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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
<div style="border: 1px solid black; padding: 5px; display: inline-block;">G. & G. SURVEY L. & A. JUN 29 1928 Acc. No.</div>	
State: Porto Rico	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. ¹⁵ 4314
LOCALITY	
Vieques Island	
West End of Vieques I.	
1927	
CHIEF OF PARTY	
G.C. Mattison	

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

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET # 15 4314

POINT ARENAS, VIEQUES ISLAND
PORTO RICO.

S.S. RANGER

G.C.MATTISON,
Chief of Party.

1927

DESCRIPTIVE REPORT.
to accompany
Topographic Sheet #15.

The re-survey of Point Arenas extends from an old well on the south coast of Vieques, three miles S.E. from Point Arenas to Point Arenas, and then to another old well two miles East from Point Arenas.

Arenas₂ was used as a starting point for both stretches and the old wells as tie in points because the wells were recoverable and easily distinguished.

SURVEY METHODS:

The plane-table and stadia method was used for the survey.

Control for this survey was furnished by the triangulation of Porto Rico 1921.

Work was begun at triangulation station Arenas₂. Orientation was obtained on Cabras Light with a check on Point Mulas Light; the azimuth lines to these lights had been previously drawn on the sheet. The traverse was then run from Arenas₂ S.E. to the old cement well previously transferred to this sheet from the bromide obtained from the office. There was an error of eight meters which was adjusted.

The table was again set up at Arenas₂ oriented as before and a traverse run east for two miles checking exactly on an old well transferred from the bromides furnished by the office.

Small streams along the beach were located but as none were large enough to navigate, it was not considered advisable to survey them back from the mouth.

The recovered topographic stations (wells) were identified beyond doubt; by the local information and from locations on the bromides. Center points of the ^(wells) ~~wells~~ were used as the tie in points.

All set ups were checked by back sight rod readings.

CHANGES IN THE SHORE-LINE:

The only appreciable change found in the shore-line was at Point Arenas. Here the beach is built of fine shifting sand, terminating in a shoal approximately three miles long, extending northwest. Strong storm and tidal currents form, changing the high water mark from time to time. The general trend however is a washing away on the S.W. side and building up on the N.E. shore-line of the point. Many roots of coconut palms out in the water and other trees in the process of having the earth washed away from their roots - on the SW. side of the point bear evidence to this condition. Arenas₂ was visited

by R.J. Auld approximately one year before it was recovered by me and at that time it was two feet above the ground. When I recovered it this time I found about three feet of sand covering the station. By making measurements and taking bearings we dug down and recovered it.

At the time this survey was made there were two pipe lines extending out from the shore at Point Arenas roadstead, the shortest line and the southernmost of the two was reported gone by Lieut. R.F.A. Studds when he returned some three months later to do some additional hydrography. I am leaving this pipe line on the sheet in the event it is needed in checking up the hydrography done by Lieut. Auld because it was used at the time the first hydrography was done. A note stating the pipe line is gone was made on the sheet.

The rest of the shore conforms with the shore-line transferred from the bromide^s.

FORM LINES:

The form lines were transferred to the topographic sheet from the bromide^s and were found to be accurate. But in the course of handling and inking the sheet these form lines were obliterated. It was not deemed necessary to re-transfer them from the bromide^s.

DESCRIPTION OF SHORELINE AND LANDMARKS:

From triangulation station Arenas₂ to the limits of the work on the north coast the beach is practically all sandy and lined with coconut groves. Signal Stump marks the center of a strip of mangrove swamp some 4/10 of a mile in extent. The old well marked with a blue circle at the end of this traverse is situated in a barrio surrounded with tall coconut trees. The small stream emptying here has a sand bar at the mouth and numerous roots and logs partially submerged. It can be entered for a short distance with a pulling boat.

The roadstead lies just south of Point Arenas. The beach runs S.E. for about 1/2 mile from the point and then swings roughly S. by W. for 3/4 of a mile. The long shoal and the 1/2 mile of beach affords some protection from the N.E. while the island its self cuts the wind and sea from the east and S.E. This strip of beach is sandy, flanked with coconut groves. As stated before many of the trees on the beach near the point are being washed into the sea by the changing shoreline. The point at signal Nipa has a number of submerged coral heads and reefs extending 50 meters from a low rocky headland. From this point to signal Bow the shoreline becomes more irregular running roughly S.E. and becoming more rugged in character. All the points have coral reefs and heads partially exposed at low water. 240 meters S.E. from signal Tow I recovered two square masonry wells shown on the bromide. These wells lie in a low swampy spot 40 meters back from the highwater mark and shielded on three sides by bushes and trees. The water was quite low and covered with about three inches of green slime showing they are apparently abandoned.

Signal Bow has a coral formation of submerged heads and boulders, extending 100 meters from shore.

From this point to the end of the traverse the shore curves more and more to the east till at signal Wind it runs practically East and West. The points in this area are boulders and higher and the country directly in back is covered with scattered trees and bushes.

The windmills (signal Wheel) and (signal Wind) were transferred from the bromide. Old well marked by a blue circle near signal Red is a round masonry well with a long trough, also masonry, now in use. This was transferred from the bromide and marks the end of the traverse in this direction.

DESCRIPTION OF INTERIOR:

The interior was not surveyed as the bromide showed by inspection it conformed to the existing conditions.

Respectfully submitted.

Benjamin H. Rigg
Benjamin H. Rigg,
Topographer.

*Forwarded,
G. M. Mathison
Capt. S. S. Ranger.*

STATISTICS

TOPOGRAPHIC SHEET # 15.

Areae surveyed	25 sq. stat. miles.
Length detailed shoreline	5.6 stat. miles.

Re-survey:

Rivers and creeks	0
Roads	$\frac{1}{2}$
Railroads	0

MAGNETIC DECLINATION

Magnetic declination was measured with declinator at Arenas₂ in March 1927, found to be 4° 18' W.

LIST OF PLANE - TABLE POSITIONS

TOPOGRAPHIC SHEET #15

Object and Description	Lat.	D.M.	Long.	D.P.	Remarks.
Stump					
White Banner	18 07	604	65 34	167	Banner on pole
Nut					
WW.Coco.tree	18 07	616	65 34	1341	Outermost tree
Cro					Roots partly eroded
WW. Coco.tree	18 07	395	65 34	1200	Tree leans over water.
Las					Flag nailed on end of
W. flag	18 07	130	65 34	1185	pipe line.
Oil					Flag nailed on end of
W. flag	18 06	1827	65 34	1102	Pipe line.
Tank					
Tall bk.tank	18 06	1826	65 34	996	--
Low bk.tank	18 07	77	65 34	985	--
Bo					
Tin rfd.shack	18 06	1572	65 34	959	^a Seaward gable roof.
Cot					
Nipa shack	18 06	1452	65 ³⁴ 34	951	" "
Can					
W.flag	18 06	1126	65 34	1051	Flag nailed in tree
Tar					
W.flag	18 06	878	65 34	1054	" " " ^{brush} brush
Nipa					
Nipa shack	18 06	494	65 34	1173	Seaward peak
How					
Tin roof shack	18 06	457	65 34	1111	" "
Rig					
WW.rock	18 06	418	65 34	1010	Center WW
Sell					
Nipa shack	18 06	400	65 34	942	Seaward peak
Stan					
Nipa shack	18 06	175	65 34	679	" "
Napa					
Nipa shack	18 06	86	65 34	532	" "

PLANE TABLE POSITIONS (con't)

Objects and Description	Lat.	D.M.	Long.	D.P.	Remarks
Tow					
WW. cliff	18 05	1685	65 34	527	Center WW
Bow					
WW. boulder	18 05	1162	65 34	^{30.3} 803	Top of boulder
Souse					
Nipa shack	18 05	888	65 33	1664	Seaward peak
Wheel					
Windmill	18 05	812	65 33	1315	Top tower
Nol					
Nipa shack	18 05	614	65 33	1087	Seaward peak
Hack					
Red. rf.house	18 05	523	65 33	981	Center roof
Cor					
Wh.house	18 05	585	65 33	767	Wheel on mill
Wind					
Windmill	18 05	481	65 33	860	Top of frame
Red					
Red house	18 05	417	65 33	00	Center of roof
Ged					
Top of trees	18 05	316	65 32	1152	
Old well	18 07	422	65 32	1518	Tie-in pt. on N.coast
Old well	18 05	322	65 32	1730	Tie-in pt. on S.coast

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
L. & A.
DEC 30 1927
Acc. No.

REG. NO.

4314

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 15

REGISTER NO. 4314

State Porto Rico

General locality Vieques Island

Locality ~~Point Arenas~~ West End of Vieques Island

Scale 1-10,000 Date of survey March, 1927

Vessel Str. RANGER

Chief of Party G.C. Mattison

Surveyed by Benjamin H. Rigg

Inked by Benjamin H. Rigg

Heights in feet above M.T.L. to ground ~~not topographic~~

Contour, Approximate contour, Form line interval 50 feet

Instructions dated July 3, 1926, 192

Remarks: Resurvey of Pt. Arenas Roadstead