

4302

Diag. Cht. No. 204-B

4302

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

State: Porto Rico

11-3413

DESCRIPTIVE REPORT.
 (W.D. Suppl. Hyd.)
 Hydrog. Sheet No. 4302

LOCALITY:

Vieques Sound

Port Yabucoa

19²³
 19^X

CHIEF OF PARTY:

F.B.T. Siems

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

U. S. S. RANGER

DESCRIPTIVE REPORT TO ACCOMPANY SHEET No. 8:

Wire Drag Operations, Port of Yabucoa, Porto Rico, July 1923.

N. B. T. Siems, Chief of Party.

INSTRUCTIONS:-

Supplemental Instructions covering this work were dated May 3, 1922. This work was done July 10, 17 and 18, 1923.

LIMITS:-

Main Channel and anchorage of the Port of Yabucoa, Porto Rico. This work was done on a field sheet of scale 1:10000.

DRAG LENGTHS:-

The approach to the main channel was dragged to an effective depth of 21' using length of drag of 1800'. The main channel was dragged to an effective depth of 17' using length of drag of 500'. The anchorage was dragged to 17' and 14' with a drag length of 1500'.

CONTROL OF SURVEY:-

Triangulation station Guayames and Ro, and directions from these stations to signals control the survey.

METHOD OF CONTROL:-

The two boat control was used for all of this work.

EQUIPMENT:-

Standard wire drag equipment as described in Special Publication #56 was used.

DEC 4 8 53 AM '23

OFFICE
LIBRARY
WAGNER
St. Thomas, V.I.
November 23, 1925.

SHOALS DISCOVERED:-

The 16' SD at entrance to main channel was found about 100 meters and in a n'easterly direction from the location shown on previous chart. Least water found at this spot was 17'. This spot was passed over by a drag 500' long and set at an effective depth of 17'.

Reports of shoals discovered were forwarded to the Washington Office immediately after discovery. A complete list is entered in the sounding record of this sheet.

Tidestaff situated at the wharf of the Yabucca Sugar Co., in this port was used.

CURRENTS:-

Strong current setting to the S.S.W. was encountered in this locality.

ORGANIZATION:-

With the exception of Chas. P. Morrill, Marine Engineer (Motor) and L.S. Godfrey, Dragnaster, the personnel of the party was from the complement of the RANGER. The Officers engaged on this work were as follows:-

A.P. Ratti,	Jr.H&G Engr.	In Charge.
A. Ogram,	Deck Officer	Assisting on Guide Launch.
J.K. Gill,	Deck Officer	Recording on Guide Launch.
E. Leff	Aid	In charge, end launch.
H.J. Auld,	H&G Engr.	Assisting, end launch.
C.P. Morrill	Marine Eng.(Motor)	Engineer, Guide launch.
H.G. Lairtus	A to E 2 cl.	Engineer, end launch.
L.S. Godfrey	Dragnaster	

In addition, the complements of the launches were as follows:

Guide launch:	Signalman, coxswain & line tender.
End "	Coxswain and line tender.
Tender "	Oiler.

All of latter were from the complement of the RANGER.

A.P. Ratti

A.P. Ratti,
Jr.H&G Engr:US CGS.

February 19, 1924.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volumes of sounding records for
1 " " Wiredrag.
HYDROGRAPHIC SHEET 4302

Locality: Yabucoa, Porto Rico.

Chief of Party: F. B. T. Siems, in 1923.
Plane of reference is mean low water, reading
6.1 ft. on tide staff at Yabucoa.

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 in 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.

Section of Field Records.

Report on sheet No. W.D. 4302	Surveyed in 1923
Chief of Party - F. B. T. Dennis	Surveyed by - Field Party
Protracted by - H. Mactown	Sounding plotted by - H. M.
Effective depths plotted by - H. M.	

1. The records conform to the requirements of the general instructions. Note: There are some evidences of carelessness in recording such as transposition of figures copying down wrong signals in a fix and leaving out signpost on buoy angles.
2. The plan and character of the development fulfils the requirement of the general instruction.
3. The plan and extent of the development satisfies the specific instructions. Note: a small split occurs in the junction of the adjoining sheet (4287).
4. No smooth sheet was submitted - all plotting being done by the office draftsman.
5. Further surveying is not necessary in this locality so further develop it.
6. Remarks: (The material affecting the control for this sheet is in parts incomplete and generally in poor condition. The control is based on two triangulation stations from which cuts are taken to

shore signals consisting of whitewash marks on prominent features of the shore line. The cuts were made with theodolite but no computations were made, making it necessary for the office draftsman to dig out of the triangulation records sufficient cuts to plot the signals used. Some difficulty was met with due to the fact that on all ^{cuts to} whitewash signals there was no name other than WW to indicate what signal was being observed. Due to lack of information signals O Rock and O No[#] 1/2 had to be transferred from the guide-launch sheet. With the material in the triangulation records and sextant cuts in the sounding records the remaining points were plotted satisfactorily with the possible exception of signals O Tan and O Mean[#] 1. (These two signals while located with cuts do not check the plotting on the guide launch sheet.) The office draftsman believes that much time and labor could have been saved had the field party adhered more closely to the general instructions; (paragraphs 207 and 208)

Effective depth areas.

Points where the drag grounded are indicated either by a sounding in pencil or a notation "ground

As passing buoy the following method was used the drag was towed up to the buoy until direct ly over or a little beyond its moorings. The launches reversed while the tender picked up the drag. The launches went forward until the tender could drop the drag on the other side. This operation was used in order to avoid making splits and in the three or four instances in which the method was used the officer drafter showed the drag lines as unbroken and the area completely covered.

At 26c the recorder for the field party shows the line ending and the drag being taken up, while the end-launch continues towing the drag for five minutes. In as much as some minutes must have elapsed after position 26c was taken by the guide launch before the lifting of the drag was under way sufficient ly to affect the covered area, and since the rejection of the last end-launch position would leave a split, the officer drafter continued the line to include 27c (end-launch). It is his belief that the area was covered.

7. Character and scope of surveying - fair

Respectfully submitted

H. E. MacEwen

Wire Drag Sheet No 4302

The report by the draftsman who plotted the smooth sheet is comprehensive and little remains to be added.

There is some difference in the work as plotted on the smooth sheet and the plotting as shown on the boatsheet submitted. This difference is due to the fact that some of the signals as plotted on the smooth sheet, from the cuts in the record, come in a slightly different position, than they are shown on the boatsheet. As these cuts seem to be correctly plotted, I can only ascribe this difference to the usual difference, which generally exists between a smooth sheet and a boatsheet.

The two boat control system was used through-out. The section from pos. 23A to pos. 26A was not plotted as there were no end launch positions and therefor no data for plotting "F."

At pos. 15B there are two grounds noted, one at buoy no. 1 and one at the position of "F," but the sounding taken plots at the position of "N." These two points have been indicated on the sheet, with the depth at which the drag grounded. There are also some grounds on the drag curve of pos. 17c and pos. 21c. But these are near the soundings taken at pos. 2c and pos. 4c and it is probable that they are the same points. They are therefor not shown on the sheet.

P. L. Johnston

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 October 29, 1924.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet H - 4302

Port Yabucca, P. R.

Surveyed in 1923

Instructions dated May 3, 1922.

Chief of Party, F. B. T. Siems.

Surveyed by A. P. Ratti, M. Leff.

Protracted and inked by H. E. MacEwen.

Verified and Area and Depth Sheet by R. L. Johnston.

1. The records conform to the requirements of the General Instructions.
2. The methods and character of operations fulfill the requirements of the General Instructions.
3. The drag should have been carried closer to the 3 fathom curve in the channel leading into Port Yabucca and in the anchorage itself. Since the channel is narrow, and the anchoring area comparatively of small extent every additional square foot made safe for navigation is of great import. It is understood that vessels entering the anchorage pass close to the black can buoy No. 1. Hence the drag should have been carried as close to the charted position of the buoy as possible. It is to be noted that the position of this buoy as found by the field party is 110 meters 310° (true) from charted position. The width of channel is 135 meters. The depth of dragging is sufficient except that the approach to the main channel should have been dragged to a deeper depth than 21 feet. Also the heart of the anchorage around the 16 foot shoal should have been dragged deeper than 13 feet.
4. The least water was found on the shoals discovered except as follows:
 - a. The 13 foot sounding in latitude $18^{\circ} 03'$, longitude $65^{\circ} 48 \frac{1}{2}'$ was not cleared. A 14 foot ~~buoy~~ ^{drag} grounded here and 13 feet was obtained. A drag should have passed over this spot since the 13 fs the shoalest depth in this vicinity.

Wire Drag Sheet H - 4302 - 2

b. The 16 foot sounding in latitude $18^{\circ} 03 \frac{1}{2}'$, longitude $65^{\circ} 48 \frac{1}{2}'$ was not dragged over. It lies just outside the inshore limit of the drag and along the northern edge of the main channel. The shoalest depth should have been obtained here as the channel itself is very narrow and it is desirable to know if there is less water here.

c. The 14 foot sounding in latitude $18^{\circ} 03 \frac{1}{4}'$, longitude $65^{\circ} 48 \frac{3}{4}'$ is outside of the drag limits.

5. The supplemental hydrography is ~~unsuitable~~ suitable for correcting the charts.
6. The overlaps within the sheet are sufficient. There is a split between this sheet and H. 4287.
7. There are two splits on this sheet: that as mentioned in paragraph 6 and a small one in the anchorage near the 16 foot sounding mentioned in paragraph 4, c.
8. This sheet was plotted in the office, and the cartographer experienced considerable difficulty in obtaining the control points for this survey on account of the incomplete form of the data. (See appended extract from report of H. E. MacEwen on protracting of this sheet.)

Differences between the boat sheet plotting and the smooth sheet plotting are due to the difference in the positions of the signals.

9. Attention is called to the fact that the 16 foot sounding in latitude $18^{\circ} 03 \frac{1}{4}'$, longitude $65^{\circ} 48 \frac{3}{4}'$ is shown as cleared by a 13 foot drag, but in reality a drag of at least 15 feet depth passed over this, since the sounding plots very close to the 16 foot upright of buoy No. 1 while buoy No. 2 was set at 13 feet, thus making an effective depth of about 15 as having actually passed over this spot.
 - (a. Character and scope of drag operations - fair.
10. Rating of work (
 - (b. Drafting - Excellent.
11. Reviewed by A. L. Shalowitz, October, 1924.

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

October 29, 1924.

Appendix to Review of Wire Drag Sheet H - 4032

Extract from Report of H. E. MacEwen on W. D. 4302

The material affecting the control for this sheet is in parts incomplete and generally in poor condition. The control is based on two triangulation stations from which cuts are taken to shore signals consisting of whitewash marks on prominent features of the shoreline. The cuts were made with theodolite but no computations were made, making it necessary for the office draftsman to dig out of the triangulation records sufficient cuts to plot the signals used. Some difficulty was met with due to the fact that on all cuts to whitewash signals there was no name other than WW to indicate what signal was being observed. Due to lack of information, signals Rock and Nes No. 1 1/2 had to be transferred from the guide launch sheet. With the material in the triangulation records and sextant cuts in the sounding records the remaining points were plotted satisfactorily with the possible exception of signals Tan and Mean No. 1. These two signals while located with cuts do not check the plotting on the guide launch sheet.