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Department of Commerce and Labor

COAST AND GEODETIC SURVEY

Superintendent.

State: Canal Zone

DESCRIPTIVE REPORT.

Top. Sheet No. 3244 3245

LOCALITY:

Juan Diaz River to Panama
Panama to Vique Cove

1902

CHIEF OF PARTY:

A. H. Heck

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COAST & GEODETIC SURVEY
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DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEETS NO.S 1.& 2. COAST OF PANAMA, JUAN DIAS RIVER TO PANAMA, AND PANAMA TO VIQUE COVE. *****

Assistant in Charge

All shore line on sheet No. 1 was run in with plane table. A mangrove swamp extends from Juan Dias River to the site of Old Panama. The shore line is fairly well defined at the trees which come down to high water mark. Under the trees and 200 meters out from H.W.M. the mud is quite firm, beyond this there is no footing so that low water mark could not be determined, it is apparently between one and two miles from H.W.M. East of Juan Dias River, a narrow fringe of sand beach lies just below high water ± 10 m. The country just back of the shore line is thickly covered with brush and trees sothat no view of the hills back of the mangroves can be had.

From Old Panama to Pt. Paitilla the shore line is quite rocky, a shelf of rock, bare at low water, extending 300 meters outside of high water mark, occasional detached reefs are visible at low water as far as 1000 m off shore.

There are numerous short stretches of sand beach and the shore line is broken by small streams closed at the mouth by sand bars. Inland, the country is covered with brush.

A macadamized road is built from Panama to the ruins of Old Panama. Part of this road near the latter was run in with the plane table, the part within the zone was transferred from the 1:20000 map of the Canal Commission, The portion shown by dotted lines has not been surveyed.

From Pt. Paitilla to the wharves at Panama there is a stretch of broad sandy beach broken only near the center of the bay by a small creek in the mouth of which is located the plant of an English ship building company. This creek is dry at low water.

From the above wharves to the chimney of the power and lighting plant

in Panama a sea wall varying in height from 10 to 30 feet is built. Beyond this point the beach is again sandy. A shelf of rock, bare, at low water runs out from the point about 700 meters.

Off Pt.Mala mud flats are bare at L.W. nearly out to Tres Hermanas Rocks . Material excavated from the canal is being dumped on this flat at the inner end of the breakwater so that a continuous change in the shore line is going on at this point. The breakwater to Naos Island is completed only a short distance beyond this fill piling for the remainder is driven as far as shown by the solid lines ,broken lines show the proposed extension of same now in progress. At present a narrow channel between the end of the barge dump and the island is used by launches.

The shore line of Naos,Perico,Culebra,and Flamenco Islands was at first transferred from a 1:5000 map of the Canal Commission , during the process of locating hydrographic signals at the request of the Commanding Officer of the St'r. Patterson it was found that the position of Perico and Flamenco was in error over 100 meters making a complete resurvey of the shore line of these islands. necessary.

Very little contouring was done on this sheet as the woods and brush prevented viewing the back country from the shore line. There are however no hills of any prominence except in the vicinity of Ancon where surveys by the Canal Commission will furnish data necessary for putting same on the chart. Naos ,Perico ,and Flamenco islands are being fortified ,about 75 feet of the latter is being removed from the top and used to construct a breakwater from Flamenco to Perico. Naos , Culebra and Perico are connected by a sand bar, bare at low water.

San Jose Rock is 96 feet in height . The north and east sides are nearly perpendicular, the top is reached from the west side, the base of the rock is surrounded by large boulders.

Sheet No. 2 shows the filling at the entrance to the Canal as it now is. Shore line on this sheet from the canal to the western boundary of the Zone was transferred from the 1:5000 map of the Commission as were the islands of Changarmi, Tortola, Tortolita, Cocovi, Cocovicoti, and Venado. This shore line was checked while locating hydrographic signals; Tortolita and Cocovicoti were each changed about 15m. in position by this revision. The remaining islands and the shore line were found to be accurately plotted. Part of the contouring within the zone was transferred from a 1:20000 map of the Commission. Additional contouring was done within and without the Zone by taking plane table cuts to mountain peaks.

Character of Shore Line**

From Farfan Pt. nearly to Guinea Pt, there is a stretch of sand beach in front of low marshy land covered with brush, and back of mud flats. From Guinea Pt. to Venado River, the shore line is very rocky except for short stretches of sand beach. A shelf of rock 50 to 100meters wide extends along part of this distance. From Venado to the Zone boundary there is a broad stretch of sand beach outside of which lies a mud flat with occasional patches of rock a few of which are awash at high water.

Beyond the west boundary monument the shore line was all run in with the plane table. For the greater part of the way there is a sand beach along high water mark, this beach is about 20m. wide and overlies the inner edge of an irregular shelf of rock. The latter extends nearly out to low water mark. A few mangroves grow on the rocks near to, but outside of H.W.Mk.

The part of Vique Cove shown on this sheet is nearly bare at low water showing mud flats with here and there a few small rocky patches. The large rocks near the center of the cove are awash at high water.

Accurate topography of the country back of the shore line on this sheet is obtainable from the 1:12000 map of the Commission, from Panama to Guinea Point and parallel to the Canal. All hills are covered with trees and brush.

The Pale Seco leper colony is the only important collection of buildings on this sheet west of the Canal; it is shown in detail on the above map. The buildings shown on the west point of Venado River are all small shacks. An extensive cocoa nut plantation has recently been planted west of this villiage.

The islands shown on this sheet are all rocky and precipitous having a few small trees and bushes on the tops.

WHARVES AND LANDINGS---

Three wharves on the water front of Panama are kept in repair. That of the Panama R.R. Co. running out beyond the other from the west shore of the bay is the most used, it is roofed over the entire length. The smaller wharf to the northward is also used by small craft. The northernmost wharf shown is in ruins. The southernmost wharf marked on the sheet as "Red wharf No." is a new structure built on concrete piers. Mud flats are bare for a considerable distance beyond these wharves at low water. There are two wharves on Naos island, the south one is inside low water mark. The other, the smaler of the two, is used as a landing by small boats at all stages of the tide. The wharf on the east side of Culebra I. is built on large concrete piers.

The only docks for large ships are in the entrance to the canal at Balboa. A new reinforced concrete dock is being built north of this landing and a basin dredged contiguous to it.

Prominent Land Marks.-.-

Old Tower at Panama Ruins:

This tower is rectangular in shape ,about 110 feet high and 36 ~~x~~ feet square.Its top is 130 feet above sea level.It shows against a dark background from the sea and is conspicuous only whenthe sun shines directly on one of the faces toward the ocean.

Stack near Pt.Paitilla:-

This is a black steel stack about 90 feet in height belonging to the saw mill now under construction on the north point of Rio Mattanilla.

Chimney:-

Of the power plant in Panama is one of the most prominent objects in the city,it is about 150 feet high,circular ,~~xxxxxx~~ built of brick.

Cupola Tivoli Hotel:(Tiv.) - In Ancon above the city of Panama.The building is dark green and white and shows against a dark background from the sea. The staff on roof of cupola in center building is the 5th mark.

Cupola Administration Building:-(CUP)--This building is built of gray ~~xxx~~ stone surmounted by a red tile roof .It is the most prominent building in ~~x~~ Ancon,showing well above the city of Panama from the sea.

Tank:-The steel tank on the hill back of the administration building in Ancon.

Height of tank-about 100 feet

Elevation above sea level- - - 388 feet.

Ancon Hill:-

This hill is being quarried away on the south and west sides to furnish stone ~~xxxxxx~~ for concrete construction.It is 656 feet in height and is the most prominent land mark near the Pacific entrance to the Canal.

*****LIST OF TOPOGRAPHIC POINTS, SURVEY OF PANAMA ROADS*******

Sheet No.1. Juan Dias River to Panama.

	Latitude			Longitude.		
Triple - - - - - - -	9 °	01'	166 meters.	79 °	25'	1670 meters
Stack, Near Pt. Paitilla	8°	58'	1140 "	79	31	635 "
Out Gable, Panama R.R.Co's Wharf	8	57	572 "	79	32	545 "
Out Gable, Red Wharf in Panama	8	57	733 "	79	32	530 "
Cupola, Tivoli Hotel	8	57	1600 "	79	32	1430 "
Cupola, Administration Building, Ancon	8	57	1028 "	79	32	1584 "
Water Tank, Ancon.	8	57	904 "	79	32	1823 "
L.H. on Changarmi I.	8	53	1244 "	79	33	225 "
Powder House on North end of Flamenco I.	8	54	1284 "	79	31	1645 "
Large Tree on North side of Perico I	8	55	68 "	79	31	1208 "
Water Tank on Culebra I	8	54	1494 "	79	31	1645 "
Tide House on North end of Ma os I.	8	55	259 "	79	32	350 "

Sheet No. 2 , Panama to Vique Cove.

East Gable . House on island off Punta Mala	8	56	212 "	79	33	1538 "
Range LH. Farfan Pt.	8	56	805 "	79	34	238 "
Large Deciduous Tree On West Point of Venado River	8	53	1302 "	79	35	1631 "
Large Deciduous Tree in Young Cocoa Nut Plantation, 500m W. of Venado	8	53	1543 "	79	33	252 "

Tank on Culebra I.:

This tank at the quarantine station is a flat topped circular steel tank about 50 feet in height.

Tide House on Naos I.:

On the north-east point of Naos I., a smallhouse, slate colored, about ~~xxx~~ 12' high and 15' square. On the edge of a perpendicular rocky bluff.

Triple:-
On East point of Juan Diaz River. The center of three tree trunks growing out 10 m below H.W.M. was located by plane table. The other two trunks were cut down when the hydrographic signal was built.

The following stations of the Pacific Division triangulation not connected with the Panama -Colon datum by triangulation were used in the control of the topography:- Sosa High, Farfan, Chimney, Tres Hermanas, Guinea, Batole, Venado , Cocovi, Changarmi, and Naos, and the Boundary Monuments at the eastern and western limits of the Zone.

The following stations ~~of~~ on the Panama-Colon datum were used:- Ancon , San Jose, Los Bovedas, Mol, Mor, Tab, Tortola, Juan Dias , and the tower at the ruins of Old Panama.

The latter stations were used whenever practicable .
Las Bovedas is common to both systems ,it was determined by cuts from San Jose and Ancon. The discropancy between the newly determined position and that furnished by the office was 1.0m in latitude and 0.3 m in longitude.

A number of cuts taken from Ancon and San Jose were plotted and these checked the positions of a number of the first stations mentioned.