

# 10008

Diagram No. 905-2

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey ..... Hydrographic  
Field No. .... MI-10-5-82  
Registry No. .... H-10008

### LOCALITY

State ..... U.S. Virgin Islands  
General Locality .. St. Croix  
Sublocality ..... Vicinity of Port Alucroix

19 82

CHIEF OF PARTY

CAPT. J. A. Yeager

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DATE ..... October 15, 1986

☆U.S. GOV. PRINTING OFFICE: 1985-588-054

10008

ACPG  
UFB

25632

25634

25641 inset

25640

TO SIGN OFF SEE  
"RECORD OF APPLICATION"

HYDROGRAPHIC TITLE SHEET

H-10008

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-10-5-82

State U.S. Virgin Islands

General locality St. Croix

Locality Harbor of Port Alucroix

Scale 1:10,000 Date of survey 08 April - 23 April 1982

Instructions dated 27 November 1981 Project No. OPR-I149-MI/PE-82

Vessel NOAA SHIP MT. MITCHELL Launches (VESNO 2224 & 2226)

Chief of party Captain J. Austin YEAGER, NOAA

Surveyed by Ship's Officers (See Remarks)

Soundings taken by echo sounder, hand lead, ~~pole~~ Echo Sounder (Ross Model 5000 Fine Line)

Graphic record scaled by JZ, RW, RC, EM, CS, ESV, BM, BC, BG, DH, AO, DC, KP, CML

Graphic record checked by JZ, RW, RC, EM, CS, ESV, BM, BC, BG, DH, AO, DC, DP, CML

Plotted by \_\_\_\_\_ Automated plot by Xynetics 1201 Plotter (AMC)

Verification by D. Mason AMC

Soundings in fathoms ~~1/100~~ at MLLW <sup>and tenths</sup> at MLLW (Gulf Coast Datum)

REMARKS: LTJG John Zabitchuck, OIC

LT E. Scott Varney Notes in red in the Descriptive Report were made during office processing.

ENS Ken Peters

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

ENS Bobby Coakley

ENS Amy Orris

ENS Craig McLean STANDARDS CK'D 10-17-86

ENS Don Crews CLOJ

AWOIS/SURF MSM 10/24/86

PROGRESS SKETCH  
 HYDROGRAPHIC OPERATIONS  
 NOAA SHIP MT. MITCHELL S-222  
 J. A. YEAGER CAPT; NOAA  
 COMMANDING OFFICER

LEGEND

BRITISH

TERRITORY

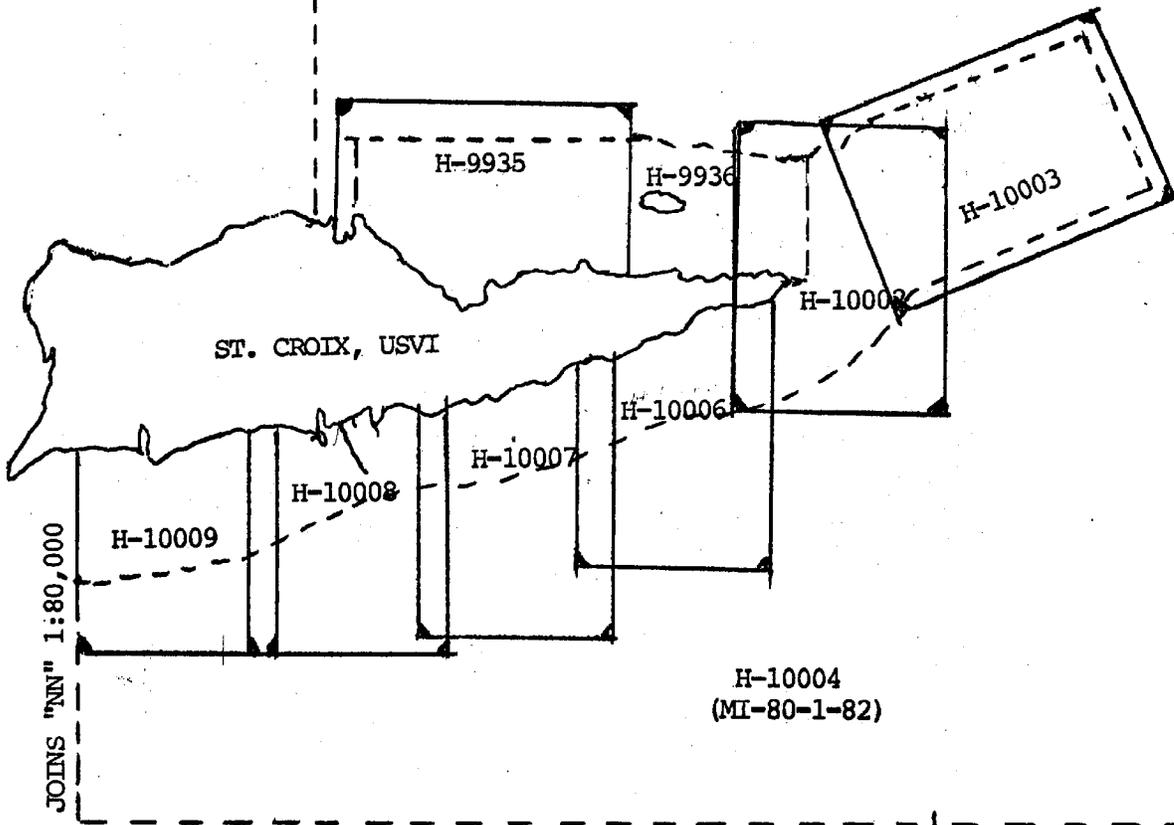
64° 30'

18°  
00'

18°  
00'

JOINS "OO" 1:80,000

H-10004  
(MI-80-1-82)



SCALE OF CHART 25640

17°  
30'

JOINS "MM" 1:80,000

64° 30'

17°  
30'

A. PROJECT

This survey was carried out in accordance with Project Instructions OPR-1149-MI/PE-82, issued 27 November 1981, and amended by changes 1 through 4 dated 21 December 1981, 11 January 1982, 25 January 1982, and 2 March 1982 respectively. A supplement to the project instruction was issued on 18 November 1981.

B. AREA SURVEYED

This survey was conducted between Vagthus Pt. to west of Krause Lagoon Inlet, St. Croix, U. S. Virgin Islands. Included in this area is Krause Lagoon Channel, Port Alucroix, and Limetree Bay. The depth of the water generally slopes gently away from shore to approximately the 15 fathom curve, where the bottom drops off quickly. This area has a sandy-grassy bottom with numerous coral reefs. The shoreline is irregular with numerous rocky points. The Limetree Bay area has piers serving the Hess Oil Virgin Islands Corporation and the majority of this area has been dredged. There is a small island (Ruth Island) west of the entrance to the Krause Lagoon Channel. Geographic name, Ruth Island, reported to Staff Geographer for future reference.

The limits of the survey are within the area described by lines connecting the following points in a clock-wise manner:

<u>Latitude</u>	<u>Longitude</u>
17° <sup>40' 15"</sup> <sub>36' 18"</sub> N	64° <sup>43' 10"</sup> <sub>42' 45"</sub> W
17° <sup>38' 36"</sup> <sub>36' 18"</sub> N	64° <sup>30'</sup> <sub>47' 57"</sub> W
17° <sup>42' 45"</sup> <sub>43' 38"</sub> N	64° <sup>30'</sup> <sub>47' 57"</sub> W
17° <sup>42' 45"</sup> <sub>43' 38"</sub> N	64° <sup>43' 10"</sup> <sub>42' 45"</sub> W

This survey was conducted between 08 April 1982 and 23 April 1982; Julian Dates 98 and 113 respectively.

C. SOUNDING VESSELS:

All soundings for this survey were obtained by NOAA Ship MT MITCHELL automated launches:

<u>VESNO</u>	<u>Hull Number</u>
2224	Jensen 1017
2226	Jensen 1008

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS:

The following equipment was used to obtain soundings for the survey:

<u>Equipment, VESNO 2224</u>	<u>Serial Number</u>
Ross Model 5000 <sup>Fine</sup> Fireline Depth Recorder	1087
Ross Model 4000 Transceiver	1079
Ross Model 6000 Digitizer	1079

<u>Equipment, VESNO 2226</u>	<u>Serial Number</u>
Ross Model 5000 <sup>Fine</sup> Fireline Depth Recorder	1083
Ross Model 4000 Transceiver	1055
Ross Model 6000 Digitizer	1055

Soundings were recorded in fathoms using a hull-mounted transducer with an antenna distance of 0.0 m.

All survey records were scanned by trained survey department personnel and checked by the officer-in-charge. Significant peaks and deeps that occurred between soundings were inserted and digitizing errors corrected on the electronic corrector tape.

Phase checks were made at frequent intervals. Necessary adjustments were made and noted in the sounding volumes and on the fathograms. Departures of the trace from the calibrations due to phase differences were corrected during the scanning process.

Velocity correctors were obtained from two Nansen casts at the following locations:

<u>Cast Number</u>	<u>Date</u>	<u>Julian Date</u>	<u>Latitude</u>	<u>Longitude</u>
1	20 February, 1982	051	17°52'72"N	64°49'24"W
2	25 March, 1982	084	17°33'54"N	64°41'18"W

An explanation of how sound velocities were derived, along with all tables and printouts of velocity tapes is included in Appendix D. Because the second cast agreed well with the first, all velocity correctors were derived from the first cast. Bar checks were taken daily and show a depth dependent variation with respect to the Nansen cast velocities.

A draft of  $0.\overset{3}{\cancel{2}}$  fathoms was applied to all soundings collected. Settlement and squat correctors for the launches were determined on 12 and 16 February 1982 in

San Juan Harbor, Puerto Rico. A copy of the field data and settlement and squat correctors obtained is included in the survey support data; however, due to the depth unit used (fathoms), the correctors are insignificant and are not used for this survey.

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

#### E. HYDROGRAPHIC SHEETS

This survey was plotted on six mylar complot roll plotter sheets by the Hydroplot system on board the MT. MITCHELL as follows:

<u>Sheet</u>	<u>Data</u>	<u>Skew</u>
1	Main Scheme (East)	90,21,54
2	X-Lines, Splits, Dev., D.Ps, B.S. (East)	90,21,54
3	Main Scheme (West)	90,21,54
4	X-Lines, Splits, Dev., DPs., B.S. (West)	90,21,54
5	Aids to Navigation (East)	90,21,54
6	Aids to Navigation (West)	90,21,54

The survey was plotted off-line using an electronic corrector tape and a velocity corrector tape. Soundings on the field sheets are corrected for draft, predicted tides, initialized and digitized error, and sound velocity. They are not corrected for smooth tides or any instrument error; these correctors will be applied on the final smooth sheet to be plotted by the Atlantic Marine Center OA/CAM3, Processing Division, Norfolk, Virginia.

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

Master Range-Range Data Tapes  
 Master Range-Azimuth Data Tapes  
 Electronic Corrector Tapes  
 Velocity Corrector Tapes  
 Parameter Tapes  
 Signal Tapes  
 TC/TI Tapes

F. CONTROL STATIONS:

The horizontal control stations used for this survey were:

<u>Signal Number</u>	<u>Name</u>	<u>Year Established</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>
730	Nugent 1919	1919	17°43'02".905	64°40'01".363
740	Nelthropp	1982	17°42'04".6356	64°43'07".6395
750	Hess	1982	17°41'24".78992	64°44'27".436251
760	Martin Marietta	1982	17°41'25".0248	64°45'57".4360
900	Long Point RMI	1982	17°40'54".55665	64°50'21".9610

All control stations were established or verified by Third Order, Class I methods by OA/CAM102, Atlantic Marine Center, Norfolk, Virginia. All control stations were recovered in February/March 1982 by MT. MITCHELL officers. A listing of stations and geographic positions is included in Appendix F.

G. HYDROGRAPHIC POSITION CONTROL:

Hydrographic position control was provided using Del-Norte equipment for range-range hydrography and a Wild T-2 Theodolite and a Del-Norte for range-azimuth hydrography.

The equipment used is as follows:

<u>Equipment</u>	<u>Serial Number</u>	<u>Comments</u>
DMU/Master	180/620	VESNO 2224
DMU/Master	190/162	VESNO 2224, after JD 098
DMU/Master	189/912	VESNO 2226
Remote (74) Unit	1137	
Remote (76) Unit	1062	
Remote (76) Unit	1317	used after JD 104
Remote (78) Unit	264	
Wild T-2 Theodolite	16017	
HP-3810b	00340	

Baseline calibrations were conducted with each DMU/Master pair on three different occasions, with each remote. Baselines were all-water paths performed on the following dates:

<u>Date</u>	<u>DMU/Master Pair</u>	<u>Baseline Distance</u>
29 March 82	190/162	2483 m.
29 March 82	189/912	2483 m.
13 April 82	190/162	2477 m.
13 April 82	189/912	2477 m.
24 April 82	190/162	2484 m.
24 April 82	189/912	2484 m.

Baseline distances were measured by repetitive slop observations utilizing a HP3810b.

Daily calibrations were performed using either the static point method, coming alongside a fixed known point, or the Range/Azimuth method.

The known point used for static calibration was Limetree Channel LT "3" located at Latitude  $17^{\circ}40'46''.81^{\circ}$  N and Longitude  $64^{\circ}44'19''.63^{\circ}$  W.

The Range/Azimuth calibration was determined by use of a Hewlett-Packard 3810b total station unit (S/N 00340) and a multi-prism mirror board provided by the National Geodetic Survey. The launch's position determined by the total station and mirror board was compared with the Del-Norte rates using either the RK 300 Utility Package Program or a program written by the author of this report for use with the Hewlett-Packard HP 9815 A/S unit.

Electronic control was not extended into Krause Lagoon and check soundings in this dredged area were controlled by visual orientation of topographic features (See-Boat-Sheet Methods).

#### H. SHORELINE

Shoreline was transferred from <sup>TP-00007 and TP-00008 of 1977</sup> the photogrammetric manuscripts. Even though a visual inspection of the shoreline by the Hydrographer did not disclose any discrepancies with the manuscripts, the shoreline was transferred to the field sheets in blue. A complete field edit and shoreline verification was not accomplished.

#### I. CROSSLINES

Crosslines were run 45 to 90 degrees to the main scheme sounding lines. Crossline mileage amounted to 10.3 percent of the total sounding line mileage. All soundings agreed within  $\pm 0.2$  fathoms within the 0 to 5 fathom range,  $\pm 0.5$  fathoms in the 5 to 11 fathom range, and  $\pm 1.0$  fathoms in greater depths.

## J. JUNCTIONS

This survey junctions with the following surveys which were run concurrently:

<u>Area of Junction</u>	<u>Field #</u>	<u>Reg. #</u>	<u>Scale</u>	<u>Date</u>	<u>Ship</u>
East Side	MI-10-4-82	H-10007	1:10,000	1982	MT. MITCHELL
West Side	MI-10-6-82	H-10009	1:10,000	1982	MT. MITCHELL
South Side	MI-80-1-82	H-10004	1:80,000	1982	MT. MITCHELL

Soundings from this survey compared excellently with soundings from <sup>H-10007</sup> (MI-10-4-82) to  $\pm 0.1$  fathoms, except in the 5 to 6 fathom area where soundings from this survey were 0.5 fathoms deeper. This may be accounted for, however, by the irregular corral bottom found on MI-10-4-82 and this survey in the 5 to 6 fathom area of junction.

Soundings from this survey compared excellently with soundings from <sup>H-10009</sup> (MI-10-6-82) to  $\pm 0.1$  fathoms to the 10 fathom curve,  $\pm 0.5$  fathoms from 10 to 50 fathoms and to within  $\pm 1$  fathom for all greater depths. This agreement is excellent considering the steepness of the slope along the area of junction.

Soundings from this survey compared well with soundings from <sup>H-10004</sup> (MI-80-1-82) to  $\pm 2$  fathoms. This agreement is good as MI-80-1-82 was performed at a much smaller scale, the junction occurred on the slope, and MI-80-1-82 used different control (ARGO). There were no shifts in contours between the two surveys.

## K. COMPARISON WITH PRIOR SURVEYS

The following prior survey was within the survey area:

<u>Registry Number</u>	<u>Scale</u>	<u>Date</u>
H-4653d	1:10,000	1924-1925
H-4653a	1:10,000	1924-1925

Comparison with H-4653d was fair with no general trend. The area has been drastically changed by dredging and development of Krause Lagoon and Limetree Bay. Depths compared to within  $\pm 0.5$  fathom between the 8 and 11 fathom curves and  $\pm 1.0$  fathoms out to the 16 fathom curve with the current soundings generally deeper. Basic shoreline topography also has changed drastically and no practical comparison can be made.

Comparison with H-4653a was good with depths comparing to  $\pm 1$  fathom between the 16 and 50 fathom curves and to  $\pm 3$  fathoms for depths deeper than 50 fathoms, with the present soundings generally deeper.

See Eval. Rpt.

#### L. COMPARISON WITH THE CHART

The area of this survey is covered by an inset on the following chart:

<u>Chart #</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>	<u>Scale of Inset</u>
25641	18th Ed.	28 Nov 81	1:100,000	1:20,000

Comparison with the chart was good on both the 1:100,000 scale and on the 1:20,000 scale inset. In the 5 fathom and less depths the soundings agreed to within  $\pm 0.2$  fathoms, to  $\pm 0.5$  fathoms in the 5 to 11 fathom range and within  $\pm 1$  fathoms in greater depths. } Do not concur  
See Eval. Rpt.  
sec 6, 7.

~~abled~~ - Channel Rep 1971 from 1971 NDS photos (SP 85460)  
A charted channel at approximate latitude  $17^{\circ}41'40''N$ , Longitude  $64^{\circ}45'40''W$

is no longer there. A cut was dredged for a sewer pipe outfall, and the channel has since been refilled. It is recommended this channel be replaced by the symbol for

a sewer outfall. *concur.* The two markers charted at Lat.  $17^{\circ}41'32''N$ , long  $64^{\circ}46'41''W$  and lat.  $17^{\circ}41'50''N$ , long.  $64^{\circ}46'44''W$  should be deleted.

←  
Delete  
Marker  
w/f

EDM

A government pier, open to the public, providing facilities for the launching of small boats is located on the right side entering Krause Lagoon Channel midway between Light No. 10 and Light No. 12 at approximate Latitude  $17^{\circ}41'50''\text{N}$ , Longitude  $64^{\circ}45'53''$ . It is recommended this feature be charted. Do not concur  
(above position is inadequate, no position indicated on field sheet)

A small private pier is located in a small cove on the right side of Krause Lagoon (opposite the turning basin) at approximate Latitude  $64^{\circ}46'10''\text{W}$ . It is recommended that this item be corrected on the chart. Do not concur (above position is inadequate, no position indicated on field sheet)

The charted controlling depth listed for Krause Lagoon Channel is 35 ft.; however, the actual controlling depth is 33 ft., according to the Port Captain at Martin-Marietta. It is recommended that this item be corrected on the chart. Concur, even though present survey depths do not conflict with charted controlling depth.

*5/5 of  
by subsequent  
survey see V  
with*

It should be noted that the western most pier in Limetree Bay (approximate Latitude  $17^{\circ}41'40''\text{N}$ , Longitude  $64^{\circ}45'10''\text{W}$ ) is currently being made into a roll on-roll off container facility under the authority and control of the Virgin Island Port Authority. The preferred entrance will be through Krause Lagoon Channel, through the cross-cut auxillary channel to the container pier.

The submerged pipeline charted as "under construction" located in Canegarden Bay is not completed or charted correctly. According to the Port Captain at Hess Oil, Inc., who has the construction permit (#72-0482, dated 4 October 1976), the pipeline has not been constructed yet but is still proposed. Also, the location for the proposed pipeline should be charted to show it extending from the offshore end of the pier at Latitude  $17^{\circ}41'40''.0\text{ N}$ , Longitude  $64^{\circ}45'08.5''\text{W}$  to Latitude  $17^{\circ}40'27''.3\text{ N}$ , Longitude  $64^{\circ}44'29''.6\text{ W}$  running roughly parallel to the main channel leading into the Hess Oil Facilities and should be annotated as under construction.

*Submerged pipeline information furnished to  
Nautical Data Unit for appropriate action*

PSR Item No. 3, a reported wooden pile <sup>located in</sup> (approximate latitude 17°41'12"N, Longitude 64°44'24"W) <sup>from LNM 27 of 1974</sup> in about 48 feet of water, 50 yards outside the Eastern channel boundary was searched for and not found. Constant work in the area indicates such a piling if it did in-fact exist at one time, has since been removed. The Port Captain at Hess Oil reported that the pile does not exist. A DP <sup>in the vicinity</sup> of ~~that area~~ was taken at Pos. #4435, JD 099. (lat. 17°41'14.6"N, long. 64°44'25.6"W) <sup>concur, delete from chart</sup>

*Deleted  
Please copy  
WJF*

*Edm*

The following PSR Items, <sup>labeled as obstr on TP-00007</sup> were identified by the hydrographer as pilings for use by ships at the new container port under construction in Limetree Bay:

<u>PSR Item No.</u>	<u>Probable Identity</u> <small>(as listed in D.R. TP-00007)</small>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
38	Buoy above MLW	17°41'53".27"	64°45'21".39"
39	Buoy above MLW	17°41'51".50"	64°45'21".18"
40	Buoy above MLW	17°41'52".61"	64°45'20".62"
41	Buoy above MLW	17°41'50".45"	64°45'19".80"

*Revised  
Obstr  
to  
Piles  
WJF  
Edm*

It is recommended that these pilings be charted at the above photogrammetric positions and annotated as such. Concur

PSR Item No. 34, <sup>an obstr on TP-00007 and identified as a probable</sup> a reported buoy above MLW (approximate Latitude 17°41'09".11" N, Longitude 64°46'32".28" W) was searched for and not found. A spoil area was found at the above approximate location (Pos. # 4871, JD 113). <sup>lat. 17°41'07.4"N, long. 64°46'32.2"W</sup> It is recommended the words "spoil area" be placed at the above location and the buoy not be charted.

*Deleted  
Obstr  
WJF  
Edm*

Disregard spoil recommendation = no evidence of spoil exists  
concur with buoy recommendation

The following PSR Items, <sup>labeled as obstrs on TP-00007</sup> were searched for and not found:

<u>PSR Item No.</u>	<u>Probable Identity</u> (as listed in D.R. for TP-00007)	<u>Latitude (N)</u>	<u>Longitude (W)</u>	
35	Pile above MLW	17°42'33".13"	64°46'15".28"	✓ WBF
36	Buoy or pile above MLW	17°42'26".41"	64°46'12".55"	✓ WBF
37	Buoy or pile above MLW	17°42'25".47"	64°46'10".67"	✓ WBF UC <i>LCM</i>

These items lie in Krause Lagoon near piers owned by the Martin-Marietta Company. If such items did exist at one time, they have since been removed. This area has a great deal of work being done in it all the time, and various construction is done on a frequent basis. It is recommended that these items not be charted. *concur*

It should be noted that the photogrammetric compiler's comments indicated those items listed as "Buoy or pile above MLW" were small and appeared similar to a fish float or other float of temporary nature.

The following PSR items, <sup>labeled as obstrs on TP-00007</sup> were searched for:

<u>PSR Item No.</u>	<u>Probable Identity</u> (as listed in D.R. for TP-00007)	<u>Latitude (N)</u>	<u>Longitude (W)</u>
24	Snag at MLW	17°41'49".84"	64°47'17".35"
25	Snag at MLW	17°41'47".37"	64°47'14".55"
26	Snag at MLW	17°41'46".75"	64°47'14".46"
27	Snag at MLW	17°41'47".33"	64°47'13".82"
28	Snag at MLW	17°41'51".02"	64°47'09".30"
29	Snag at MLW	17°41'47".72"	64°47'08".87"
30	Snag at MLW	17°41'48".13"	64°47'07".27"
31	Snag at MLW	17°41'51".47"	64°47'00".77"
32	Pile above MLW	17°41'50".32"	64°46'43".82"
33	Pile above MLW	17°41'49".70"	64°46'43".11"

A visible search was made for the above PSR items as close to shore as possible (approximately 100 m from shore). Nothing was visible. A extensive search was not made due to the extreme shallowness of the water and close proximity of the shoreline. This area (on shore) contains a mangrove grove, and it is believed these items are possible stumps which appear at very low water. They pose no danger to navigation due to the closeness to shore and are in only 1 to 2 feet of water. *concur. Do not chart obstr*

It is recommended that the shoreline from Longitude  $64^{\circ}47'17''.35W$  eastward to Longitude  $64^{\circ}46'43''.11W$  be charted as "foul area". *foul note applied to smooth sheet. Edm*

Two charted piles at approximate latitude  $17^{\circ}41'56''N$ , Longitude  $64^{\circ}45'05''W$  and Latitude  $17^{\circ}42'04''N$ , Longitude  $64^{\circ}45'06''$ , located in Limetree Bay were not found and have been reported not to exist by the Port Captain at Hess Oil Corporation. *Deleted 2 Piles IndP*

It is recommended that these two piles be deleted from the chart. *concur*  
 Due to the above, the two piles located on TP-00007 at lat.  $17^{\circ}41'57''N$ , long.  $64^{\circ}45'05''W$ , are considered to no longer exist. *Edm*

Piles appearing on the <sup>TP-00008</sup> ~~photobathymetry~~ along the eastern edge of the Hess *BC*  
 Refinery, <sup>(easterly turning basin)</sup> in Limetree Bay are there. It is recommended they be charted as shown on the ~~photobathymetry~~.  
*present survey*

Charted shoal sounding of 3 1/4 fathoms at approximate Latitude  $17^{\circ}40'.2$  N, Longitude  $64^{\circ}46'.6$  W had sounding lines run in that area with <sup>corrected</sup> shoal depths of  $\overset{4.0}{\cancel{3.9}}$  and  $\overset{4.2}{\cancel{3.8}}$  fms (Pos:  $\overset{6}{\cancel{4216+7}}$  and Pos. 6030+6 both on JD 98, respectively. Due to the irregular bottom and coral heads in that area, it is recommended the 3 1/4 fathoms sounding from the present chart be retained and brought forward on the new chart. *concur*  
*brought forward to present survey*

*Main body  
Edm*

M. ADEQUACY OF THE SURVEY

This survey is considered complete and adequate to supercede prior surveys for charting, except for those items noted in section L, Comparison with the Chart. Due to the irregular coral bottom, coral heads could exist between sounding lines which could differ up to several feet from the surrounding bottom, hence the recommendation that shoaler depths be retained on the new chart. See Eval Rpt. sec 7.

N. AIDS TO NAVIGATION

All fixed and floating aids within the limits of the area surveyed are privately maintained. Their current positions were determined and are listed in the NOAA Form 76-40 in Appendix I.

O. STATISTICS

Linear Nautical Mile of Hydrography	197.3
Linear Nautical Mile of Crossline	23.3
Linear Nautical Mile of Development	15.2
Total Linear Miles of Hydrography	253.8
Total Miscellaneous Miles	270.8
Total Miles Run	506.6
Square Mile of Hydrography	37.15
Total Number of Positions	1773
Nansen Cast	2
Bottom Samples	19

P. MISCELLANEOUS

Krause Lagoon and Krause Lagoon Channel was last dredged in January-February of 1980 by the McClain Marine Service of Jackson, New Jersey. Copies of the dredge hydrographic surveys were compared with check lines run by visual orientation of topographic features (as no control was available for Krause Lagoon and the northern half of Krause Lagoon Channel). Comparison was excellent with depths agreeing to  $\pm 0.2$  fathoms. Copies of these dredge surveys are included with the transmitted data.

Sounding lines were run to insure sufficient overlap with photobathymetry, normally to the 3 fathom curve. Soundings generally compared excellently with the photobathymetry. *Do not concur. Differences of as much as 1 fm. exist in depths of 3 fms. or less.*

Q. RECOMMENDATIONS

Launches were calibrated daily using static point methods and also with the use of a range and azimuth obtained from a HP3810b and a mirror board positioned at the Del-Norte unit on the launch. By comparing the rates of the Del-Norte unit, the same time the range and azimuth were obtained, the electronic correctors were computed. This system worked extremely well, with the use of a program for the HP9815 A/S developed by this author. This system of calibration provides a time saving and accurate procedure and is recommended for use in other surveys.

R. AUTOMATED DATA PROCESSING

The following Hydroplot Programs were used to acquire and process the survey data:

<u>Program Number</u>	<u>Program Name</u>	<u>Version</u>
RK 111	Range-Range Real Time Hydroplot	01/30/76
RK 112	Hyperbolic Range-Range Real Time Hydroplot	08/04/81
RK 116	Range-Azimuth Real Time Hydroplot	08/24/81
RK 201	Grid, Signal & Lattice Plot	04/18/75
RK 211	Range-Range Non-Real Time Plot	01/15/76
RK 212	Visual Station Table Load	04/01/74
RK 216	Range-Azimuth Non-Real Time Plot	02/05/76
RK 300	Utility Computations	02/04/76
RK 330	Data Reformat and Check	05/04/76
AM 500	Predicted Tide Generator	11/10/72
RK 530	Velocity Correction Computation	05/10/76
AM 602	Extended Line Oriented Editor	05/21/75
RK 612	High Speed Print-out	03/23/78

S. REFERENCES TO REPORTS

Horizontal Control Report, NOAA Ship MT MITCHELL, St. Croix, U. S.V.I.  
1982, OPR-1149-MI/PE-82

Range-azimuth calibration program documentation HP9815 A/S by LT (j.g.)  
John Zabitchuck.

Coast Pilot Report, NOAA Ship MT. MITCHELL, St. Croix, U. S.V.I. 1982,  
OPR-1149-MI/PE-82

Respectfully submitted,

*Kenneth W. Reun, Lt. NOAA*

*fa*  
John Zabitchuck  
Lieutenant (j.g.), NOAA

## SIGNAL TAPE LIST

MI-10-5-82

H-10008

730	4	17	43	02905	064	40	01363	139	0000	000000
740	4	17	42	0463 <sup>6</sup> <sub>5</sub>	064	43	0763 <sup>4</sup> <sub>2</sub>	250	0019	000000
750	4	17	41	247 <sup>92</sup> <sub>80</sub>	064	44	2725 <sup>1</sup> <sub>8</sub>	250	0004	000000
760	4	17	41	250 <sup>8</sup> <sub>24</sub>	064	45	5743 <sup>0</sup> <sub>8</sub>	250	0003	000000
900	4	17	40	545 <sup>65</sup> <sub>56</sub>	064	50	2196 <sup>0</sup> <sub>7</sub>	250	0000	000000

## SIGNAL NAME AND SOURCE

STA NO.	NAME	FIELD SOURCE COMP. QUAD # STA # 1982	RECOVERED
730	NUGENT 1919	* 170644 1096	AMCOPS 1982
740	NELTHROPP	*	AMCOPS 1982
750	HESS	*	AMCOPS 1982
760	MARTIN MARIETTA	*	AMCOPS 1982
900	LONG POINT RM1	*	AMCOPS 1982

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY			
ALL AIDS PRIORITELY MAINTAINED NONFLOATING AIDS <del>FOR CHARTS</del>				LOCALITY				<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)			
REPORTING UNIT (If field party, ship or office)		STATE		DATE		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED			
NOAA SHIP <u>MR. MITCHELL ST. CROIX US.VI.</u>		<u>KRAUSE LAGOON CHANNEL</u>		<u>23 APR 82</u>							
CHARTING NAME		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		LATITUDE		LONGITUDE		OFFICE		FIELD	
OPR PROJECT NO.		SURVEY NUMBER		D.M. Meters		D.P. Meters					
<u>OR-149-MI/PE-82</u>		<u>MI-10-5-82</u>		<u>17° 41'</u>		<u>64° 45'</u>				<u>** F-2-6-L/V 4-18-82</u>	
<u>R "4A"</u>		<u>FIXED LIGHT Krause Lagoon Channel Light 4A</u>		<u>15.66</u>		<u>30.58</u>				<u>(insert) 25641</u>	
<u>* "5"</u>		<u>FIXED LIGHT, 14 FT, PASSIVE-FL</u>		<u>20.26</u>		<u>38.28</u>				<u>** F-2-6-L/V 4-18-82</u>	
<u>"6"</u>		<u>FIXED LIGHT " Qk Fl G</u>		<u>27.15</u>		<u>37.58</u>				<u>" "</u>	
<u>"7"</u>		<u>FIXED LIGHT " Fl G 4 SEC</u>		<u>30.98</u>		<u>48.02</u>				<u>" "</u>	
<u>R "8"</u>		<u>FIXED LIGHT " Fl R 2.5 SEC</u>		<u>33.06</u>		<u>41.18</u>				<u>" "</u>	
		<u>* also Krause Lagoon Cross Channel Range front light</u>									
		<u>AC L 306(82)</u>									
		<u>L 660(82)</u>									

\*\* LOCATED BY RANGE/RANGE WITH DEL NOTE

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS. AMY ORRIS
POSITIONS DETERMINED AND/OR VERIFIED	ENS. AMY ORRIS
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<p style="text-align: center;"><b>INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'</b> (Consult Photogrammetric Instructions No. 64.)</p>	
<p><b>OFFICE</b></p> <p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p>	<p><b>FIELD (Cont'd)</b></p> <p><b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b> EXAMPLE: P-8-V 8-12-75 74L(C)2982</p>
<p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p><b>A. Field positions* require entry of method of location and date of field work.</b> EXAMPLE: F-2-6-L 8-12-75</p> <p><b>**FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b></p>	<p><b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b></p>

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY	
ALL AIDS PRIVATELY MAINTAINED NONFLOATING AIDS <del>FOR CHARTS</del>		LOCALITY		DATE		<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)	
REPORTING UNIT (If field party, ship or office)		STATE		METHODOLOGY		METHOD AND DATE OF LOCATION	
NOMA ship MT Mitchell		ST Croix, USVI		KRAUSE LAGOON CHANNEL		OFFICE	
HAVE <input checked="" type="checkbox"/> HAVE NOT <input type="checkbox"/> The following objects have been inspected from seaward to determine their value as landmarks.		SURVEY NUMBER		DATUM		FIELD	
JOB NUMBER Register No H-10008		MI-10-5-82		Puerto Rico Datum		CHARTS AFFECTED	
OPR PROJECT NO. OR-I/149. M/TIPE 82		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		POSITION		CHARTS AFFECTED	
CHARTING NAME		LATITUDE		LONGITUDE		CHARTS AFFECTED	
		D.M. Meters		D.P. Meters			
"3" Fixed LT	FL 4 sec "3"	17° 41'	07.55	64° 45'	29.55	* F-3-L/V 4-14-82	25641 (insert)
"4" Fixed Light	FL R 4sec "4"	17° 41'	07.13	64° 45'	26.88	"	"
Occ G Fixed Light	Cross Channel RR LT 4 sec 28A	17° 41'	18.07	64° 45'	42.58	"	"
"9" Fixed LT	FL G 4 sec "9" Krause Lagoon Channel Light	17° 41'	43.90	64° 45'	52.80	F-5-US-V 4-14-82	"
"10" Fixed LT	FL R 2.5 sec "10"	17° 41'	46.10	64° 45'	48.90	"	"
"11" Fixed LT	FL G 4 sec "11"	17° 41'	56.80	64° 46'	00.50	"	"
"12" Fixed LT	FL R 2.5 sec "12"	17° 41'	58.86	64° 45'	56.90	"	"
"13" Fixed LT	FL R "13"	17° 42'	09.60	64° 46'	08.30	"	"
"14" Fixed LT	FL R 2.5 sec "14"	17° 42'	11.60	64° 46'	04.70	"	"
"15" Fixed LT	FL G 6 sec "15"	17° 42'	11.20	64° 46'	14.90	"	"

APPENDIX "I"

MC L 306(82)

\* RANGE-RANGE DIZ NOT VISUALLY VERIFIED ONLY; WAS NOT NOTICED BY PRESENT SURVEY.

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS. AMY ORRIS
POSITIONS DETERMINED AND/OR VERIFIED	ENS. AMY ORRIS
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  
 (Consult Photogrammetric Instructions No. 64.)

OFFICE	FIELD (Cont'd)
<p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b>            Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.            EXAMPLE: 75E(C)6042            8-12-75</p>	<p><b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b>            EXAMPLE: P-8-V            8-12-75            74L(C)2982</p>
<p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b>            Enter the applicable data by symbols as follows:            F - Field            L - Located            V - Verified            Vis - Visually</p> <p>5 - Field Identified            6 - Theodolite            7 - Planetable            8 - Sextant</p> <p>A. Field positions* require entry of method of location and date of field work.            EXAMPLE: F-2-6-L            8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p><b>II. TRIANGULATION STATION RECOVERED</b>            When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.            EXAMPLE: Triang. Rec.            8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b>            Enter 'V-Vis.' and date.            EXAMPLE: V-Vis.            8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY			
ALL AIDS PRIVATELY MAINTAINED NONFLOATING AIDS <del>OR</del> <b>LANDMARKS FOR CHARTS</b> <i>of Landmarks</i>				LOCALITY				<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)			
REPORTING UNIT (Field Party, Ship or Office)		STATE		DATE		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED			
NOAA ship <i>MT Mitchell</i>		<i>ST Croix, USVI</i>		<i>KRAUSE LAGOON CHANNEL</i>		<i>23 April 82</i>		<i>F-5-VIS-V</i>		<i>25641 (insert)</i>	
REASON FOR DELETION		SURVEY NUMBER		DATUM		POSITION		OFFICE			
The following objects HAVE <input checked="" type="checkbox"/> <b>HAVE NOT</b> <input type="checkbox"/> been inspected from seaward to determine their value as landmarks. OPR-1149-MI/PE 82 Job Number <i>MI-10-5-82</i> Registry # <i>H-10008</i>		<i>MI-10-5-82</i>		<i>Puerto Rico Datum</i>		LATITUDE D.M. Meters LONGITUDE D.P. Meters					
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	LATITUDE D.M. Meters	LONGITUDE D.P. Meters								
<i>"16" Fixed LI</i>	<i>FL R 2.5 sec "16"</i>	<i>17° 42'</i>	<i>64° 46'</i>	<i>19.60</i>	<i>09.70</i>						
<i>"17" Fixed LT</i>	<i>FL G 4 sec "17"</i>	<i>17° 42'</i>	<i>64° 46'</i>	<i>19.90</i>	<i>22.70</i>						
<i>"19" Fixed LI</i>	<i>FL G 6 sec "19"</i>	<i>17° 42'</i>	<i>64° 46'</i>	<i>23.97</i>	<i>21.16</i>						
<i>FG 113ft Fixed</i>	<i>Krause Lagoon, <del>RG R LF</del></i> <small>Channel Range Front Light</small>	<i>17° 42'</i>	<i>64° 46'</i>	<i>33.7</i>	<i>21.0</i>						
<i>FG 131ft Fixed</i>	<i>Krause Lagoon, <del>RG R LF</del></i> <small>Channel Range Rear Light</small>	<i>17° 42'</i>	<i>64° 46'</i>	<i>42.3</i>	<i>26.37</i>						
<i>CHY</i>	<i>(ANQUITA CHIMNEY 1919)</i>	<i>17° 42'</i>	<i>64° 46'</i>	<i>27.020</i>	<i>46.517</i>			<i>772 (C) 9341</i>		<i>25641</i>	
								<i>11/14/77</i>		<i>4-20-82</i>	

APPENDIX "I"

visually verified only; not donated by present survey  
 MC L-306(82)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS. AMY ORRIS
POSITIONS DETERMINED AND/OR VERIFIED	ENS. AMY ORRIS
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<p style="text-align: center;"><b>INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'</b> (Consult Photogrammetric Instructions No. 64.)</p>	
<p><b>OFFICE</b></p> <p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p>	<p><b>FIELD (Cont'd)</b></p> <p><b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b> EXAMPLE: P-8-V 8-12-75 74L(C)2982</p> <p><b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b></p>
<p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p><b>A. Field positions* require entry of method of location and date of field work.</b> EXAMPLE: F-2-6-L 8-12-75</p> <p><b>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b></p>	<p><b>PHOTO FIELD PARTY</b> <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)</p> <p><b>FIELD ACTIVITY REPRESENTATIVE</b></p> <p><b>OFFICE ACTIVITY REPRESENTATIVE</b></p> <p><input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p>

NOAA FORM 76-40 (8-74)		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY	
Replaces C&GS Form 567.		All Aids PRIVATELY MAINTAINED NON-FLOATING AIDS <del>FOR CHARTS</del>		LOCALITY		<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)	
TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input checked="" type="checkbox"/> TO BE DELETED <input type="checkbox"/>		REPORTING UNIT (Field Party, Ship or Office) NOAA SHIP MT. MITCHELL ST. CROIX, USVI		STATE LIMETREE BAY		DATE 23 MAR 82	
The following objects HAVE <input checked="" type="checkbox"/> HAVE NOT <input type="checkbox"/> been inspected from seaward to determine their value as landmarks.		DATUM PUERTO RICO DATUM		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED	
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station name, where applicable, in parentheses)	POSITION		OFFICE	FIELD		
		LATITUDE D.M. Meters	LONGITUDE D.P. Meters				
"3"	FIXED LIGHT 14 FT. Limetree Bay Channel Light Fl G 5 SEC	17° 40'	64° 44'		F-2-6-4/V 4-8-82		(insert) 25641
"4"	FIXED LIGHT 14 FT. " Fl R 5 Sec	17° 40'	64° 44'		* F-3-4/V 4-9-82		"
"5"	FIXED LIGHT " Fl G 4 sec 5M	17° 41'	64° 44'		"		"
"6"	FIXED LIGHT " Fl R 4 sec 5M	17° 41'	64° 44'		"		"
"7"	FIXED LIGHT " Fl 2.5 Sec 6M	17° 41'	64° 44'		"		"
"8"	FIXED LIGHT " Fl R 2.5 Sec 5M	17° 41'	64° 44'		** F-2-6-4/V 4-20-82		"
"9"	FIXED LIGHT " Fl G 2.5 Sec 5M	17° 41'	64° 44'		"		"
"11"	FIXED LIGHT " Fl G 2.5 Sec 5M	17° 41'	64° 44'		"		"
"LK"	FIXED LIGHT, 14 FT, CHANNEL-JUNCTION LT 19k Fl 6M Junction Light LK	17° 41'	64° 45'		"		"
"4"	FIXED LIGHT, CROSS CHANNEL LT 4 Fl R 2.5 Sec	17° 41'	64° 45'		"		"

\* LOCATED BY RANGE/RANGE DEL MONTE

\*\* LOCATED BY RANGE/RANGE DEL MONTE

NOA 1-306(82)

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.		ALL AIDS PRIVATELY MAINTAINED NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE				FLOATING AIDS <del>FOR CHARTS</del>		ORIGINATING ACTIVITY	
<input type="checkbox"/> TO BE CHARTED	<input checked="" type="checkbox"/> TO BE REVISED	<input type="checkbox"/> TO BE DELETED	REPORTING UNIT (If field party, ship or office)	STATE	LOCALITY	DATE	<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)		
The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED from seaward to determine their value as landmarks.			NOAA SHIP <u>MT. MITCHELL</u>	<u>ST. CROIX U.S.V.</u>	<u>KRAWE LAGOON CHANNEL</u>	<u>23 MAR 82</u>			
OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM		POSITION		METHOD AND DATE OF LOCATION (See instructions on reverse side)		
<u>OPR-I149-M/ME-82</u>	<u>H-10007</u>	<u>MI-10-5-82</u>	<u>Beato Rico Datum</u>		<u>Beato Rico Datum</u>				
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses) <small>Krause Lagoon Channel Entrance Lighted Buoy 1 BLACK FIBERGLASS SEA BUOY, SOLAR POWERED. FL G 4 SEC Krause Lagoon Channel Entrance Lighted Buoy 2 RED FIBERGLASS SEA BUOY, SOLAR POWERED. FL R 6 SEC Lime Tree Bay Channel Lighted Buoy 1 WHITE SPAR MARKER BUOY, SHOWS ANCHOR FOR "1" BUOY Lime Tree Bay Channel Lighted Buoy 2 RED SEA BUOY OK FL R WHITE SPAR MARKER BUOY, SHOWS ANCHOR FOR R "2" BUOY.</small>	LATITUDE		LONGITUDE		OFFICE	FIELD	CHARTS AFFECTED	
		D.M. Meters	"	D.P. Meters	"				
"1"		17° 40'	36" 44.78	64° 45'	66" 16.50		* F-3-L/V 4-9-82	25641	
R "2"		17° 40'	45.70" 44.78	64° 45'	12.05" 17.82		"	"	
"1"		17° 40'	38.58" 38.00	64° 44'	57" 16.58		"	"	
NO MARKINGS		17° 40'	08" 38.00	64° 44'	58" 16.98		"	"	
R "2"		17° 40'	80" 38.05	64° 44'	61" 09.95		"	"	
NO MARKINGS		17° 40'	40" 38.72	64° 44'	61" 09.95		"	"	
NC L-306(82)									
* Located by Range-Range Del Norte.									

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	ENS. AMY ORRIS
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	ENS. AMY ORRIS

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  
 (Consult Photogrammetric Instructions No. 64.)

OFFICE	FIELD (Cont'd)
<p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b>            Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.            EXAMPLE: 75E(C)6042            8-12-75</p> <p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b>            Enter the applicable data by symbols as follows:            F - Field            L - Located            V - Verified            1 - Triangulation            2 - Traverse            3 - Intersection            4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work.            EXAMPLE: F-2-6-L            8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p><b>B. Photogrammetric field positions** require date of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b>            EXAMPLE: P-8-V            8-12-75            74L(C)2982</p> <p><b>II. TRIANGULATION STATION RECOVERED</b>            When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.            EXAMPLE: Triang. Rec.            8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b>            Enter 'V-vis.' and date.            EXAMPLE: V-Vis.            8-12-75</p> <p>**PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS. AMY ORRIS
POSITIONS DETERMINED AND/OR VERIFIED	ENS. AMY ORRIS
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  
 (Consult Photogrammetric Instructions No. 64.)

OFFICE	FIELD (Cont'd)
<p><b>1. OFFICE IDENTIFIED AND LOCATED OBJECTS</b>            Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.            EXAMPLE: 75E(C)6042            8-12-75</p> <p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b>            Enter the applicable data by symbols as follows:            F - Field            L - Located            V - Verified            1 - Triangulation            2 - Traverse            3 - Intersection            4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work.            EXAMPLE: F-2-6-L            8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p><b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b>            EXAMPLE: P-8-V            8-12-75            74L(C)2982</p> <p><b>II. TRIANGULATION STATION RECOVERED</b>            When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.            EXAMPLE: Triang. Rec.            8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b>            Enter 'V-Vis.' and date.            EXAMPLE: V-Vis.            8-12-75</p> <p>**PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>

NDA FORM 76-40 (8-74)		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY	
ALL AIDS PRIVATELY MAINTAINED NONFLOATING AIDS <del>ON</del> FOR CHARTS		LOCALITY		DATE		<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)	
REPORTING UNIT (If field Party, Ship or Office)		STATE		DATE		METHOD AND DATE OF LOCATION (See instructions on reverse side)	
NOAA SHIP DT. MITCHELL ST. CRUIX, USVI LIMETREE BAY		ST. CRUIX, USVI LIMETREE BAY		23 APR 82		OFFICE FIELD	
The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS. OPR PROJECT NO.		DATUM PUERTO RICO DATUM		POSITION LATITUDE D.M. Meters		CHARTS AFFECTED	
JOB NUMBER SURVEY NUMBER		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		LONGITUDE D.P. Meters		CHARTS AFFECTED	
COR-I-149-MI/PE-82 H-10008		MI-10-5-82		17° 41'		(insert) 25641	
"2"	FIXED LIGHT, CROSS CHANNEL LIGHT 2 Krause Lagoon Cross Channel Light 2	17° 41'	22.49	64° 45'	28.71	"	"
"17"	FIXED LIGHT Lime Tree Bay Channel Light 17	17° 41'	48.37	64° 45'	24.88	"	"
"15"	FIXED LIGHT " "	17° 41'	45.78	64° 45'	18.38	"	"
"13"	FIXED LIGHT " "	17° 41'	39.57	64° 45'	15.29	"	"
"5"	FIXED LIGHT, CROSS CHANNEL LIGHTS Krause Lagoon Cross Channel Light 5	17° 41'	32.81	64° 45'	15.77	"	"
"3"	FIXED LIGHT " "	17° 41'	29.44	64° 45'	23.06	"	"
"1"	FIXED LIGHT, CROSS CHANNEL LIGHT " "	17° 41'	26.05	64° 45'	30.48	"	"
** LOCATED BY RANGE - AZIMUTH DEL NORTE MC K. 306(82)							

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	<i>ENS. AMY ORRIS</i>
POSITIONS DETERMINED AND/OR VERIFIED	<i>ENS. AMY ORRIS</i>
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  
 (Consult Photogrammetric Instructions No. 64.)

<p><b>OFFICE</b></p> <p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b>          Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.          EXAMPLE: 75E(C)6042          8-12-75</p> <p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b>          Enter the applicable data by symbols as follows:          F - Field          L - Located          V - Verified          1 - Triangulation          2 - Traverse          3 - Intersection          4 - Resection</p> <p><b>A. Field positions* require entry of method of location and date of field work.</b>          EXAMPLE: F-2-6-L          8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p><b>FIELD (Cont'd)</b></p> <p><b>B. Photogrammetric field positions** require date of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b>          EXAMPLE: P-8-V          8-12-75          74L(C)2982</p> <p><b>II. TRIANGULATION STATION RECOVERED</b>          When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.          EXAMPLE: Triang. Rec.          8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b>          Enter 'V-V's.' and date.          EXAMPLE: V-V's.          8-12-75</p> <p>**PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>
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NOAA FORM 76-40  
(8-74)

Replaces C&GS Form 567.

- TO BE CHARTED
- TO BE REVISED
- TO BE DELETED

REPORTING UNIT  
(Field Party, Ship or Office)

NOAA SHIP MT MITCHELL

STATE

ST. CROIX, USVI

LOCALITY

LIMETREE BAY

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

DATE

23 APR 82

ORIGINATING ACTIVITY

- HYDROGRAPHIC PARTY
  - GEODETIC PARTY
  - PHOTO FIELD PARTY
  - COMPILATION ACTIVITY
  - FINAL REVIEWER
  - QUALITY CONTROL & REVIEW GRP.
  - COAST PILOT BRANCH
- (See reverse for responsible personnel)

The following objects HAVE  BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.

OPR PROJECT NO.

0R2-I49-ME/PE-82

DATUM

PUEBLO RICO DATUM

JOB NUMBER

H-10008

SURVEY NUMBER

MI-10-5-82

METHOD AND DATE OF LOCATION  
(See instructions on reverse side)

CHARTING NAME

DESCRIPTION  
(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)

LATITUDE

LONGITUDE

FIELD

OFFICE

CHARTS AFFECTED

FG

FIXED LT, LIMETREE BAY CHANNEL RANGE-FRONT LT. 165 FT.

17° 42'

64° 44'

58.20

F-5-VIS-V  
4-20-82

25641  
(PIEAT)

FG

FIXED LT, LIMETREE BAY CHANNEL RANGE-REAR LT. 195 FT.

17° 42'

64° 45'

05.00

"

"

FR

FIXED LT, EAST AUXILIARY RANGE-REAR LT. 70 FT.

17° 42'

64° 45'

01.10

"

"

FR

FIXED LT, EAST AUXILIARY RANGE-FRONT LT. 55 FT.

17° 42'

64° 44'

57.0

"

"

visually verified only, not located by present survey.

MC K 306(82)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS. AMY ORRIS
POSITIONS DETERMINED AND/OR VERIFIED	ENS. AMY ORRIS
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	

ORIGINATOR

PHOTO FIELD PARTY

HYDROGRAPHIC PARTY

GEODETIC PARTY

OTHER (Specify)

FIELD ACTIVITY REPRESENTATIVE

OFFICE ACTIVITY REPRESENTATIVE

REVIEWER

QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'  
(Consult Photogrammetric Instructions No. 64)

OFFICE	FIELD (Cont'd)
<p><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p>	<p><b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b> EXAMPLE: P-8-V 8-12-75 74L(C)2982</p>
<p><b>FIELD</b></p> <p><b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p><b>A. Field positions* require entry of method of location and date of field work.</b> EXAMPLE: F-2-6-L 8-12-75</p> <p><b>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b></p>	<p><b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p><b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b></p>

## 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.

*J. Austin Yeager*  
J. Austin Yeager

Captain, NOAA

Commanding Officer

MOA23-113-86

**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

6 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-10008 (MI-10-4-82)  
OPR-I149-MI/PE-82--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)



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-10008

Number of positions	1747
Number of soundings	9073
Number of control stations	21

	<u>TIME-HOURS</u>	<u>DATE COMPLETED</u>
Preprocessing Examination	29	9 JUL 82
Verification of Field Data	571	24 FEB 86
Quality Control Checks	140	
Evaluation and Analysis	70	28 MAY 86
Final Inspection	30	20 JUN 86
TOTAL TIME	840	
Marine Center Approval		16 JUL 86

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

---

TIDE IN H49935 folder

JULY 9, 1982 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): 975-1401 LIMETREE BAY, V.I.

Period: APRIL 8-23, 1982

HYDROGRAPHIC SHEET: H-10008

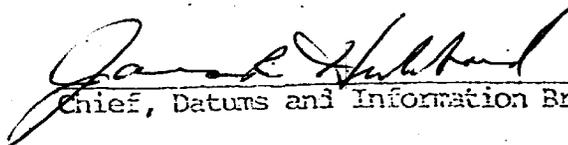
OPR: I-149

Locality: SOUTH COAST OF ST. CROIX, V.I.

Plane of reference (mean lower low water): 2.27 FT

Height of Mean High Water above Plane of Reference is 0.72 FT

REMARKS: ZONE DIRECT

  
Chief, Datums and Information Branch

GEOGRAPHIC NAMES

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			
CANE GARDEN (locality)											1
CANEGARDEN BAY											2
CARIBBEAN SEA											3
KRAUSE LAGOON CHANNEL											4
LIMETREE BAY											5
LONG REEF											6
POINT HARVEY											7
PORT ALUCROIX											8
SAINT CROIX											9
U.S VIRGIN ISLANDS (title)											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

Approved:

*Charles E. Harrington*  
Chief Geographer - N/C62x5

MAY 29 1986

ATLANTIC MARINE CENTER  
EVALUATION REPORT

REGISTRY NO.: H-10008

FIELD NO.: MI-10-5-82

U.S. Virgin Islands, St. Croix, Vicinity of Port Alucroix

SURVEYED: April 8 through April 23, 1982

SCALE: 1:10,000

PROJECT NO.: OPR-I149-MI-82

SOUNDINGS: Ross Model 5000  
Fineline Echo Sounder  
Leadline

CONTROL: Range/Range--Del Norte  
Range/Azimuth--Del  
Norte/Theodolite  
(Wild T-2)  
"See Field Sheet" Method

Chief of Party ..... J. A. Yeager

Surveyed by ..... J. Zabitchuck  
..... E. S. Varney  
..... K. P. Peters  
..... R. D. Henegar  
..... B. L. Coakley  
..... A. E. Orris  
..... C. N. McLean  
..... D. I. Crews

Automated Plot by ..... Xynetics 1201 Plotter (AMC)

1. INTRODUCTION

a. No unusual problems were encountered during the evaluation of this survey.

b. Changes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. Control is adequately addressed in sections F and G of the Descriptive Report.

b. Shoreline originates with Class III registered shoreline maps TP-00007 and TP-00008 of 1977. The maps consist of two parts, the shoreline

map and a photobathymetric overlay. Depths in red on the smooth sheet were determined by photobathymetric methods using photographs of 1977. These depths were transferred from the overlay and provide supplemental information.

Differences exist between the photobathymetric survey and 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 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 fathom in depths of 3 fathoms or less.

b. The standard depth curves were adequately delineated, except for the 0-fathom depth curve because of its 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. Numerous items assigned to be examined on the Notes to Hydrographer prints, prepared by the Photogrammetry Branch, were not accomplished. These included the proper identification of charted landmarks, verification of fixed aids as shown on the shoreline maps, and the investigation of charted piles not visible on air photos.

b. The comparison with prior surveys in paragraph K of the Descriptive Report is not complete. Portions of the area in common with the present survey were not mentioned.

c. No position was provided for the sewer pipe outfall mentioned in section L, paragraph 2, of the Descriptive Report.

d. Little or no hydrography was conducted in the inner harbor area of Limetree Bay, the northern portion of Krause Lagoon Channel, and at Port Alucroix. The hydrographer stated no control was available for Krause Lagoon (Port Alucroix) and the northern half of Krause Lagoon Channel. No justification was provided for the lack of soundings in the Limetree Bay area.

e. NOAA Forms 76-40 "Nonfloating Aids or Landmarks for Charts" were incomplete and not in compliance with section 5.5 of the Hydrographic Manual.

f. No comparison was made with prior survey H-4653c (1924-25) as required by section 6.10.1 of the project instructions.

g. Many of the charted shoal soundings, originating with the prior surveys, were not investigated as required in section 6.10.1 of the project instructions.

## 5. JUNCTIONS

Adequate junctions were effected with H-10009 (1982) on the west and H-10004 (1982) on the south. The junction with H-10007 (1982) on the east was completed during the evaluation of that survey.

## 6. COMPARISON WITH PRIOR SURVEYS

- a. H-4653a (1924-25) 1:20,000
- H-4653c (1924-25) 1:10,000
- H-4653d (1924-25) 1:10,000

These surveys, taken together, cover the area of the present survey and are prior to any alterations from dredging to effect construction of port facilities in Limetree Bay and Krause Lagoon. While the bottom is characterized by numerous coral heads, reefs, and submerged rocks, most of which have not been disproved, differences in less than 10-fathom depths are generally slight. These differences are mainly attributed to methods of surveying. In deeper depths a detailed comparison is precluded because of the scarcity of soundings on the prior surveys. However, the bottom configuration has essentially remained the same.

Significant differences in the portrayal of fringing reef and offshore reefs in the area of Canegarden Bay and Long Reef are noted between the prior and present surveys. The more definitive photogrammetric delineation of these features as depicted on the present survey discredit the prior information.

With the addition of coral heads, rocks, exposed reefs, and some isolated shoal soundings carried forward from the prior surveys, the present survey is adequate to supersede the prior surveys within the common area.

## 7. COMPARISON WITH CHART 25641 (18th Edition, November 28, 1981)

### a. Hydrography

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

Attention is directed to the following items:

(1) The charted items listed below, from miscellaneous sources, were neither verified nor disproved by the present survey and should be retained on the chart.

<u>Items</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
pile	17°41'41"	64°45'07"
submarine sewer	vicinity of 17°41'16"	64°46'36"
29-ft. depth	17°41'06"	64°44'44" ✓
31-ft. depth	17°40'58"	64°44'39" ✓
33-ft. depth	17°40'59"	64°44'35" Note: 33' not charted WAF
lighted Dols P.A. (2)	vicinity of 17°42'28"	64°42'15" Not charted WAF ✓ EAM

(2) Two visible piles, charted in latitude 17°41'29"N, longitude 64°44'54"W and latitude 17°41'25"N, longitude 64°44'43"W from miscellaneous sources, were neither verified nor disproved by the present survey and should be revised to submerged on the chart.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

#### b. Controlling Depths

Present survey depths are in agreement with the charted controlling depth notes for the following privately maintained channels within their common areas. (See section L, paragraph 5, of the Descriptive Report.)

<u>Controlling Depth Note</u>	<u>Immediate Vicinity Latitude (N), Longitude (W)</u>
35 FT APRIL 1965	17°41'15", 64°45'33"
Rep dredged to 38 ft 1974	17°41'27", 64°45'21"
Reported dredged 60 ft 1973	17°41'15", 64°44'30"
Rep dredged to 32 ft 1974	17°41'48", 64°45'18"

#### c. Aids to Navigation

The privately maintained fixed and floating aids located on the present survey are in substantial agreement with the chart and adequately mark the features intended.

### 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.

  
\_\_\_\_\_  
Douglas V. Mason  
Cartographic Technician  
Verification of Field Data

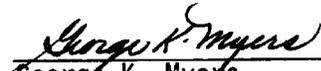
  
\_\_\_\_\_  
Stephen R. Baumgardner  
Cartographer  
Standards Section (N/CG242)  
Evaluation and Analysis

  
\_\_\_\_\_  
Robert R. Hill  
Senior Cartographic Technician  
Verification Check

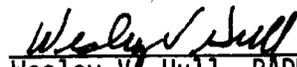
Inspection Report  
H-10008

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/CG242)  
Hydrographic Surveys Branch

Approved

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

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

Hydrographic Index No. 180C

