

9997

Diagram No. 905-2

NOAA FORM 78-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic
Field No. PE-10-1-82
Registry No. H-9997

LOCALITY

State U.S. Virgin Islands
General Locality ... St. Croix
Sublocality Hams Bluff to Salt River Bay

1982

CHIEF OF PARTY
CDR D.E. Nortrup

LIBRARY & ARCHIVES

DATE October 15, 1986

☆U.S. GOV. PRINTING OFFICE: 1985-568-054

9997

0046
CHIC

25632

25644

25641

25640

TO SIGN OFF SEE
"RECORD OF APPLICATION"

HYDROGRAPHIC TITLE SHEET

H-9997

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.

PE-10-1-82

State U.S. Virgin Islands

General locality St. Croix

Locality Hans Bluff to Salt River Bay

Scale 1:10,000

Date of survey 21 February 1982-3 March 1982

Instructions dated 27 November 1981

Project No. OPR-I-149-82

NOAA Ship PEIRCE

Vessel VESNO 2839 (launch 1009)

Chief of party CDR. Donald E. Nortrup, Commanding

Surveyed by T.W. Ruzala, G.E. Leigh, J.W. Bailey, P. Glickman, R.B. Harris, S.I. Andreeva

Soundings taken by echo sounder, ~~hand lead, pole~~ ^{model} ROSS #5000 Finline Echo Sounder

Graphic record scaled by G.E.L., J.W.B., R.B.H., J.S.B.

Graphic record checked by G.E.L., J.W.B.

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

Verification by D.V. Mason, AMC Verification Branch

Soundings in ^{and tenths} fathoms ~~XXX~~ at ~~XXX~~ MLLW _____

REMARKS: ^{UTC} All times recorded in ~~GMT~~, soundings in fathoms ^{and tenths}

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

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

STANDARDS 10-17-86

Gloay

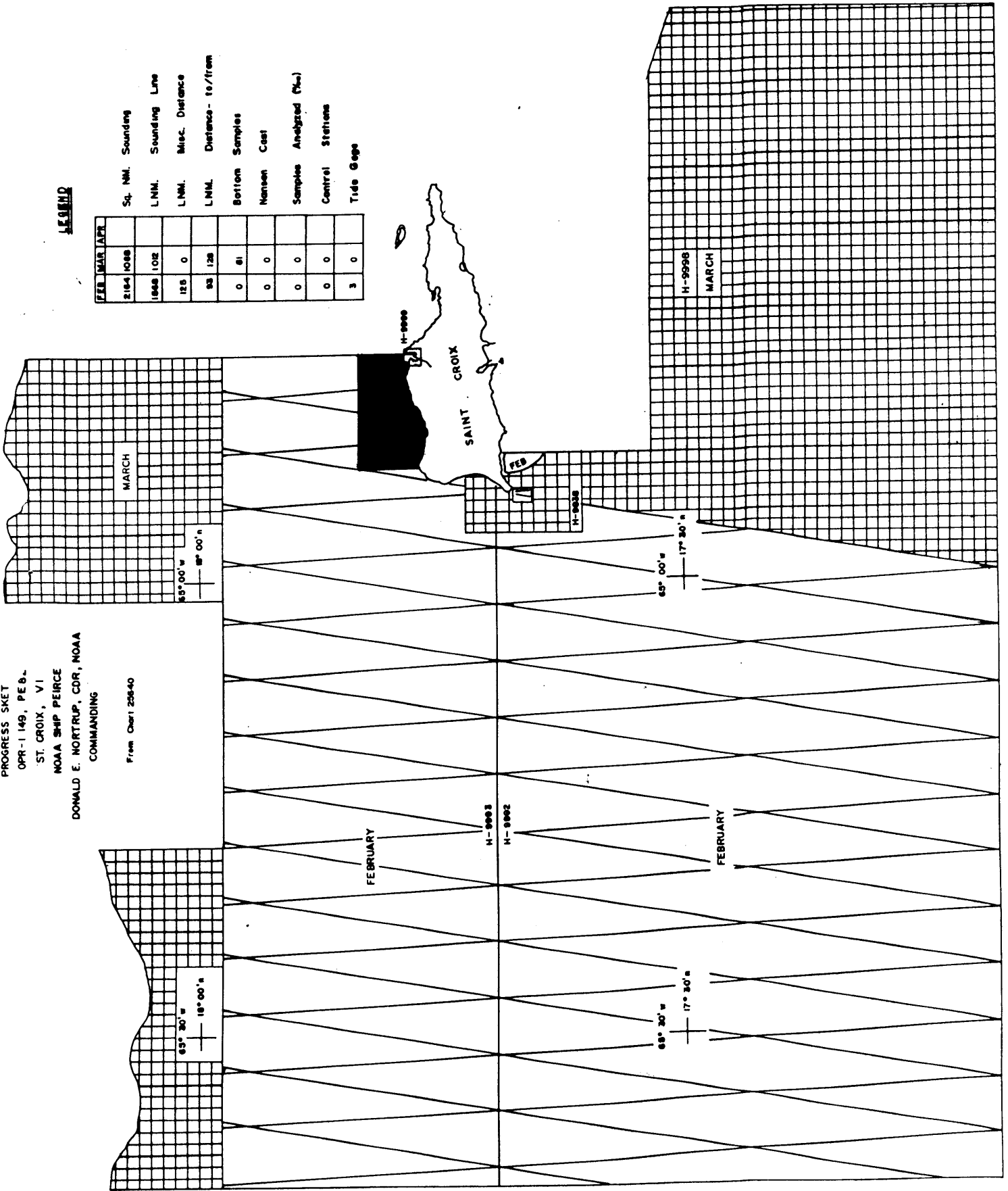
AW015/SURF MSTM 10/21/86

PROGRESS SKET
 OPR-1149, PE 6.
 ST. CROIX, VI
 NOAA SHIP PEIRCE
 DONALD E. NORTRUP, CDR, NOAA
 COMMANDING

From Chart 256-40

LEGEND

FEB	MAR	APR	Sq. NM.	Sounding
2164	1088		L.N.M.	Sounding Line
1848	102		L.N.M.	Misc. Distance
185	0		L.N.M.	Distance - to/from
93	128		Bottom Samples	
0	81		Nansen Cast	
0	0		Samples Analyzed (Nos.)	
0	0		Control Stations	
3	0		Tide Gage	



DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9997
(Field Number PE-10-1-82)
CDR. D. E. NORTRUP, NOAA

A. PROJECT

This project OPR-1149-MI, PE-82, St. Croix, Virgin Islands, is a continuation of hydrographic surveying in St. Croix waters begun in 1981. Operations were conducted in accordance with project instructions dated 27 November 1981, from Associate Director, Marine Surveys and Maps, forwarded via Director, Atlantic Marine Center.

There were four changes to the project instructions issued during this survey. The changes affecting this survey were change numbers 1, 3 and 4 dated 21 December 1981, 25 January 1982, and 02 March 1982 respectively. Change number 2, which does not affect this survey, was issued 11 January 1982.

B. AREA SURVEYED

This survey was conducted along the north shore of St. Croix from Hams Bluff extending eastward to Salt River Bay. The actual survey limits are as follows:

The 200 fathom curve with sounding and or positional junction with contemporary survey (PE-80-2-82) H-9993	Northern Limit
Northern Shoreline of St. Croix	Southern Limit
064°45'19" west	Eastern Limit
064°52' ³⁰ 08" west	Western Limit

The hydrography was conducted between the dates of 21 February 1982, (J.D. 51) and 3 March, 1982 (J.D. 62).

C. SOUNDING VESSEL

Hydrography was conducted by the ships type I aluminum survey launch, (Jensen). The Jensen, LAUNCH 1009, vesno 2839, was equipped with an automated hydroplot system.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

This survey was conducted utilizing the Ross digital fathometer model #5000. The individual sounding equipment and serial numbers are as follow:

<u>Vesno</u>	<u>Fathometer s/n</u>	<u>J.D.</u>
2839	1078	51-54
	1079	60-62

LAUNCH 1009 (vesno 2839) encountered depths of 0.9-199 fathoms. Phase checks between 10-50 fathom scales were performed on both Ross digital fathometers at the conclusion of each sounding line. All discrepancies and drifts were corrected at the conclusion of the line.

Velocity corrections were computed for the launch from Nansen Cast data obtained by NOAAAS MT. MITCHELL on 20 February 1982. Data for NOAAAS MT. MITCHELL Nansen cast #2 taken, on 25 March 1982, will be submitted at the conclusion of the project.

Bar checks were performed daily, weather permitting. Agreement between Nansen Cast and direct comparison logs is very favorable. Velocity correction table (#2) and graphs are included in section K of the appendices. Velocity correctors were graphed and applied in the following increments:

<u>Depth (Fathoms)</u>	<u>Increment (Fathoms)</u>
0-20	0.1
20-110	0.2
110-greater	0.5 1.0

The draft correction of 0.3 fathoms was applied to all corrector tapes for LAUNCH 1009 (Vesno 2839). This correction was based on physical measurement from waterline to transducer face.

Launch work was carried out to approximately 199 fathoms. Due to expected discrepancies in junctions between inshore launch, narrow beam Ross system, and offshore ship, wide beam UGR system, the following guidelines are recommended and were implemented by the ship for this survey.

1. Ross soundings greater than 150 fathoms not to be smooth plotted (NSP)
All soundings were plotted where echosounder could be read.
2. Where Ross and UGR soundings conflict in less than 150 fathoms:
 - A) Save Ross and NSP UGR if Ross fathometer trace can be interpreted confidently.
 - B) Save UGR and NSP Ross if Ross trace is ambiguous, (must also N.S.P. all deeper soundings on same Ross sounding line in this case.)

A complete list of the soundings not to be smooth plotted is appended in section "G" of the appendix.

Settlement and Squat measurements were conducted on LAUNCH 1009, vesno 2839, on 26 March 1982 from the Frederiksted Pier, St. Croix. Corrections were obtained using a Zeiss level instrument, serial number 18946, and Philadelphia rod positioned on the launch over the transducer. Readings were recorded at speed 0, 600, 1000, 1400, 1800, 2200, and 2600 Rpm's. The results were graphed and are included within supplemental data file on corrections to echo soundings. The resulting corrector values are less than 0.1 of a fathom and are therefore considered negligible.

The following is a list of the stations observed:

<u>Type of Station</u>	<u>S/N</u>	<u>Vesno</u>	<u>J.D.</u>	<u>Latitude</u>	<u>Longitude</u>
Nansen Cast	#1	MT. MITCHELL	51	17°51'12"N	064°49'24"W
	#2	MT. MITCHELL	84	17°53'54"N	064°41'18"W
Settlement and Squat	—	2839	85	17°42'48"N	064°53'00"W
Bar Checks	—	2839	50-54, 56 60-62	17°43'00"N	064°54'.0"W

E. HYDROGRAPHIC SHEETS

The field sheets were constructed and drawn up aboard PEIRCE by the ship's PD P8/E computer and complot roll bed plotter. The data is presented on two (2) plotter sheets at the scale of 1:10,000 with a skew of 07, 20, 60. One of the plotter sheets contains the mainscheme, mainscheme splits, crosslines, and shoreline while the overlay contains bottom samples and PSR item investigation.

Due to change number 4 of the project instructions sheet limits were extended to 60 inches to accomplish proper junctioning with contemporary survey PE-5-1-82, H-9999. Appended to section A of the Appendices is the letter approving the oversized sheet.

The final smooth sheet will be plotted by the Atlantic Marine Center. All field records and appropriate data will be forwarded to A.M.C. for final verification. All sheet parameters are appended to this report.

F. CONTROL STATIONS

All horizontal control and hydrographic positions are based on the Puerto Rican datum.

All launch hydrography was controlled by electronic positioning with reference stations HOUSE RM 3, 1980 and BAKE ARGO, 1982, signals #026 and #041 respectively. All positioning system calibrations were relative to signals #011, SPRAT HALL MILL, 1919, #012 PROSPERITY CHIMNEY HOT, 1919, #20 SOUTHWEST CAPE LIGHT, 1980, and #37 FREDERIKSTED HARBOR LIGHT, 1975.

Station HOUSE RM 3, 1980 is a third order station and was established by AMC Operations Division personnel, quad 170654.

Station BAKE ARGO, 1982 is an unmonumented third order eccentric to station BAKE, 1918, established by N.G.S., position computed by PEIRCE with data included in supplemental data file appended to this report.

All other stations used for visual calibration meet third order Class I positional accuracy standards. None of the stations are located within the survey limits.

G. HYDROGRAPHIC POSITION CONTROL

Positioning of the launch was by range/range method using ARGO (Automated Range/Grid Overlay), a medium range, phase comparison system.

The following electronic and related positioning equipment was used during this survey:

Vesno 2839	<u>Equipment</u>	<u>S/N</u>	<u>J.D.</u>
	RPU	R047855 R047854	51-54 60-62
	CDU	C037961	51-54, 60-62
	ALU	A0379122 A047858	51-54 60-62
	Power Supply	V0379122	51-54, 60-62
	Strip Chart	S097958	51-54, 60-62

ARGO Shore Stations

BAKE ARGO, 1982	RPU	R047859	51-54, 60-62
	ALU	A0379120	51-54, 60-62
	Power Supply	V0379100	51-54, 60-62
HOUSE RM. 3, 1980	RPU	R0379117	51-54, 60-62
	ALU	A047859	51-54, 60-62
	Power Supply	V0379112	51-54, 60-62

The ARGO positioning system was calibrated via 3-point sextant fix and check fix. On line partial electronic rate corrections were based on each day's beginning calibration and entered via the nav-cal feature of program RK-112. Final rate correctors are based on the mean of each day's beginning and ending calibrations and applied via off line corrector tape. Throughout the survey ARGO was maintained at a smoothing code of 02 with time slots 02, 06, 00, 00 or 01, 05, 00, 00, and at a frequency of 1646.7 KHZ. Fixed shore station AGC values and antenna range tune values were monitored every hour while on line on a daily basis. Individual calibration and ARGO tune values can be found in the supplemental data file, electronic positioning control, appended to this report.

H. SHORELINE

The shoreline for this survey was transferred from registered Class III shoreline manuscript TP-00001 and TP-00002, scale 1:10,000. The shoreline as it appears on TP-00001 and TP-00002 adequately represented the area surveyed.
Shoreline maps were compiled from 1977 photography.

Field edit was not performed on this survey as per project instructions. All possible hazards to navigation as noted on TP-00001 and TP-00002 were investigated with subsequent DP's being taken whenever possible. Detached positions were taken on possible navigation hazards with all other inshore obstructions being adequately represented on the shoreline manuscript.

I. CROSSLINES

During this survey a total of 13.85 nautical miles of crosslines were run. This constitutes 24% of of the total mainscheme hydrography.

General agreement is very good. Crossline agreement in water less than 20 fathoms is ± 2 fathoms. Larger discrepancies of ± 4 fathoms in water greater than 20 fathoms are possible due to the extreme bottom slopes.

J. JUNCTIONS

This survey junctions with contemporary survey H-9993, PE-80-2-82, to the north; H-9935, MI-10-1-81, to the east; H-9937, PE-10-4-81 to the west and contemporary survey H-9999, PE-5-1-82, Salt River Bay to the southeast.

Comparisons with contemporary survey H-9993, PE-80-2-82, indicate very poor agreement. Unfavorable junctioning is primarily due to the inherent differences in sounding equipment and the steep continental slope characteristic to the north side of the island. UGR soundings were systematically shoaler than Ross fathometer soundings; agreement between the two systems occurring only in relatively flat bottom areas. Recommendations are made in section D of this report.

Comparisons with survey H-9935, MI-10-1-81, indicate very favorable agreement up to and including the 50 fathom curve. General agreement is ± 3 fathoms. Agreement in water deeper than 50 fathom is poor. General agreement is ± 20 fathoms. Sounding records from both surveys were rechecked and compared. Field data comparisons indicate that the data acquired from this survey, H-9997, should supersede all prior soundings and charted data. } Do not concern, see present survey.

Comparisons with H-9937, PE-10-4-81, indicates very good agreement up to the 50 fathom curve. General agreement is within ± 3 fathoms. The depth curves

are continuous and show no systematic curve displacement through the junctioning area. Agreement in depths greater than 50 fathoms is good. There is no systematic curve displacement present through the junctioning area. Minor discrepancies are due to the steep continental slope.

Comparisons made with H-9999, PE-5-1-82, Salt River Bay, indicate excellent agreement with no displacement in junctioning curves. General agreement is less than 1 fathom.

Inshore junctioning was also accomplished with the photobathymetric survey. Comparisons indicate very favorable agreement. General agreement is within ± 1.5 fathoms.

K. COMPARISONS WITH PRIOR SURVEYS

The St. Croix Presurvey Review was issued 14 November, 1981 and updated 12 January, 1982. There were two presurvey review items located within the survey area. Their descriptions and dispositions are as follows:

an obstr originating with TP-00002 and identified as a probable
 Item #12 is ~~reported as a~~ manmade object at MLW located at $17^{\circ}45'57.85''$
 north, $064^{\circ}49'51.43''$ west. This item was not located via sounding search due to
 extensive coral heads and breakers. The item was located visually from the beach
 and appeared to be a ~~rect~~^{ir}angular rock formation. This item is no navigational hazard.

Many other similar rocks and coral heads are also found in the survey area. CONCUR
 Rock a wash applied to smooth sheet at above position. ✓

an obstr originating with TP-00002 and identified as a probable
 Item #13 is ~~reported as a~~ buoy at $17^{\circ}47'13.21''$ north, $064^{\circ}47'18.12''$ west. This
 (lat. $17^{\circ}47'15''$ N, long. $64^{\circ}47'17''$ W)
 item was located via detached position number 2048 and is described as a black spar
 buoy marking underwater cables. The cables represent no hazard to navigation. CONCUR ✓

Comparisons were made with prior survey H-4653a, scale 1:20,000, surveyed in 1924, 1925. This prior survey covers the entire area surveyed. General agreement is very good ± 3 fathoms. Contour agreement up to and including 50 fathoms is very good. Contour agreement deeper than 50 fathoms is good. Slight distortion can be attributed to date of prior survey, related sounding equipment, and the lack of sufficient soundings to construct adequate contour lines.

A $4 \frac{5}{6}$ fathom ^(charted as $4 \frac{2}{4}$ fm.) sounding is located at $17^{\circ}46'58''$ north, $064^{\circ}48'30''$ west on prior survey H-4653a but was not investigated on this survey or the photobathymetric survey for this area. This sounding was not disproved therefore it is recommended that the sounding remain as previously charted. *concur, brought forward to present survey.*

EDM

L. COMPARISONS WITH THE CHART

Comparisons were made with chart 25644, 8th edition, 6 May 1978, at scale 1:20,000 and chart 25641, 18th edition, 28 November 1981, at scale 1:100,000.

Comparisons with chart 25644, which covers $\frac{1}{2}$ from the western sheet limit east to $064^{\circ}50'20''$ west, indicates favorable agreement with depths comparing within ± 2 fathoms in waters less than 50 fathoms. Larger discrepancies were noted and listed below. No large anomalies were noted with respect to depth curves.

<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>CHARTED SOUNDING (fms)</u> (From H-4653a)	<u>SURVEY SOUNDING (fms.)</u> (corrected)
$17^{\circ}46'24''$ N	$064^{\circ}51'55''$ W	158	121 50-110
$17^{\circ}46'33''$ N	$064^{\circ}51'57''$ W	105	100 83
$17^{\circ}46'20''$ N	$064^{\circ}51'46''$ W	160	145 140-150

superseded by present survey

Comparisons with chart 25641, which covers the remaining portion of the survey area, indicates good agreement. General agreement is within +5 fathoms. The corresponding depth curves are similar in shape and placement.

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede the presently charted soundings and prior surveys of this area with the exception cited in section K of the Descriptive Report.

N. AIDS TO NAVIGATION

There are no Coast Guard maintained floating or fixed aids to navigation within the limits of this survey. ~~Do not concur.~~ HAMS BLUFF LIGHT is within survey limits.

There is one submerged pipeline located within the limits of this survey. This item was located at $17^{\circ}47'1^{\frac{3}{4}}.3''$ north, $064^{\circ}47'1^{\frac{8}{4}}.6''$ west and represents no hazard to navigation.

O. STATISTICS

<u>Category</u>	<u>Vesno 2839</u>
Nautical Miles of Sounding	57.7
Square Miles of Sounding	4.14
Total Number of Positions	458
Nansen Casts	MT. MITCHELL
Bottom Samples	TX 22
Tide Stations	1

P. MISCELLANEOUS

Twenty^{two}-one bottom samples were taken during this survey, a copy of Oceanographic Log sheet "M" is included within the appendix.

R. AUTOMATED DATA PROCESSING

The following programs were used in acquiring and processing data for this survey.

<u>PROGRAM</u>	<u>PROGRAM NAME</u>	<u>VERSIONS</u>
RK 112	Hyperbolic R/R Hydroplot	08/04/81
RK 201	Grid, Signal Lattice Plot	04/18/75
RK 211	Range/Range Non Real Time Plot	02/02/81
RK 212	Visual Station Table Load	04/01/74
RK 216	R/Az. Non Real Time Plot	02/09/81
RK 300	Utility Computations	10/21/80
RK 360	Electronic Correctors Abstract	02/02/76
RK 530	Layer Correctors for Velocity	05/10/76
AM 500	Predicted Tide Generator	11/10/72
AM 602	Extended Time Oriented Editor	05/20/75
AM 612	Time Printer Test	03/22/78

Q. RECOMMENDATIONS

It is recommended that data compiled for this survey supersede all existing charts and information. Specific recommendations regarding charted features and general bottom topography were made in sections K and L of this Report.

S. REFERENCE TO REPORTS

The ship's personnel installed three tide gages during this survey. See field tide note appended. This report, leveling records , and monthly tide records have been submitted to the Tides and Water Branch, Rockville, Maryland, Horizontal Control Reports are available at the Operations Division of the Atlantic Marine Center. All other supplemental data and related data will be submitted with this report.

Respectfully Submitted,

A handwritten signature in black ink, reading "Jonathan W. Bailey" with a stylized flourish at the end.

Jonathan W. Bailey, LT(jg), NOAA

SIGNAL LISTING PE-10-1-82
H-9997

SIGNAL NAME/SOURCE LISTING

008	WASHINGTON, 1919	Published Station
011	SPRAT HALL MILL, 1919	Published Station
012	PROSPERITY CHIMNEY HOT, 1919	Published Station
020	SOUTHWEST CAPE LIGHT, 1980	A.M.C. OPS.
026	HOUSE RM - 3, 1980	A.M.C. OPS.
037	FREDERIKSTED LIGHT, 1982	MT. MITCHELL
041	BAKE - ARGO, 1982	PEIRCE

008	7	17	45	02528	064	52	38157	250	0248	164670
011	7	17	44	30545	064	53	23843	139	0000	000000
012	7	17	43	40693	064	53	02029	139	0000	000000
020	7	17	40	46824	064	54	01035	139	0000	000000
026	7	17	59	24458	065	53	07765	250	0018	164670
037	7	17	42	58500	064	53	03250	139	0000	000000
041	7	18	19	04495	064	47	21847	250	0086	164670

APPROVAL SHEET
H-9997

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personal checks of progress and adequacy. This report and the final field sheet have been closely reviewed and found to represent a complete survey and, with the exception cited in section K of the Descriptive Report, adequate to supersede the common coverage portions of prior survey H-4653a for nautical charting purposes.



Donald E. Nortrup
Commander, NOAA
Commanding Officer
NOAA Ship PEIRCE S-328

MOA23-115-86

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check):

- ORDINARY MAIL AIR MAIL
 REGISTERED MAIL EXPRESS
 GBL (Give number) _____

TO:

Chief, Data Control Branch, N/CG243
 Room 151, WSC-1
 Hydrographic Surveys Branch
 Rockville, MD 20852

DATE FORWARDED

7 October 1986

NUMBER OF PACKAGES

two (2)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-9997 (PE-10-1-82)
OPR-I149-MI/PE--U. S. Virgin Islands

Pkg 1: (tube)

- 1 Smooth Sheet
- 1 Position Overlay
- 2 Excess Overlays (Levels 1/3 and 2&3/3)
- 1 Original Descriptive Report

Pkg 2: (box)

- 1 Cahier-Position Printout/Control Listing
- 1 Cahier-Sounding Printout/L-File Listing
- 1 Package of material removed from Original Descriptive Report (to be filed with original survey records)

FROM: (Signature)


 Robert G. Roberson

RECEIVED THE ABOVE

(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
 N/MOA23
 Atlantic Marine Center
 439 W. York Street
 Norfolk, VA 23510-1114

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-9997

Number of positions	477
Number of soundings	2737
Number of control stations	5

	<u>TIME-HOURS</u>	<u>DATE COMPLETED</u>
Preprocessing Examination	22	10 MAY 82
Verification of Field Data	331	4 MAR 86
Quality Control Checks	100	
Evaluation and Analysis	37	18 JUL 86
Final Inspection	10	6 AUG 86
TOTAL TIME	500	
Marine Center Approval		9 SEP 86

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

DATE: November 15, 1982

Slides H-9935 folder

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): 975-1364 Christiansted, V.I.
975-1584 Fredericksted, V.I.

Period: February 8-March 26, 1982

HYDROGRAPHIC SHEET: H-9997

OPR: I-149

Locality: North Coast St. Croix, Virgin Islands

Plane of reference (mean lower low water): 975-1364 = 3.65 ft.
975-1584 = 4.93 ft.

Height of Mean High Water above Plane of Reference is 975-1364 = 0.81 ft.
975-1584 = 0.77 ft.

REMARKS: Recommended Zoning:

1. West of longitude 64°50' zone direct on 975-1584 Fredericksted, Virgin Islands.
2. East of 64°50' zone direct on 975-1364 Christiansted, Virgin Islands.

*This supersedes Tide Note of July 9, 1982

for Donald D. Carver
Chief, Tidal Datums and Information Branch

GEOGRAPHIC NAMES

H-9997

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
ANNALY BAY												1
BARON BLUFF												2
BELYEDERE												3
CANEBAY (locality)												4
CANE BAY												5
CARIBBEAN SEA												6
DAVIS BEACH												7
HAMS BLUFF												8
LA VALLEE												9
MAROON HOLE												10
NORTH STAR (locality)												11
RUST UP TWIST (locality)												12
SAINT CROIX												13
SALT RIVER BAY												14
U.S. VIRGIN ISLANDS (title)												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

Charles E. Harrington
Chief Geographer - N/C62x3

JUL 21 1986

sheet because it was not possible for the evaluator to determine which of the photogrammetric portrayals was the more correct.

3. HYDROGRAPHY

- a. Depths at crossings are generally in good agreement.
- b. The standard depth curves were adequately delineated, except for the 0-fathom depth curve and portions of the 1-, 2-, 3-, and 5-fathom depth curves because of their proximity to shore.
- c. The development of the bottom configuration and the determination of least depths are considered adequate.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records, and reports comply with the requirements of the Hydrographic Manual with the exceptions listed below:

- a. No justification was provided as to why a 4 5/6-fathom prior survey sounding, discussed in section K, paragraph 5, of the Descriptive Report, was not investigated. The hydrographer's recommendation to retain the charted sounding, without an investigation, is not an adequate resolution.
- b. Landmarks assigned on the Notes to Hydrographer prints, prepared by the Photogrammetry Branch, were not examined by the hydrographer.

5. JUNCTIONS

The junctions with H-9937 (1981) on the west and H-9999 (1982) on the southeast were completed during the verification and evaluation of those surveys. An adequate junction was effected with H-9935 (1981-82) on the east. A junction was effected with H-9993 (1982) on the north. (See section J of the Descriptive Report.)

6. COMPARISON WITH PRIOR SURVEYS

H-4653a (1924-25) 1:20,000

This survey covers the area common to the present survey. A comparison between prior and present depths indicates a general agreement inshore of the 20-fathom depth curve with the exception of several rocks, a reef, and a shoal sounding which were carried forward to supplement the present survey.

A comparison in deeper depths reveals random differences of as much as 50 fathoms. These differences are attributed to the irregular bottom, the steep slope, and methods of surveying.

With the addition of the items carried forward, the present survey is adequate to supersede the prior survey within the common area.

sdw

7. COMPARISON WITH CHART 25641 (18th Edition, November 28, 1981)
CHART 25644 (8th Edition, May 6, 1978)

a. Hydrography

The charted hydrography originates with the previously discussed prior survey which requires no further consideration.

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

c. Aids to Navigation

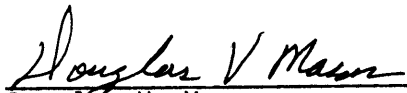
The fixed aid to navigation located on the present survey is in substantial agreement with its charted position and adequately marks the feature intended.

8. COMPLIANCE WITH INSTRUCTIONS

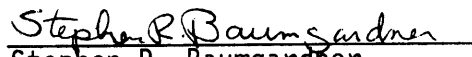
This survey adequately complies with the project instructions.

9. ADDITIONAL FIELD WORK

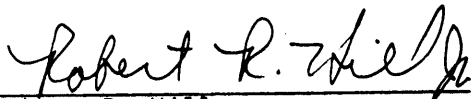
This survey is an adequate basic survey and no additional field work is recommended.



Douglas V. Mason
Cartographic Technician
Verification of Field Data



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

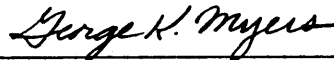


Robert R. Hill
Senior Cartographic Technician
Verification Check

Inspection Report
H-9997

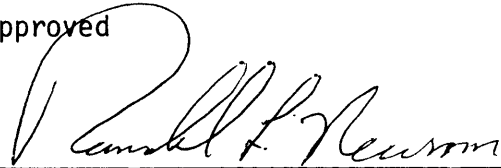
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey complies with National Ocean Service (NOS) requirements except as noted in the Evaluation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

Inspected



George K. Myers
Chief, Standards Section (N/CG24)
Hydrographic Surveys Branch

Approved



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

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.

Hydrographic Index No. 180C

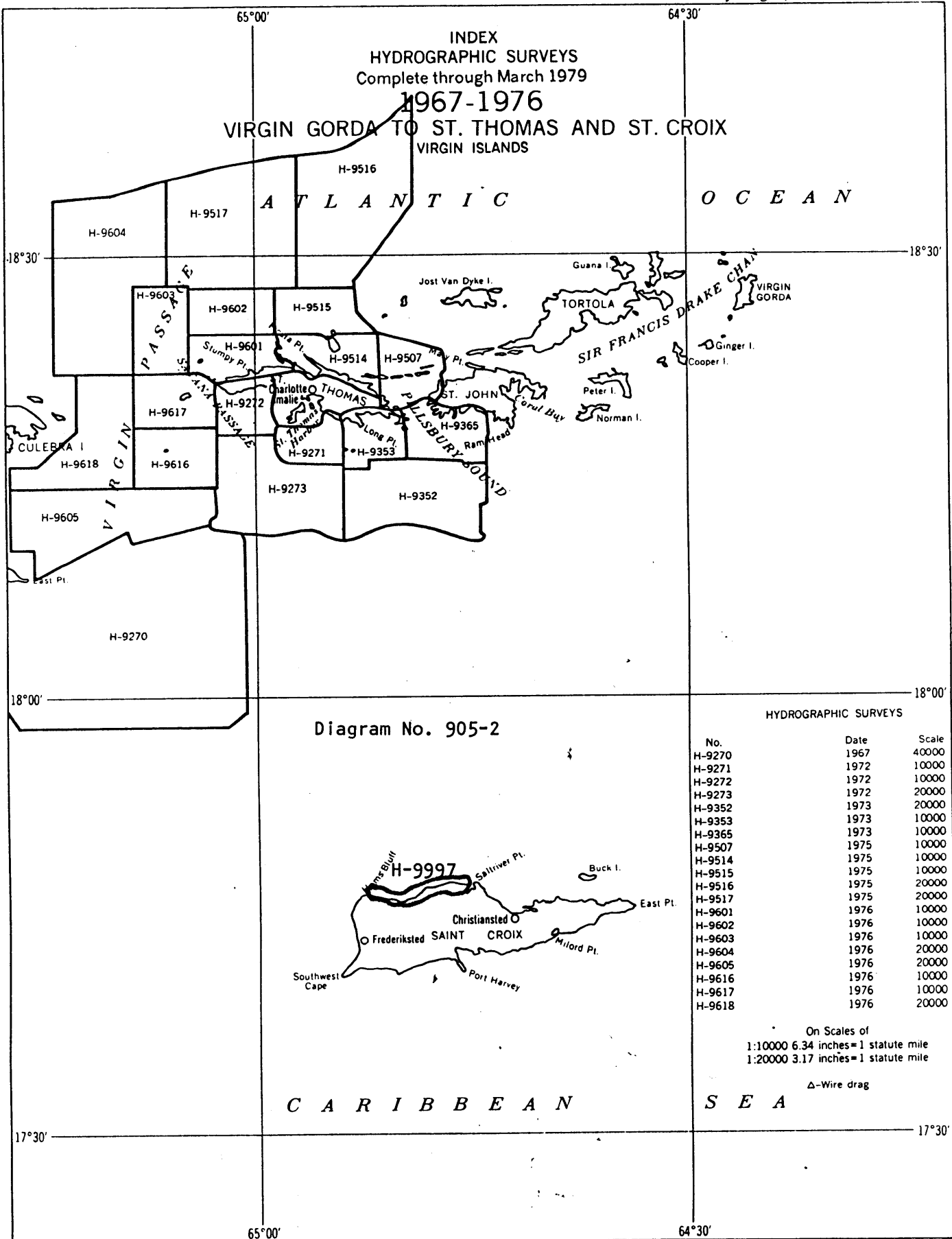


Diagram No. 905-2

HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-9270	1967	40000
H-9271	1972	10000
H-9272	1972	10000
H-9273	1972	20000
H-9352	1973	20000
H-9353	1973	10000
H-9365	1973	10000
H-9507	1975	10000
H-9514	1975	10000
H-9515	1975	10000
H-9516	1975	20000
H-9517	1975	20000
H-9601	1976	10000
H-9602	1976	10000
H-9603	1976	10000
H-9604	1976	20000
H-9605	1976	20000
H-9616	1976	10000
H-9617	1976	10000
H-9618	1976	20000

On Scales of
1:10000 6.34 inches=1 statute mile
1:20000 3.17 inches=1 statute mile

△-Wire drag

