

9936

Diagram No. 905-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. MI-10-2-81
Office No..... H-9936

LOCALITY

State U.S. Virgin Islands
General Locality .. Coakley Bay to East Point
Locality

1981

CHIEF OF PARTY
CAPT R.A. Trauschke

LIBRARY & ARCHIVES

DATE August 12, 1986

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

9936

ACPG
CHTS

25634
25636
25645
25641
25640

TO SIGN OFF SEE
"RECORD OF APPLICATION"

HYDROGRAPHIC TITLE SHEET

H-9936

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

FIELD NO.

MI-10-2-81

State U.S. VIRGIN ISLANDS

General locality ST. CROIX

Locality COAKLEY BAY
GREEN CAY TO EAST POINT

Scale 1:10,000 Date of survey 12 FEBRUARY 1981 - April 13, 1981

Instructions dated 13 NOVEMBER 1980 Project No. OPR-I149-MI, PE-80

Vessel NOAA SHIP MT MITCHELL LAUNCHES (VESNO 2223,2225)

Chief of party CAPT. ROBERT A. TRAUSCHKE, NOAA

Surveyed by SHIP'S OFFICERS (SEE REMARKS)

Soundings taken by echo sounder, ~~hand lead, pole~~ ECHO SOUNDER (Ross Model Finline 5000)

Graphic record scaled by JH, RW, FS, EM, UG, RC, WZ, DH, JL

Graphic record checked by JH, RW, FS, EM, UG, RC, WZ, DH, JL

Protracted by _____ Automated plot by Xynetics 1201 Plotter (AMC)

Verification by D.V. Mason - AMC Verification Branch

Soundings in _____ fathoms _____ feet at ~~MLW~~ MLLW ^{and tenths} FATHOMS at MLW ^{MLLW Puerto Rico} (GULF COAST DATUM)

REMARKS: LT(jg) JOHN W. HUMPHREY JR. OIC

ENS JOHN ZABITCHUCK

ENS FREDERICK ROSSMANN

ENS BOBBY COAKLEY

Notes in red in the Descriptive Report were made during office processing.

Miscellaneous pages have been removed and filed with the survey records.

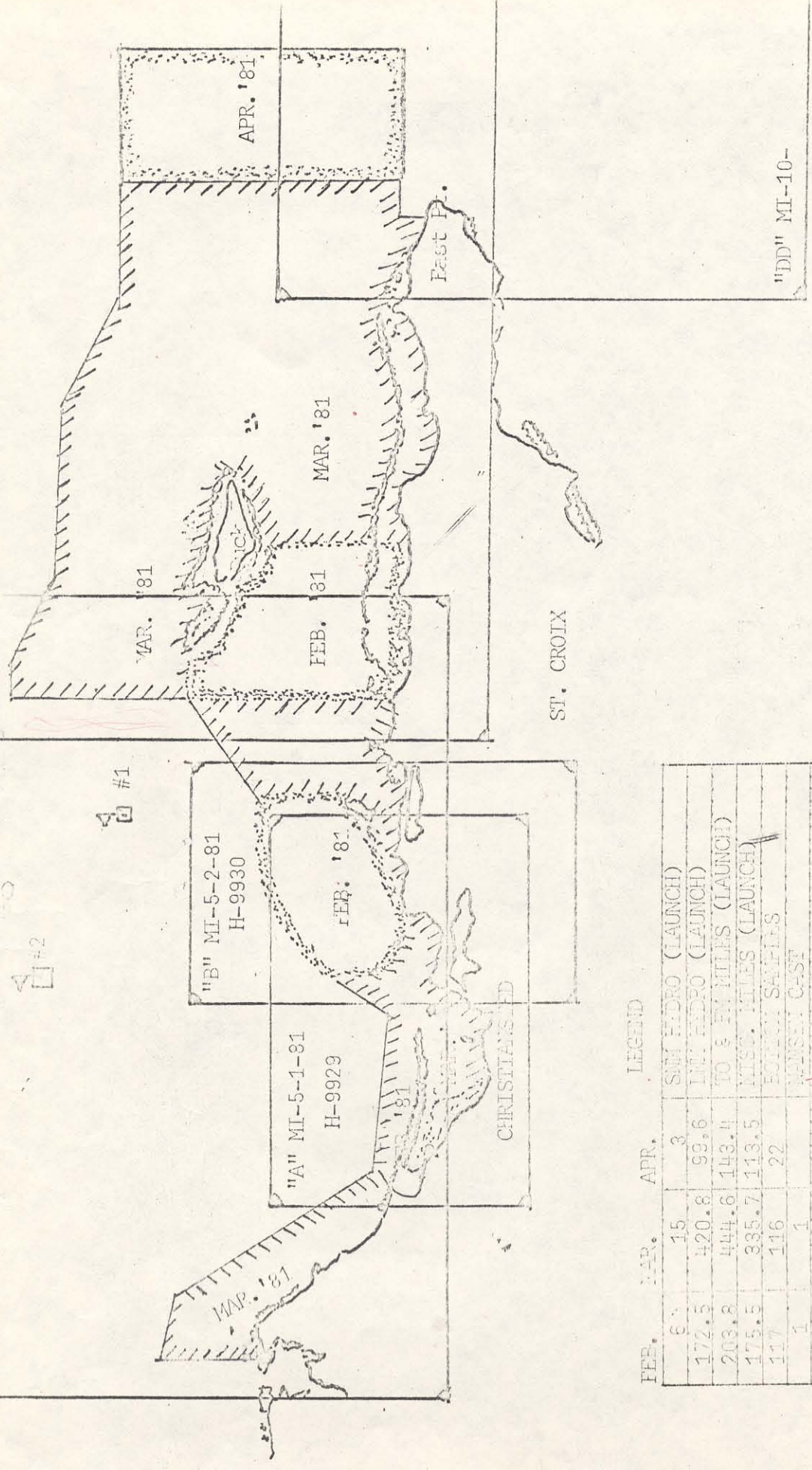
STANDARDS CK'D 8-12-86

ADVIS/SURF MSM 9/16/86

Edoy

50'

"BB" 10-2-81 H-9936



#2

#1

"B" MI-5-2-81
H-9930

"A" MI-5-1-81
H-9929

FEB. '81

MAR. '81

FEB. '81

MAR. '81

APR. '81

ST. CROIX

CHRISTIANS ED

Fast P.

"DD" MI-10-

LEGEND

FEB.	MAR.	APR.	SUM	HYDRO (LAUNCH)
6	15	3		
172.5	420.8	93.6		LINE HYDRO (LAUNCH)
203.8	444.6	143.4		TO & FROM MILES (LAUNCH)
175.5	385.7	113.5		MISC. MILES (LAUNCH)
117	116	22		ECHOSOUND SAMPLES
1	1			WINSUM CAST
				TDC CAST

PROGRESS SKETCH
HYDROGRAPHIC OPERATIONS
NOAA SHIP HT. MITCHELL S-222
ROBERT A. TRAUSSCHKE, CAPT. NOAA
COMMANDING OFFICER

OPR-I149-11/11-81, ST. CROIX, USVI

64° 40'

SCALE OF CHART 25641

17° 40'

10-2-81 DESCRIPTIVE REPORT

A. PROJECT

This survey was carried out in accordance with project instructions OPR-I149-MI, PE-81, St. Croix, Virgin Islands, dated 13 November 1980, and amended by CHANGE 1 dated 24 November 1980.

B. AREA SURVEYED

This survey was conducted off the north coast of St. Croix from ^{Coakley Bay} ~~Pull Point~~ extending to just west of East Point. The limits of the survey are roughly described by lines connecting the following points in a clockwise manner:

17°45'00" N	64°39' ⁰⁰ 15" W
17°49' ¹⁵ 54" N	64°39' ⁰⁰ 15" W
17°49' ^{8 30} 54" N	64°31' ^{4 10} 36" W
17°45'00" N	64°31' ^{4 10} 36" W

Buck Island off the northeastern coast lies within the limits of this survey. This survey was conducted between 12 February 1981 (Julian day 043) and 1³/₄ April 1981 (Julian day 10³/₄). The bottom topography to the north and west of Buck Island was generally a flat bottom extending to an extremely steep shelf dropoff approximately 2.2 NM from the shoreline of the island. Flat bottom was found in the area south of Buck Island extending to a reef that is .2 NM north of the St. Croix shoreline from East Point to Pull Point.

C. SOUNDING VESSELS

Soundings for this survey were obtained by Launch 1002 (2225) and Launch 1004 (2223).

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following equipment was aboard the vessels during this survey:

<u>EQUIPMENT, VESNO 2223</u>	<u>SERIAL NUMBER</u>
Ross Model 5000 Fineline Depth Recorder	1089

Ross Model 4000 Transceiver 1039

Ross Model 6000 Digitizer 1053

EQUIPMENT, VESNO 2225 SERIAL NUMBER

Ross Model 5000 Fineline Depth

Recorder 3780

Ross Model 4000 Transceiver 1053

Ross Model 6000 Digitizer 1039

All survey records were scanned and checked scanned by trained survey department personnel and checked by the officer-in-charge. Peaks and deeps considered significant that occurred between soundings were inserted, and digitized errors were corrected on the electronic corrector tape.

Phase calibration checks were made at frequent intervals on each day of hydrography. Any necessary adjustments were made and noted in the sounding volume and on the fathogram. Any departure of the trace from the calibration due to phase differences was corrected during the scanning process.

Velocity corrections were obtained from two TDC casts at the following locations:

<u>CAST NO.</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DATE</u>
1	17°48'04" N	64°40'00" W	02/19/81
2	17°49'12" N	64°41'35" W	03/19/81

All velocity correctors were derived from the first cast. Comparison of correctors between two casts was excellent. Bar checks were taken on each day of hydrography. Bar check correctors and Nansen cast data compared favorably to 25 ft. after which bar check data began to diverge from the Nansen cast. All velocity correctors were derived from the first cast in lieu of the bar check correctors since the TDC cast was considered more accurate. (The TDC casts which were used to generate the velocity tables, printout of depths, and velocity corrections may be found in "Appendix D".)

3

A transducer draft of 0.2 fathom was applied to soundings taken by VESNO 2223 and VESNO 2225. Twice daily, checks were made to insure the transducer draft was correct. Settlement and squat correctors were not applied because of the negligible value when sounding in fathoms.

This survey was conducted using predicted tides based on daily predictions at Charlotte Amalie, St. Thomas, U.S.V.I., (975-1639), with Galveston Channel, Texas (3277), as the reference station. Smooth tides have been requested from the Chief, Tides and Water Levels Branch (OA/C23) for the period of hydrography (see letter "Appendix B").

E. HYDROGRAPHIC SHEETS

All work was plotted on 4 mylar field sheets prepared by the Mt. Mitchell hydro-plot system.

<u>No. of Sheets</u>	<u>Type</u>	<u>Skew</u>
2	Main Scheme	90, 21, 36
2	Crosslines, Bottom Samples, Detached Positions	90, 21, 36

Soundings on the field sheets are corrected for draft, predicted tides, digitizing errors and sound velocity. Sheets are not corrected for smooth tides. The final smooth sheet will be plotted at the Atlantic Marine Center, Norfolk, Virginia.

All field records and the following tapes have been forwarded to the Atlantic Marine Center:

- Master Range/Range Tapes
- Range-Azimuth Hydrologger Tapes
- Master Range-Azimuth Tapes
- Electronic Corrector Tapes
- Velocity Correction Tapes

Parameter Tapes

ASCII Signal Tapes

TC/TI Tapes

F. CONTROL STATIONS

Five horizontal control stations of 3rd order accuracy were used for this survey.

They are as follows:

<u>Signal Number and Name</u>	<u>Latitude</u>	<u>Longitude</u>
100; East Point, 1980	17°45'28.995" N	64°34'02.442" W
130; Skow, 1919	17°45'42.302" N	64°36'57.225" W
135; Tague, 1919	17°45'47.027" N	64°36'44.411" W
200; Buck Island Light, 1980	17°47'19. ³⁷ 987" N	64°37'10.1 ⁸ 75" W
300; Green, 1919	17°46'12.254" N	64°39'55.348" W

} off smooth sheet

All stations were either recovered or located by Operations Division, Atlantic Marine Center and Mt. Mitchell personnel. See the Horizontal Control Report for OPA-I149-MI PE-81, St. Croix, U.S.V.I. for further information on the control stations.

G. HYDROGRAPHIC POSITION CONTROL

All hydrography was controlled by range-range positioning using Del Norte equipment, except on Julian day 098 when range-azimuth positioning was used north of Buck Island inside the reef. A Wild T-2 Theodolite and Del Norte were used for positioning.

The following equipment was used:

VESNO 2223

<u>Equipment</u>	<u>Serial Number</u>
DMU/Master	190/1318
Remote (72) Unit	244
Remote (74) Unit	1317
Remote (76) Unit	1059

Remote (78) Unit 264

Remote (78) Unit 253

VESNO 2225

<u>Equipment</u>	<u>Serial Number</u>
DMU/Master	173/187
Remote (72) Unit	244
Remote (76) Unit	1059
Remote (78) Unit	264
Wild T-2 Theodolite	16017

Baseline calibrations were conducted on the following dates involving DMU/Master Pairs used on vessels 2223 and 2225 during this survey:

<u>Date</u>	<u>DMU/Master Pair</u>	<u>Baseline</u>	<u>Distance</u>
9 Feb. 81	190/1318	Cement - Chrst. Fr. R. Lt.	2134.00 M
20 Feb. 81	190/1318	Calib. 1 - Calib. 2	2634.04 M
26 Feb. 81	190/1318	Cement - CHV 1-3	2132.49 M
20 March 81	190/1318	Calib. 3 - Calib. 4	1625.44 M
20 March 81	173/187	Calib. 3 - Calib. 4	1625.44 M
3 April 81	190/1318	Pier - South Point	3952.00 M
3 April 81	173/187	Pier - South Point	3952.00 M
6 April 81	190/1318	Cement 1981 - Buck Is. Lt.	10830.30 M
6 April 81	173/187	Cement 1981 - Buck Is. Lt.	10830.30 M
16 April 81	190/1318	Calib. 1 - Calib. 2	2507.36 M
16 April 81	173/187	Calib. 1 - Calib. 2	2507.36 M

Position information is as follows:

<u>Station</u>	<u>Latitude</u>	<u>Longitude</u>
Cement 1981	17°45'11.7 ⁴⁸ 59" N	64°42'52.61 ⁷ 3" W
Chrstd. Fr. R. Lt.	17°45'25.424" N	64°41'41.593" W
CHV 1-3 USE 1982	17°45'25.7 ⁴⁹ 31" N	64°41'41.71 ³ 8" W

Stations Calib. 1, Calib. 2, Calib. 3, and Calib. 4, Pier and South Point have no position control. Baseline distances were determined by repetitive observations with an LSE Ranger 1 EDM on JD 102,103 and 104 pattern 2 correctors were applied after baseline calibration showed the Del Norte equipment to be out of calibration.

Check calibrations on Julian days 043 and 044 were determined using RK. 561 calibration program. All check calibrations after JD 044 were static point calibrations. Buck Island Reef National Park sign and a private pier, designated Pelican pier, were used as calibration checkpoints. These points were used to check consistently the electronic position control. Comparisons using these points and Buck Island pier were excellent. Static points used for calibration for this survey were:

<u>Station Name</u>	<u>Latitude</u>	<u>Longitude</u>
Buck Island Pier	17°47'13.927" N	64°37'29.684" W

H. SHORELINE

Sounding lines were run to insure sufficient overlap with the 18 foot curve of the photobathymetry. Comparison of the photobathymetry (TP-00004,0000⁵) with the boat sheet shows the following: 35% agree to $\pm .2$ fathom; 48% agree to $\pm .3$ fathom; and 57% agree to $\pm .5$ fathom.

Shoreline on the smooth sheet was transferred from ^{TP-00004, TP-00005} ~~the corresponding photobathymetry sheet~~ in blue since the shoreline was not ^everified. Visual inspection of the shoreline and adjoining reef formations indicated that the photobathymetry appeared to be accurate.

I. CROSSLINES

Crosslines were run 45 to 90 degrees to the mainscheme and accounted for approximately 10 percent of the total sounding line mileage. Comparison of the crosslines and the mainscheme soundings yield the following data:

66% agree to ± 0.2 fm.

72% agree to ± 0.3 fm.

78% agree to ± 0.4 fm.

82% agree to ± 0.5 fm.

J. JUNCTIONS

This survey junctions with the following survey which was run concurrently:

<u>Area of Junction</u>	<u>Field No.</u>	<u>Reg. No.</u>	<u>Scale</u>	<u>Date</u>	<u>Ship</u>
North	MI-80-1-82	H-10004	1:20,000	1982	Mt. Mitchell
West Side	MI-10-1-81	H-9935	1:10,000	1981	Mt. Mitchell
East	MI-10-1-82	H-10002	1:10,000	1981-82	Mt. Mitchell

Comparison of soundings from surveys MI-10-1-81 and MI 10-2-81 was excellent.

Eighty-one percent of the soundings agreed to ± 0.2 fathom with the remainder agreeing to ± 0.3 fathom.

K. COMPARISON WITH PRIOR SURVEYS

The following prior survey was conducted in the area of this survey:

<u>Survey</u>	<u>Scale</u>	<u>Date</u>
H-4652A	1:20,000	April 1924-February 1926

Comparison with H-4652A shows that 72% of the soundings agree to ± 0.2 fathom and 83% agree to ± 0.4 fathom or less. Soundings deeper than 6.0 fathoms differed up to as much as 1.5 fathoms down to the 50.0 fathom curve.

L. COMPARISON WITH THE CHART

<u>Chart No.</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>
25641	17th.	09/08/79	1:100,000

Comparison with the chart shows 47% of compared soundings agreeing to ± 0.2 fathom; up to and including 11 fathoms. Soundings deeper than 11 fathoms differed by up to 1.0 fathom from charted depths. These differences showed actions of both scouring and build-up taking place. No one trend was particular to a certain area. This is probably due in part to the affects of a predominant northeast wind to which the northeastern end of St. Croix and the area around Buck Island is exposed.

Investigations were conducted on the items highlighted on "Notes to Hydrographer," (No obstructions were found after investigations at the following locations).

a. 17°45'56" N

64°37'42" W ✓

b. 17°45'48" N

64°37'48" W ✓

c. 17°45'45" N

64°37'36" W ✓

d. 17°45'32" N

64°36'27" W ✓

e. lat. 17°45'44" N, long. 64°37'41" W ✓

f. lat. 17°45'43" N, long. 64°37'16" W ✓

These obstrs originate with TP-00004 and are considered disproved.

Priv maint'd Mooring buoys were located at these locations 17°45'44" N, 64°36'21" W and 17°45'36" N, 64°35'50" W. These were labeled as obstructions on "Notes to Hydrographer." Pier remains west of Tague Point at 17°45'45" N, 64°36'48" W and 17°45'48" N, 64°36'50" W extend 3' feet above the surface at low water. It is recommended these positions be charted as obstructions, as shown on TP-00004.

After investigation pier remains were found at 17°45'42" N, 64°37'12" W and it is recommended that an obstruction be charted at this position. A pipe frame-work is located at 17°45'54" N, 64°36'36" W. This structure stands approximately 6 feet above water and is on a submerged reef. It is recommended this be charted as an obstruction, as shown on the present survey.

A wreck in the southern part of Tague Bay charted at 17°45'28" N, 64°36'35" W was not located after investigation. Local mariners believe a wreck to be located south, southeast of Tague Point in the vicinity of 17°45'42" N, 64°36'40" W. Due to insufficient evidence to disprove the existence of the charted wreck, it is recommended this wreck remain charted as shown.

It is recommended that a privately maintained buoy charted at 17°47.10' N, 64°36.13' W be deleted as it is no longer there. Privately maintained channel buoys at Cotton Valley Cut (see section N. aids to navigation) are not charted. It is recommended these buoys be charted as shown.

M. ADEQUACY OF THE SURVEY

This survey is considered complete and adequate to supercede prior surveys for charting.

N. AIDS TO NAVIGATION

Included within the limits of this survey were ⁶ National Park Service reef buoys. These buoys are white with orange markings standing 3 feet high and 18 inches in diameter. They are located as follows:

<u>Latitude</u>	<u>Longitude</u>
17° ^{7 21.75"} 48'34.21" N	64° ^{02.07"} 38'20.18" W
17° ^{37.99"} 47'38.41" N	64° ^{39"} 38'36.59" W
17° ²⁹ 47'01.55" N	64° ^{6.96} 37'17.30" W
17° ^{8 00.28} 47'28.41" N	64° ^{38'20.27"} 36'27.75" W
17° ^{0.12} 47'21.42" N	64° ^{5.97} 36'26.45" W
17°47'28.04" N	64°36'22.57" W

Four channel marking buoys are located within the limits of this survey. They are two pair of red and black can buoys standing 3 feet high, marking the entrance to Buck Island National Reef Monument on the south side of Buck Island and Cotton Valley Cut through the reef, ^{0.7} 1.38 nautical miles northwest (289°) of Tague Point.

These buoys are located as follows:

<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>
Buck Island National Reef		
Black Can (priv. maintained)	17° ⁸⁷ 47'06.27" N	64° ³⁷ 37'08.13" W
Red Can (priv. maintained)	17° ^{6.39} 47'05.94" N	64° ⁶ 37'07.12" W
Cotton Valley Cut		
Black Can (priv. maintained)	17° ^{6 00.23} 45'59.41" N	64° ^{5.28} 37'24.15" W
Red Can (priv. maintained)	17° ²⁵ 45'59.74" N	64° ¹⁹ 37'25.07" W

O. STATISTICS

Linear nautical miles of mainscheme hydrography 303.6

Linear nautical miles of cross lines	38.1
Linear nautical miles of development	2.1
Total linear miles of hydrography	343.8
Total miscellaneous miles	211.5
Total miles run	555.3
Square miles of hydrography	13.7
Total number of positions	2653.0
Nansen casts	1.0
Bottom samples	113.0

P. MISCELLANEOUS

Photobathymetry "T" Sheets were an extremely useful aid to the hydrographer while working in areas of submerged reefs.

Solar panels obtained from NOAA ship "Peirce" extended the working time of the Buck Island Light Del Norte unit and saved valuable time during the last 3 weeks of the survey.

The steepness of the shelf dropoff often limited accurate soundings deeper than 50 fathoms. Where possible any soundings deeper than 50 fathoms were kept.

Q. RECOMMENDATIONS

None.


R. AUTOMATED DATA PROCESSING

RK 111	Range- Range Real-Time Hydroplot	01/30/76
RK 201	Grid, Signal and Lattice Plot	04/18/75
RK 211	Range-Range Off-Line Plot	01/15/76
RK 300	Utility Computations	02/04/76
RK 330	Data Reformat and Check	05/04/76
AM 500	Predicted Tide Generator	11/10/76
RK 530	Velocity Correction Computation	05/10/76
AM 602	Extended Line Oriented Editor	05/20/75

S. REFERENCES TO REPORTS
Horizontal Control Report
St. Croix, U.S.V.I.

OPR-1149-MI PE-81

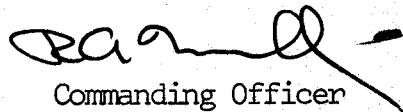
Respectfully submitted,



John W. Humphrey, Jr.
LTJG, NOAA

APPROVAL SHEET

The field work on this Hydrographic Survey was under my daily supervision. The boat sheet and records have been reviewed and approved by me.

A handwritten signature in black ink, appearing to read 'R. A. ...', with a horizontal line extending to the right from the end of the signature.

Commanding Officer

APPENDIX "J"

GEOGRAPHIC SIGNAL LISTING

100	4	17	45	28995	064	34	0244 ²	250	0067	000000
110	4	17	45	41786	064	34	28847	139	0019	000000
120	4	17	45	40295	064	35	00092	139	0032	000000
130	4	17	45	42302	064	36	57225	139	0034	000000
135	4	17	45	47027	064	36	44411	250	0000	000000
200	4	17	47	19907	064	37	10105	250	0000	000000
210	4	17	47	19923	064	37	10915	139	0000	000000
220	4	17	45	16409	064	37	32083	139	0000	000000
230	4	17	45	29516	064	37	50809	139	0000	000000
240	4	17	45	47289	064	37	52239	139	0000	000000
250	4	17	45	22840	064	38	59111	139	0000	000000
260	4	17	45	39473	064	39	17053	139	0000	000000
300	4	17	46	12254	064	39	55348	250	0016	000000
310	4	17	45	25081	064	40	50937	139	0000	000000
400		17	45	25426	64	41	41595	139		

June 24, 1981

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 975-1224, West Indies Lab, St. Croix, VI
975-1364, Christiansted, St. Croix, VI

Period: February 12 - April 15, 1981

HYDROGRAPHIC SHEET: H-9936

OPR: I-149

Locality: Northeast shore of St. Croix, VI

Plane of reference (mean lower low water): 975-1224 = 3.28 ft.
975-1364 = 3.42 ft.

Height of Mean High Water above Plane of Reference is 975-1224 = 0.84 ft.
975-1364 = 0.78 ft.

REMARKS: Recommended zoning: Zone direct on 975-1224, West Indies Lab, VI.

From J-day 94 at 0900 to J-day 104 at 0500 when the gage at the West Indies Lab was inoperative, zone direct on 975-1364 Christiansted.

From J-day 104 at 0600 to J-day 105 at 2359, smooth tides will not be available. All tides gages in the area were inoperative during periods of hydrography.

for Donald Carrier
Chief, Datums and Information Branch

GEOGRAPHIC NAMES

H-9936

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
BUCK ISLAND											1
BUCK ISLAND BAR											2
BUCK ISLAND CHANNEL											3
BUCK ISLAND REEF											4
CARDEN											5
CHANNEL ROCK											6
COAKLEY BAY											7
COTTONGARDEN BAY											8
COTTONGARDEN POINT											9
EAST POINT											10
KNIGHT											11
KNIGHT BAY											12
MARYS FANCY (locality)											13
POW POINT											14
ROMNEY POINT											15
SAINT CROIX											16
SOLITUDE											17
SOLITUDE BAY											18
TAGUE BAY											19
TAGUE BAY (locality)										Approved:	20
TAGUE POINT											21
U.S. VIRGIN ISLANDS (title)										<i>Charles E. Hamilton</i>	22
YELLOWCLIFF BAY										Chief Geographer - NY/CG 2x5	23
										APR 11 1986	24
											25

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-9936

Number of positions	2469
Number of soundings	12264
Number of control stations	10

	<u>TIME-HOURS</u>	<u>DATE COMPLETED</u>
Preprocessing Examination	30	22 AUG 1981
Verification of Field Data	687	17 JAN 1986
Quality Control Checks	229	
Evaluation and Analysis	73	04 APR 1986
Final Inspection	14	12 MAY 1986
TOTAL TIME	1033	
Marine Center Approval		23 MAY 1986

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

Differences exist between the photobathymetric survey and the shoreline map with respect to reefs. Where reefs are shown on the shoreline map, depths of 1 to 3 feet are found on the photobathymetric survey. In these areas the reefs from the shoreline map are shown on the smooth sheet.

There are many isolated shoals on the photobathymetric overlay represented only by depth curves. The curves have been transferred to the smooth sheet.

3. HYDROGRAPHY

a. Depths at crossings are generally in good agreement, except in some areas where hydrographic and photobathymetric data differ by as much as 1 to 1½ fathoms.

b. The standard depth curves were adequately delineated, except for the 0-fathom depth curve because of its proximity to shore. Some 4- and 6-fathom supplemental depth curves and dashed curves were added to emphasize shoal features.

c. The development of the bottom configuration and the determination of least depths are considered adequate except for the following soundings which should have been developed.

<u>Sounding (fms.)</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
✓ 5.6	17°46'27"	64°35'54" ✓
✓ 2.8	17°46'57"	64°35'41" ✓
✓ 5.9	17°46'56"	64°36'29" ✓
✓ 6.8	17°46'53"	64°36'38" ✓
✓ 5.8	17°46'28"	64°36'38" ✓
✓ 5.2	17°46'08"	64°36'47" ✓
✓ 6.0	17°46'41"	64°37'09" ✓

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records, and reports comply with the requirements of the Hydrographic Manual except that no charting recommendations were provided for the obstructions lettered e and f in section L of the Descriptive Report.

5. JUNCTIONS

An adequate junction was effected with H-10002 (1981-1982) on the east. The junctions with H-10004 (1982) on the north and H-9935 (1981) on the west were completed during the evaluations of those surveys.

6. COMPARISON WITH PRIOR SURVEYSa. H-4652a (1924-26) 1:20,000

This survey covers the area common to the present survey. A comparison between prior and present depths offshore of the 3-fathom depth curve indicates differences of 1 to 2 fathoms, with present depths being shoaler.

Inshore of the 3-fathom depth curve, present survey bottom coverage is mainly determined by photobathymetric methods. A comparison in this area indicates a general agreement, except for the barrier reef located offshore of St. Croix. The reef on the prior survey is generally continuous and awash at MLW, whereas on the present survey portions of the reef are submerged.

The present survey is adequate to supersede the prior survey within the common area. ✓ EDM

b. H-4652b (1924-25) WD 1:20,000

This wire-drag survey covers a portion of the present survey. No conflicts between present depths and effective wire-drag depths were found.

Several detached soundings, groundings, and bottom characteristics have been brought forward to supplement the present survey. ✓ EDM

7. COMPARISON WITH CHART 25641 (17th Edition, September 8, 1979)a. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by depths from miscellaneous sources.

The present survey is adequate to supersede the charted hydrography within the common area. ✓ EDM

b. Aids to Navigation

The charted aid to navigation adequately marks the feature intended.

See sections L and N of the Descriptive Report for a discussion of the privately maintained aids to navigation.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the project instructions, except as noted in section 4 of this report.

9. ADDITIONAL FIELD WORK

This survey is an adequate basic survey and no additional field work is recommended at this time.

for Leroy G. Gram

Douglas V. Mason
Cartographic Technician
Verification of Field Data

Stephen R. Baumgardner

Stephen R. Baumgardner
Cartographer
Standards Section (N/CG242)
Evaluation and Analysis

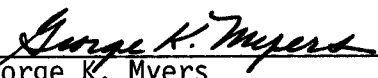
Robert R. Hill

Robert R. Hill
Senior Cartographic Technician
Verification Check

Inspection Report
H-9936

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The survey complies with National Ocean Service (NOS) requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected



George K. Myers
Chief, Standards Section (N/CG242)
Hydrographic Surveys Branch

Approved



Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

