

4651a

Diag. Cht. Nos. 904-2 and 905.

Form 504 U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No.	Office No. H-4651a
LOCALITY	
State	Virgin Is.
General locality	St. Thomas Island
Locality	North, South and West of St. Thomas
<u>1923-26</u>	
CHIEF OF PARTY	
F.B.T. Siem and G.C. Mattison	
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. ³ 46512

46512

State ~~Virgin Islands of the United States~~

General locality . . . St. Thomas Island . . . Sheet #3

Locality . . . North, South, and West of St. Thomas
~~St. Thomas Island~~

Chief of party F.B.T. Siems, G.C. Mattison

Surveyed by F.B.T. Siems, G.C. Mattison, R.J. Auld, C.K. Green, A.P. Ratti, M. Leff,
H.E. Finnegan.

Date of survey . Sept. 12, 1923- March 11, 1926.

Scale . . . 1:20,000

Soundings in . . . Feet

Plane of reference . . . MTL - $\frac{1}{2}$ foot

Protracted by R.C. Rowse . . . Soundings in pencil by C.F. Ehlers
A.C. Thorsen . . . G.C. Mattison

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, _____ Tide books, _____ Marigrams, 2 Boat sheets,
and 1 combined Hyd + W.D.

17 Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Wire drag sheet of the same area.

Remarks:

B.S.
MATT

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

VIRGIN ISLANDS

A DESCRIPTIVE REPORT H- 4651a
to accompany
HYDROGRAPHIC SHEET # 3.

1923-1926

S.S. RANGER

G.C. MATTISON,
Chief of Party.

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET No. 3

Date of Instructions, June 22, 1923

LIMITS:

Sheet number three includes the waters adjacent to St. Thomas Island, and extending north, west and south between four and five miles in each direction. The sheet has as its approximate limits; meridians $64^{\circ} 52'$ to $65^{\circ} 09'$ and Parallels $18^{\circ} 15'$ to $18^{\circ} 26'$ which excludes the eastern end of St. Thomas beyond a line drawn thru the eastern end of Capella Island. The rest of St. Thomas is included in sheet number two of this locality, while sheet number one is a detailed survey of St. Thomas Harbor and approaches.

GENERAL DESCRIPTION:

The general description of the coast and off-lying islands may be obtained from the Coast Pilot for this region, There are no additions or corrections to be made to the present description.

OUT LYING DANGERS AND ISLANDS:

The out lying islands are adequately described in the Coast Pilot as to appearance, but some changes are noted in the depths in the immediate vicinity.

CURRENTS:

No corrections or additions can be made to the remarks in the Coast Pilot regarding currents.

LANDMARKS:

All landmarks are already listed with the exception of a square white house on the north side of St. Thomas known as signal "HOW". It stands approximately one hundred meters back from the sloping cliffs, which make up the coast line and is approximately one hundred feet above sea level. It stands between Bordeaux Point and Stumpy Point, and is on the Bordeaux Estate as shown on the hydrographic sheet.

INSHORE DANGERS AND CORRECTIONS:

Some inshore dangers, such as submerged rocks, reefs, &c. were found which were not shown on chart number nine hundred five. In some cases lesser depths have been found with the wire drag. These will be noted in the report accompanying the wire drag sheet.

CHANGE OF COAST LINE OR DEPTHS:

There has been no perceptible change in the shore line of St. Thomas, which is in general, bold and steep-to. Differences in depths as noted were probably not due to changes occurring as much as to probable discrepancies between survey methods. The depths in general were found to be greater than charted.

SURVEY METHODS:

All information for the sheet was obtained following the usual survey methods. The stations located by the triangulation and topographic party of 1920 were used and all other signals were cut in by sextants. The inshore work in places does not check with the longer sounding lines, but this usually occurred where the bottom was changing rapidly. In some cases close inshore, a large number of the fixes were on the circle and were plotted by using the total angle in connection with the boat sheet position whenever necessary. (See tender e & j days). The positions close to Sail Rock were difficult to plot as signals on land could not be seen from small boats.

The hand lead was used on the launches in all cases.

The ship sounding was done using either the Tanner Blisch machine or trolley gear. The standard trolley rig was used, for part of the work, a heavy sash cord being used for the lead line. The Navy Type Tanner-Blisch electric sounding machine was also used for up and down soundings with the ship stopped. In some cases the vessel was stopped by backing on the engines, and when the engines had backed sufficiently they were changed to ahead, the sounding being taken while the vessel was dead in the water. In other words, the engines never stopped except momentarily while changing from one direction to another. On other days, the engines were backed and stopped and the sounding taken before^{ing} ahead on the telegraph.

The close inshore work was done by the tender and motor dinghy, the deeper work by the RANGER, and the intermediate by the launches MITCHELL and MARINDIN.

Almost all the sounding on this sheet was done by the party previous to November 1923, with F.B.T. Siems as chief of party. The inshore work and the northeast corner of the sheet east of Brass Islands were done with G.C. Mattison as chief of party. The following officers were engaged in the field work on this sheet.

- F.B.T. Siems, H&G. Engineer, in charge ship hydrography.
- G.C. Mattison, H&G. Engineer, in charge ship hydrography.
- R.J. Auld, H&G. Engineer, in charge ship and launch hydrography.
- C.K. Green, H&G. Engineer, in charge launch hydrography.
- H.E. Finnegan, Jr. H&G. Eng'r in charge launch hydrography.
- A.P. Ratti, Jr. H&G. Engineer, in charge launch hydrography, left angle ship hydrography.

M. Leff, Jr. H&G. Engineer, in charge launch hydrography,
left angle ship hydrography. ✓
A. Ogram, Jr. H&G. Engineer, left angle and recording ship
and launch hydrography.
R. C. Rowse, Jr. H&G. Engineer, left angle and recording launch
hydrography.
V. A. Powell, Aid, left angle and recording launch hydrography. ✓
C. F. Ehlers, Aid, left angle and recording launch hydrography. ✓
A. C. Thorson, Aid, left angle and recording launch hydrography.
J. H. Gill, D. O. left angle and recording launch and ship
hydrography.
W. R. Poster, D. O. recording launch hydrography.
H. J. Stansell, Chief Writer, recording.
H. V. Rackliff, Dragmaster, left angle.

COCKROACH ISLAND:

The ten fathom curve approaches closer to this island than is charted. This is also true to Cricket Rock. A coral head with a depth of twenty seven feet was found two hundred eighty meters due south of the southern extremity of Cricket Rock. This was not shown on the chart. A large uncharted shoal with a depth of one hundred eleven feet was found one half mile ^{west} east of Cockroach Island. ✓

SAIL ROCK:

The rock charted to the west of Sail Rock was found as charted. A sunken rock lies just north of the one that is almost awash. There are several rocks awash close to the north side of the rock. ✓

DUTCHMAS'S CAP:

The ten fathom curve is much closer to the island than charted. A sharp lookout was kept for the rock charted south of the island especially when a heavy swell was running, but the rock was never seen. It was not sounded for, as the locality was to be covered by the drag. ✓

SALT CAY:

The charted nine fathom spot south of Salt Cay was not found, but a depth of ¹⁰one foot was found about the same distance off Salt Cay, but two hundred meters to the northwest. ?

KALKUM CAY:

The charted five fathom shoal northwest of Kalkum Cay was located about two hundred meters northwest of the charted position, the least depth obtained being thirty one feet. ^(2 x on W.D.) Southeast of the Cay a depth of forty six feet was obtained where the chart shows nine fathoms. ✓

SAVANNA ISLAND:

No uncharted dangers were found in the vicinity of this island.

The passages between the islands listed above, are practically as charted, with the exceptions as noted above. A shoal with a least depth of fifty feet was found in the southeast end of Savanna Passage, with Saltwater Money Rock bearing 54° (true), distance three quarters of a mile. The charted depth at this spot is fifteen fathoms. ✓

BOTANY BAY.

This bay can only be considered as an anchorage, under favorable conditions. This is true of all the bays on the north side, except possibly Mogens Bay, which is exposed only to the northwest. ✓

The shoal extending west from Stumpy Point was found almost as charted, with the depth about the same. A depth of thirty five feet exists $\frac{1}{4}$ mile north of Bordeaux Point, where the chart indicates a slightly greater depth. ✓

In Santa Maria Bay, a depth of twenty feet was found where the chart shows four and a quarter fathoms. This is the least depth found on a wide ridge extending east and west across the bay. ✓

Brass Islands, are almost as charted with only minor corrections. ✓

Lizard Rocks. A depth of six feet exists sixty yards southeast of the eastermost rock. ✓

Ornen Rock. A depth of six feet exists on Ornen Rock instead of nine feet as charted. ✓

Mogens Bay.

This bay is an excellent anchorage except when westerly or northwesterly winds are blowing. A depth of forty three feet exists about midway of the entrance. The northeastern side of the bay is clear of dangers except close inshore, and is preferable as an anchorage as it is better protected from northerly swells. The southwestern side of the upper half of the bay has irregular bottom; and a shoal near the head, extending from the southeast corner more than halfway across the bay, and extending almost one half mile from the southwesterly and southeasterly shores, with least depths of five and a half feet near the northern edge of the shoal area.. The anchorage used by the RANGER was about half way between the northern end of this shoal and the northeast shore, in about nine fathoms sticky bottom. This bay is of no importance, as it is used only by a few small fishing boats. ✓

HANS LOLLIK ISLAND.

There is an opening in the coral reef between Hans Lollik and Little Hans Lollik Islands. ✓

COCULUS POINT.

A depth of eight feet was found on the rock off Coculus Point previously charted as nine feet, ✓

The remainder of the south coast is adequately covered in the Coast Pilot. ✓

The only anchorage used by the RANGER in the area covered by the hydrography of this sheet was Mogens Bay. During fleet maneuvers in January 1924, naval vessels were anchored in the Southwest Roads, but no other vessels have been known to anchor during the past two years in any of the sounded areas of this sheet. ✓

Respectfully submitted.

G. C. Mattison

Forwarded
G. C. Mattison
Com. Off. S. S. Ranger.

RECOVERABLE OBJECTS AND PLANETABLE POSITIONS.

HYDROGRAPHIC SHEET No. 3

NAME	DESCRIPTION
Del	Top of Knoll, Mandal Point
Dry	Dry Rock, Largest in group.
French	Center, Main House, Frenchman B.
Horn	Rocks E. of Saba Island, Largest in group.
How	Center, Main House, Bordeaux Est.
Hoy	Tower, Louisenhoy
Lone	Solberg Mill.
Por	Porpoise Rocks, Largest in E'ly group.
Sen	Outlaying Rock, Current Hole.
Sho	House, Hull Bay.

TRIANGULATION SIGNALS

HYDROGRAPHIC SHEET No. 3

NAME	LAT.	LONG.
Sail	18° 17'	65° 06'
Sav	18 20	65 05
Roach	18 24	65 03
Egg	18 24	65 03
Cricket	18 24	65 02
Dutch	18 22	65 03
Salt	18 21	65 03
Targ	18 21	65 02
Bad	18 21	65 01
Stump	18 22	65 00
Prom	18 22	64 59
Out	18 24	64 58
Outer	18 23	64 58
In	18 23	64 58
Good	18 22	64 58
Lit	18 22	64 57
Mag	18 22	64 57
Gen	18 22	64 55
Pic	18 23	64 56
Rough	18 22	64 55
Coki	18 21	64 51
Lollik	18 24	64 54
Hans	18 23	64 54
West	18 21	64 52
Thatch	18 21	64 51

TRIANGULATION SIGNALS

HYDROGRAPHIC SHEET No. 3

Name	Lat.	Long.
Gas	18° 18'	64° 51'
Cul	18 18	64 53
Green	18 18	64 54
East	18 19	64 55
Buck	18 16	64 53
Rock	18 19	64 56
Chim	18 20	64 56
Sprat	18 19	64 56
Drift	18 19	64 57
Tap	18 19	64 57
Red	18 19	64 58
Black	18 20	64 59
High	18 20	65 00
Lucas	18 20	65 00
Fortuna	18 20	65 01
Bore	18 20	65 02
Bluff	18 21	65 02
Saba	18 18	65 00

TOPOGRAPHIC SIGNALS

HYDROGRAPHIC SHEET NO. 3

NAME	LAT.	LONG.
Tip	18° 20'	65° 05'
Not	18 20	65 04
Reef	18 20	65 04
Turk	18 21	65 03
Mon	18 20	65 02
Rock	18 22	65 03
Shelf	18 21	65 03
Bat	18 21	65 02
Slope	18 21	65 00
Liz	18 23	64 59
End	18 23	64 58
Off	18 23	64 57
Tomb**	18 21	64 56
Man	18 21	64 53
Sun	18 21	64 52
Pel	18 24	64 54
Steek	18 24	64 54
Goat	18 24	64 54
Tan	18 24	64 54
Lik	18 24	64 54
Mot	18 23	64 54
Mat	18 21	64 52
Bluff	18 21	64 51
Mid	18 18	64 53
Tri	18 19	64 54

TOPOGRAPHIC SIGNALS

HYDROGRAPHIC SHEET No. 3

NAME	LAT		LONG.	
Wat	18°	18'	64°	57'
Flam	18	18	64	57
Pro	18	19	64	57
El	18	19	64	57
Mos	18	19	64	57
Mid	18	20	64	58
Mid	18	20	64	58
Flat	18	20	64	59
Scar*	18	21 (1748.1) (96.5m)	64	58 (547.4) (1214.2m)
Lone*	18	21 (1637.0) (207.6m)	64	56 (1342.0) (419.6m)
Mill	18	21	65	00
Like*	18	23 (1521.1) (323.5m)	64	54 (1626.7) (134.9m)

Note:

*Topographic signals located from topographic sheets.
(Distances scaled)

**Tomb was used to locate other signals in Mogens Bay.
It was not used in hydrography or wire drag.

HYDROGRAPHIC SIGNALS

HYDROGRAPHIC SHEET No. 3

NAME	Lat.	Meters	Long.	Meters.
Sam	18 20	562.9	65 05	261.0
Tiv	18 20	809.2	65 05	177.3
Hat	18 20	1128.8	65 04	1651.6
Gil	18 20	1382.4	65 04	1415.2
Van	18 20	1488.6	65 04	1282.8
Hig	18 24	909.6	65 03	1018.4
Kip	18 24	724.6	65 03	1361.4
Chu	18 22	1696.8	65 03	1551.0
Cud	18 23	78.8	65 03	1094.6
West	18 21	1686.2	65 03	789.4
Isle	18 21	1748.6	65 03	774.0
Say	18 21	1788/8	65 03	514.6
Yac	18 21	1556.4	65 02	1735.6
Pat	18 21	13500	65 02	1396.0
Cay	18 21	1230	65 02	1088.0
Mit	18 21	896	65 02	1152.0
Sen	18 21	832	65 02	1062.5
Runt	18 21	827.3	65 02	881.5
Jane	18 21	538.0	65 02	269.0
Bee	18 21	754.0	65 01	1168.5
Ed	18 21	1492.0	65 01	409.5
War.	18 21	1541.0	65 01	308.5
Rip	18 21	1374.0	65 01	224.0
How	18 21	1444.0	65 00	1756.0
Duck	18 21	1678.0	65 00	916.0
Air	182 22	158.0	65 00	92.0

HYDROGRAPHIC SIGNALS

HYDROGRAPHIC SHEET No. 3

Name	Lat	Meters	Long	Meters.
Dos	18 m21	1504.0	64 59	1206.0
r	18 21	1638.0	64 59	1548.0
Con	18 22	12.6	64 59	1220.0
Do	18 22	338.0	64 59	1034.0
Og	18 23	1118.0	64 58	520.0
Sim	18 23	1374.0	64 58	894.0
Go	18 22	1284.0	64 57	1714.0
Dom	18 22	1808.0	64 58	754.0
Bog	18 22	468.0	64 56	958.0
Nip	18 22	130.0	64 56	852.0
Pan	18 21	1668.0	64 56	460.0
Pig	18 21	1482.0	64 56	74.0
Monk	18 21	1298.0	64 55	1342.0
Beach	18 21	1649.0	64 55	771.2
Cat	18 22	458.0	64 55	422.0 842.0
Dog	18 22	748.0	64 55	1242.0
Rat	18 22	988.00	64 55	1608.0
Car	18 22	1400.0 1608	64 56	228.0 448.0
Dal	18 21	1500.0	64 53	980.0
Lon	18 21	718.0	64 53	696.0
b	18 21	732.0	64 53	582.0
Fag	18 21	520.0	64 51	1194.0
My	18 24	1610.0	64 54	690.0
Be	18 24	920.0	64 54	614.0
Run	18 24	855.0	64 54	1373.5
Fid	18 24	688.0	64 54	942.0

HYDROGRAPHIC SIGNALS

HYDROGRAPHIC SHEET No. 3

Name	Lat	Meters	Long	Meters
Las	18 24	404.0	64 54	598.0
Tel	18 24	200.0	64 54	376.5
Let	18 23	1670.0	64 54	132.0
Gro	18 23	1350.0	64 54	1746.0
Abe	18 23	1220.0	64 54	15.6
Fil	18 23	1196.0	64 54	342.0
San	18 23	950.0	64 54	466.0
Lo	18 24	446.0	64 54	1742.0
Long _z	18 18	502.0	64 52	1300.0
Bok	18 18	1634.0	64 53	778.0
Rug	18 18	1512.0	64 53	1278.0
Rap	18 18	1386.0	64 54	228.0
Tree	18 18	1564.0	64 54	312.0
French	18 19	18.6	64 54	538.0
Cap	18 18	1452.0	64 54	514.0
Hole	18 18	1786.0	64 54	970.0
Man	18 18	1804.0	64 54	1112.0
Ret	18 19	476.0	64 56	1362.0
Flam2	18 18	904.0	64 57	816.0
Land	18 18	1084.0	64 57	1110.0
Ham	18 19	1538.0	64 57	1306.0
Gov	18 20		64 58	
Paint	18 20	1324.0	65 00	1466.0
Head	18 20	1574.0	65 00	1610.0
Lu	18 20	1374.0	65 01	64.6

HYDROGRAPHIC SIGNALS

HYDROGRAPHIC SHEET No. 3

Name	Lat	Meters	Long	Meters
Tun	18 20	1116.0	65 01	954.0
Lry	18 18	390.0	65 00	1104.0
Hom ^{rn}	18 18	754.0	64 59	1406.0
Por	18 18	1216.0	64 58	516.0
Hoy	18 21	328.0	64 55	900.0
Sho	18 22	134.0	64 57	306.0
Tan	18 22	1483.4	65 03	1257.0

Note:

Seconds in meters for hydrographic signals scaled from
smooth sheet.

HYDROGRAPHY.

Statistics Sheet No. 3

DATE	Letter	Volume	Posi- tions	Sdgs.	Miles Statute.	Vessel.
Sept. 5, 1923.	A	1	55	169	13	Marindin
" 6, 1923.	B	1	50	149	16	"
" 7, 1923.	C	1	56	167	20	"
" 10, 1923.	D	1	55	165	18	"
" 11, 1923.	E	1	62	180	22.2	"
" 12, 1923.	F	1	66	201	23	"
" 12, 1923.	A	2	45	131	12.7	Ranger.
" 13, 1923.	G	3	55	182	22	Marindin
" 13, 1923.	B	2	59	171	18	Ranger.
" 14, 1923.	H	3	59	224	23.2	Marindin
" 14, 1923.	C	2	71	215	21.5	Ranger.
" 17, 1923.	J	3	55	161	19	Marindin
" 18, 1923.	K	3	17	46	6.7	"
" 18, 1923.	D	2	59	159	18	Ranger
" 19, 1923.	L	3	58	161	19	Marindin
" 20, 1923.	M	3	42	121	13.8	"
" 20, 1923.	E	2	58	169	20	Ranger.
" 21, 1923.	N	4	20	56	7.5	Marindin
" 21, 1923.	F	2	61	187	17.5	Ranger.
" 25, 1923.	P	4	81	264	20	Marindin
" 26, 1923.	Q	4	64	211	14.1	"
" 27, 1923.	R	4	37	109	13	"
" 27, 1923.	G	2 & 5	73	243	30	Ranger.
" 28, 1923.	S	4	59	127	19	Marindin
" 28, 1923.	H	5	44	122	15	Ranger.
Oct. 1, 1923.	T	4	42	120	12.5	Marindin
" 2, 1923.	J	5	51	153	19	Ranger.
" 2, 1923.	U	4 & 6	47	105	15	Marindin
" 3, 1923.	V	6	54	106	8.5	"
" 4, 1923.	W	6	58	163	11.5	"
" 22, 1923.	X	6	57	110	12	"
" 22, 1923.	K	5	57	155	14.5	Ranger.
" 23, 1923.	Y	6	36	102	10	Marindin
" 23, 1923.	A	5	49	101	12	Mitchell
" 24, 1923.	Z	6	45	128	12	Marindin
" 24, 1923.	L	5	68	151	21.3	Ranger.
" 26, 1923.	A'	6	47	125	12.5	Marindin
" 26, 1923.	M	5	65	155	21.3	Ranger.
" 29, 1923.	N	5	89	87	29	"
" 30, 1923.	B'	8	71	266	19	Marindin
" 30, 1923.	P	7	86	85	25	Ranger.
" 31, 1923.	C'	8	73	278	14	Marindin
" 31, 1923.	Q	7	95	95	27	Ranger.
Nov. 1, 1923.	a	8	56	313	7	M-Dinghy
" 5, 1923.	D'	8	84	150	15.5	Marindin
" 6, 1923.	E'	8	60	106	12.3	"
" 7, 1923.	F'	9	101	166	24	"

HYDROGRAPHY.

Statistics Sheet No. 3

Date	Letter	Volume	Posi- tions	Sdgs.	Miles Statute	Vessle.
Nov. 8, 1923	G'	9	54	109	11	Marindin
" 9, 1923	B	7	33	88	7	Mitchell
" 9, 1923	H'	9	62	121	11	Marindin
" 12, 1923	C	7	22	102	4	Mitchell
" 12, 1923	R	9	34	34	10.6	Ranger.
" 13, 1923	D	9	46	57	8	Mitchell
" 13, 1923	S	7	108	108	40	Ranger.
" 14, 1923	E	9	95	208	22	Mitchell
" 14, 1923	T	7	103	103	30	Ranger.
" 15, 1923	F	9	58	109	15	Mitchell
" 15, 1923	b	10	19	42	2	M-Dinghy
" 15, 1923	U	7&10	69	69	18	Ranger.
" 16, 1923	G	9	31	65	6	Mitchell
" 16, 1923	V	10	54	54	12.6	Ranger.
" 21, 1923	J'	11	16	39	2.5	Marindin
" 22, 1923	K'	11	74	98	10	"
" 23, 1923	L'	11	42	124	6	"
Mar. 12, 1924	H	17	21	38	2.7	Mitchell
" 24, 1924	a	17	78	278	13.5	Tender.
" 24, 1924	M'	12	75	155	17.5	Marindin
" 27, 1924	W	10	71	71	18.1	Ranger.
" 28, 1924	b	17	89	323	11.2	Tender.
" 28, 1924	N'	12	40	69	9.5	Marindin
Oct. 13, 1924	c	12	63	91	10.5	Tender.
" 14, 1924	d	12	80	276	18.0	Tender.
" 15, 1924	e	12	123	273	14.0	Tender.
" 15, 1924	c	10	122	531	12.5	M-Dinghy.
" 16, 1924	f	12&13	124	178	23	Tender.
" 16, 1924	d	10	83	262	7.3	M-Dinghy.
" 17, 1924	g	13	79	306	13.5	Tender.
" 21, 1924	h	13	51	105	8.0	Tender.
" 22, 1924	j	13	93	206	13.0	Tender.
" 22, 1924	J	16	73	104	10	Mitchell.
" 23, 1924	K	13	103	218	12	Tender.
" 24, 1924	l	13&14	68	158	13.5	Tender.
" 23, 1924	e	10&15	124	378	11.5	M-Dinghy.
" 23, 1925	m	14	80	211	6.5	Tender.
" 28, 1925	n	14	80	210	8.6	Tender.
Nov. 4, 1925	P	14	68	211	6.0	Tender
Mar. 9, 1926	q	14	25	38	1.3	"
" 11, 1926	r	14	47	56	8	"
TOTALs-----			5527	13487	1282.5	

Total area soundings-----198.6 square stat. miles.

Tide gauge at St. Thomas for south side of island, and tide staff
at Magens Bay for north side.

St. Thomas Tide gauge.

Plane of reference-----M. T. L.-----0.5 ft. ft. on staff.
Lowest tide observed-----4.9 ft. on staff.
Highest tide observed-----6.8 ft. on staff.

Magens Bay Tide Staff #1.

Plane of reference-----M. T. L.-----0.5 ft. --5.93 on staff
Lowest tide observed-----8.4 ft. on staff.
Highest tide observed-----7.8 ft. on staff.

Magens Bay Tide Staff #2.

Plane of reference-----M. T. L.-----0.5 ft. --1.5 ft. on staff.
Lowest tide observed-----1.0 ft. on staff.
Highest tide observed-----2.7 ft. on staff.

NOTE FOR HYDROGRAPHIC SMOOTH SHEET #3, ST. THOMAS ISLAND, V.I.

When plotting the adjoining sheet, there was noticed a discrepancy in signal "MID" which also lies in the southeast corner of Sheet #3. The list of topographic positions as furnished by the office was in error, as the signal did not plot as on the bromide of the topographic sheet. The position of the signal as shown on sheet #3 is in error accordingly, and was not changed as the records had already been forwarded to the Washington office. The suggestion is made that the position be correctly plotted, and the records examined and launch positions plotted where-ever necessary.

J. Mattison

Notations on Hydrographic Sheet No. 4651a

1. Lat. 18° 24' 20" Difference of 24 feet in adjacent soundings ✓
Long. 65° 06' 37" 44 n, 164'; 72 n, 188'.
2. Lat. 18° 17' 47" Position 13 u looks out of place. Time uneven ✓
Long. 65° 09' 17" but fix checks.
3. Lat. 18° 16' 12" Sounding of 114 feet between 94 and 95 feet. ✓
Long. 65° 09' 02" Looks too deep but marked o.k. by field party.
4. Lat. 18° 17' 33" Difference of 13 feet in adjacent soundings ✓
Long. 65° 06' 00" 23 u, 91'; 17 l, 104'. Position 17 l looks out of place but checks.
5. Salt Kay. 640 meters south of signal ⊙ West 41 k' 24' sounding ✓
plots directly over 81' sounding on line 42 D' - 43D'.
6. 600 meters north of signal ⊙ Bee, position 88 F' 45' sounding ✓
plots between 58' soundings on line 28 e to 29 e. Difference of 13 feet.
7. ~~8 k sounding, 27' south of Cricket Rock is questioned in the record and apparently not cleared up at any later date. (Vol. 13, page 46). This sounding is surrounded by deeps and undeveloped though the ground is generally well covered. The records (remarks column) notes that this sounding was taken "on sunken rock" but the sounding itself is marked with a "?". This should either be cleared or developed.~~
8. 114' sounding between 10 j and 11 j (green) looks shoal for soundings ✓
around it. No comment in the sounding record on this sounding. Bottom "fine sand - coral" was obtained. Lat. 18° 22' 32", Long. 65° 00' 00".
9. 95' sounding at 15 H' (blue) close to 45' sounding. This sounding ✓
is on the edge of the 10 fathom area but looks rather close to the shoal soundings. 200 m. southwest Signal Prom.
10. At signal △ Or 54 b (blue) sounding 108' looks too close to the point. ✓
Position checks.
11. 105' sounding at 3 B (green) falls close to 85' sounding between 18 H *This is*
and 19 H (green); disagreement of 20' at crossing. Position of *O.K.*
85' sounding O.K. Lat. 18° 24' 25", Long. 64° 56' 27".

The 85 is on top of a bank. Q.L.S.

12. Between \triangle Gin and \odot Beach 35' sounding appears surrounded by shoal water. Sounding checks. ✓
13. 400 meters south of \odot Mid poor crossing. Line 1 P - 2 P, 18' - 22', Line 85 n - 85 n, 40'. ✓
14. Lat. 18° 18' 55", Long. 65° 00' 18" (Saba Island) Poor crossing. Line 28 B' - 29 B', 77'. Line 28 n - 29 n, 65'. ✓
15. Vicinity Porpoise Rocks. Poor agreement on adjacent lines. 12' sounding falls on 33' (21 p). ✓

H. E. MacEwen.

All the above points have been considered and except as noted no satisfactory solution could be arrived at. In view of the irregular bottom disclosed by the drag survey and the coral formation in these waters, these apparent inconsistencies have been retained.

A. L. Shalowitz.

Statistics for Hydrographic Sheet No. 4651^a

Number of soundings	13,644
Number of positions	5,751
Percentage of positions checked	18%
Percentage of positions requiring change after being checked	46% (of pos. checked)
Percentage of positions in error to total num- ber of positions	8.2%
Number of working days engaged on sheet	49 d., 4 h.
Number of volumes of soundings	17

H. E. MacEwen

June 30, 1927.



Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
17 volumes of sounding records for

HYDROGRAPHIC SHEET 4651a

Locality: VIRGIN ISLANDS, VICINITY OF ST. THOMAS.

Chief of Party: F.B. Niemi & G.C. Mattison, 1923-1924.

Plane of reference is M L W

5.2 ft. on tide staff at St. Thomas

5.9 ft. ~~do~~ Hagens Bay (Oct. 1923)1.5 ft. ~~do~~ Hagens Bay (Oct. 1924)

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.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 20, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4651^a

Surveyed, 1923 to 1926

Chief of Party, F. B. T. Siems, G. C. Mattison.

Surveyed by F. B. T. S., G. C. M., R. J. Auld, C. K. Green, A. P. Ratti,
M. Leff, and H. E. Finnegan.

Protracted by R. C. Rowse, C. F. Ehlers, and A. C. Thorsen.

Soundings penciled by C. F. Ehlers and G. C. Mattison.

Verified and inked by H. E. MacEwen.

1. The records in general conform to the requirements of the general instructions although some discrepancies were noted: m day (blue) vol. 14 was not labeled with the day letter, nor was n day, while on p, q, and r days identification was not sufficient. On n day and p day (vol. 14) "same" was used frequently in the place of the names of signals used in the fix, several instances occurring where a change in the signals used was not recorded. On n, p, q and r days the boat's heading by compass was not given as required in the general instructions (ship's tender was used).
2. The plan and character of the development fulfill the requirements of the general instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. No system of sounding line crossings was used on this sheet, though where lines cross the register is good.
5. The usual depth curves can be completely drawn, except the 6, 12 and 18 foot.
6. The field plotting was completed to the extent prescribed in the general instructions. The sheet, however, had been held in the field, awaiting the addition of new work, for such a long period that the original pencil plotting was almost completely effaced by handling. In many parts of the sheet it

was only with difficulty that sounding lines could be picked up and the depths as recorded in pencil identified.

7. The office draftsman had to do over considerable work done by the field party. Many plotted positions had to be shifted due to distortion of the sheet by age or apparent carelessness on the part of the field draftsman. (See sheet of statistics attached to this report.)
8. The junctions with adjacent sheets so far completed (May 22, 1928) are satisfactory.
9. No further surveying is required to fully develop important areas within the limits of this sheet. Attention is called to the rock located south of Salt Key (position 50 k') where a sounding of 41 feet was obtained. This was not developed by the hydrographic party but the wire drag party in its development obtained a sounding of 31 feet and cleared the spot with a drag set at 27 feet effective. At 60 k' 100 meters southwest of signal \odot Rock on Dutchman Cap, 89 feet was obtained by the hydrographic party in the vicinity of a charted sunken rock. The party manoeuvred around to locate shoaler water but failed to detect the rock charted. This spot was not fully developed and was not covered by wire drag. Coast Survey chart 905 does not show a sunken rock on this spot.

South of Cricket Rock a 27 foot sounding was obtained (8 k). This sounding is surrounded by deeps and undeveloped. In the sounding record the sounding is questioned and no indication of the question being cleared. In the remarks column of the sounding record a note appears that this sounding was obtained on "sunken rock." Examination of the wire drag sheet shows that this spot was covered by a drag set at 14 feet effective and a least sounding obtained near by (where another drag grounded) of 16 feet.

The strip of coast on the southwest side of St. Thomas Island from signal \triangle Fort to signal \odot West on Salt Key lacks the required amount of inshore development because of the rejection of most of the day work (1 e to 116 e). Further surveying in this area is not considered necessary because the offshore work is sufficient to cover the area for charting purposes.

The 10 fathom curve is completely developed and the 5 fathom curve is developed sufficiently to give an indication of the character of the bottom. No dangers to navigation were recorded or reported by the field party.

10. Remarks:

The almost complete effacement of the original pencil work, due to the length of time the sheet was held in the field, and the handling the sheet received, together with the great number of changes in the field plotting made necessary because of errors, increased the time required for the completion of the office work to a marked degree. (See attached sheet of statistics).

11. Rating of work:

- a. Character and scope of surveying - good.
- b. Field drafting - fair.

12. Reviewed by H. E. MacEwen, May 23, 1928.

Inspected by A. L. Shalowitz. (See remarks attached)

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

Addenda to Review of H. 4651^a

1. The following recommendations are made regarding additional work on this sheet:
- a. In the bight formed by Salt Cay and West Cay where most of the work was rejected, more soundings should be taken, as this bight could be used as an anchorage for small boats.
 - b. In Druif Bay on the west side of Water Island a 14 foot sounding was obtained (pos. 36 B', vol. 8, page 10) that falls in depths of 37 to 41 feet on the large scale survey (H. 4544a). It is doubtful whether the position of this 14 is correct since practically all the soundings between this position and the next position 37 B' fail to agree with the soundings on the larger scale survey (H. 4544a). It is noted that in the sounding record the original recorded object was crossed out and another substituted. This tends to show that there was some doubt as to the objects used and so there may have been some confusion as to the other objects used. However, by applying the ordinary methods of office adjustment, no satisfactory location for the line could be obtained. It was therefore agreed by the Chiefs of Field Records and Field Work (L.O.C.) to retain the position as plotted by the field party, which conforms to the records.

This sounding
does not exist.
See letter
128-1929.
A.L.S.(1-17-29).

While the above decision is on the side of safety, this area should be re-examined whenever work is again done in this locality in order that our charts should not be burdened with possible misleading information. If necessary, a drag of an adequate depth should be carried over the area.

2. Information regarding the submerged cable buoy indicated on this sheet will be found in the letter from Captain Mattison of July 3, 1928 attached to the descriptive report for H. 4651^b.

A. L. Shalowitz.

Applied to Chart Comp. 938. January 1941. W.E. MacLennan