

4289

WIRE DRAG

4289
WIRE DRAG

Form 504	
U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Wire Drag
Field No.	6
Office No.	H-4289 W.D.
LOCALITY	
State	Porto Rico
General locality	Vieques Sound
Locality	Vieques Island - North Shore
19* 22-23	
CHIEF OF PARTY	
F.B.T. Siems	
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. 4289
field No. 6

State Porto Rico

General locality Vieques Sound

Locality North Coast Vieques Island - North Shore

Chief of party F.B.T. Siems

Surveyed by R.R. Moore

Date of survey 1922-1923

Scale 1:20000

Soundings in feet

Plane of reference M.L.W. Rajardo and Culebrita Gauges

Extracted by N.N. Soundings in pencil by N.N.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, 2 Boat sheets,
1 Sounding books, 2 Wire-drag books, 1 ~~Photographs.~~
1 ~~Drag depth tracing~~

Data from other sources affecting sheet
Triangulation Porto Rico 1922-1923

Remarks: Some minor work remains to be plotted.

Action of Field Records.

Report on W. D. Sheet No 4289

Surveyed in - 1922 - 1923.

Chief of Party - F. B. T. Sims.

Surveyed by - R. R. Moore.

Protracted by - N. November.

Verified & A & D Sheet by - H. E. MacEwen

1. The records conform to the requirements of the general instructions.
2. The plan and character of the surveying development fulfil the requirements of the general instructions.
3. The field plotting was completed to the extent prescribed in the general instructions.
4. Some changes in the field drafting were necessary to bring the survey to date. (see remarks)
5. The junctions with adjacent sheets are satisfactory.
6. Further surveying is not required to fully develop important areas within the limits of the sheet.
7. Remarks: (a) Changes were made necessary

through out the sheet due to the failure of the field draftsman to apply the rule of $\frac{1}{40}$ th as applied to effective depth changes.

(b) Some changes in tide reductions made in the office made necessary minor changes.

(c) The plotting of G day covering splits at the juncture of adjoining sheet was omitted without apparent reason.

(d) On G day the drag was lifted over a buoy and no split recorded. The office draftsman was unable to find sufficient proof to show the area covered.

8. Character and scope of surveying - Excellent.
Field Drafting - Good.

Respectfully submitted.

H. Elmer Ewen

T. F. Dec.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON December 20, 1924.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4289

Surveyed in 1923 - 24

Instructions dated July 7, 1921

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

Surveyed by R. R. Moore.

Protracted and inked by N. November.

Verified and Area and Depth Sheet by H. E. MacEwen.

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 specific instructions of above date cover only the western portion of this sheet. It is understood that no specific instructions were issued for this work, but that a chart showing the limits of the work was sent to the Chief of Party. It is assumed that the above written instructions as to depth and extent of dragging were intended to apply to this work.

a. The extent of dragging is sufficient in so far as it was carried generally to the 3-fathom curve.

b. As to the depth of dragging it is to be noted that the work was not done in conformity with Paragraphs 243-252 of the General Instructions and Special Publication No. 56 as called for in Paragraph 2 of the specific instructions. To quote in part from Paragraph 245 of the General Instructions: "Unless otherwise instructed, the following will be the standard drag depths: Areas with depths less than 50 ft. to within about 3 ft. of the bottom." In only a few cases was this carried out and it might also be added that even in depths much less than 50 ft. the drag was set to a considerable less depth than the charted depths. This is noticeably true of the area covered by chart 916, a photostat of which is attached showing the limits of the various effective depths to which the area has been dragged.

4. The least water was found on all shoals discovered except as follows:
 - a. The 8 ft. sounding in latitude $18^{\circ} 09'$, longitude $65^{\circ} 27 \frac{1}{4}'$. A 14 ft. drag grounded here and 8 feet was obtained, but no clearance depth obtained here. As this spot lies in the entrance to Port Mulas and is surrounded by depths of 22 ft., it is desirable to have the least depth on this shoal.
 - b. The 19 ft. sounding in latitude $18^{\circ} 09 \frac{3}{4}'$, longitude $65^{\circ} 28'$ was cleared by a 7 ft. drag. This spot lies off the eastern end of Commandante Shoal and is about a third of a mile from the ten ft. spot at the western end of the shoal. A deeper drag could have been carried across this.
 - c. The 21 ft. sounding in latitude $18^{\circ} 10'$, longitude $65^{\circ} 29'$ was not cleared. This spot lies about 400 meters off the eastern end of Corona Reef. It is a detached shoal with depths of 41 to 48 feet between it and Corona Reef. A 23 ft. drag grounded here and the least water obtained was 21 ft. No subsequent dragging was done. This spot should be dragged over with a clearance depth.
 - d. The 33 ft. sounding in latitude $18^{\circ} 11'$, longitude $65^{\circ} 30 \frac{1}{2}'$ was cleared by a 19 ft. drag.
 - e. The 32 ft. sounding in latitude $18^{\circ} 11'$, longitude $65^{\circ} 27 \frac{1}{4}'$ was cleared by a 19 ft. drag.
5. The overlaps within the sheet are sufficient. The junctions with the adjacent sheets will be taken up in the reviews of those sheets.
6. Further dragging will be required as mentioned in paragraphs 3 (b) and 4.

There is a split in the work shown on the Area and Depth sheet. This was occasioned by lifting the drag over Mosquito Reef Buoy N 2. The records note that this area was covered on the adjoining sheet, but according to the plotting on that sheet the drag grounded on the shoal north of the charted position of this buoy leaving an area not dragged over.

It is to be noted that the above buoy as located by the field party plots 334° (true) 630 yards from the charted position. (See volume 4, page 45, H. 4291)

7. The field plotting was completed to the extent prescribed in the General Instructions.

8. The office cartographer had to make numerous changes owing to the failure to take into consideration the 1/40th rule in the plotting, which was also ignored in the effective depth diagrams. Some changes were also made due to changed tide reducers. There was one day's work omitted in the field plotting which had to be done in the office.
9. Rating of the work (
 - (a. Character and scope of drag operations - good.
 - (b. Field drafting - good.
10. Reviewed by A. L. Shalowitz, December, 1924.

C. I. C.

COPY TO FIELD RECORDS

Oct. 9, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volumes of sounding records for
2 " " " wire drag " "
HYDROGRAPHIC SHEET 4209

Locality: **Vieques Sound, East Coast Porto Rico**

Chief of Party: **F. D. S. Stone in 1922-3**
Plane of reference is **mean low water, reading**
5.0 ft. on tide-staff at Pajaro
auto. gauge

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.

4289 Add'l. Work

Diag. Ch. No. 904-2

4289 Add'l. Work

Form 604	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
State: Porto Rico	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. 4289 Add'l. Work
WIRE DATA	
LOCALITY	
Viñques Sound	
North of Viñques I.	
1926	
CHIEF OF PARTY	
G. C. Mattison	

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

WIRE DRAG

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. _____

REGISTER NO. 4289 Add'l Work

State PORTO RICO

General locality VIEQUES SOUND

Locality NORTH OF VIEWUES ISLAND.

Scale 1:20,000 Date of survey June 14-16, 1926

Vessel RANGER

Chief of Party G.C. MATTISON

Surveyed by H.E. FINNEGAN

Protracted by H.E. FINNEGAN

Soundings penciled by H.E. FINNEGAN

Soundings in ~~fathoms~~ feet

Plane of reference M.T.L. -0.5 feet. = M.C.W.

Subdivision of wire dragged areas by H.E. FINNEGAN

Inked by H.E. FINNEGAN

Verified by _____

Instructions dated May 28, 1925

Remarks: _____

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

PORTO RICO

A DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET # 4289

1926

S.S. RANGER

G.C. MATTISON,
CHIEF OF PARTY.

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET #4289.

INSTRUCTIONS:

The Director's orders of May 28, 1925 called for additional dragging on sheet #4289, covering one split; finding the least water on three soundings; and dragging around Comandante Shoal with 17 feet effective depth. ✓

RESULTS OBTAINED:

A drag of 17 feet effective depth was carried in as close as possible to Comandante Shoal on all sides. Two soundings of 16.5 feet each were obtained at the northeast end of the shoal and lie at a distance of 50 to 100 meters outside of the 18 foot curve as now charted. These soundings were not covered, being considered as the N.E. limit of Comandante Shoal. The position of the above soundings are given under List of Soundings.

Vicinity
 $\phi 18^{\circ}09.6'$
 $\lambda 65^{\circ}28.1'$

In attempting to find the least water in the area of the 21 foot charted sounding east of Corona reef, a drag of 22 feet effective depth covered this area. The sea was smooth and drag tests showed no lift, therefore there is nothing less than 22 feet in this area. A drag of 24 feet effective depth grounded in this area and a sounding of 23.5 feet was obtained, 56 meters WxN true of the charted 21 foot sounding.

$\phi 18^{\circ}09.87'$
 $\lambda 65^{\circ}28.9'$
EFF. Depth changed to 21 ft.

The charted 33 foot sounding 2.5 miles N 1/2 W of Caballo Point was covered by a drag of 34 feet effective depth. The same drag grounded about 125 meters W 1/2 S of the charted 33 foot sounding and a depth of 34.5 feet was obtained. The area was later covered by a drag of 31 feet effective depth.

$\phi 18^{\circ}10.82'$
 $\lambda 65^{\circ}30.5'$
Strip with EFF. Depth of 34 ft. rejected.
Area covered by 31 ft. EFF. Depth

The charted 32 foot sounding 0.78 miles 58 true from the north end of Caballo Blanco was covered by a drag of 30 feet effective depth. This same drag grounded about 185 meters S.E. x S. of the charted 32 foot sounding and a depth of 27.5 feet was obtained. Time was not taken to determine the least water on this 27.5 foot shoal; it being just north of a charted 21 foot shoal.

$\phi 18^{\circ}10.87'$
 $\lambda 65^{\circ}27.25'$
32' not digitized on latest print

The split, in the vicinity of Red Nun Buoy #2 about 2.3 miles NNW of Caballo Point, was all covered as required. ✓

SURVEY METHODS:

All work was done using launches MARINDIN and MITCHELL as guide and end launches respectively; and launch Edna M. as a tender. Standard drag equipment was used. Dual control was employed entirely. The complement of the guide launch was two officers, an engineer, a coxswain and two seamen; on the Mitchell; two officers, and engineer, a coxswain and one seaman; on the tender, the Dragmaster, an engineer and one seaman. ✓

All soundings were taken with a sounding wire, to which no correction was necessary. ✓

COAST PILOT NOTES:

No additional coast pilot notes were obtained during the progress of this survey. ✓

SIGNALS:

Only one new signal was used. A tripod signal was built on Point Arenas by Mr. R.J. Auld, and was located by a triangulation cut and the distance from triangulation station Arenas. This new signal is called "RENA". ✓

Respectfully submitted.

Henry E. Finnegan

Henry E. Finnegan,
Jr. H. & C. Engineer.

*Forwarded.
G. Mattison
Ch. S. S. Ranger.*

LIST OF SOUNDINGS

A depth of 18.5 feet was found 2.65 miles 339° true from Caballo Point, in Lat. $18^{\circ} 10'$ - 1500 meters, Long. $65^{\circ} 31' - 363$ meters.

A depth of 29.5 feet was found 2.32 miles 338° true from Caballo Point, in Lat. $18^{\circ} 10'$ - 910 meters, Long. $65^{\circ} 31' - 281$ meters. This also marks the position of Red Nun Buoy #2.

A depth of 34.5 feet was found 2.5 miles 319° true from Caballo Point, in Lat. $18^{\circ} 10'$ - 1450 meters, Long. $65^{\circ} 30' - 1150$ meters.

A depth of 36.5 feet was found 2.55 miles 352° true from Caballo Point in Lat. $18^{\circ} 10'$ - 1597 meters, Long. $65^{\circ} 30' - 997$ meters.

A depth of 23.5 feet was found 1.27 miles 337° true from Point Martineau, in Lat. $18^{\circ} 09'$ - 1648 meters, Long. $65^{\circ} 28' - 1638$ meters. The 21 foot charted depth 60 meters E x S true from the above sounding was covered by a drag of 22 feet effective depth.

A depth of 14.5 feet was found 0.6 miles 357° true from Point Martineau, in Lat. $18^{\circ} 09'$ - 590 meters, Long. $65^{\circ} 28' - 750$ meters. This sounding verifies the charted 15 foot shoal.

A depth of 17.5 feet was found 0.82 miles 9° true from Point Martineau, in Lat. $18^{\circ} 09'$ - 927 meters, Long. $65^{\circ} 28' - 461$ meters.

A depth of 23.5 feet was found 0.85 miles 8° true from Point Martineau, in Lat. $18^{\circ} 09'$ - 1000 meters, Long. $65^{\circ} 28' - 487$ meters.

A depth of 15.5 feet was found 0.88 miles $8-1/2^{\circ}$ true from Point Martineau in Lat. $18^{\circ} 09'$ - 1078 meters, Long. $65^{\circ} 28' - 483$ meters.

A depth of 18.5 feet was found 0.98 miles 15° true from Point Martineau, in Lat. $18^{\circ} 09'$ - 1200 meters, Long. $65^{\circ} 28' - 237$ meters

A depth of 16.5 feet was found 1.05 miles 24° true from Point Martineau in Lat. $18^{\circ} 09'$ - 1234 meters, Long. $65^{\circ} 27' - 1650$ meters.

A depth of 16.5 feet was found 1.07 miles 26° true from Point Martineau, in Lat. $18^{\circ} 09'$ - 1242 meters, Long. $65^{\circ} 27' - 1615$ meters.

A depth of 27.5 feet was found 0.83 miles 65° true from the north end of Caballo Blanco, in Lat. $18^{\circ} 10'$ - 1476 meters, Long. $65^{\circ} 27' - 498$ meters.

. STATISTICS
W.D. SHEET #4289.

Date	Day	Vol.	Drag Length	Positions	Miles Stat.	Soundings.
June 14, '26	A	1	1500 1800	33	1.5	5
June 15, '26	B	1	1800 1500	39	2.9	8
June 16, '26	C	1	1500	8	1.0	0
Total-----				80	5.4	13

Area.

New area dragged	0.02 square statute miles
Total area dragged	1.17 " " "

Tidal data.

Plain tide staff at Point Arenas.

Plane of reference	M.T2L.	-0.5 ft	= 1.6 ft. on staff
Lowest tide observed			1.6 ft. on staff
Highest tide observed			2.8 ft. on staff.

Copy for Records Section.

(11)

February 10, 1926.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4289 add'l.

Locality: **VIRQUES ISLAND, PORTO RICO.**

Chief of Party: **G. G. Mattison, 1926.**

Plane of reference is **M L W**
1.6 ft. on tide staff at **Point 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.

Thuse

Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-4289WD (1926)
Additional Work

FIELD NO. -----

Puerto Rico, Vieques Sound, North of Vieques I.
Surveyed in June 1926 Scale 1:20,000
Instructions dated May 25, 1948

Soundings:

Control:

Handlead

Sextant fixes on shore
signals

Chief of Party - G. C. Mattison

Surveyed by - H. E. Finnegan, R. C. Rowse, C. F. Ehlers and
W. R. Porter

Protracted by - H. E. Finnegan

Soundings plotted by - H. E. Finnegan

Verified by - R. H. Carstens and R. L. Johnson

Reviewed by - R. H. Carstens, April 9, 1948

Inspected by - R. H. Carstens

1. In compiling charts of this area it was noted that the verification and review of the Additional Work 1926 had not been accomplished. An informal review is, therefore, being made at this date.
2. One new hydrographic signal was established on the west end of Vieques Island. No record could be found, however, of the angles and distances which determine the position of the signal.
3. The effective drag depths are in harmony with depths charted on chart 917 (print date 8/18/47).
4. Wire drag coverage of the split and shoal soundings required by the instructions for additional work is adequate except for the area of insufficient overlap remaining in lat. 18° 10.82', long. 65° 31.1'.