launch and one for the End Launch.

VESSELS AND EQUIPMENT:

The Guide Launch and End Launch, the "HANSEN" and "MERRYFIELD", respectively, are 45 foot tug boats, owned by the U.S. Corps of Engineers, San Francisco.

The "EXCEL", a 65 foot fishing vessel was used as the "Tender", owned by the contractor who had the job of clearing the wreck to a depth of 50 feet prior to this dragging.

The HANSEN and the MERRYFIELD were not equipped with fathometers. The EXCEL was equipped with a visual type fathometer.

All three vessels based at the U.S. Corps of Engineers base in Sausalito, California.

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DESCRIPTIVE REPORT FOR SPECIAL WIRE DRAG SURVEY OVER WRECK OF BENEVOLENCE:

CONTROL STATIONS:

Only triangulation control was used, furnished by stations listed in the publication "Geographic Positions of Triangulation Stations, California, Zones VII and X.

A list of stations used are as follows:

<u>Name used in Wire Drag Survey</u>	<u>Triangulation Station Name</u>	<u>Triangulation Zone and Page No.</u>	
BIRD	Bird Island Radio Compass Station 1921	X	50
BON	Bonita Point Lighthouse 1909	VII	92
MILE	Mile Rock Lighthouse 1916	VII	92
NOR	San Francisco North Dutch Windmill 1916 - 17	VII	97
WIND	San Francisco South Dutch Windmill 1916 - 17	VII	97
SKY	NOTE: GOLD 1948 GATE 1948	VII	138
	The above two stations were plotted on the survey sheet. A point midway between these two stations designated the centerline of the south tower of the Golden Gate Bridge. This point was named SKY.	VII	139

SHORELINE AND TOPOGRAPHY:

No shoreline was transferred to the boat sheet.

SOUNDINGS:

In one instance the visual type fathometer on the Tender was used in determining the least depth over the area where the drag was aground, - Refer to page 11 of Guide Launch Record Book.

CONTROL OF WIRE DRAG SURVEY:

This survey was controlled by sextant angles taken between objects located by triangulation.

DESCRIPTIVE REPORT FOR SPECIAL WIRE DRAG SURVEY OVER WRECK OF
USS BENEVOLENCE:

ADEQUACY OF SURVEY:

This survey is believed to be complete and adequate, in that an effective depth of 50 feet was obtained over the area of the wreck.

COMPARISON WITH CHARTS:

Chart 5532 covers this area.

DANGERS AND SHOALS:

No dangers or shoals were found.

The wire drag cleared 50 feet over the wreck of the USS BENEVOLENCE.

COAST PILOT INFORMATION:

No changes nor additions are recommended.

AIDS TO NAVIGATION:

There are no changes nor additions involving fixed aids to navigation relative to this survey.

Two floating aids to navigation were located on this survey and are tabulated as follows:

<u>Latitude</u>	<u>Longitude</u>	<u>Depth</u>	<u>Pos.</u>	<u>Day</u>	<u>Vessel</u>	<u>Date</u>	<u>Floating Aid</u>
37° 47'.02	122° 32.98	-	1	A	HANSEN	8-13-52	Wreck Lighted Whistle Buoy "12WR" #279 in light list
37° 46'.92	122° 33'.25	-	2	A	HANSEN	8-13-52	Wreck lighted Gong Buoy "10-WR" #278 in light list.

Above data was not submitted on Form 567 as it is believed that subject buoys will be removed in the near future.

DESCRIPTIVE REPORT FOR SPECIAL WIRE DRAG SURVEY OVER WRECK OF
USS BENEVOLENCE:

LANDMARKS FOR CHARTS:

No changes nor additions are involved.

DISCUSSION:

On 31 July 1952, a representative from the Corps of Engineers in San Francisco called the Ship BOWIE and stated that the contractor had finished clearing the wreck of the USS BENEVOLENCE to an effective depth of 50 feet, and that dragging operations could be started at any time.

A gasoline driven winch and all wire drag equipment were then installed on the "HANSEN", one of the U.S. Corps of Engineers 45 foot debris tugs.

Prior to dragging it was learned that the contractor's estimation of the cleared depth over the wreck was 51.5 feet at MLLW.

Rough sea conditions prevented operations prior to and including 13 August. However, the two wreck lighted buoys were located on 13 August.

On 14 August a 3500 foot drag passed over the wreck area without going aground, unfortunately the Tender did not get any drag tests, refer to Page 6 in the Guide Launch Record, (Pos. 8 B - 10 B).

On the following day, 15 August, a 1500 foot drag was put out and towed between the navigation buoys and over the wreck area. This drag hung up as described on page 11 in the Guide Launch Record Book. Rough sea conditions were encountered on this day making it difficult for the Tender to obtain accurate results.

On 18 and 19 August, (D and E days, respectively), longer drag strips were run in order to give the Tender ample time for testing.

On 18 August considerable lift was experienced making the effective depth over the wreck area only 46.4 feet, refer to (13 D-16 D).

On 19 August the drag strip (19 E through 22E) had an effective depth of 52.4 feet. It appeared that the drag hung up momentarily and then cleared itself. However, the drag strip (29E through 33E) covering the same area has an effective depth of 50.2 feet with no indication of fouling with the wreck.

APPROVED:

*No n to m published
H&B per 786
chart by hand. 150
H&B*

Robert A. Marshall

Robert A. Marshall
Commander, USC&GS
Commanding Officer Ship BOWIE

Respectfully submitted, 150

R. M. Stone

R.M. Stone
Lieut. Comdr., USC&GS

STATISTICS
for
Special Wire Drag Survey
Entrance to San Francisco Bay, California

Ship BOWIE Year 1952
Tug "HANSEN" -- Guide Launch
Tug "MERRYFIELD" -- End Launch

<u>Volume Number</u>	<u>Day Letter</u>	<u>Date</u>	<u>Number of Positions</u>	<u>Stat. Miles of Dragging</u>
1	A	8-13-52	2	0.0
1	B	8-14-52	11	0.9
1	C	8-15-52	5	0.5
1	D	8-18-52	21	1.7
1	E	8-19-52	33	2.8
TOTAL			72	5.9

TOTAL AREA OF WIRE DRAG -- 1.16 Square Statute Miles

TIDE NOTE
to accompany
Special Wire Drag Survey
Entrance to San Francisco Bay, California

Ship BOWIE

Year 1952

The tide station at San Francisco (Presidio), California, at Lat. $37^{\circ} 48'.4$, Long. $122^{\circ} 27'.9$, was used for the reduction of all soundings and wire drag depths on this survey.

The value of mean lower low water on the staff was 2.00 feet.

On days when wire dragging was done, staff readings were read every 30 minutes at the Presidio Tide Station, and recorded in a Tide Record Book, Form 277.

A time correction fact of (-) 20 minutes was applied to the observed Presidio values in order to arrive at a fair value for the area being dragged in the vicinity of the wreck of the USS BENEVOLENCE.

APPROVAL SHEET

Special Wire Drag Survey
Entrance to San Francisco Bay, California

The records for this wire drag survey have been examined and found to be complete.

The smooth sheet has not been plotted at the time of writing this report.

This survey is complete, adequate, and is approved.



Robert A. Marshall
Commander, USC&GS
Commanding Officer
Ship BOWIE

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24 C

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~XXXXXXXXXXXXXXXXXXXX~~

25 September 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 3
volumes of sounding ~~records for~~ and wire drag records for

FE No. 2 1952

~~HYDROGRAPHIC SHEET~~

Locality Entrance to San Francisco Bay, California

Chief of Party: R. A. Marshall in 1952
Plane of reference is mean lower low water, reading
2.0 ft. on tide staff at San Francisco (Presidio)
13.5 ft. below B. M. 180 (1936)

Height of mean high water above plane of reference is 5.1 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section of Tides
Chief, ~~Division of Tides and Currents.~~

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets /.....; sounding vols.; wire drag vols. ³.....;
 bomb vols.; graphic recorder rolls;
 special reports, etc.

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

Number of positions on sheet	.....	72
Number of positions checked	.....	13
Number of positions revised	.....	1
Number of soundings revised (refers to depth only)	.....	—
Number of soundings erroneously spaced	.....	—
Number of signals erroneously plotted or transferred	.....	—
Topographic details	Time	..... 0
Junctions	Time	..... 0
Verification of soundings from graphic record	Time	..... 0

Verification by *Lu Jaskind* Total time *1 1/2 hrs* Date *8-28-52*
 Reviewed by *Lu Jaskind* Time *2 hrs* Date *8-29-52*

REVIEW OF FIELD EXAMINATION 2, 1952

The purpose of this field examination was to determine if the wreck of the U.S.S. Benevolence at the entrance to San Francisco Bay, California, had been demolished to an effective depth of 50 ft.

The field examination shows the wreck was momentarily hung by a wire-drag with an effective depth of 52 ft. and cleared by a wire-drag with an effective depth of 50 ft. The position of the wreck was not determined during the examination.

There are no conflicts between the effective wire-drag depths and charted depths in this area.

The field examination is plotted on a section of the boat sheet and a tracing showing the area and depth diagram. These two sheets are attached to the Descriptive Report.

The Descriptive Report adequately covers all matters pertaining to this examination.

Reviewed by -

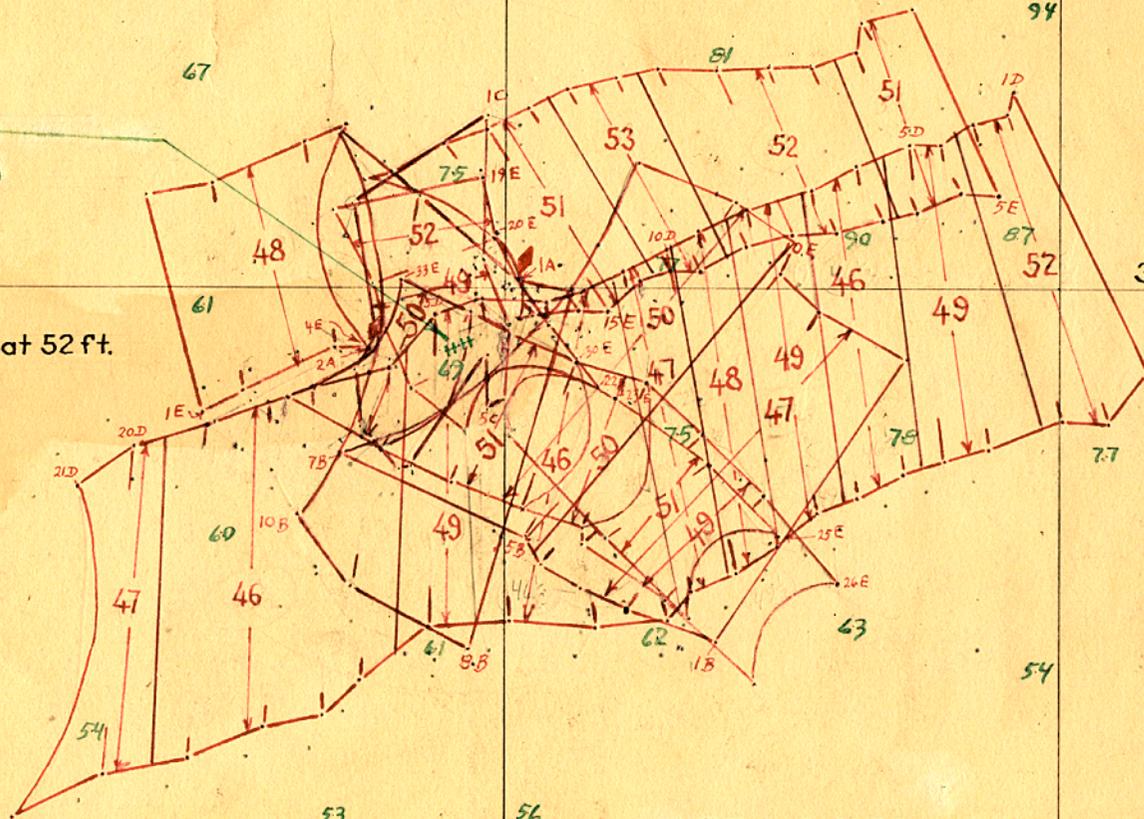
I. M. Zeskind
8-29-52

Inspected by -

R. H. Carstens

Location of Wreck U.S.S.
BENEVOLENCE and soundings
transferred from Chart 5532 (4-16-51)

Drag hung wreck momentarily at 52 ft.
Cleared wreck by 50 ft.



FE No. 2, 1952
Scale-1:20,000
Sheet 1 of 2

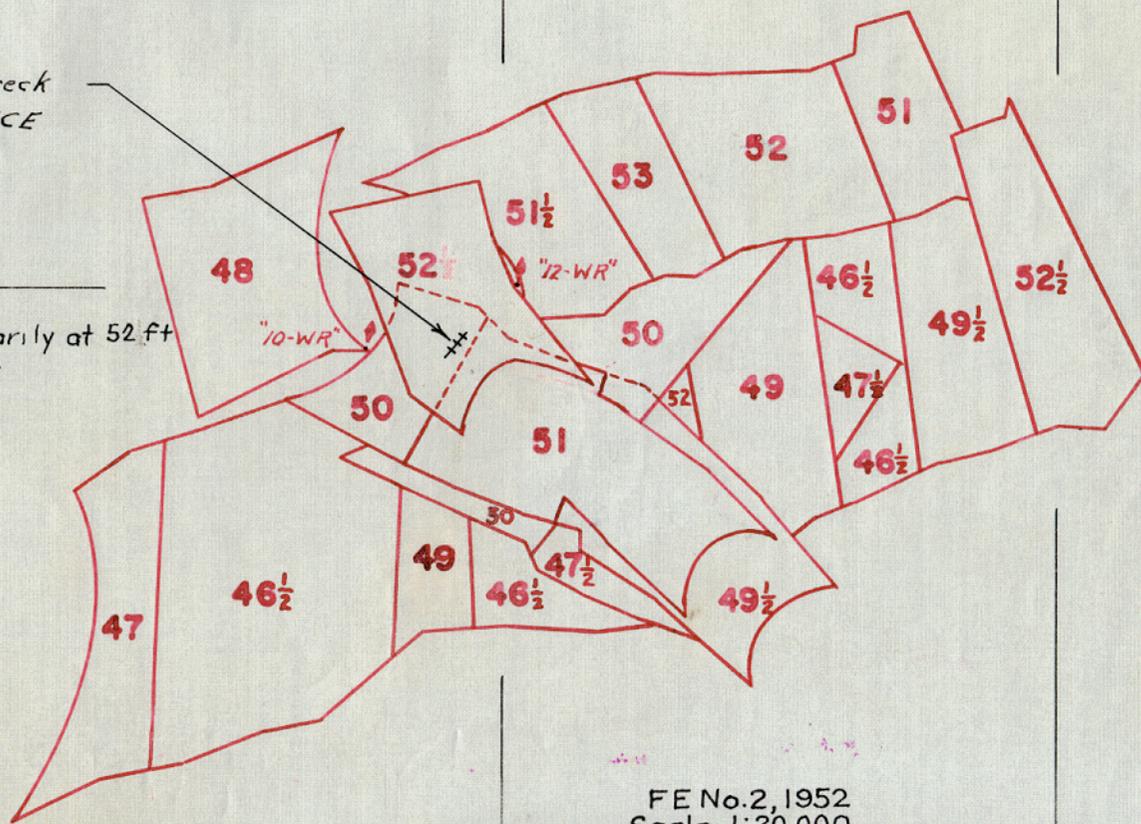
A & D SHEET

Charted Position of Wreck
of USS BENEVOLENCE

- 47'

Drag hung wreck momentarily at 52 ft
Cleared wreck by 50 ft.

37°47'



FE No. 2, 1952
Scale-1:20,000
Sheet 2 of 2

37° - 46'

46

34'

122° 33'

32'

Height of Tide above MLLW
Time at Ft. Point
Time at Windy Site

5

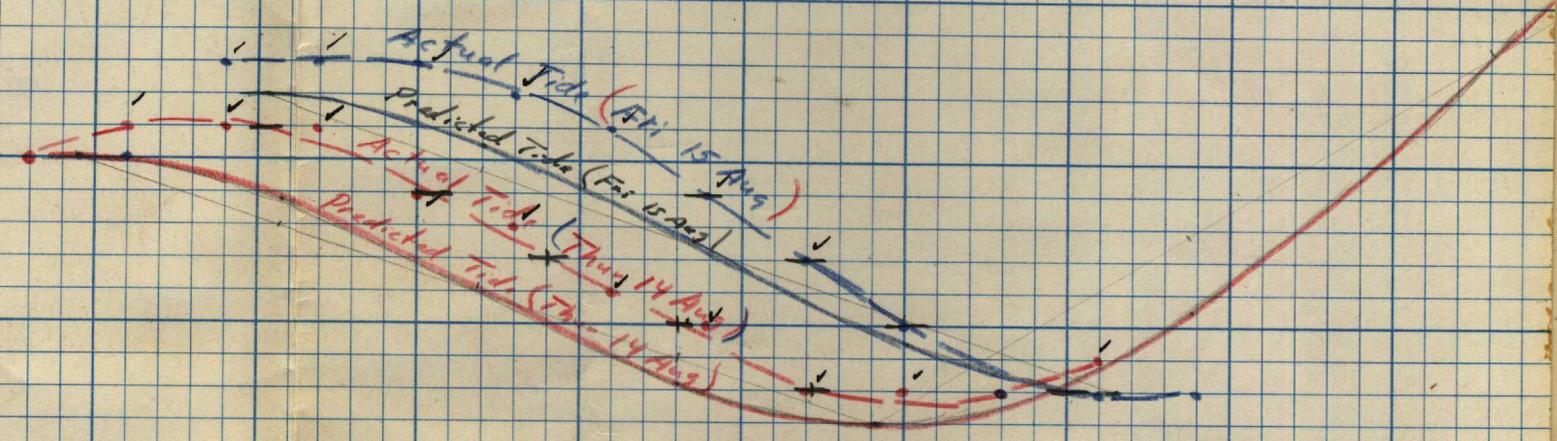
3.4	0730	0710
3.7	0800	0740
3.9	30	0810
4.0	0800	0840
4.1	30	0810
4.1	1000	0940
4.1	30	1010
3.5	1100	40
3.8	30	1110
3.6	1200	40
3.5	30	1210
3.3	1300	40
3.3	30	1310
3.3	1400	40
3.4	30	1410

Thurs.
Aug 14
1952

3

2.8	0730	0710
3.2	0800	0740
3.6	30	0810
3.8	0900	40
4.0	30	0910
4.3	1000	40
4.3	30	1010
4.3	1100	40
4.2	30	1110
4.1	1200	40
3.8	30	1210
3.7	1300	40
3.5	30	1310
3.3	1400	40
3.3	30	1410
3.3	1500	40

Fri
15 Aug
1952



Tide Reduction	(Pac Daylight Sav.) Time	
4.0	0952 to 1044	Thurs. 14 Aug.
3.8	1044 to 1120	
3.6	1120 to 1200	
3.4	1200 to 1242	
3.2	1242 to 1340	Fri 15 Aug.
3.8	1209 to 1240	
3.6	1240 to 1310	
3.4	1310 to 1400	

ARM

NOTE: Time is 125th Meridian or Pacific Daylight Sav. Time.

4 5 6 7 8 9 10 11 12 13 14 15 16

Height of Tide above MLLW	Time at Pt. Point	Time at West Side
3.4	1000	0940
3.7	30	1010
4.3	1100	40
4.5	30	1110
4.6	1200	40
4.6	30	1210
4.7	1300	40
4.7	30	1310
4.3	1400	40
4.1	30	1410
3.7	1500	40
3.4	30	1510

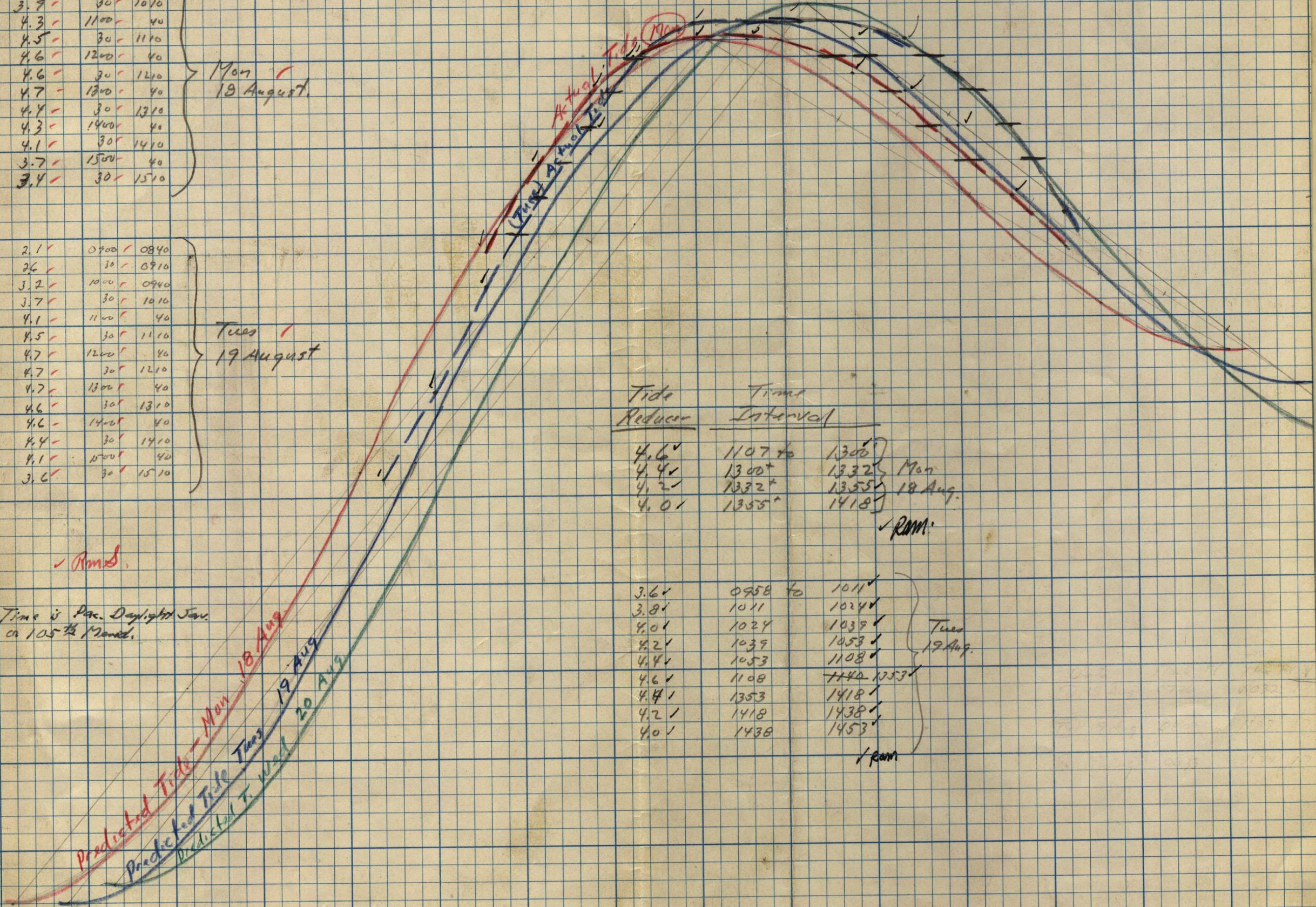
Mon
18 August

2.1	0900	0840
2.6	30	0910
3.2	1000	0940
3.7	30	1010
4.1	1100	40
4.5	30	1110
4.7	1200	40
4.7	30	1210
4.7	1300	40
4.6	30	1310
4.6	1400	40
4.4	30	1410
4.1	1500	40
3.6	30	1510

Tues
19 August

Time is Pac. Daylight Sav. on 105th Merid.

Predicted Tide - Mon 18 Aug
 Predicted Tide - Tues 19 Aug
 Predicted T. West 20 Aug



Tide Reducer	Time Interval	
4.6	1107 to	1300
4.4	1300	1332
4.2	1332	1355
4.0	1355	1418

Mon
18 Aug.

Rams

3.6	0958 to	1011
3.8	1011	1024
4.0	1024	1039
4.2	1039	1053
4.4	1053	1108
4.6	1108	1140 1353
4.4	1353	1418
4.2	1418	1438
4.0	1438	1453

Tues
19 Aug.

Rams

