

3778a



C. & G. SURVEY

L. & A.

FEB 8 1920

Form 504

DEPARTMENT OF COMMERCE

Acc. No.

U. S. COAST AND GEODETIC SURVEY

11-5613

State: *Virgin Is.*

DESCRIPTIVE REPORT.

Top

Sheet No.

3778a

18

LOCALITY:

*Virgin Islands*

*St. Thomas Island*

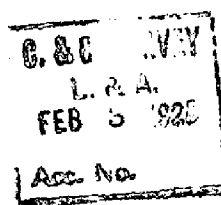
*Eastern Part and*

*Offlying Islands*

1919

CHIEF OF PARTY:

*O. W. Swainson*



DESCRIPTIVE REPORT

TO

Accompany Topographic Sheet No 3778<sup>a</sup>

Field Sheet "D", Virgin Islands of the U.S.

BY

A.L. Shalowitz, Jr. H. & G. Engineer, C. & G. Survey.

O.W. Swainson, Chief of Party.

PLANE TABLE SURVEY OF THE EASTERN PART OF ST. THOMAS ISLAND.

3778<sup>a</sup>  
Field Sheet "D". Virgin Islands of the U.S.

Shore Party. November-December-January. 1918, 1919. O.W. Swainson, Chief of Party.

Survey by A.L. Shalowitz, Aid.

INTRODUCTORY NOTES.

This survey made on a 1-10000 scale in accordance with instructions dated January 24, 1918 was done during the months of November, December 1918 and January 1919. The south shore and Buck Island were first completed and then the north shore taken up, stopping to do interior work when the ground sea set in. A change in the personnel of the party from that on sheets "A" & "B" occasioned considerable difficulty in the execution of the interior topography. It is estimated that from two to three weeks were lost during the work, due to the lack of a right hand man or assistant topographer.

LIMITS OF SHEET.

This sheet borders on sheet "C" to the westward and takes in both shores of St. Thomas and intervening topography east of the 64° 54' meridian including Buck Island, Shark Island and Thatch Cay. There is considerable overlap between sheets "C" & "D", but the contours between the two sheets have ~~not~~ been adjusted. It is recommended, however, that owing to the excellent control at this end of the island, preference be given this sheet for everything east of the 64° 54' meridian.

CONTROL AND METHODS OF SURVEY.

Triangulation stations established on most of the prominent points on the shore, on all offlying islands, and on many of the hills

in the interior, furnished ample control for mapping the country. Before beginning the actual topography, the rodmen were sent out to put up flags on all the hills on the sheet that were not located by triangulation. Different coloured flags and combinations were used in order to prevent confusion. The heights of these flags were carefully measured and recorded. With practically every hill on the island flagged, work was begun on the south shore by occupying The Cow. The three point problem was carefully solved and then the projection checked by taking cuts to all triangulation stations visible. Vertical angles were also taken to the triangulation stations and thus numerous elevations were established for the control of the contours. The shore line was then surveyed and flags on hills cut in at the same time. Before commencing work on the interior, a few hills, where good three point fixes could be obtained, were occupied and then the other flags on hills cut in. In this way a vast number of control points were established, so that I could go almost anywhere along the roads or the interior, where the timber was not too heavy, and get a good location. Too strong emphasis cannot be placed on the value of first flagging all hills within the area to be surveyed before commencing work. Aside from identifying hills, which in itself is quite an item, particularly where you have a maze of hills with no especial prominence, there is a constant check on the work, and one is not confined to straight traversing. It is estimated that fully 150 topographic flags were erected on the hills and spurs of this sheet before beginning the work and during the progress of same. What at first appeared a hopeless conglomeration of various shaped hills gradually resolved itself into definite land forms interspersed with various coloured flags.

Then followed the survey of the roads. These were for the most part traversed, with frequent three point fixes as checks. Then came the filling in of the interior topography.

All the work was executed with the plane table, and no unusual methods employed.

#### CONTOURS.

As this formed one of the important features of the survey, as much care as possible was taken in the mapping of same. But like the western half of the island most of the hills and ridges are covered with thick vines and bush, which made it impossible to obtain direct readings. Particular attention was, however, paid to the proper delineation of the drainage system. There is a definite location for every hill shown except the one to the east of Salt Gut, where no elevation is shown. In a general way, the relative accuracy of different portions of the sheet is shown by the number of elevations determined, this being in inverse proportion to the amount of bush and timber in a particular vicinity. All elevations determined are, however, not shown, as many of them became erased from the sheet during the progress of the work. The most extensive sketching was done in the area between Salt Gut and Benner Hill and south of the  $18^{\circ} 20'$  parallel. The country here is heavily timbered and is not visible from any of the roads nor from along the shore. With practically all hills within this area located, three hills were occupied with considerable difficulty and the tops of trees climbed. With the plane table sheet before me and approximately oriented, the contours were sketched in.

Elevations were carried along all the roads, hence the contours along these are accurate.

### DESCRIPTION OF SHORE LINE.

Especial care was taken in the inking of the shore line on this sheet and the nature shown by its appropriate symbol, so that it is thought unnecessary to resort to any detailed description.

Any unusual feature is described on the sheet by a note.

### GENERAL APPEARANCE OF THE COUNTRY.

The east end of St. Thomas Island has the appearance of two main ridges sloping to the north and to the south and separated by a large basin, with numerous smaller ridges and spurs making off from them. These two ridges join to the eastward of Tutu Estate to form one main ridge that runs through the center of the island and terminates at its eastern end. The south ridge is almost cut into by a long and narrow ravine through which Turpentine Avenue runs.

The country in the immediate vicinity of "Charlotte Amalie" and Tutu is rolling but the rest is generally hilly and mountainous. The hills are mostly flat topped and irregular in shape. The highest in the vicinity being Nulliberg which is 870 feet high.

There is considerable pasture land in the vicinity of Tutu but cultivated land is conspicuous by its absence. Only here and there we see evidences of patches of land under cultivation, or grounds as they are locally known. These amount to nothing more than home gardening. Aside from these the country is covered with thick growths of trees, shrubs and vines. This is particularly true of the area east of Turpentine Avenue and south of the main road leading to Smith Bay. The accompanying tracing shows the character of the vegetation and forms a part of the field records for this

sheet.

Practically all houses are shown on the sheet, and with few exceptions these are in the main wooden shacks or thatch houses. All wells are shown on the sheet as these form the main water supply for the animals.

Turpentine Gut is the only streamlike gut on this end of the island. With moderate rains there is always running water, while during the dry season it contains many pools of water that the natives use for clothes washing purposes. It has never been known to go dry.

One cannot but help notice the many lagoons on this end of the island. After heavy rains these afford excellent bird shooting.

#### COAST PILOT.

##### OUTLYING AND INSHORE DANGERS.

PACKET ROCK lying about one mile south of the mainland of St. Thomas and about 1 1/2 miles north of Buck Island. It is a sunken rock, only in heavy weather does the sea break over it. At no time during the progress of the survey work was it seen to break, so that it was impossible to cut it in with the planetable. The position shown is a sextant location, but no great reliance should be placed in it as there was a heavy sea running at the time and it was impossible to get too close to the rock. The distance from the center of the break was estimated. It is reported that the lighthouse department are contemplating placing a lighted buoy on it.

All other dangers are clearly shown on the sheet and need no special comment.

Attention is called to H.O. Chart No. 3903 which shows

SHEET "D".

The following Geographic Names are known locally but do not appear on the published charts.

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SUNSI POINT	COKI BAY	TUTU ROAD
SPRING POINT	BAKER BAY	SMITH BAY ROAD
FOOTER POINT	BIG SMITH BAY	WATER BAY ROAD
PRETTY CLIP POINT	✓ ST. JOHN <del>X</del> BAY	REDHOOK ROAD
WATER POINT	ROD BAY	BOLONGO BAY ROAD
COMPASS POINT	MULLER BAY	TURPENTINE AVENUE
✓ RED POINT	EAST <del>END</del> BAY ( <i>? = Eva Bay</i> )	MANDAL ROAD
OCCULUS POINT	STONY BAY	WINTBERG ROAD
GROUPER POINT, various spellings (L.W.M.)		
EVA POINT		

PETERSEN HILL	THE ROCK <del>---</del> ?
CASSI HILL	SALT GUT
MT. PLEASANT	SALT POND
MT. ZION	JACK ROCK .

The following names were taken from an old Danish Chart and are well known locally. No extra copies of this chart are available.

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DONOE	BOLONGO
✓ CHARLOTTE AMALIE	LONGMAT
TITUS	LONG BAY
✓ BOVONI <del>X</del> ( <i>See Zabristia</i> )	HOFFMAN.

Names assigned by Field Officer and recommended for adoption.

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MANDAL KNOLL	BENNER HILL
REDHOOK HILL - A prominent hill overlooking Red Point	
CABRITE HILL - Sharp and conspicuous hill at eastern end of island	
TURPENTINE GUT - Bordering Turpentine Avenue throughout its distance.	

All other names appearing on this sheet were taken from H.O.  
Chart No. 3203 or from Danish Chart No. 265.



PLANE TABLE POSITIONS. SHEET "D".

3778<sup>a</sup>

Object & Description	Latitude	D.M.	Longitude	D.P.	Elevation	Remarks & How Marked.
BLUFF	18° 21'	1026	64° 51'	1367	6	Reg. Disc
BOL	18° 18'	763	64° 52'	1246	10	" "
COW	18° 18'	622	64° 50'	1566	9	" "
DUN	18° 20'	408	64° 53'	1675	174	" "
FES	18° 19'	869	64° 51'	626	2	Same as DUN. Sh. "C"
GAT	18° 31'	580	64° 53'	1159	404	" "
GUT	18° 20'	395	64° 53'	822	117	" "
JACK	18° 19'	1165	64° 50'	1550		Jack Rock.
LOT	18° 20'	867	64° 51'	31	1	Reg. Disc
LAG	18° 18'	1689	64° 52'	1142		Pile of Rocks
MAT	18° 20'	386	64° 52'	734	563	Reg. Disc
MID	18° 18'	1187	64° 53'	266	9	" "
MOT	18° 21'	1699	64° 52'	447	34	" "
MAN	18° 21'	1629	64° 53'	956	16	" "
NUL	18° 19'	1213	64° 53'	1466	870	" "
PALM	18° 18'	1699	64° 53'	1383	18	" "
PETER	18° 20'	1314	64° 53'	169	478	" "
ROD	18° 21'	320	64° 53'	123	614	" "
ROCK	18° 19'	38	64° 51'	295	3	" "
SMIT	18° 20'	727	64° 51'	922	6	" "
SUN	18° 21'	748	64° 52'	1457	8	" "
WAT	18° 20'	1401	64° 52'	376	7	" "

RELATION OF SURVEY TO NAVY NEEDS.

This survey having been made at the instance of the Navy Department, it was endeavoured as much as possible to co-operate with them and meet their needs. To this end numerous topographic stations were established along the roads and on the hills, so that in their future boundary adjustments they can tie in with them. An attempt was made to locate estate boundary lines. Where these were accessible and well defined and indisputable they were located and are thus shown on the sheet. As most of the boundary lines run through timbered land and in most cases have no fixed point, a systematic survey of these could not be made without <sup>considerable</sup> loss in time.

CONCLUSION.

The photographs attached were taken during the progress of the work and form a part of this report. A list of recoverable plane table stations is also attached as well as a reference list of Geographic names.

Respectfully submitted

*Aaron L. Shalowitz*  
 Aaron L. Shalowitz  
 Jr. H. & G. Engr.  
 C. & G. Survey.

To The Superintendent  
 Coast and Geodetic Survey.

December 16, 1919.

The Cow as the eastermost of the two rocks comprising The Cow and Calf. This is incorrect. The higher of the two rocks is the one to the westward and this is known as the Cow while the other is known as the Calf.

Attention is also called to the hill over Deck Point, H.O. Chart No. 3903 showing this as 289 feet high. This is incorrect, as it is only 143 feet high. Special care was taken to check this up.

#### ANCHORAGES.

With the exception of The Sound, there are no large vessel anchorages around the island. With the wind in the proper direction, small boats can seek shelter in almost any of the small bays along the coast.

#### GENERAL RESOURCES.

##### WATER SUPPLY.

See Descriptive Report for Sheets "A" and "B". Virgin Is.

##### ROADS.

The roads are all of easy grade and are in fairly good condition. The road leading from town to Smith Bay and around the south side of the island and up through Turpentine Avenue is popular with the tourists, as the entire distance can be traversed with an automobile.

##### TRANSPORTATION.

See Report for Sheets "A" and "B".

##### FAUNA.

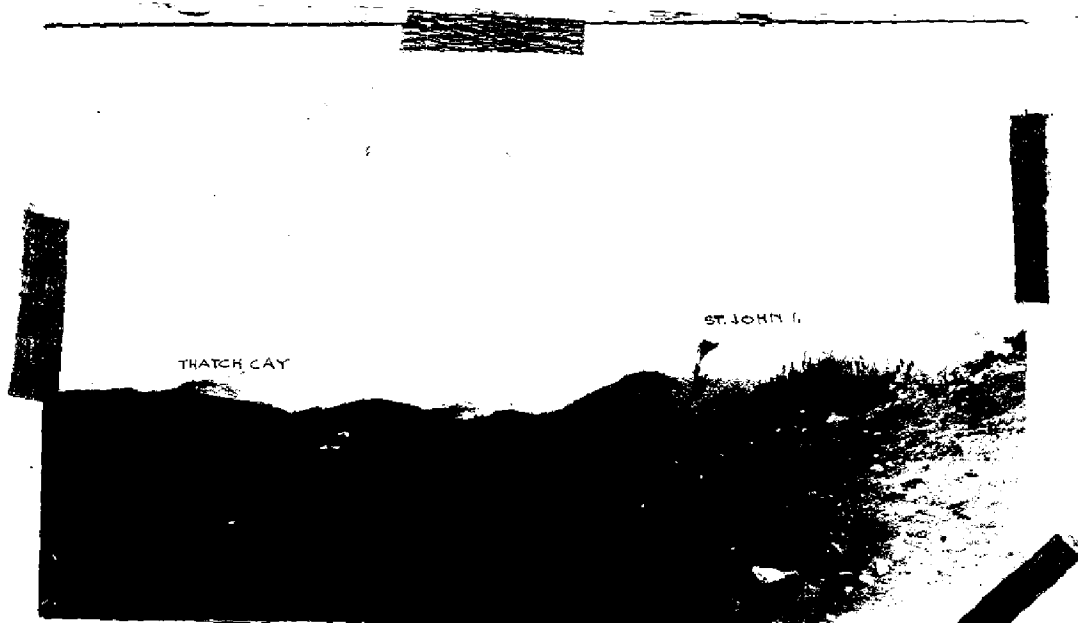
There are a few deer around Redhook and vicinity. As this is private property, no trespassing is allowed without permission.

##### FLORA.

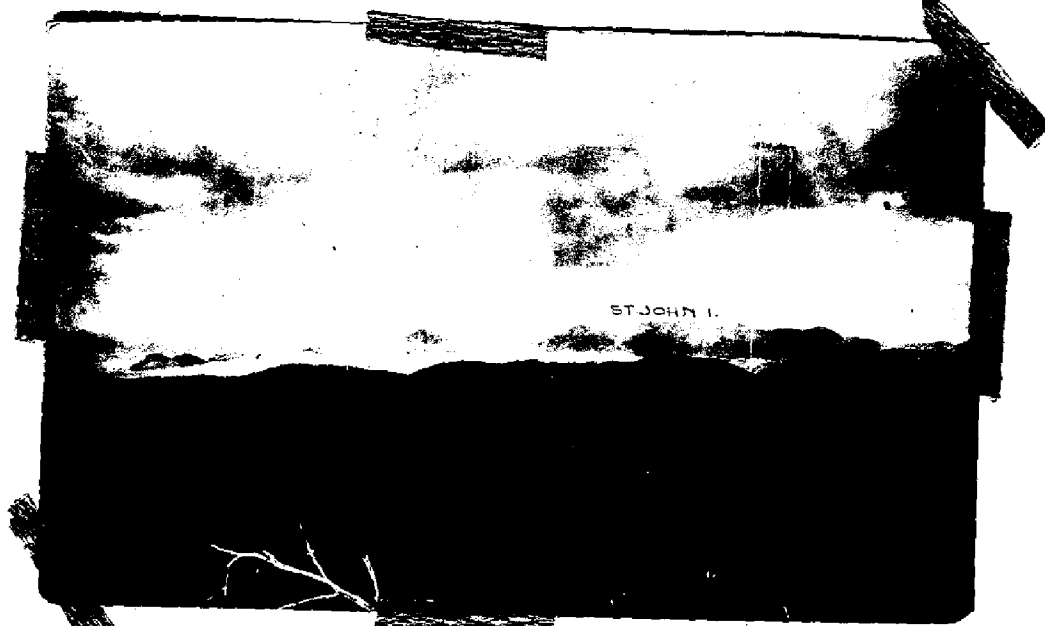
See Report for Sheets "A" and "B".

##### CLIMATIC CONDITIONS.

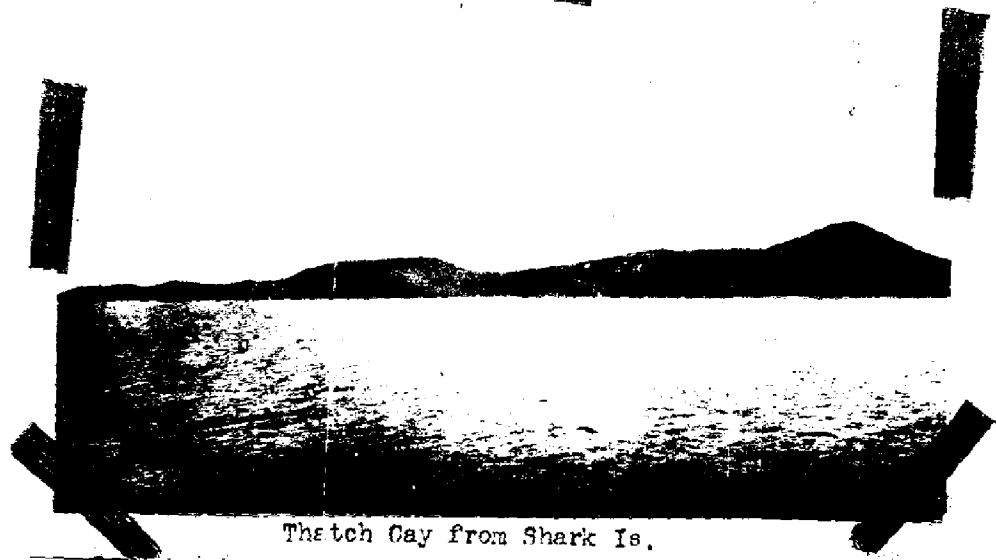
See Report for Sheets "A" and "B".



Tortola and St. John from St. Thomas



Looking eastward from Mulliberg



Thatch Cay from Shark Is.

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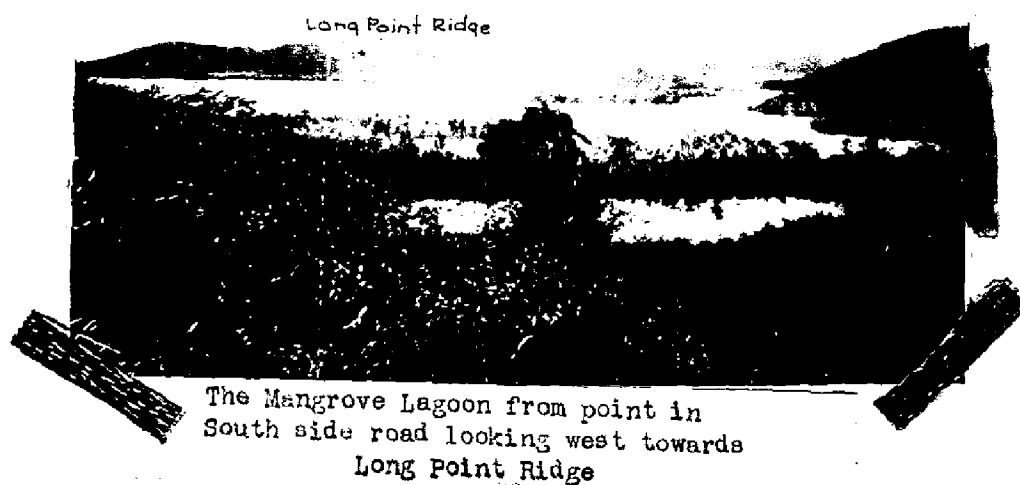
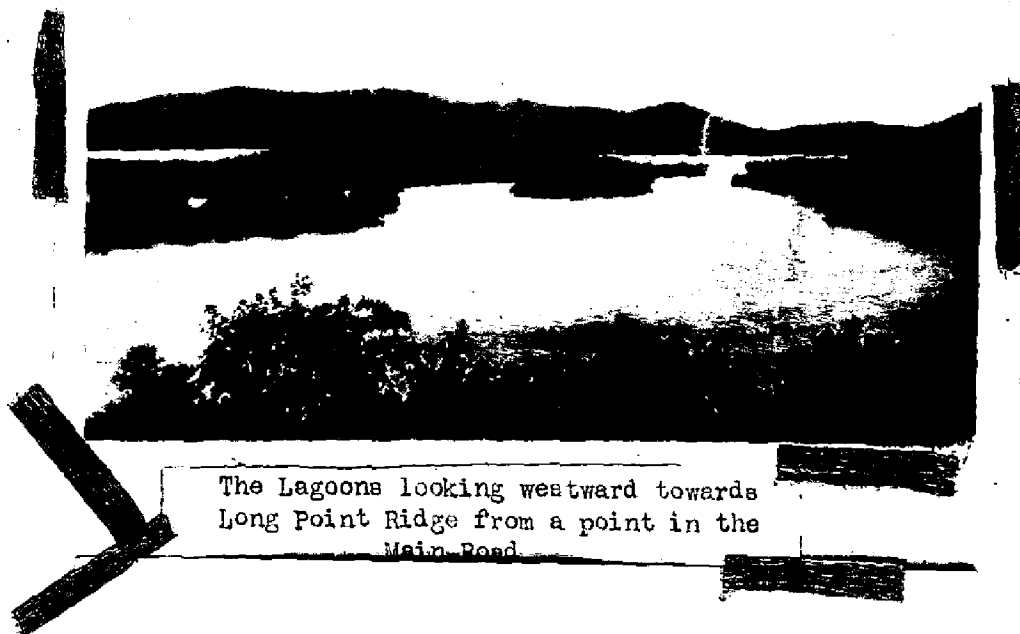
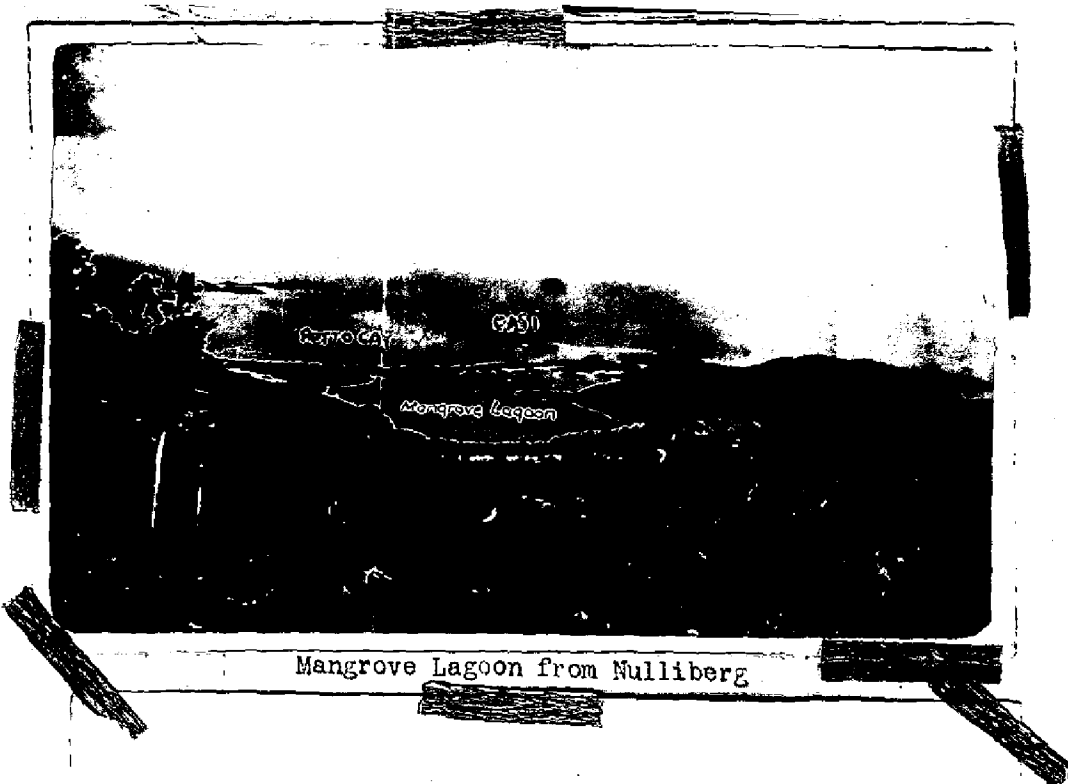
Plane Table party working in Mangrove Lagoon

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Topography in Jersey Bay

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Topography in Mangrove Lagoon





Benner Ridge from Rotto Cay



Long Point Ridge from Rotto Cay



Nulliberg Ridge from Rotto Cay

Estate Tutu from Petersen Hill  
with Mulliberg Ridge in background.



Sketching contours <sup>from tree</sup> ~~in the~~  
~~view~~ on Benner Hill.



3778<sup>b</sup>

Original  
AUG 10 1919

Form 504  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: *Virgin Is.*

11-5813

DESCRIPTIVE REPORT

*Top* Sheet No. *3778<sup>b</sup>*

LOCALITY:

*Virgin Islands*

*St. Thomas Island*

*Frenchmans Cap*

*1919*

CHIEF OF PARTY:

*O. W. Swainson*

3778<sup>b</sup>

Applied to Chart Comp 938 January 1941. H.E. MacEwen

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic 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. 3778<sup>b</sup> Frenchmans Cap

State . . . Virgin Islands

General locality . . . St. Thomas Island

Locality . . . Frenchmans Cap

Chief of party . . . O.W. Swainson

Surveyed by . . . Benjamin Friedenber

Date of survey . . . May 8, 1919

Scale . . . 1 to 20,000

Heights in feet above M.S.L.

Contour interval . . . 50 feet.

Inked by B. Friedenber Lettered by B. F.

Records accompanying sheet (check those forwarded): Photographs,

✓ Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet . . . . .

Remarks:

This survey consists of the topography of Frenchmans Cap, St. Thomas, V.I., scale 1 to 20,000 with 50 ft. contours.

The projection was made in the hope of obtaining a three point fix from distant stations on St. Thomas and St. John but the determination here was weak and signals hazy. Consequently the topographic determination was in error, and the top of the hill was later located by triangulation, the rest of the island being adjusted to this.

From vertical angles and distances from shore stations the elevation of  $\Delta$  TOP, highest point, was determined as 184, 176 and 188 feet with an average of 183 feet. Traversing from the shore to the top of the hill with the Plane table, with steep angles gives the determination of the top as 207 ft., which is in error, apparently.

The top of the hill showed great magnetic disturbances as to dip of the needle, and the declinator was unable to be used on this account.

The west shore is abrupt, of high massive cliffs partly of diorite and partly of volcanic ash. The top is covered with grass, and booby eggs are found in large numbers when the bird season comes early in May.

The northwest side is rugged and weatherbeaten.

The east shore is of low ragged cliff 20 to 40 ft. in height.

© CAP is a regular hydrographic disc cemented in a drill hole on the highest point of detached rock, extreme north of islet. Elevation 15 feet.

Ø - 18° 14'	174 meters
λ - 64° 51'	343 "

$\Delta$  TOP is a hydrographic disc. located on top of the hill by triangulation.

*Benjamin Friedenber*  
Benjamin Friedenber  
Aid, C.&G. S. Aug. 22, 1919

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic 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. 3778<sup>a</sup> Field No. "D".

State Virgin Islands

General locality St. Thomas Island

Locality Eastern end of St. Thomas *Part and Offlying Islands*

Chief of party O. W. Swainson

Surveyed by A. L. Shalowitz

Date of survey November 1918 to January 1919

Scale 1-10000

Heights in feet above Mean sea level

Contour interval 20 feet.

Inked by A. L. Shalowitz Lettered by A. F. Gleason

Records accompanying sheet (check those forwarded): Photographs, ☒

Descriptive report, ☒ Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: The notes and elevations were inked by A. L. Shalowitz  
The mangrove by A. F. Gleason.