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RESTRICTED

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RESTRICTED

Form 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic } Hydrographic	Sheet No. C
State British West Indies	
LOCALITY	
Trinidad	
Chaguaramas Bay	
San Jose Point to San Carlos Point	
19340-41	
CHIEF OF PARTY	
Fred. L. Peacock	

6772

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. C

REGISTER NO. **T6772 RESTRICTED**

~~XXXX~~ TRINIDAD, BRITISH WEST INDIES

General locality CHAGUARAMAS BAY

Locality SAN JOSE POINT TO SAN CARLOS POINT AND CASPARILLO ISLAND

Scale 1/4800 Date of survey December 12, 1940 to January 9, 1941

Vessel OCEANOGRAPHER

Chief of party Fred. L. Peacock

Surveyed by Don A. Jones

Inked by Don A. Jones

Heights in feet above Approximate Mean High Water to ground tops of trees

Contour, Approximate contour, form line interval 5 feet

Instructions dated November 9, 1940

Remarks: _____

DESCRIPTIVE REPORT
to accompany
PLANE-TABLE SURVEY FIELD NUMBER "C"

ISLAND OF TRINIDAD, BRITISH WEST INDIES

CHAGUARAMAS BAY

POINT SAN JOSE TO POINT SAN CARLOS AND GASPARILLO ISLAND

Date of this report

February 15, 1941

INSTRUCTIONS

Instructions for Project HT 257 of which this survey is a part are dated November 9, 1940. ✓

SCALE

The scale of this survey is 1/4800 or one inch equalling 400 feet. ✓

LIMITS

This survey begins at San Carlos Point on the southeast, extends northward to Harts Cut, and hence westward to San Jose Point and includes Gasparillo Island. The survey embraces all the shore line of Chaguaramas Bay except the Island of Gaspar Grande located approximately $\frac{1}{2}$ mile south of San Jose Point. ✓

The High Water Line only was surveyed from San Carlos Point to Harts Cut. From the western end of Harts Cut to San Jose Point all the area between the shoreline and the 100 foot contour was surveyed except in Chaguaramas River Valley which was detailed to latitude 10°41'08" only. ✓

CONTROL

Triangulation The triangulation control used in executing this survey consists of 8 stations shown on the survey by the red triangulation symbol, and 12 hydrographic signals located by triangulation cuts shown on the survey by red circles. Following is a list of the control and its sources: ✓

Triangulation established by the Trinidad Land Surveys (Trinidad Trigonometrical Survey Datum); ✓
Gaspar Grande, No 45.

Triangulation established by Fred. L. Peacock, 1940, unadjusted, ✓
Trinidad Trigonometrical Survey Datum:
SAN JOSE, 1940
STAUBLE, 1940
GORDON, 1940

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PRISON, 1940
 RAMSEY, 1940 ✓
 CARLOS, 1940
 REYNA, 1940

Unmarked hydrographic signals established by Fred. L. Peacock, 1940, computed from triangulation cuts:

POD	DIE
HEN	LAM
SAY	WIN
SID	TRIP
SKN	VAN
GAB	NIX

45 additional unmarked hydrographic signals located by Plane-Table cuts are also shown on the survey by red circles. ✓

ELEVATIONS

All elevations on this survey are referenced to 7.3 feet on the Staff at Carenage Bay Tide Gauge which is 0.5 feet higher than the mean high water plane furnished by the Washington Office.* A second order line of levels from Carenage Bay Tide Gauge to San Jose Point furnished elevations above approximate mean high water at four permanent standard disk bench marks shown on the Sheet by red cross (X), and at twenty temporary bench marks. A spur line of levels from Bench Mark T-3 at the highway bridge over Chaguaramas River, northward along the west side of the river to the northern limit of this survey, furnished one additional permanent standard disk bench mark shown on the Sheet as above, and three temporary bench marks. These bench marks were established by Fred. L. Peacock, 1940. Consider plane as M.H.W. ✓

PLANETABLE CONTROL AND TRAVERSES

Planetable setups at triangulation stations and three-point fixes supplied most of the planetable control required for executing this survey. Short traverses starting at triangulation-controlled setups were required in detailing two narrow valleys. These traverses were run both ways in order to check azimuths, distances, and elevations carried. The extreme rugged nature of the terrain between valleys made the tying in of the uncontrolled ends of the traverses impracticable. A traverse of 1730 meters in length was run from Hydrographic Signal INK northward along the western side of Chaguaramas River Valley to the northern limit of the survey, eastward to Chaguaramas River, and hence south to Hydrographic Signal BIM. This traverse failed to close with an error of three meters. The elevation carried from the beginning of the traverse to Bench Mark T-14 (approximately 1100 meters) failed to check with an error of 0.9 feet. These errors were adjusted in accordance with the instructions in the topographic manual. ✓

* See tide report for explanation.

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CONTOURS:

All levels for contouring this survey were carried by plane-table from the established permanent and temporary bench marks. ✓

A total of 843 elevations were determined throughout the area for the control of the contours. Only those elevations that could be clearly shown appear in red on the sheet. An overlay tracing showing all elevations in black accompanies this sheet. ✓
Overlay attached to this report.

Five-foot contours shown in red were drawn in the field with reference to elevations determined at the breaks in the slope and with reference to the actual configuration of the relief. The 25, 50, 75, and 100-foot contours are shown by heavier red lines. The intermediate contours are shown by light red lines. ✓

In areas of sharper relief having too steep a slope to allow all of the contours to be plainly shown, only the intermediate 10-foot contour lines were drawn. Contours were not drawn through bluff symbols. ✓

SHORELINE:

From San Carlos Point to Harts Cut, the shoreline is extremely irregular, consisting generally of sharp, broken, vertical and overhanging rock bluffs from ten to fifty feet high. At the very few places having a more gentle slope, heavy tropical vegetation extends out beyond the high water line. In detailing this shoreline, ✓
planetable setups were made on broken rocks off the high water line and in the water outside the vegetation at the shoaler points. Practically the entire shoreline, from San Carlos Point to Harts Cut, was rodded in by small boat.

The high water line in the two mangrove-filled bights 200 meters and 350 meters southwest of Harts Cut were rodded in as far as possible with a practical amount of cutting. The innermost portions of these bights was reproduced from Topographic Plan of Point Gourde, Scale 1:1250 surveyed by the Trinidad Land Surveys, and is shown on this survey by a dashed line. The end of the solid high water line in these bights, as shown on this sheet, indicates the extent of the high water line determined by this survey. It was estimated that a minimum of fifty man hours would be required to clear these two bights in order to determine the high water line back of the mangrove. Navigation in these bights was limited by the mangrove and mud flats as shown on this sheet. The light line shown on this survey around the mangrove-filled mud flats at Harts Cut ✓

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represents the limit of navigation in accordance with Field Memorandum No. 1, dated June 20, 1938.

The high water line back of the mangrove clusters between Harts Cut and Triangulation Station GORDON, 1940 was rodded in as well as the limits of the mangrove clusters. The outer limits of the mangrove symbol as shown on this survey indicate the true limit of navigation in this area.

GASPARILLO ISLAND:

The shore line of Gasparillo Island consists of ten to sixty-foot vertical and overhanging rock bluffs. The rock is very broken and loose at many places and practically the entire shoreline is undercut at a point somewhat below mean high water. The undercutting extends several feet back under the bluffs. There is deep water right up to the bluffs except where the bluff has fallen recently. These places are indicated on the sheet by detached rocks and submerged rocks. The shore line on the northerly side of the Island was located by planetable from the small island thirty meters north of Gasparillo. The south side of Gasparillo Island was located by sextant fixes on triangulation. The fixes were taken from a small boat at the prominent points and bights, and the intermediate high water line was then sketched. The fixes and intermediate shore line were plotted on the survey in the field.

The rock ^{formation} foundation on the Island is very coarse, irregular, and rough-surfaced. The Island is covered by tropical vegetation consisting of brush, cactus, and trees. The highest trees are approximately seventy feet high and are located on the northerly slope of the island. Two elevations above approximate mean high water were determined on the rock outcropping at the apparent highest part of the island. These elevations were shown on the survey in red.

A landing on the island may be made more easily on the northerly side of this island, near the eastern end. At this place, for approximately fifty meters, the bluffs along the shoreline are from ten to fifteen feet high and can be scaled without difficulty. From the top of these bluffs a steep but more gentle slope extends to the highest points of the island. The shoreline bluffs around the rest of the island are practically vertical and reach approximately sixty feet in height at many places.

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MAGNETIC MERIDIAN:

Two magnetic meridians were determined by declinoire on this survey. On January 6, 1941 at 3:00 P.M. (60th meridian time) a meridian was determined at Hydrographic Signal SAM, Latitude $10^{\circ} - 40.7'$, Longitude $61 - 38.1'$. The unadjusted magnetic variation as determined equalled $6 - 26'$ West. On January 8, 1941 at 1:20 P.M. (60th meridian time) a meridian was determined at Triangulation Station STAUBLE, 1940. The unadjusted magnetic variation for this determination equalled $6 - 40'$. ✓

Charted value approx. $7^{\circ} 20' W.$

The index correction for the declinoire used was determined at Magnetic Station FORT STOREY, Norfolk, Virginia on February 13, 1941 and is covered by report of Magnetic Observations for Project H.T.-257.

DETAIL:

All detail was shown on the survey in accordance with instructions regarding detailing, Special Publication No. 144, Topographic Manual. ✓

The low water line was determined by the hydrographic party and was not shown on this survey. Sand areas between high and low water have been indicated by a single row of the symbol outside the high water line. ✓

All offlying features are shown and labeled accordingly. The three red barrel buoys 150 meters east of San Jose Point were located by planetable cuts. They are maintained by the Industrial Gases Corp. who operate the Marine Railway located on the eastern side of San Jose Point. ✓

The wreckage, 500 meters northeast of San Jose Point and 30 meters offshore consists of a large iron boiler and engine. The anchored float, 100 meters northeast of this wreckage is maintained by the management of Staubles Bathing Beach. Six newly-constructed bathhouses and a refreshment stand are located along the high water line at this point. ✓

The large dock shown off Signal NUT is maintained by the Wallace Marine Service, Ltd. This dock is used extensively by pleasure boats and pleasure craft anchored just off the dock. The dock is in process of being improved and extended. ✓

The Marine Railway located 60 meters east of Signal HOT consists of two anchored rails projecting out from the sea wall as ✓

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indicated on the sheet. There are no facilities for the handling of boats drawn up on these rails. It was pointed out by natives that a small boat yard was to have been constructed here. ✓

The marine railway and dock at Triangulation Station GORDON, 1940 is operated by Mr. R. Woodburn and has extensive equipment for the repair and handling of pleasure boats up to approximately 45 feet. Pleasure craft anchor to the south of the boat works. ✓

The offshore mangrove areas between Stations GORDON, 1940 and PRISON, 1940 are cut about once every year by labor from the Prison Camp on Carrera Island. ✓

The grounded barges in the vicinity of PRISON, 1940 are of steel and are solidly grounded in the positions shown on the survey. ✓

The area outlined by light line vicinity of the west end of Harts Cut consists of solid mud flats overgrown by scattered mangrove. ✓

In compliance with the instructions for this survey no detail was located back of the high water line from Harts Cut to San Carlos Point. This area is very heavily wooded except at three points (in the vicinities of Signals SID, HEN, and GAB) at which summer cottages are maintained, each having the usual improvements such as bathhouses, boat landings, etc. ✓

The vegetation symbols indicating the character of the vegetation were not shown in areas of steeper slopes. The contour lines only were indicated in these areas with notes regarding the vegetation. ✓

The Palm tree symbol represents cocoanut palms. Along the marsh areas, dwarf cocoanut palms are prevalent. Farther inshore the cocoanut palms grow to a height of 70 to 80 feet. Bamboo, cactus, brush, and tall tropical grass grows extensively along the numerous intermittent streams. ✓

All buildings are shown on this survey. They vary from brick and concrete construction to thatched-roofed, bamboo-sided huts. ✓

JUNCTIONS:

T-6773 (1940-41)

Junctions were made with field survey no. "D" at San Carlos Point and with field survey No. "E" in the vicinity of the west end of Harts Cut. ✓

T-6774 (1941)

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GEOGRAPHIC NAMES:

The geographic names shown on this survey are listed in the appendix. ✓

STATISTICS:

0.45	Square Statute Miles Area.
7.1	Miles of Roads, intermittent streams, & ditches
5.1	Statute miles of shore line. ✓
843	Elevations determined

Respectfully submitted,

Don A. Jones
Don A. Jones,
Aid, C&GS.

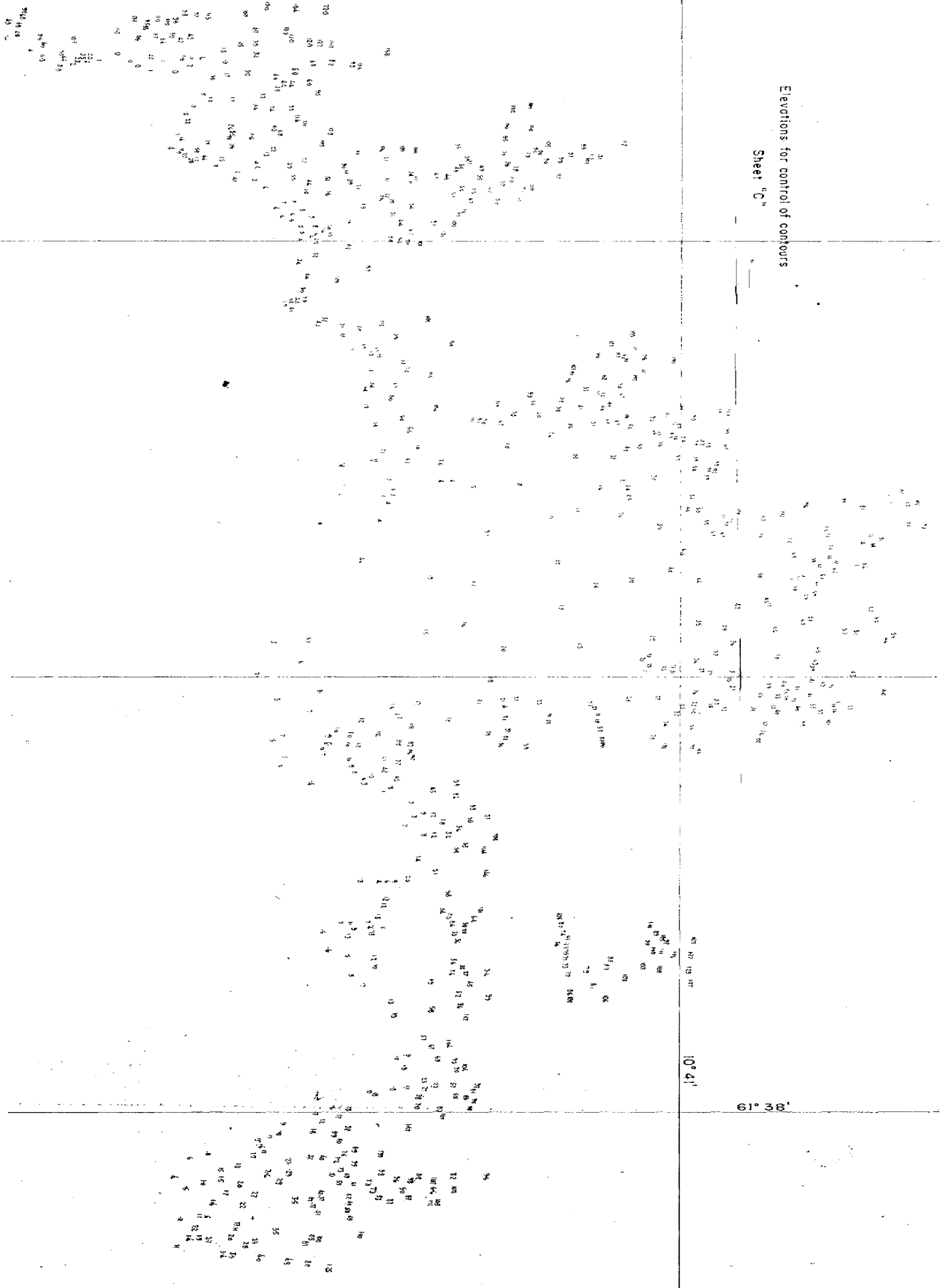
Approved and forwarded:

Fred. L. Peacock
Fred. L. Peacock,
Chief of Party, C&GS.

Geographic Names

	HO Chart #1964	Sheet A Trinidad Colonial Survey
Chaguaramas Bay	✓	✓
San Carlos Point	✓	✓
Escondida Cove	✓	✓
Point Gourde	✓	✓
Harts Cut	✓	✓ ✓
Chaguaramas	✓	✓
Grande Bois Road	(Road sign)	
Western Main Road	✓	✓

Elevations for control of contours
Sheet "C"



DIVISION OF CHARTS

SURVEYS SECTION

REVIS. OF TOPOGRAPHIC SURVEY NO. 6772 (1940-41) FIELD NO. 0

Trinidad, B.W.I.; Chacabamas Bay;
San Jose Point to San Carlos Point
Surveyed in December 1940 - January 1941, Scale 1:4,200
Instructions dated November 9, 1940 (OCEANOGRAPHER)

Plane Table SurveyAluminum Mounted

Chief of Party - F. L. Peacock
Surveyed and inked by - D. A. Jones
Reviewed by - J. A. McCormick, June 20, 1941
Inspected by - W. R. Edmonston

1. Junctions with Contemporary Surveys

Satisfactory junctions were effected with T-6774 (1941) on the east and with T-6775 (1940-41) on the southeast. Marsh area on San Jose Point is shown in more detail on the 1:1,200 scale survey T-6776 (1941). The project does not extend beyond the western limits of the present survey.

2. Comparison with Prior Surveys

Copies of previous British surveys of this area are not available in this office.

3. Comparison with H.O. Chart 1964 (Corrected to Feb. 1941)

The chart is on a scale which necessitates considerable generalization and prevents close comparison with the present survey. However, principal features of each appear to be in fairly good agreement.

4. Condition of Survey

An overlay tracing, showing all elevations determined on the survey, is attached to the Descriptive Report.

5. Compliance with Instructions for the Project

Excellent.

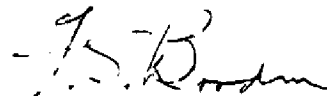
6. Additional Field Work Recommended

None.

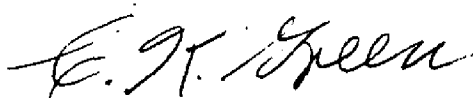
Examined and approved:



Chief, Surveys Section



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal
Surveys