

4287

WIRE DRAG

4287
WIRE DRAG

<small>Form 504</small> U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE DESCRIPTIVE REPORT	
<i>Type of Survey</i> <u>Wire Drag</u>	
<i>Field No.</i> <u>3</u> <i>Office No.</i> <u>H-4287 W.D.</u>	
LOCALITY	
<i>State</i> <u>Porto Rico</u>	
<i>General locality</i> <u>Vieques Sound</u>	
<i>Locality Pt.</i> <u>Guayanes to Gabras I and</u> <u>Vieques I.</u>	
<u>19# 22-23</u> CHIEF OF PARTY <u>F.B.T. Siems</u>	
LIBRARY & ARCHIVES	
DATE	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 4287
Field Number 3.

State . . . PORTO RICO

Vieques Sound

General locality . . . ~~South east coast of Porto Rico~~

Pt. Guayanes to Cabras I. ~~light~~ and Vieques I.

Locality . ~~Cabras Island to Point Guayanes.~~

Chief of party . . . F. B. T. Siems

Surveyed by . . . R. R. Moore and A. P. Ratti.

Date of survey 1922-1923.

Scale . . . 1:20,000

Soundings in . . . feet

Plane of reference . . . Mean Low Water.

Protracted by . R. R. M. . Soundings in pencil by R. R. M. .

Inked by . ~~by A.L.S.~~ Verified by . *Drag Work by R.L.S.*
Soundings by A.L.S.

Records accompanying sheet (check those forwarded):

Des. report, 4 Tide books, Marigrams, 3 Boat sheets,
1 ~~Sounding~~ books, 5 ~~Wire-drag~~ books, 1 ~~Effective Drag Tracing~~
Effective Drag Tracing

Data from other sources affecting sheet Comparison Pt Arenas staff with Fajardo station. Triangulation 1922-1923.

Remarks: It will be necessary to plot some minor additional drag work on this sheet.

See H-4292 W.D. (1922-23) for combined descriptive report.

Section of Field Records

Report on H.D. 4287 (1922-23)

The verification of this sheet was started by F. M. Albert, who verified L'day, R'day and S'day, the balance of the work being verified by myself.

The records conform to the requirements of the general instructions, except that more detailed notes should have been made in regard to the handling of the drag at groundings. At pos. 22 S' and pos. 15 F', it was necessary to break the line, making large splits in the work.

The work is well laid out, and all overlaps are ample.

There are several discrepancies between the position of the grounding as stated in the drag record, and the position of the sounding taken. These occur at pos 28 F and pos 20 E'.

A sounding was obtained on April 12, 1923, of 58 ft, which could not be located on account of rain-squalls. Its approximate position is Lat. $18^{\circ}-06.1'$, Long. $65^{\circ}-39.7'$, close to the ground of O day and has been covered with an effective depth of ⁵⁰ 55 ft. see review. ✓
(57 feet obtained at pos. 7 L. No. 2 sounding record for 1927 work, the 58 is therefore removed)

The sounding of 57 ft, obtained at the ground of pos. 22 S, might have been verified, as deep water is charted in this vicinity.

Between pos 15 G' and pos 16 G', the drag was aground with an effective depth of 32 ft. on a charted shoal of 35 ft, but slipped off.

At pos 5 S the drag was aground at an effective depth of 30 ft, and parted. Nothing was shown on the sheet at this point, as it seems probable that the grounding occurred after pos 5 S was passed, which would bring it close to the 30 ft charted shoal. In any event, the point was cleared with an effective depth of ² 27 ft. ✓

At pos. 69c the drag was aground at an effective depth of 29 ft at a point which was later cleared by 31 ft. However 29 ft was shown on the sheet. (29 ft taken off as it was cleared by eff depth of 32 ft on G day 1927 work)

At pos 8K the drag was aground at an effective depth of 18 ft, but the record states that the tender sounded and found no shoal and the point has been cleared by both 19 ft and 21 ft, therefore nothing was shown on the sheet. ✓

The field plotting of this sheet is only fairly well done. The protracting is good on the greater part of the work, but quite approximate in places. Too many short cuts were attempted on the days on which the single boat control was used. Only every other position was plotted on C day and D day, while on A day, pos 10A and pos 20A were connected with a straight line, omitting nine intermediate positions. ✓

A great deal of erasing was necessary, as the color of some strips were affected by changed tide reducers. Also the subdivision was corrected, due to the fact that the rule of 1 to 40 was ignored in the field plotting. The effective depth-figures for all areas under twenty feet were incorrectly shown. The color intended for brown on the sheet looks more like red. The last two days work were not plotted at all. ✓

On D' day the drag was apparently lifted over two buoys but no mention is made of this in the records. R. L. Johnston

E.O.E.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DEM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON May 5, 1925.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4287

Surveyed in 1922 - 23

Instructions dated July 7, 1921.

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

Surveyed by R. R. Moore

Protracted and Inked by R. R. Moore

Verified and Area and Depth Sheet by R. L. Johnston, F. M. Albert.

1. The records conform to the requirements of the General Instructions except that more detailed notes should have been made in regard to the handling of the drag at groundings. In two such instances (pos. 22 S' and 15F') it was necessary to break the line making large splits in the work.
2. The methods and character of operations fulfill the requirements of the General Instructions.
3. The extent of dragging satisfies the Specific Instructions except as follows:
 - a. Between Pt. Cascajo and Pt. Lima the drag was not carried close enough to the 3 fathom curve.
 - b. Drag work should have been carried closer to Santiago Cay on the southeast and northeast
 - c. South and southwest of Botata Cay the extent of dragging is insufficient.
 - d. Between El Morillo and Port Humacao the drag should have been carried closer to shore.
 - e. The bay southwest of Pt. Candelero was not dragged.
 - f. The drag should have been extended to include the important shoal area in vicinity of Lat. 18° 02', Long. 65° 45'. The sailing directions as given in the latest edition of the Coast Pilot cross this undragged area.

*Accomplished
Ad. WK. 1926-7*

*Accomplished
Ad. WK. 1926-7*

4. As to the depth of dragging, it is to be noted that with the exceptions of shoals and a few other places the effective depths are considerably less than the general charted depths. It is suggested that, when consideration is given to the need for additional work in this locality, special copy of chart 917 (on file in the Field Records Section) be examined for the desirability of dragging to greater effective depths certain portions of the sheet. A few of the more important places are the following:

a. The 29 ft. area in Vieques Passage lies in depths varying from 44 to 60 feet. no

b. The 29 ft. area in vicinity of Lat. $18^{\circ} 09 \frac{1}{2}'$ Long. $65^{\circ} 38'$ should have been dragged as deep as possible. Also the 28 ft. area in Lat. $18^{\circ} 09'$, Long. $65^{\circ} 38 \frac{1}{2}'$. The sailing directions as given in the Coast Pilot pass ~~es~~ through both of these areas. no

c. Between the $4 \frac{3}{4}$ fathom spot in Lat. $18^{\circ} 07'$, Long. $65^{\circ} 41 \frac{3}{4}'$ and the $4 \frac{1}{4}$ fathom spot in Lat. $18^{\circ} 07 \frac{1}{2}'$, Long. $65^{\circ} 41 \frac{1}{4}'$, there is a deep channel about $\frac{1}{2}$ mile wide that connects the deep area offshore with the deep area inshore. The effective depths through here range from 23 to 36 ft. The drag can be set considerably deeper. ✓

d. Between red buoy N-2 and the 3 fathom shoal in Lat. $18^{\circ} 09'$, Long. $65^{\circ} 43'$ the effective depth is 14-16 ft. This is the easterly approach to Port Humacoa and should be dragged to a deeper effective depth. Accomplished
Ad. Wk. 1926-7

e. South of Point Algodones there are effective depths ranging from 15 to 19 ft. which should be increased. Accomplished
Ad. Wk. 1926-7

f. About 1 mile south of Point Lima and extending between Long. $65^{\circ} 40'$ and $65^{\circ} 42'$ there are several strips that have been dragged to depths varying from 13 to 15 ft. The charted depths warrant a much deeper drag here. Accomplished
Ad. Wk. 1926-7

g. The area in Lat. $18^{\circ} 07'$, Long. $65^{\circ} 43 \frac{1}{2}'$ should have been dragged to a greater depth than 26-27 ft. An inspection of the hydrographic sheet shows that a channel of about 600 yards width is possible through here with a depth of 36 ft. ✓

5. The least water was found over all important shoals except as follows:

a. The 24 ft. sounding in lat. $18^{\circ} 06\frac{1}{2}'$, long. $65^{\circ} 46'$ was cleared by a 20 ft. drag. It would seem that the drag should have been set deeper than within 4 ft. of the known depth. This shoal is surrounded by depths of 32 to 37 ft.

b. The 17 ft. sounding (grounding depth) in lat. $18^{\circ} 07\frac{1}{2}'$, long. $65^{\circ} 46'$ has not been cleared.

c. The 13 ft. sounding in lat. $18^{\circ} 08'$, long. $65^{\circ} 46'$ was not cleared. A large split in the work occurs here. Depths of 20 to 30 ft. surround this spot. *cleared by Eff. Depth of 12 ft. on Ad. WK 1926-7*

d. the $4\frac{3}{4}$ fathom spot (28 ft.) in lat. $18^{\circ} 07\frac{1}{4}'$, long. $65^{\circ} 45'$ from H. 2582 was cleared by a 14 ft. drag. There is some uncertainty as to the exact clearance depth over this shoal as the boat sheet shows an effective depth of 25 ft. which would seem to be a logical depth. The smooth plotting by the field party was changed to conform to the boat sheet depth after the records were sent to the office, a note stating that there must have been an error made in inking. However, an examination of the drag record clearly indicated that the drag was hooked up to 14 ft. and therefore the verifier has so shown it on the smooth sheet to be on the side of safety. The spot is an important one and should be cleared by an adequate depth. *Shoal cleared by Eff. Depth of 23 ft. on Ad. WK 1926-7*

e. The 4 fathom spot (24 ft) from H. 2582 in lat. $18^{\circ} 07'$, long. $65^{\circ} 44\frac{1}{4}'$ was cleared by a 19 ft. drag. This is an extremely important shoal and should be dragged closer to the bottom. *22-ft. shoal cleared by Eff. Depth of 20 ft. on Ad. WK. 1926-7*

f. The 31 ft. sounding (grounding depth) in lat. $18^{\circ} 09\frac{1}{4}'$, long. $65^{\circ} 42\frac{1}{2}'$ was not cleared. This is probably due to the split in the work occasioned by lifting the drag over a navigation buoy on W day. The large split shown around the buoy was caused by the lack of information in the records relative to the maneuvering of the drag before and after it was lifted over the buoy. *cleared by Eff. Depth of 21 ft. on Ad. WK. 1926-7*

g. The $6\frac{3}{4}$ fathom shoal (41 ft.) from H. 2584 in lat. $18^{\circ} 05\frac{3}{4}'$, long. $65^{\circ} 38\frac{1}{4}'$ was cleared by 37 ft.

h. The $4\frac{3}{4}$ fathom sounding (29 ft.) from H. 2584 in lat. $18^{\circ} 06\frac{3}{4}'$, long. $65^{\circ} 36'$ was cleared by a 24 ft. drag.

i. The 57 ft. sounding in lat. $18^{\circ} 05'$, long. $65^{\circ} 37\frac{1}{4}'$ was not cleared. The drag was lifted over after grounding and a large split in the work is left here. The surrounding depths are considerably deeper. *cleared by Eff. Depth of 52 ft. on Ad. WK. 1926-7*

j. The 12 and 13 ft. soundings in lat. $18^{\circ} 12'$, long. $65^{\circ} 37 \frac{1}{4}'$ were not cleared. The drag grounded here at 12 and 15 ft. respectively, but pulled off, so the clearance depths are uncertain. *cleared by Eff. Depth of 11 ft. on H-4292*

k. The 13 ft. sounding in lat. $18^{\circ} 11 \frac{1}{4}'$, long. $65^{\circ} 39 \frac{3}{4}'$ was not cleared. A 13 ft. drag grounded here and pulled off, making the clearance depth uncertain. *cleared by Eff. Depth of 10 ft. on Ad. WK. 1926-7*

l. The 13 ft. sounding in lat. $18^{\circ} 10 \frac{3}{4}'$, long. $65^{\circ} 43'$ was not cleared. The drag grounded here and was lifted over the 13 ft. spot. *cleared by Eff. Depth of 11 ft. on Ad. uk 1926-7*

6. The following are places where the drag passed over known shoals of lesser depths but without any indication of grounding.

a. In the vicinity of lat. $18^{\circ} 08 \frac{1}{2}'$, long. $65^{\circ} 36 \frac{1}{4}'$, a 32 ft. drag passed over several soundings varying from 27 to 30 ft (authority H. 2582). It is to be noted that the state of the sea on this day was "light swell". *shoal sdg. verified on Ad. WK. 1926-7. Eff. Depth revised to 27 ft.*

b. At 34 S' in the vicinity of lat. $18^{\circ} 06'$, long. $65^{\circ} 36'$ the drag grounded at buoy No. 2 and F. The boat sheet and smooth sheet showed the bight of the drag as pivoting on buoy No. 2. This treatment would have made a 31 ft. drag pass over a 26 ft. sounding about 450 meters northwest of buoy No. 2. The authority for this sounding is H. 2585. As there is no reason to question this sounding on the original hydrographic sheet it is possible that the drag was also aground at this point. The bight of the drag was therefore changed so as not to include the 26 ft. sounding. However, there remains some doubt as to the existence of this spot and it is therefore recommended that this area be further investigated. *shoal substantiated by 27 ft sdg on Ad. uk 1926-7 cleared by Eff. Depth of 24 ft.*

c. The 29 ft. sounding (grounding depth at 69 C in lat. $18^{\circ} 09 \frac{1}{4}'$, long. $65^{\circ} 42 \frac{1}{4}'$ has been cleared by a 31 ft. drag on K day. *Also cleared by Eff. Depth of 32 ft. on Ad. uk 1926-7. 29 ft. sdg deleted*

d. The 18 ft. sounding (grounding depth at 8 K) in lat. $18^{\circ} 09 \frac{1}{2}'$, long. $65^{\circ} 40 \frac{1}{4}'$ was cleared by a 19 ft. drag on E day and a 21 ft. drag on T' day. This sounding is to be charted in order to be on the side of safety as there is a possibility that there was a lift on the 21 ft. drag to pass over this spot. *Also cleared by Eff. Depth of 21 ft. on Ad. uk 1926-7 18 ft. sdg deleted*

7. The overlaps within the sheet are ample. The junction with H. 4292 on the east is adequate but that with *split covered by Ad. Wk. 1926-7* H. 4302 on the southwest is insufficient. This is clearly indicated on the Area and Depth sheet.
8. There are a number of splits on this sheet which should be covered. These are all shown on the Area and Depth Sheet. In many of these cases large splits had to be shown in order to be on the side of safety, as the records were incomplete with regard to the maneuvering of the drag at groundings and at navigation buoys. Whenever a drag is lifted over a shoal or a navigation buoy, the time when the drag is let down should be recorded, otherwise the line will be shown as beginning at the next position. Also when a drag grounds and the launches stop to permit the tender to lift the drag over the shoal or buoy, the drag strip will be broken at the moment when the launches stopped. These two points should be borne in mind and the handling of the drag in such cases adjusted accordingly in order to eliminate excessive splits.
9. Attention is called to the following:
- a. On L' day (rejected) April 12, 1923, Vol. 4, page 28, the drag was continually aground at the F buoy in vicinity of lat. 18° 06', long. 65° 39 3/4'. No locations are given for the F buoy except cuts from the guide launch. A sounding of 58 ft. was obtained at F but no fix given on account of the signals being obscured. Inasmuch as the charted depths in this vicinity are much greater, a 58 ft. sounding is shown in the most probable position and marked P. D. giving weight to the grounding of the drag at 15-0 set at 61 ft. although the record says "due to buoy No. 8 lost." This spot was covered by a 55 ft. drag on a previous day. This area for *Position of shoal obtained on Ad. Wk. 1926-7 at 57 ft. sdg* redragged and a better location obtained for this sounding. Until such time, however, the sounding should be charted as indicated.
- b. At 15 G' in vicinity of lat. 18° 06', long. 65° 44' the drag was aground on a charted shoal but slipped off after the hock-up was made. It is assumed that the shoal referred to is the 6 1/2 fathom spot in latitude 18° 06' long. 65° 44' and not the 5 3/4 fathom spot in lat. 18° 05 1/2', long. 65° 44 1/4' and that N-buoy was aground although no buoy number is given. However, the 6 1/2 fathoms is not plotted on the boat sheet and it is likely *✓* that the note in the record refers to the 5 3/4 fathom shoal and there is a possibility that the 32 ft. drag grounded. In view of this incomplete information there is no justification for charting a 32 ft. sounding here and hence the above assumption was made. The locality nevertheless is of sufficient importance to be re-examined if work is resumed in this vicinity.

10. Further dragging will be required as mentioned above, hence this sheet cannot be considered as satisfactorily completed.
11. The field plotting was only fairly well done as is evidenced by the verifier's report. It was defective in the following respects:
 - a. The protracting was only approximate in many places. On C and D days only every other position was plotted while on A day position 10 A and position 20 A were connected with a straight line, omitting the plotting of nine intermediate positions.
 - b. The effective depth figures for all areas under 20 ft. were incorrectly shown.
 - c. The last two days work were not plotted without any reason being given.
12. Considerable changes were made necessary by the failure to observe the rule of forty in the plotting, as well as by the office correction to the tide reducers.
13. Rating of work { Character and scope of operations - fair.
 { Field drafting - fair.

Reviewed by A. L. Shalowitz, April, 1925.

Oct. 13, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volume of sounding records for
5 " " " wife drag " "

HYDROGRAPHIC SHEET 4287

Locality: South East Coast of Porto Rico

Chief of Party: F. B. T. Siems, in 1922-3
Plane of reference is mean low water, reading
7.8 ft. on tide staff at Punta Arenas, Vieques Id.
5.0 " " auto. gauge at Fajardo.

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.

NAUTICAL CHARTS BRANCH

SURVEY NO. _____

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1-5-48	940	H. E. M.	Before After Verification and Review R.K.D.
1-13-48	917	J.F.R.	Previously applied before review Before After Verification and Review - changed. To agree with review.
31 Mar 49	904	Trickels	Before After Verification and Review Add. wk.
7 Apr 49	923	Trickels	Before After Verification and Review
1-16-57	904	R.K. DeStander	Exam overlay of ad. wk. Before After Verification and Review. See history 4-4-49.
1/27/65	940	Helm	Before After Verification and Review Appt main channel area only to new green plate
			Before After Verification and Review
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M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

4287 Add. Wk. Wire Drag

4287 Add. Wk.
4287 Wire Drag

Diag. Cht. No. 904-2

Form 504	
U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	HYDROGRAPHIC (WIRE DRAG) Wk.
Field No.	Office No. H-4287 & Add'l
LOCALITY	
State	PORTO RICO
General locality	VIEQUES SOUND
Locality	VIEQUES PASSAGE
194 26-27	
CHIEF OF PARTY	
G. C. Mattison	
LIBRARY & ARCHIVES	
DATE	APRIL 26, 1927

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WIRE DRAG

~~XXXXXXXXXXXX~~ 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. 4287 Add'l Work

State Porto Rico

General locality Vieques Sound

Locality Vieques Passage

Chief of party G. C. MATTISON

Surveyed by H. E. FINNEGAN

Date of survey MAY 18, 1926 - March 24, 1927

Scale 1:20,000

Soundings in Fpst.

Plane of reference M.T.L. - 0.5 ft. F. M.L.W.

Protracted by H.E.F. Soundings in pencil by H.E.F.

Inked by H.E.F. Verified by P.H. Carleton

Records accompanying sheet (check those forwarded):

Des. report, _____ Tide books, _____ Marigrams, 2 Boat sheets,

2 Sounding books, 5 Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks:

4287 Add'l Work

APR 26 9 01 AM '27

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DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY.
E. LESTER JONES, DIRECTOR.

PORTO RICO

A DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET #4287. *Add'l Work*

1926-1927

S.S. RANGER

G.C. MATTISON,
CHIEF OF PARTY.

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET #4287.

PORTO RICO.

This work was done in accordance with Director's Instructions dated May 28, 1925 and July 3, 1926.

These instructions called for additional dragging on sheet #4287, covering splits, increasing the drag depth of some areas, and re-dragging areas in places where the drag grounded and no soundings were obtained.

NOTES MADE WHILE PLOTTING SHEET:

The following remarks refer to each paragraph of the instructions of May 28, 1925, which relate to sheet 4287 and will aid in the verification of the sheet.

Paragraph #14-a,b,c,d. No additional drag work done. See Director's letter of December 24, 1925.

Sub-paragraph #1--All of this area was covered following the instructions as closely as possible. About 220 meters ENE of Red Nun Buoy #2 a drag of 13 feet effective depth grounded. The least depth obtained was 16 feet. The dragmaster, in charge of the tender, after sounding for some time stated that it was impossible to obtain a sounding on the finger coral on which the drag was hung. Later a drag of 13 feet effective depth covered the area. The position of the 16 foot sounding is given under "List of Soundings Obtained".

018°-09.22' N 65°-44.48'
The shoal marked by the Black Can Buoy #1, 850 meters 246° true from signal SAN, was dragged up against both from the eastward and from the westward, with a drag of 18 feet effective depth. However the soundings of 14 feet obtained on this shoal were not covered.

018°-09.13' N 65°-43.55'
The 19 foot sounding 1010 meters, 119° true from signal SAN was found by grounding a drag of 20 feet effective depth. A drag with a fair bight and having an effective depth of 16 feet cleared this 19 foot sounding. Later another drag of 16 feet effective depth caught in the vicinity of this shoal, but slipped over. However the sharp bight caused by the end launch turning in too quickly, may have allowed the ground wire to catch below it's depth of 16 feet. *16' grounding disregarded. This shoal was also cleared by 5 ft. depths of 19' and 20' on prior work.*

Sub-paragraph #2--Required area covered, part at 44 feet effective depth and part at 46 feet effective depth.

Sub-paragraph #3--This area, required to be dragged at 21 feet effective depth or 3 feet from bottom, was covered at 22 feet effective depth except for a small area in the vicinity of a 19 foot sounding, which was covered at 17 feet effective depth.

*vicinity,
018°-03'
N 65°-44.7'*

*018°-04.1'
N 65°-38.9'*

Sub-paragraph #4---This area was to be re-dragged to an effective depth of 22 feet but was covered to an effective depth of 21 feet.

Vicinity
φ 18°-10.0'
λ 65°-41.0'

Sub-paragraph #5---This area to be dragged to an effective depth of 12 feet, was covered at the required depth.

Vicinity
φ 18°-08.0'
λ 65°-46.0'

Sub-paragraph #6---Area to be re-dragged to an effective depth of 25 feet, was all covered at the required depth, except for a small area in the vicinity of two 26 foot soundings, which was covered at 23 feet effective depth.

Vicinity
φ 18°-07.2'
λ 65°-44.9'

Sub-paragraph #7---Area to be re-dragged to an effective depth of 21 feet, was all dragged at 22 feet effective depth, except for a small area in the vicinity of a 23 foot sounding obtained, which was covered by a drag of 20 feet effective depth,

φ 18°-07.0'
λ 65°-44.25'

Sub-paragraph #8---A split to be covered with 51 feet was covered at an effective depth of 52 feet.

Vicinity
φ 18°-05.4'
λ 65°-37.1'

Sub-paragraph #9---This area was dragged in conjunction with other work on sheet #4292.

Vicinity
φ 18°-12.0'
λ 65°-37.3'

Sub-paragraph #10---This area covered as required, to an effective depth of 11 feet. Between the original drag limits and shore this 11 foot drag grounded, but the least depth that could be obtained by the tender at the ground was 16.8 feet. In attempting to obtain a sounding at the ground, the dragmaster worked the sounding rod along the ground wire, toward the ground. Each time he did this the sounding rod became pinched between the ground wire and the obstacle; the least depth all around being about 17 feet. This area was then covered by a drag of 10 feet effective depth.

φ 18°-41.1'
λ 65°-42.9'

Sub-paragraph #12---This area was to be re-dragged to determine the existence or non-existence of charted soundings of 27 to 30 feet, over which a drag of 32 feet passed on the previous survey.

Vicinity
φ 18°-08.3'
λ 65°-36.2'
27 to 30 ft soundings substantiated

In trying to re-drag this area to an effective depth of 32 feet the drag grounded but did not hang up, the weights being dragged along the bottom. The drag strip was carried far enough to be sure that the weights would drag across the bottom, which is hard sand. Soundings were taken by the tender in the bight of the drag while moving along the line and soundings were also taken from the Guide launch which were recorded. The soundings taken by the Guide launch and tender agree with the charted soundings. Evidently in dragging this area previously the launches had considerable speed and pulled the drag over the sand.

Prior Eff. Depth of 32 ft. raised to 27 ft. to harmonize with soundings

Sub-paragraph #13---This area was to be re-dragged to 26 feet and determine whether or not a 31 foot drag covered the area in which a 26 foot sounding is shown on hydrographic sheet #2585.

Vicinity
φ 18°-06.08'
λ 65°-35.0'

In attempting to drag this area a drag of 28 feet effective depth just covered the position of the 26 foot sounding as located on hydrographic sheet #2585. But this same grounded and hung up in two places. At one grounding a 29 foot sounding was obtained about 222 meters ~~SE~~ of the position of the 26 foot sounding. At the other grounding a 27 foot sounding was obtained about 196 meters ~~SE~~ of the position of the 26 foot sounding.

31 ft drag strip raised to exclude 26' sd.

The drag had been set at 30 feet to obtain an effective depth of 28 feet. The 29 and 27 foot soundings were covered by effective depths of 26 and 24 feet respectively. In the dragmasters record there is a note:-"Clearing drag caught on large anchor". This was at the position of the 27 foot sounding, where the drag did not come clear in reversing. The tender was ordered to try to get the least water on the anchor, but nothing less than 27 feet was obtained.

Sub-paragraph #14--In the original survey a drag of 29 feet grounded in this area and no sounding was obtained. Instructions required that this area be covered with a drag set at 31 feet. The area was covered with a drag of 32 feet effective depth in this survey.

Vicinity
19°-04.2'
λ 65°-42.3'
29' drag disapproved & removed from sheet

Sub-paragraph #15--This area was to be re-dragged to an effective depth of 21 feet to determine the existence or non-existence of a shoal on which a drag of 18 feet grounded but no sounding was obtained. Almost this entire area is now covered to an effective depth of 21 feet. At the southern limits of the area the 21 foot drag grounded and a sounding of 19 feet was obtained. This 19 foot ^{50' drag} was covered by a drag of 16 feet effective depth.

Vicinity
18°-09.35'
λ 65°-40.25'
18' drag disapproved and removed from sheet

Sub-paragraph #16--This area was to be re-dragged to an effective depth of 60 feet to accurately locate a depth of 58 feet, the position of which was doubtful.

Vicinity
18°-06.08'
λ 65°-39.72'

On "L" day of this survey a sounding of 57 feet was obtained by the tender 108 meters 111° true from the position of the 58 foot sounding as obtained by the previous survey. The dragmaster marked his position of the 57 foot sounding with "P.D" due to difficulty in seeing signals. However the grounding was at "F" buoy and the position of the sounding as determined by the tender was verified by the position of "F" as determined by the end launch. Therefore the officer in charge of the dragging crossed out the "P.D." and marked it OK.

58' drag removed from sheet

On "A" day of this survey a drag reducing to 59 feet effective depth covered this 57 foot sounding while dragging with the sea. The drag of 60 feet on "L" day grounded on the bank while dragging against the sea.

57' depth of 59 ft revised to 57 ft to be in harmony with 57 ft sounding
57 ft sdg.

Sub-paragraph #17--This area was to be re-dragged to an effective depth of 32 feet. In this survey this area was covered with a drag of 31 feet effective depth.

cleared by 57 ft depth of 32 ft on drier work
Vicinity
18°-10.06' λ 65°-43.28'

The supplemental instructions of the Director dated July 3, 1926 called for additional dragging in Port Humacao and Port Naguabo, carrying the previous work in as close as practicable to the 18 foot curve.

While dragging in Port Naguabo, an 18 foot drag grounded and a 16 foot sounding was obtained. The same drag passed over a 15 foot sounding as plotted on the smooth sheet #4287 from the previous work. The position of the 16 foot sounding plots about 50-meters west of the 15 foot sounding. The two soundings are probably on the same shoal, the discrepancy

18°-10.06' λ 65°-43.28'

being between the signal or fixes of the original and present work. The position of this 16 foot sounding is given under List of Soundings.
18' strip clearing 15' sounding was rejected. Buoy was being raised at the time drag was crossing shed

SURVEY METHOD:

All work was done using launches MARINDIN and MITCHELL as guide and end launches, respectively. And launch EDNA M. as tender. Dual control was used entirely. The complement on the MARINDIN was 2 officers, an engineer, a coxswain and two seamen; on the MITCHELL, 2 officers, an engineer, a coxswain and one seaman; on the tender, the Dragmaster, an engineer and one seaman. All soundings taken by the tender were with a sounding wire to which no correction was necessary. In setting the drag to obtain an effective depth, allowance was made for the sea and a possible lift of one or two feet.

REDUCTION OF RECORDS:

In reducing records, half of the estimated swell was subtracted from the drag depth. In some places in the records a note was made to subtract a certain amount due to swell. This amount was half the estimated swell.

PLOTTING:

This work was plotted on the original sheet for #4287, and all positions numbered for the present work were inked with violet colored ink, to distinguish them from the position numbers of the previous work.

DISCREPANCY in POSITION OF OLD AND NEW LOCATION OF SIGNALS:

A new topographic survey was made in March 1927 of the west end of Vieques from Point Arenas south. The position of a number of the old signals as located by the old and the last survey differ a little. The position of those signals which differ are plotted on the Wire Drag Smooth sheet and marked with the same name but labeled 1927. However only the last days work ("H") is plotted using these new positions, because the rest of the work had been plotted and inked before the last topographic survey.

New positions of signals cause only minor shift in sextant positions - no revisions made

COAST PILOT NOTES:

A new school building, in the S.E. part of the town of Port Naguabo, is located on a rise of about 20 feet elevation. Building is painted white and being quite large shows up well to seaward.

Near the beach in Playa de Humacao are three tanks, two large gray tanks and a red molasses tank. The tanks are prominent features and show well to seaward.

CHANNELS AND ANCHORAGES:

The channels and anchorages are sufficiently described in the present Coast Pilot.

LIST OF SOUNDINGS OBTAINED.

A depth of 28 feet was found 1302 meters 165° true from Boca Quebrada Point, in Lat. 18 05' - 1054 meters, Long. 65 34' - 883 meters. A depth of 32 feet was found 63 meters 97° true from the 28 foot sounding. A depth of 23 feet was found 181 meters 96° true from the 28 foot sounding.

A depth of 36 feet was found 1750 meters 220° true from Boca Quebrada Point in Lat. 18 05' - 992 meters, Long. 65 35' - 570 meters.

A depth of 27 feet was found 632 meters 239° true from Boca Quebrada Point in Lat. 18 06' 0 154 meters, Long. 65 35' - 10 meters. In clearing drag the tender record states that ground ware was caught on large anchor.

A depth of 29 feet was found 780 meters 245° true from Boca Quebrada Point, in Lat. 18 06' - 184 meters, Long 65 35' - 137 meters.

A depth of 28.5 feet was found 1.5 miles 300° true from Point Arenas, as shown on latest edition of chart #917 in Lat. 18 08' 320 meters, Long. 65 36' - 373 meters.

A depth of 27.5 feet was found 1.46 miles 304° true from Point Arenas as shown on latest edition of chart #917, in Lat. 18 08' 481 meters, Long. 65 36' - 232 meters.

A depth of 29.5 feet was found 1.54 miles 305° true from Point Arenas, as shown on latest edition of chart #917, in Lat. 18 08' 652 meters, Long. 65 36' - 401 meters.

600
A depth of 27.5 feet was found 1.58 miles, 303° true from Point Arenas as shown on latest edition of chart #917 in Lat 18 08' - 648 meters, Long 65 36' - 242 meters.

A depth of 29.5 feet was found 1.55 miles, 307° true from Point Arenas, as shown in latest edition of chart #917, in Lat. 18 08' 716 meters, Long. 65 36' - 360 meters.

A depth of 27.5 feet was found 2.18 miles, 301° true from Point Arenas, as shown on latest edition of chart #917, in Lat. 18 08' 1436 meters, Long. 65 36' - 1374 meters,

A depth of 59 feet was found 4.46 miles 269° true from Boca Quebrada Point, in Lat. 18 06' - 352 meters, Long. 65 39' - 650 meters.

A depth of 57 feet was found 4.8 miles 267° true from Boca Quebrada Point, in Lat. 18 06' - 128 meters, Long. 65 39' - 129 meters.

A depth of 19.5 feet was found 0.95 miles 194° true from the southernmost point of Point Algodones, in Lat. 18 11' - 224 meters, Long. 65 38' - 1585 meters.

A depth of 22.5 feet was found 1.17 miles, 198° true from the southernmost point of Point Algodones, in Lat. 18 10' - 1663 meters, in Long. 65 39' - 114 meters.

A depth of 21.5 feet was found 1.2 miles, 194° true from the southernmost point of Point Algodones, in Lat. 18 10' - 1593 meters, Long. 65 38' - 1738 meters.

A depth of 23.5 feet was found 1.25 miles, 192° true from the southernmost point of Point Algodones, in Lat. 18 10' - 1463 meters, Long. 65 38' - 1666 meters.

A depth of 22.5 feet was found 1.5 miles, 192° true from the southernmost point of Algodones in Lat. 18 10' - 1326 meters, Long. 65 38' - 1685 meters.

A depth of 18.5 feet was found 2 miles 216° true from the southernmost point of Point Algodones, in Lat. 18 10' - 750 meters, Long. 65 39' - 1563 meters.

A depth of 16 feet was found 1236 meters 46° true from the Eastern point of Santiago Cay in Lat. 18 10' - 127 meters Long. 65 43' 502 meters.

A depth of 17 feet was found 1318 meters 8° true from the Eastern point of Santiago Cay in Lat. 18 10' - 598 meters, Long. 65 43' 1206 meters.

In Porto Naguabo at a point 1.25 miles 284° true from the southernmost point of Point Lima, a drag of 11 feet effective depth caught an obstruction in Lat. 18 11' - 180 meters, Long. 65 44' - 1595 meters. No sounding could be obtained on this obstruction, the least depth found here being 16.8 feet. A drag of 10 feet effective depth cleared this obstruction.

A depth of 19.5 feet was found 1.98 miles 142° true from the southernmost point of Point Lima in Lat. 18 09' - 520 meters, Long. 65 44' - 462 meters. Another sounding of 20.5 feet was found 24 meters 345° true from the 19.5 sounding. The charted sounding of 18 feet, 130 meters 100° true from the above 19.5 foot sounding does not exist having been covered by a drag of 21 feet effective depth.

20' not plotted

21 ft. sdg was rejected - signals questioned in sdg failed to check strip of sdg 7 fathoms rejected - time, and is considered to be incorrect

A depth of 21.5 feet was found 2.2 miles 144° true from the southernmost point of Point Lima in Lat. 18 08' - 1830 meters, Long. 65 40' - 432 meters.

A depth of 31.5 feet was found 1.95 miles 206° true from the southernmost point of Point Lima in Lat. 18 08' - 1782 meters, Long. 65 42' - 712 meters.

A depth of 30 feet was found 1.85 miles 206° true from the southernmost point of Point Lima in Lat. 18 09' - 175 meters, Long. 65 42' - 810 meters.

A depth of 21.5 feet was found 1.2 miles 210° true from the southernmost point of Point Lima in Lat. 18 09' - 938 meters, Long. 65 42' - 691 meters.

grounding of 13 ft

A depth of 15.5 feet was found 1.71 miles 215° true from the southernmost point of Point Lima in Lat. 18 09' - 696 meters, Long. 65 42' - 1155 meters.

A depth of 18.5 feet was found 1.71 miles 219° true from the southernmost point of Point Lima in Lat. 18 09' - 815 meters, Long. 65 42' - 1300 meters.

A depth of 27.5 feet was found (at Red Nun Buoy #2) 1.8 miles 217° true from the southernmost point of Point Lima in Lat. 18 09' - 617 meters, Long. 65 42' - 852 meters. *(20° 10' - 71)*

A depth of 19.5 feet was found 1.75 miles 234° true from the southernmost point of Point Lima in Lat. 18 09' - 1400 meters, Long. 65 43' - 96 meters.

A depth of 19.5 feet was found 0.53 miles 110° true from the southernmost point of ~~Point Lima~~ *Santiago Cay* in Lat. 18 09' - 144 meters, Long. 65 43' - 950 meters.

A depth of 20.5 feet was found 1.03 miles, 111° true from the southernmost point of Santiago Cay in Lat. 18 08' - 1793 meters, Long. 65 43' - 65 meters.

A depth of 11.8 feet was found 200 meters 195° true from the southernmost point of Santiago Cay in Lat. 18 09' - 400 meters, Long. 65 44' - 165 meters. Another sounding of 13.9 feet was found 72 meters 268° true from the 11.8 foot sounding. *(18 40)*

Six soundings were obtained on the shoal marked by the Black Can Buoy #1 in Port Humacao. The two shallowest soundings were 14.7 feet each. One 14.7 sounding is 473 meters 256° true from the southernmost point of Santiago Cay in Lat. 18 09' - 467 meters, Long. 65 44' - 822 meters. The other 14.7 foot sounding is 53 meters 235° true from the above 14.7 sounding.

A depth of 23.5 feet was found ^{1.0} 0.92 miles 207° true from the southernmost point of Santiago Cay in Lat. 18 08' - 857 meters, Long. 65 44' - 888 meters.

A depth of 18.5 feet was found 0.95 miles ²⁰⁶ 206° true from the southernmost point of Santiago Cay in Lat. 18 08' - 828 meters, Long. 65 44' - 862 meters.

A depth of 16.3 feet was found ^{grounding of 14 ft.} 1.04 miles 197° true from the southernmost point of Santiago Cay in Lat. 18 08' - 635 meters, Long. 65 44' - 642 meters.

A depth of 26.5 feet was found ^{0.90} 1.08 miles 186° true from the southernmost point of Santiago Cay in Lat. 18 08' - 866 meters, Long. 65 44' - 242 meters.

A depth of 26.5 feet was found ³⁰ 2.25 miles 203° true from the southernmost point of Santiago Cay in Lat. 18 07' - 430 meters, Long. 65 44' - 1710 meters. Another sounding of 26.5 feet was found 100 meters 205° true from the above 26.5 sounding.

A depth of 23.5 feet was found 2.32 miles 185° true from the southernmost point of Santiago Cay in Lat. 18 07' - 10 meters, Long. 65 44' - 440 meters.

(On chart #904)

A depth of 35.5 feet was found 1.1 miles 86° true from Point Icacos in Lat. 18 04' - 512 meters, Long. 65 46' - 1181 meters. Another sounding of 39.5 feet was found 95 meters 90° true from the 35.5 foot sounding.

Respectfully submitted.

Henry E. Finnegan,
Jr. N&G. Engineer

STATISTICS
WIRE DRAB SHEET #4287

Date	Let.	Vol.	Drag Length	Pos.	Miles Stat.	Soundings.
May 18, 1926	K	1	1800 3500 2400	37	4.4	2
May 24, 1926	B	1	4500 3200	37	3.6	5
May 25, 1926	C	1	1600 3500 2000	28	4.1	5
May 26, 1926	D	1	3200 1600	37	2.1	5
May 27, 1926	E	1	3200 2800 1800	55	4.2	6
May 28, 1926	F	1	2100 1800	29	2.5	7
June 1, 1926	G	2	2500 1600 1400	31	2.5	4
June 2, 1926	H	2	3500 2400 2100 1600 1200	59	6.3	2
June 3, 1926	J	2	4500 2400 2100 1800	48	5.9	3
June 4, 1926	K	2	1400 1200 3200	25	1.3	2
June 8, 1926	L	2	1800 3500	37	3.1	7
Mar. 23, 1927	M	2 3	2400 2400	35 15	3.7 1.1	2 2
Mar. 24, 1927	N	3	2400 5400 2000	32	3.1	4
Totals-----				505	47.9	54

STATISTICS
WIRE DRAG SHEET # 4287

Date	Let.	Vol.	Drag Length	Pos.	Miles Stat.	Soundings
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New area -----4. Square Miles, Statute
 Total area-----15.00 " " "
 New area surveyed in 1927----1 square mile, statute.

Plane tide staff Point Arenas, 1926.
 Plane of reference--M.T.L. --.0.5 = 1.6 on staff
 Lowest tide observed----- 1.6 on staff
 Highest tide observed----- 2.8 on staff

Portable automatic tide gauge, at Point Arenas (1927)
 Plane of reference-----*M.T.L.* - 0.5 = 2.9 on staff
 Lowest tide, observed----- 2.45 on staff
 Highest tide observed----- 3.1 on staff.

. LIST OF NEW SIGNALS
W.D. SHEET #4287.

--- Name	Description	Location	Type
An	WW Palm tree	Port Humacao	Topographic
Oil	Red tank	" "	Triangulation
Tank (Tanker)	Gray tank	" "	"
Cros	WW. Palm tree	" "	Topographic
Jane	" " "	" "	"
Post	" Telephone Post	" "	"
Kit	" Palm tree	" "	"
Rig	" " "	Port Naguabo	"
Brown	" on Brown Cliff	" "	"
Gable*	Gable of Warehouse	" "	"
Tor	WW on rock	" "	"
Napa	Nipa shack	In bight SE of Point Boca Quebrada, Vieques, Island	"
Wheel (1927)	Wheel of Windmill	" "	"

*T-4314 and T-4323 of
1927*

Note;

Signals How, Bow, Souse, Wind and Cor on Vieques Island are the same objects as those used in the previous survey, but their positions as determined by the last topographic survey are plotted, the same name being used with 1927 in parenthesis.

* The warehouse in Naguabo has been recently built and the present location of the gable was used and called signal Gable, on "M" and "N" days. This location is slightly different than the old location.

Copy for Field Records

August 19, 1927

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 4287 Add'l.

Locality: Vieques Sound, Porto Rico.

Chief of Party: G. G. Mattison, 1926-27.

Plane of reference is ^{M L W}
1.8 ft. on tide staff at Ft. Arenas

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.

G. G. Mattison
Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-4287

Ad. Wk. 1926-27

FIELD NO. -----

Puerto Rico, Vieques Sound, Vieques Passage
Surveyed in May 1926 to March 1927 Scale 1:20,000
Instructions dated May 28, 1925 and July 3, 1926

Soundings:

Control:

Handlead

Sextant fixes on shore signals

Chief of Party - G. C. Mattison
Surveyed by - H. E. Finnegan, W. R. Porter and C. F. Ehlers
Protracted by - H. E. Finnegan
Soundings plotted by - H. E. Finnegan
Verified and inked by - R. D. Goodrich and R. H. Carstens
Reviewed by - R. H. Carstens, April 28, 1948
Inspected by - R. H. Carstens

1. In recompiling charts of this area it was noted that the verification and review of the Additional Work 1926-27 had not been accomplished. An informal review is, therefore, being made at this date.
2. The new signals used on the additional work originate with T-4314 and T-4323 of 1927. New positions determined for prior signals on Vieques Island differ from the prior positions as much as 40 meters. The shift in the plotted positions of the prior drag strips and soundings, however, are minor on the scale of this survey and do not warrant revision of the prior plotting.

3. Charted depths are in harmony with the effective drag depths of the additional work. The 16 ft. charted (chart 923) in lat. $18^{\circ} 08.33'$, long. $65^{\circ} 44.36'$ from the present survey, prior to verification and review, should be superseded by the 14 ft. grounding on that shoal. CH. 923
19/49

✓ The 9 fms. (chart 917) charted in lat. $18^{\circ} 06.2'$, long. $65^{\circ} 39.38'$ from the present survey, prior to verification and review is superseded by the present 59 ft. depth. ✓

904?

940 OK. This is
a new compilation
HEM

Soundings applied to Chart 940. Jan. 5, 1948. H.S. MacEwen
1/27/65 H.S. MacEwen Chart 940 - good main channel area only to
new green plate