H10505

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Type of Survey Side Scan Sonar

Field No. MI-05-1-93

Registry No. H-10505

LOCALITY

State Virgin Islands

General Locality St. Thomas Harbor

Sublocality East Gregerie Channel

19 93

CHIEF OF PARTY
CAPT D. B. MacFarland

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DATE APR 1 1996

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FORM 77-28 | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10505

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-05-01-93

State ~~Saint Thomas~~ VIRGIN ISLANDS

General locality ~~U. S. Virgin Islands~~ ST THOMAS HARBOR

Locality EAST GREGERIE CHANNEL ~~St Thomas Harbor, Long Bay to 1.7 nm South of Point Knoll and East Gregory Channel~~

Scale 1:5000 Date of survey 26 SEP- 11 NOV, 1993

Instructions dated August 19, 1993 Project No. OPR-1173-MI-93

Vessel NOAA Ship MT MITCHELL S-222

Chief of party CAPT David B. MacFarland

Surveyed by J.C. Gardner, K.A. Pavelle, M.P.M. Soracco, J.D. Swallow, S.R. Williams, ~~U.J. Gardner, P.G. Lewit, M.E. Ahern, R.L. Harris, M.D. Johnson~~

Soundings taken by echo sounder, hand lead, pole DSF-6000N and INTERSPACE Fathometers

Graphic record scaled by MT MITCHELL survey personnel

Graphic record checked by MT MITCHELL survey personnel

Protracted by N/A Automated plot by ENCAD NOVAJET III PLOTTER (LAB) Zeta 936 Plotter (FIELD)

Verification by ATLANTIC HYDROGRAPHIC BRANCH

Soundings in ~~fathoms feet~~ MLLW ~~meters~~ FEET

REMARKS: Investigation of AWOIS item #'s 4515, 8536-8553, 8555, 8557-8559, 8561, 8562, 8564-8566, & 8569-8572

Basic Hydrography and 200% side scan sonar coverage

Time zones used: 0 (UTC) for data collection,

NOTES IN THE ORIGINAL DESCRIPTIVE REPORT WERE MADE IN RED DURING OFFICE PROCESSING.

AWOIS/SURF ✓ 4/9/96 SJV

APR 1 1996

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

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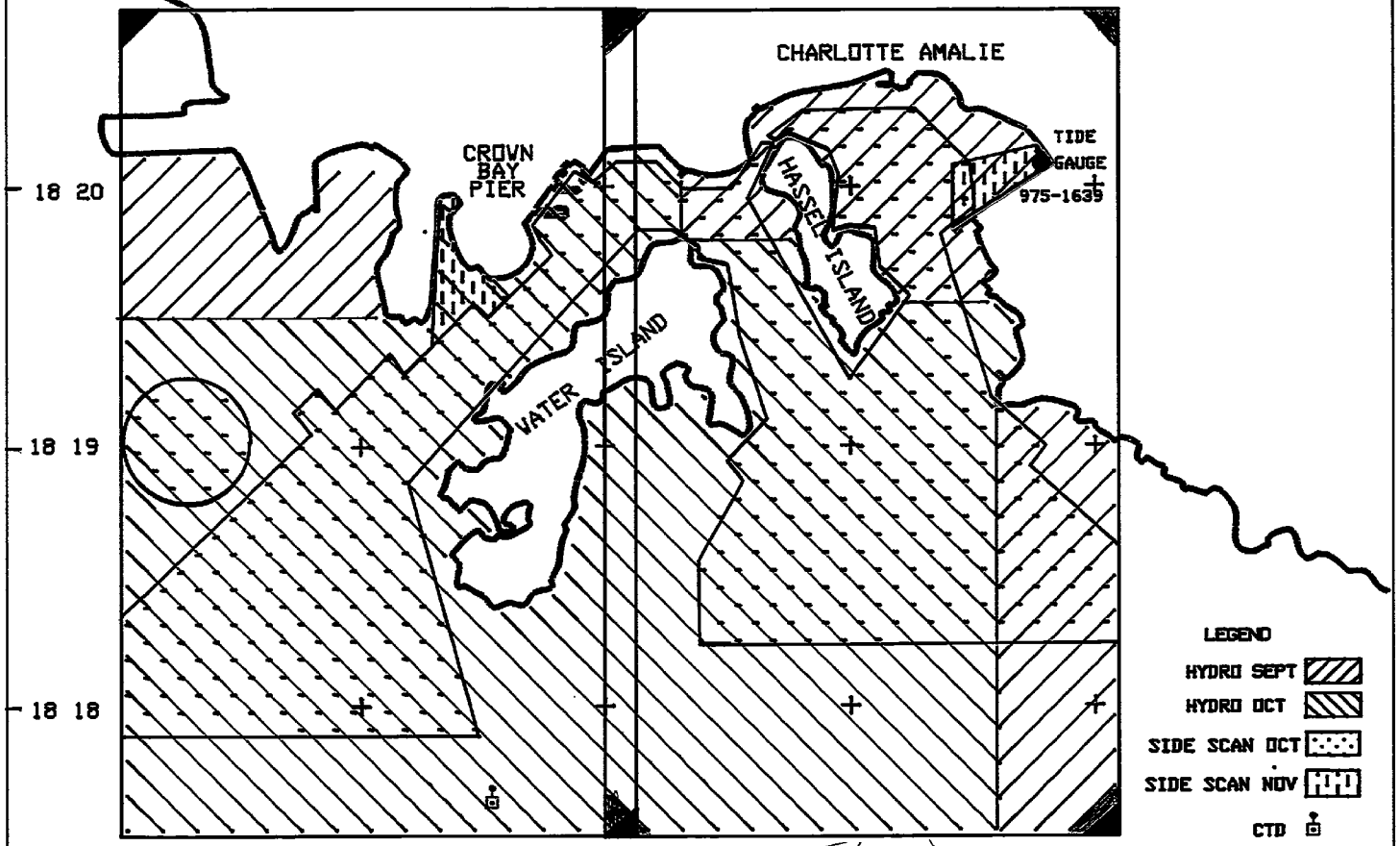
ST THOMAS - VIRGIN ISLANDS
OPR-I173-MI-93
NOAA SHIP MT MITCHELL S-222
CAPT. DAVID MACFARLAND

DGPS REF.STA.
T41

SEP	OCT	NOV		TOTALS
11	26	18	DAYS AT SEA	55
172	484	2	LNM HYDRO	658
0	107	24	LNM SSS	131
2.6	18.5	2.2	SQNM	23.3
1	2	1	CTD'S	4
0	82	99	DIVES	181
0	24	22	AVOIS RESOLVED	46
0	13	35	NEV ITEMS	48



H10505 (1993)
MI-5-1-93

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* FILED WITH THE ORIGINAL FIELD RECORDS

A. PROJECT

A.1 This survey was conducted in accordance with Project Instructions OPR-1173-MI-93, Saint Thomas Harbor, Saint Thomas, U. S. Virgin Islands.

A.2 The original date of the instructions is August 19, 1993.

A.3 The following changes to the original instructions are relevant to this survey:

November 19, 1993 - CHANGE #1: Sets priority for the completion of basic hydrography, item investigations, and side scan sonar corridor coverage. Changes requirement for landmark verification from "elevation above ground and above mean high water" to "elevation above mean high water." Changes the DGPS Estimated System Error from 2.0 meters to 2.5 meters. Adds the option of visual search to all AWOIS item survey requirements due to the clarity of the water in the ST Thomas Harbor.

A.4 This sheet was designated by the project instructions as "St. Thomas Harbor Sheet A"

A.5 Project OPR-1173-MI-93 responds to a request from the Virgin Islands Port Authority. Numerous changes in shoreline and charted offshore features have been noted by the local pilots. The passage of Hurricane Hugo in 1989 created many wreck sites in shoal water and along the shores of St. Thomas Harbor and the surrounding Islands. Increased commercial and cruise ship activity has also contributed to changes in the St Thomas harbor area.

B. AREA SURVEYED

B.1 This survey is located in the St. Thomas Harbor and approaching waters. Existing depths are between 0 and 28 meters. Thirty-two AWOIS Items are included on this sheet. The frequent traffic in the area includes cruise ships, pleasure craft, small ferry boats, and cargo vessels.

B.2 The survey sheet is rectangular and delineated to the north and south by latitudes 18° 20' 42.01" N and 18° 17' 30.00" N respectively, and to the east and west by longitudes 064° 54' 48.00" W and 064° ~~56' 55.40" W,~~ 57'00.00"W respectively.

The primary requirement on this survey sheet was basic hydrography. Two hundred percent side scan sonar coverage was conducted in the major shipping corridors leading into St. Thomas Harbor and within the harbor itself. The SSS coverage area was increased to include the anchorage areas inside and outside the harbor. The areas within AWOIS search radii were also covered with side scan sonar when water depths and conditions allowed. The charted positions and search radii for the AWOIS items on this survey are as follows:

AWOIS Item #	Charted Position	Search Radius (meters)	AWOIS Item #	Charted Position	Search Radius (meters)
4515	018° 20' 01.55" N 064° 56' 39.21" W	100	8536	018° 18' 08.50" N 064° 55' 13.00" W	500
8537	018° 18' 40.51" N 064° 54' 57.26" W	100	8538	018° 18' 42.93" N 064° 54' 55.90" W	100
8539	018° 18' 44.70" N 064° 55' 00.87" W	100	8540	018° 18' 40.84" N 064° 55' 07.32" W	100
8541	018° 19' 18.70" N 064° 55' 25.60" W	100	8542	018° 19' 20.00" N 064° 55' 26.00" W	200
8543	018° 19' 24.00" N 064° 55' 24.00" W	200	8544	018° 18' ~~39.50"~~ 44.24 N 064° 56' ~~07.80"~~ 14.52 W	100
8545	018° 19' 57.84" N 064° 55' 51.52" W	200	8546	018° 20' 00.90" N 064° 55' 38.90" W	200
8547	018° 19' 21.64" N 064° 55' 57.02" W	200	8548	018° 19' 41.64" N 064° 55' 52.72" W	200
8549	018° 19' 43.84" N 064° 55' 52.52" W	100	8550	018° 19' 53.64" N 064° 56' 00.27" W	100
8551	018° 19' 57.34" N 064° 56' 04.12" W	50	8552	018° 19' 55.10" N 064° 56' 01.90" W	200
8553	018° 20' ~~11.00"~~ 03.84 N 064° 56' ~~22.50~~ 21.92" W	100	8555	018° 19' 40.00" N 064° 56' 52.00" W	200
8557	018° 20' 09.04" N 064° 56' 18.92" W	100	8558	018° 20' ~~04.40~~ 17.24" N 064° 56' ~~21.00~~" W	100
8559	018° ~~20' 06.00"~~ 25' 52.84 N 064° 56' ~~19.00"~~ 17.52 W	100	8561	018° 20' ~~06.50"~~ 19.52 13.50 N 064° 56' ~~45.10"~~ 46.50 W	100
8562	018° 20' 24.80" N 064° 55' 43.70" W	50	8564	018° 19' 50.04" N 064° 56' 03.82" W	100
8565	018° 19' 52.34" N 064° 56' 02.52" W	100	8566	018° 19' 53.14" N 064° 56' 03.22" W	100

AWOIS Item #	Charted Position	Search Radius (meters)	AWOIS Item #	Charted Position	Search Radius (meters)
8569	018° 20' 04.03" N 064° 56' 04.02" W	100	8570	018° 20' 08.04" N 064° 56' 06.92" W	100
8571	018° 20' 06.00" N 064° 56' 07.80" W	100	8572	018° 20' 11.00" N 064° 56' 12.00" W	100

B.3 Data acquisition began on September 27, 1993 (DN 270) and concluded on November 11, 1993 (DN 315).

C. SURVEY VESSELS

C.1 A PCDAS equipped Monark was borrowed from the Atlantic Hydrographic Party to assist MT MITCHELL in the shallow water area of the harbor. The following vessels were used during this project:

VESSEL	ELECTRONIC DATA PROCESSING NUMBER	PRIMARY FUNCTION
MT MITCHELL	2220	CTD Casts
JENSEN LAUNCH 1017 (MI-3)	2223	Hydrography/Side Scan Operations, CTD Cast, Bottom Sampling
JENSEN LAUNCH 1002 (MI-4)	2224	Diving Operations, CTD cast
AHP MONARK 770 (770)	770	Hydrography, Dive support, Detached Positions, Shoreline Verification
BOSTON WHALER (MI-1)	N/A	Diving Operations

C.2 There were no unusual vessel configurations used in this survey.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

SEE ALSO THE EVALUATION REPORT.

D.1 Survey data acquisition and processing were accomplished using the HDAPS system with the following software versions:

Program Name	Version	Installation Date (1993)
AUTOST	3.01	17 MAY
BACKUP	2.00	23 JUL
BASELINE	1.14	23 JUL
BIGABST	2.05	23 JUL
BIGAUTOST	No Version Listed	23 JUL
BLKEDIT	2.02	23 JUL
CARTO	2.09	15 AUG
CONTACT	2.09	15 AUG
CONVERT	3.54	23 JUL
DAS_SURV	6.42	15 AUG
DIAGNOSE	3.03	23 JUL
DISK_UTIL	1.00	23 JUL
DP	2.14	23 JUL
EXCESS	4.11	23 JUL
FILESYS	3.10	15 AUG
GRAFEDIT	1.04	23 JUL
HIPSTICK	1.01	23 JUL
HPRAZ	1.26	23 JUL
INSTALL	4.02	23 JUL
INVERSE	2.01	23 JUL
LISTDATA	1.02	23 JUL
LOADNEW	2.05	15 AUG
LSTAWOIS	3.03	23 JUL
MAINMENU	1.10	15 AUG
MAN_DATA	2.01	23 JUL
NEWPOST	6.01	23 JUL
PLOTALL	2.11	23 JUL
POINT	2.10	23 JUL
PREDICT	2.01	23 JUL
PRESURV	7.04	15 AUG
PRINTOUT	4.03	23 JUL
QUICK	2.04	28 JUL
RAMSAVER	1.02	25 JUL
REAPPLY	2.03	23 JUL
RECOMP	2.02	23 JUL
REFTIDE2	1.00	28 JUL
SCANNER	1.00	23 JUL
SELPRINT	2.03	23 JUL
SYMBOLS	2.00	15 AUG
ZOOMEDIT	2.12	23 JUL
GPSCHECK	1.00	5 OCT
TIMECHECK	1.00	2 NOV

Survey data acquisition was accomplished using PCDAS with the following software:

Program Name	Version Date	Program Name	Version Date
CONFIG.EXE	1 JUL 91	OFFSET.EXE	1 JUL 91
PPMENU	10 NOV 90	PROJECT.EXE	21 FEB 90
SATINIT.EXE	14 SEP 92	TABLES.EXE	1 JUL 91
SETPOS.EXE	1 JUL 91	HPCOPY.EXE	17 MAR 90
INITGPS.EXE	16 MAY 92	COLLECT.EXE	21 FEB 90
PREDTIDE.EXE	5 JUN 90	SATSURV.EXE	14 SEP 92
GPS_DAS.EXE	14 MAY 93	CHARTS.EXE	21 FEB 90

A *LOTUS 1-2-3* spreadsheet was used to compute the DGPS performance checks

D.2 Two programs were used to determine velocities: *VELOCITY* version 2.00, and *CAT* version 2.00, both dated December 18, 1992. The *CATCRE.EXE* module of *VELOCITY* was updated June 02, 1993.

D.3 There were no nonstandard automated acquisition or processing methods used. The HDAPS programs *GPSCHECK* and *TIMECHECK* were sent to the ship after the beginning of the project to resolve problems with the data discovered by MT MITCHELL and other hydrographic ships. *GPSCHECK* resolves the problem encountered with the positioning DR Flag being turned on in all data in a dataset. The *TIMECHECK* program takes care of time sequencing problems seen when data is recorded in HDAPS at a one second logging rate.

E. SIDE SCAN SONAR EQUIPMENT

E.1 Side Scan Sonar (SSS) operations were conducted using an EG&G Model 260-TH slant range corrected side scan recorder and a Model 272-T (single frequency) towfish. All side scan operations were conducted from Launch MI-3 (Vesno 2223). The following list shows the equipment serial numbers and corresponding dates used.

Vessel Number	Equipment Type	Serial Number	Dates Used
2223	Recorder	016672	07 OCT - 06 NOV
2223	Towfish	016700	07 OCT - 06 NOV

E.2 The side scan sonar towfish was configured with a 20° beam depression, which is the normal setting.

E.3 The 100 Khz frequency was used throughout the entire survey.

E.4 **a)** In sufficiently deep water the 100 meters range scale was used for main scheme

coverage. In shoaler areas of the sheet (less than 10 meters water depth) the 75 meter or 50 meter range scale was used.

Line spacing for main scheme SSS coverage was 170 meters for the 100 meters range scale, 120 meters line spacing for the 75 meters range scale, and 70 meters line spacing for the 50 meters range scale. Line spacing was adjusted to ensure sufficient overlap with adjacent lines.

b) Daily opening and closing confidence checks were obtained by towing the SSS towfish past fixed or floating aids to navigation or along the cruise-ship pier face. Confidence checks are also possible throughout the day because of the numerous rocks and obstructions along the bottom.

c) The area designated on the chartlet was covered with 200% side scan coverage. AWOIS search radii were covered as required by the AWOIS listings as water depths and shoreline permitted, or unless proven by diver investigation.

d) Side scan sonar lines were run in the due East/West and North/South direction while offshore, in the Harbor areas, and in AWOIS search radii if possible. A direction of 345°/165° was used in the narrow Main Harbor and East Gregerie Channels. Side scan operations in the main harbor and Careening Cove were made difficult due to the numerous sailboats moored in the areas. Swath plot lines in these areas contain wavy lines and areas where the sss fish lost bottom tracking briefly. Additional lines were run in these areas to ensure full sss coverage.

E.4 The towfish was deployed from the stern of Jensen launch 2223 (MI-3).

E.5 Any contact appearing significant was entered into the contact tables. The tables were reviewed and correlating contacts examined. Adjacent side scan sonar coverage was scanned for each contact to see if it appeared on multiple traces. Contacts which occurred only once and appeared insignificant were labeled as such; those appearing multiple times were closely examined and calculated heights compared. All significant contacts were selected for diver investigation.

E.6 Overlap was checked on-line using the real-time plot and the edited swath plot for gaps. All gaps were filled in by running additional side scan sonar lines.

F. SOUNDING EQUIPMENT

F.1 All hydrographic soundings were acquired using either a Raytheon 6000N digital survey fathometer (DSF) [Vessel# 2223] or an Innerspace fathometer [Vessel# 770]. The following list shows the equipment serial numbers and corresponding dates used:

Vessel Number	Manufacturer's Serial Number	Dates Used
2223	B051N	27 SEP - 11 NOV
2223	A122N	02 NOV (1/2 Day)*
770	241	27 SEP - 11 NOV

*Fathometer A122N was installed on vessel 2223 for a half day while repairs were being done to fathometer B051N.

F.2 System checks on launch fathometers were performed using lead lines in the area of survey at depths less than 12 meters. These lines were calibrated as per instructions in the Hydrographic Manual section 7.2.1.2.

F.3 No problems were encountered with data acquisition using the DSF-6000 or the Innerspace fathometers.

F.4 Both the high (100 Khz) and the low (24 Khz) frequency sounding data were recorded during data acquisition. Only high frequency soundings were digitized and selected for plotting. Low frequency sounding data were examined for spikes indicating nearby items. These spikes were added as inserts to the digital records and plotted.

G. CORRECTIONS TO SOUNDINGS

G.1 **a)** The velocity of sound through water was determined by a Seacat conductivity, temperature and density gage (serial number 192472-0284). The sensors on this CTD unit were last calibrated on 7 August and 28 October, 1992. On 26 September, 1993, a simultaneous independent test was made with this CTD and CTD unit 192472-0285, in 27 meters of water. The 0285 CTD unit was last calibrated on 25 June, 1993. Using the comparison utility of the *VELOCITY* program, the percent difference between the two casts was 0.01 at the mid-depth of the cast and 0.00 at the bottom

A Data Quality Assurance test was run for each velocity cast to ensure the meter was within tolerance. The DQA test was performed using hydrometers manufactured by H-B Instrument Company. The ship had problems getting the DQA to pass on the first CTD cast, DN 269. All of the data appeared to be within the required values. This data was passed to Dr. Lloyd Huff, Chief, Hydrographic Technology Program for further analysis. The cast was repeated and the DQA passed. On the second CTD cast, DN 286, taken to 30 meters, the *VELOCITY* program would only process the cast to 18 meters. Dr. Huff was also informed of this problem, but could not provide a solution. On DN 287 the cast was repeated and all worked as expected.

All data were processed using *VELOCITY* Version 2.00 and *CAT* Version 2.00 software. Since two different types of survey launches were used on this survey, with

different transducer depth, two velocity tables were computed for each CTD cast. The computed velocity correctors were entered into the HDAPS sound velocity tables and applied on-line to digitized high frequency soundings. The HDAPS Velocity Tables cited below were computed for a launch transducer draft of 0.6 meters for launch 2223 and 0.4 meters for launch 770. Launch 2223 used HDAPS velocity tables 1,3,5, and 7 while launch 770 used tables 2,4,6, and 8.

Cast Number	Date	Latitude	Longitude	HDAPS Table #	Applied To Day #'s
01	26 SEP 93	18° 17' 00" N	064° 58' 30" W	01/02	269-283
02	14 OCT 93	18° 16' 50" N	064° 57' 25" W	03/04	284-297
03	25 OCT 93	18° 16' 35" N	064° 59' 00" W	05/06	298-311
04	08 NOV 93	18° 16' 41" N	065° 58' 55" W	07/08	312-315

b) There was no variation in the fathometer's instrument initial.

c) No instrument correctors to the fathometers were required.

d) No instrument corrections were determined from direct comparison of bar checks.

Lead line comparisons with the fathometer were made for each vessel on the following days:

VN	DN	Fathometer Serial Number	Lead Line Depth (m)	Digital Depth (m)	Δd (m)
2223	270	B051N	5.0	5.1	-0.1
	279	B051N	10.2	10.1	0.1
	284	B051N	8.1	7.9	0.2
	291	B051N	11.2	11.3	-0.1
	305	B051N	10.4	10.3	0.1
	306	A122N	12.8	12.8	0.0
770	271	241	12.3	12.5	-0.2
	284	241	14.0	14.1	-0.1
	298	241	9.0	9.0	0.0

Fathometer Serial Number	Average Instrument Corrector (m)	Range of Instrument Corrector (m)
241	-0.10	0.2
B051N	0.03	0.3
A122N	0.00	0.0

Except for the corrector computed on DN 284, for vessel 2223, fathometer B051N, the range of correctors for each fathometer falls within 0.2 meters. The value on DN 284 is attributed to human error. If this value is excluded, then the correctors for fathometer B051N would also fall within the 0.2 meter range. These values show that all survey fathometers are working within accuracy requirements. These values were not applies to the survey data as instrument correctors.

Daily bar checks were attempted on launch MI-3. A comparison of digital and analog readings was also done in the check.

e) All sounding correctors were applied to both the narrow (100 Khz) and the wide (24 Khz) beams.

f) The static draft of launch MI-3 (VesNo 2223) was determined in April, 1993 while the launch was out of the water at the Atlantic Marine Center, Norfolk, Virginia. A calibrated steel tape was used to measure the distance from the transducer to a reference line on the launch above the water line. The launch was then put into the water and the distance from the water line to the reference line was measured. The static draft for launch 770 was measured in the same manner upon arriving in the St Thomas harbor. A static draft of 0.6 meters was used in HDAPS Offset tables for launch MI-3 and 0.4 meters for launch 770. (refer to Separates III).*

g) Settlement and squat correctors for the Jensen launch (2223) were determined, using procedures outlined in the Hydrographic Manual, on the Elizabeth River on April 30, 1993. An observer, stationed with a level on a pier, measured changes in relative height as each launch ran toward and away from the observer at various speeds. The settlement and squat correctors for the 770 boat were determined by the same method on September 27, 1993 in the West Gregory Channel, St Thomas harbor. The settlement and squat correctors were applied to soundings through the HDAPS offset table. Refer to Separates III for copies of the observed settlement and squat data. *

h) Neither launch is equipped with a heave, roll and pitch indicator.

G.2 The HDAPS program "Reapply" was frequently used for data collected on the same day as a velocity cast. Casts were performed every other week, so the new velocity tables for those days were reapplied to the data before processing.

G.3 There were no special correctors to be applied to the fathometers or velocity zoning required.

G.4 The ship carries a shallow water (0-21 meter) (0-69 FT) and a deep water (0-42 meter) (0-138 FT) pneumatic depth gauges, serial numbers 245419 and 245418 respectively. These gages were calibrated by 3-D Instruments, Inc. of Huntington Beach, CA on August 18, 1993 and April 28, 1993 respectively. None of the calibration values exceeded 0.1 meters. Therefore, no correctors were applied to the pneumatic depth gauge least depths. On October 22, DN

* DATA FILED WITH FIELD RECORDS.

295, the shallow water pneumatic depth gauge failed and was returned to the manufacturer. After that date all least depths requiring the pneumatic depth gauge were taken with the deep water gauge. On November 4, DN 308, the deep water pneumatic depth gauge failed the leak test. All fittings were checked and a small leak was found. This was repaired and the gauge returned to operations the next day.

System checks were performed on the gauges as illustrated in HSG 55. The gauge checks worked well when the wire angle was 10° or less. When currents created wire angles of greater that 10° a valid agreement between the leadline and the gauge could not be reached. System checks were always performed before the gauges were used.

G.5 Sea conditions greater than one meter affected the fathogram, creating a trace of constant peaks and deeps. Launches are not equipped with heave, pitch and roll indicators, so MITCHELL personnel scanned the sea action out of the fathograms and edited the selected soundings accordingly.

G.6 **a)** The tidal datum for this project is mean lower low water. The operating tide station at Long Bay, Charlotte Amalie harbor, (station number 975-1639) served as control station for tides during the course of this survey. Predicted tidal data for St. Thomas harbor was provided on floppy magnetic disk after the start of the project. APPROVED TIDES AND ZONING WERE APPLIED DURING OFFICE PROCESSING.

b) Since the primary tide gage was located in the St Thomas harbor no height or time correctors needed to be applied. The tide tables were applied on-line and during processing of sounding data. For a more detailed overview of tidal information refer to Appendix V. DATA FILED WITH FIELD RECORDS.

c) No zoning was required for this project.

H. CONTROL STATIONS - SEE ALSO THE EVALUATION REPORT.

H.1 The horizontal datum for this project is the North American Datum of 1983 (NAD 83).

H.2 A list of horizontal control stations is ~~located in Appendix III~~ APPENDED TO THIS REPORT.

H.3 A NOAA VHF DGPS reference station was established at horizontal control station T-41 and was the only station used for positioning. Station T-41 meets the criteria for a Second-Order Class I horizontal control station. It was established by the Virgin Islands Cadastral Survey in 1955. The position for station T-41 was obtained from the NGS database and was verified by MT MITCHELL and AMC EED personnel using the NOS *MONITOR* program.

In the operations of the *MONITOR* program, two GPS receivers were set up over the control station. An Ashtech M-XII GPS receiver generated correctors for each GPS satellite. These correctors are then transmitted to an Ashtech DGPS receiver which computes a DGPS position based on the GPS satellites and the correctors. This position is then feed into a computer running the *MONITOR* program, which compares this computed position to the known position of the control station. This program is left running for a 24 hour period and a statistical analysis is performed by the *MONITOR* program on this data. These observations were run on station T-41 on September 22-23, 1993 and showed that the mean radial error between the DGPS position and the NAD83 NGS position of T-41 differed by 1.254 meters. A copy of the *MONITOR* program scatter plot and error statistics is included in Appendix III. DATA IS APPENDED TO THIS REPORT.

H.4 No horizontal control stations were established by the MT MITCHELL during this survey. However, the Field Surveys Unit of the Field Photogrammetry Section conducted a horizontal control survey in the St Thomas harbor area for MT MITCHELL. This survey was run to establish and verify landmarks and aid to navigation for MT MITCHELL's hydrographic survey. They also established photogrammetric control points for a new shoreline manuscript on the area.

H.5 The Horizontal Control Report will be submitted by the Field Surveys Unit.

H.6 No problems or anomalies were encountered in positioning control of this survey.

I. HYDROGRAPHIC POSITION CONTROL

I.1 The primary method of sounding position control was Differential Global Positioning System (DGPS).

I.2 Tests conducted by the Systems Engineering Branch, Office of NOAA Corps Operations and the Hydrographic Surveys Branch showed that with the recent improvements in the Ashtech DGPS receivers and the full implementation of the GPS constellation, the current positional accuracy of the DGPS was much better than originally considered. Based on these tests the Expected System Error (ESE) was lowered from 4.0 meters to 2.5 meters. This improvement increased the overall accuracy to the point where 1:5,000 scale surveys could reliably be controlled by DGPS. Use of the 2.5 meter ESE was authorized in the project instructions.

The Estimated Distance Error (EDE) value is calculated at 2 meters per 100 nautical miles from the DGPS reference station. In this survey the maximum range from the DGPS reference station was 5 nautical miles. At this range the EDE was 0.1 meters. This is a negligible value and was not used to calculate the maximum allowed HDOP value (as described in section 3.4.2 of the FPM). With a maximum Expected Positional Error (EPE) of 7.5 meter (1.5 mm at a 1:5,000 scale), the maximum allowable HDOP for this project is

3.0. This was calculated by the formula given in section 3.4.2 of the FPM.

The HDOP value remained far below 3.0 for most of the survey. On occasions, the HDOP would increase drastically as the GPS satellite configuration changed, the DGPS correctors would not be received for several seconds at a time, or several satellites would be obscured by structures. When this happened HDAPS entered "DR Mode" and began estimations of the vessel's position. If HDAPS was in the "DR Mode" for twenty seconds and failed to receive good navigation information, it forces a fix at the next selected sounding and breaks the survey line, thereby preventing questionable positioning data.

MT MITCHELL encountered several problems with DRed data on this project. When HDAPS is in the DR mode it sets a flag in the data to indicated that it is DRing. On several occasions this flag was inadvertently set by the system when it was started and remained on throughout the day affecting all data in all datasets. The HDAPS office developed a program (*GPSCHECK*) which will reset all DR flags and only set the flag on the appropriate data.

When HDAPS DRs, it uses the last computed course and speed made good of the launch. If this value is inaccurate or the launch cox'n make any course or speed changes during this period, the position estimate of the DR is not valid. This will result in a positional jump in the trackline when good navigation returns. Fortunately, these jumps are usually very obvious and can be smoothed out during processing. Additionally, the system currently allows survey lines to be started or DP's taken while in the DR mode. This should not occur. DRed data collected during these times was deleted. During many of these events the launch OIC's attention is on other things beside looking at the HDAPS screen. It is recommended that HDAPS give some sort of audible alarm when it enters the DR mode to bring this event to the cox'n and OIC's attention.

When the PCDAS installed on the 770 Monark enters the DR mode, it does not break the line if the DRing goes over twenty seconds. MT MITCHELL personnel had to pay particular attention to the positional data of this boat. Data exhibiting this problem was deleted and rerun.

I.3 The manufacturer, model number and serial number of all DGPS equipment used during this survey is identified below:

VESSEL #	MODEL	S/N	DATES USED
Shore Station	Ashtech M-XII DGPS Receiver	700354B2501	27 SEP - 11 NOV
Shore Station	Maxon SM-3010-H VHF Receiver	20813476	27 SEP - 11 NOV
Shore Station	GPS Antenna	700228D2313	27 SEP - 11 NOV

VESSEL #	MODEL	S/N	DATES USED
2223	Ashtech DGPS Receiver	700417B1197	27 SEP - 11 NOV
2223	Maxon SM-3010-H VHF Receiver	20813451	27 SEP - 11 NOV
2223	GPS Antenna	700391A0520	27 SEP - 11 NOV
770	Ashtech DGPS Receiver	700417B1309	27 SEP - 11 NOV
770	Maxon SM-3010-H VHF Receiver	01007764	27 SEP - 11 NOV
770	GPS Antenna	700378A0270	27 SEP - 04 NOV
		700391A0504	04 NOV - 11 NOV

I.4 DGPS performance checks were performed daily prior to data collection by using the fixed point DGPS check procedure described in section 3.4.4.2 of the Field Procedures Manual. MT MITCHELL use a horizontal control stations or its reference mark for these checks. Station SUB 1985 was set by the NOAA Ship PEIRCE in 1985 for a Field Examination in the area, but the horizontal position of the disk was never established. An Airport Surveys Group party established a position for SUB 1985, and its reference mark, RM1, by traverse during an airport survey in January 1993. The positions of these two points are listed below.

These stations are located approximately 50 meters apart on the end of the Crown Bay pier (old Sub Base pier) where the MT MITCHELL was berthed during the survey. Each morning the launches would pull up alongside a marked section of the pier where one of the control station were located. The actual distance from the control station to the launch's GPS antenna was measured and used as an offset. The calculated Easting and Northing values of the control station were entered into HDAPS as a target so that HDAPS would determined the range between the launch antenna position and the control station. The HDAPS online screen, displaying the target range, was then dumped to the on-line printer four times to record the target range value in meters and the launch's Easting and Northing position. The observed range to target was then entered into a *LOTUS* spreadsheet where the measured offset was subtracted from it to arrive at the Delta P_{obs} value. The performance check was considered satisfactory if at least three of the Delta P_{obs} values were less than the project EPE_{max} of 7.5 meters.

Control Station Position	Latitude & Longitude	Easting & Northing
Reference mark	18° 19' 54.1679" N	E 11734.3
RM 1	65° 57' 09.0484" W	N 09044.2

In a few cases during the beginning of the survey, the launch crew forgot to enter the control station's easting and northing values into HDAPS as a target before the performance check. For these instances a second spreadsheet was prepared which calculated the target range value based on the observed launch's easting and northing values and the station's known position. Copies of all performance checks can be found in Separates III.*

I.5 No calibration data is applied to the DGPS raw positioning data.

I.6 **a)** No unusual methods of operation were employed with the DGPS equipment.

I.6 **b)**When ever the launch was working along side a steep hill or the hull of a ship, a large portion of the horizon was obscured and signals from GPS satellites in that area were lost. In these instance HDAPS would go into the DR mode. This usually was not satisfactory because the launch was not running in a straight line at the time. The only way around this problem was to return to the area when the majority of the satellites were in the un-obstructed portion of the sky.

c) No unusual atmospheric conditions were encountered.

d) No weak signals or poor geometric configurations were observed.

e) No adjustment or systematic errors were discovered.

f) Antenna positions were corrected for offset and layback, and referenced to the position of the DSF-6000N or Innerspace fathometer transducers. These correctors were located in the HDAPS Offset table, and applied on-line to the positioning algorithm. Launch 2223 used Offset table #7 and launch 770 used table #9. Refer to Separate III for a copy of offset tables used during this survey.*

During preparation of the data for final submission it was discovered that Offset Table #9, for launch 770, did not have the GPS antenna offset, layback, or antenna height values applied. This resulted in a 0.3 meter shift in the horizontal position of all data collected by launch 770. This shift was not considered significant enough to reprocess and replot all data. It is requested that the Atlantic Hydrographic Section reapply these offsets as they process the survey.**The offset table values are shown below: * * APPLIED DURING OFFICE PROCESSING.

Offset Table #9, GPS receiver 1:

Offset	Layback	Depth
+0.1	-0.3	-2.4

g) Offset and layback distance for the A-frame (tow point) on launch 2223 was located in HDAPS Offset table #7 and applied on-line. These offsets, along with the cable length, towfish height, and depth of water, were used by the HDAPS system to compute the position of the towfish. Refer to Separate III for offset tables.*

* DATA FILED WITH FIELD RECORDS.

J. SHORELINE - SEE ALSO THE EVALUATION REPORT.

J.1 All shoreline in this survey area comes from NOAA chart #25649 (scale 1:10000). It was blown up to a 1:5000 scale for this project. It was noted early in the project that the charted shoreline and the current hydrography did not agree in several places. This is detailed below.

J.2 All shoreline features shown on chart #25649 within the survey area were either verified or disproved. MT MITCHELL had assistance from the Field Photogrammetry Section for this shoreline verification. The Field Photogrammetry Section will be compiling a new shoreline manuscript of the St Thomas chart with recent photography and the data from this project. The field sheet identifies each item by reference number or detached position fix number. The estimated height/depth of each item (corrected to MLLW) is annotated on the field sheet.

J.3 Field notes are contained in the "Sheet 'A' Shoreline Verification" logbook, and were transposed onto the final field sheet.

J.4 Shoreline verification was completed on all shoreline within the limits of this survey.

J.5 The shoreline on chart #25649 is not accurately charted. The shape of the shoreline and the details it represents appear to be accurate, however the horizontal position of the shoreline is not. A similar discrepancy was noted in the positions of the charted lankmarks. All landmarks and fixed aids to navigation were positioned during this survey to Third Order Class I, or better, accuracy on the NAD83 datum. The currently charted shoreline and landmarks positions were converted from the Puerto Rician datum to NAD83. It appears that this datum shift introduced a small error into the charted shoreline and landmarks. A *NONFLOATING AIDS OR LANDMARK FOR CHARTS* form is include in Appendix II* showing the updated positions for the landmarks. Final positioning of the shoreline should be resolved in the new shoreline manuscript being prepared by Photogrammetry. * APPENDED TO THIS REPORT.

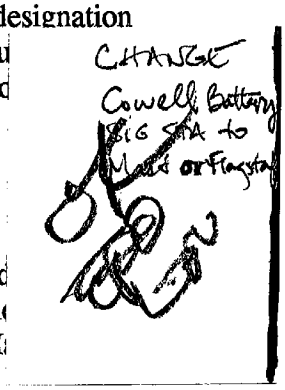
During shoreline verification detached positions were take at various locations around the harbor area to assist in transferring the shoreline from the chart enlargement. Because this shoreline is still transferred from the chart it is displayed in brown on the final shoreline field sheet. Only the small inlet along Sand Bay, on Water Island, which is now closed up is shown in red.

J.6 Detached positions were taken to verify all new rocks and disprovals of charted rocks if sea conditions permitted. Each item is described in the field notes and depicted on the final field sheet in red.

The local Pilot Association and several other interest groups request that the compass rose on

chart #25649 be moved so that the St Thomas hospital located in approximation position 18/20/25.99 N, 064/54/52.43 W, can be charted as a landmark. The pilots use part of the hospital as a range when bringing in cruise ships to the main dock or anchorage. The actual shape and location of the building can be obtained from the NOS photography flow in the harbor in January of 1992.

It is also requested that the Cowell Battery Signal Station charted in position 18/19/32.42 N, 064/55/57.45 W, be be changed from the designation of "Signal Station" to the designation of "Mast" or "Flagstaff". The station is no longer manned and has created confu several foreign ships have tried to signal the station to request pilots or other infc



K. CROSSLINES

K.1 Crosslines on survey H-10505 equaled 9% of the total main-scheme sound Crosslines were run at 90 degree intersections across the north / south main-sch at near 45 degree intersections to main-scheme lines in the East Gregerie and M channels.

K.2 Crossline to main-scheme sounding intersection comparisons were excellent, with all of the approximately 800 crossline soundings agreeing to within 0.3 meters or less with main-scheme soundings. CONCUR

K.3 An intersection was considered a discrepancy if a crossline sounding on or near a main-scheme sounding differed by more than 0.3 meters. The discrepancies were reconciled by viewing the fathometer traces of the main-scheme and comparing them to those of the crossline. Originally nine soundings fell outside the 0.3 meter comparison range and were investigated further. After individual analysis of these discrepancies, each was found to be caused by and adjusted to compensate for sea action scanning or processing errors. After correction all intersections fell within the 0.3 meter requirement.

K.4 The vessel and sounding equipment used to run crosslines was also used in the main-scheme.

L. JUNCTIONS - SEE ALSO THE EVALUATION REPORT.

L.1 The western edge of this survey sheet junctions with the eastern edge of survey sheet H-10506. This a contemporary survey which was run in the same time frame as this survey. Survey sheet H-10506 is bounded by the following positions:

018:17:30.00 N	064:56:52.00 W
018:17:30.00 N	064:59:01.39 W

018:20:48.39 N	064:59:01.43 W
018:20:48.40 N	064:56:52.00 W

L.2 Agreement of soundings in the junction area is excellent, with all soundings comparing to within 0.3 meters or less. In addition, the depth contours drawn on each survey sheet match. No problems with the survey junction were found. CONCUR

L.3 No sounding discrepancies in the junction area were noted.

L.4 There are no recommended adjustments to sounding features or depth contours.

M. COMPARISON WITH PRIOR SURVEYS – SEE ALSO THE EVALUATION REPORT.

M.1 The Project Instructions only require comparison with the most recent survey in the area. The following surveys were used for comparison:

Registry #	Scale	Date
H-8877	1:5000	1966
H-9271	1:10000	1972

M.2 The area surveyed in H-8877 is the most recent survey that covers most of the area of H-10505. A small portion of the offshore area of this survey was compared to H-9271. Twenty soundings from H-8877 and eight soundings from H-9271 were compared with H-10505. On average, the soundings of H-10505 were 0.3 meters deeper than soundings on both H-8877 and H-9271. This difference was also seen on contemporary survey H-10606.

M.3 All the significant wrecks and obstructions from the H-8877 survey included in this survey area are discussed under section N. The position of major shoal and rock areas from all three surveys agree.

The datum for H-8877 and H-9271 was Puerto Rician. No method of converting between this datum and NAD83 was available. This was compenstated for by matching up the shoreline of each of these two prior surveys with the repositioned charted shoreline. This method indicated that the NAD83 datum needed to be shifted approximately 8 seconds of lattitude to the south to line up with the Puerto Rician datum. SEE SECTION H. OF THE EVALUATION REPORT.

M.4 The trend of the bottom slope of H-8877 and H-9271 agree with the trends shown on H-10505. The following steps were taken to ensure that the source of the discrepancies, mentioned in Section M.2 above, did not originate with this project.

Efforts at rectifying the discrepancy with H-8877 turned first to data processing. The

first step was to verify that all correctors had been properly applied to survey H-10506 soundings. Raw soundings were extracted from data randomly, and correctors were applied manually. This investigation found that all sounding correctors were applied correctly.

The next effort was proving that survey H-10506 sounding data is accurate. The fathometers' accuracy in each Jensen survey launch were checked very carefully by leadline and steel tape on DN 306, see Lead Line Comparisons Table G.1.d. Each fathometer was found to be within +0.1 meters of the manually measured depth.

An external explanation was then sought for the discrepancy. Since this survey's soundings were taken to the tenth of a meter, it was hypothesized that the prior surveys' soundings, taken in feet, were shoaler because of a larger round off interval (one tenth of a meter is about 0.33ft). To check this hypothesis, consecutive equal soundings (i.e. a string of seven 15ft soundings) from prior survey H-8877 were compared to survey H-10506 soundings in the same locations. If the deepening trend was caused by a larger prior survey round off interval, then the H-10506 sounding at either end of the string should equal the comparable sounding from H-8877. This investigation found that the larger round off interval could cause a difference of +0.1 meters. This was not large enough to the cause of the discrepancy .

The next possibility explored was that the predicted tide correctors were inaccurate. Mr. Steve Gill of Tidal Analysis Branch (N/OES22) was contacted. He provided the ship with a copy of a graph of the actual tidal data from the Next Generation Water Levels gage installed in Charlotte Amalie. This showed that the observed tides were running approximately +0.15 meters above the predicted values during most of the survey period. This difference was too small to explain the 0.3m discrepancy observed between surveys H-10506 and H-8877.

Several locals in the area report that the Virgin Island are very geologicly active. The deepening trend may be caused by tectonic shifts (eg. earthquakes).

A single cause for the differences observed between this survey and the prior surveys could not be conclusive determined. It may be possible that several or all of these factors are contribution to this difference. The ship has done its best to prove that the problem does not reside in the current survey. We feel that this data is accurate and adequate for superseding surveys H-8877 and H-9271 and for updating the charted depths. CONCUR

M.5 No non-NOS / USC&GS surveys were provided or comparisons conducted.

N. ITEM INVESTIGATION REPORTS

Thirty-two AWOIS items were investigated within this survey area. Twenty-two significant new items were also discovered in the survey area. Diver Investigation Forms were filled out for each report. Sketches were made for each significant item listed below.

A total of 152 contacts were entered into the HDAPS contact utility program. Sixty-four of the contacts correlated with other contacts or were considered significant for diver investigation. Through diver investigation, some of the sonar contacts were discovered to be only seagrass patches or insignificant debris. All the newly found significant items are addressed as items A-3 - A-23 below.

AWOIS 4515

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/01.55 N 064/56/39.21 W Search Radius: 100

Datum: MLLW

Type of Feature: Visible Wreck

Source: FE279/85-- OPR-I191-PE-85; Uncharted visible wreck found in LAT 18-20-08.71 N, LONG 064-56-40.69 W; Bares 4-8 feet at MHW; Described as a barge 35 feet wide. Evaluator recommends charting a hulk as shown on survey.

Survey Requirements: Visual Search, Bottom Drag, Diver Investigation, Salvage Documentation.

Method of Investigation: Side scan sonar was conducted on DN 306 / Diver investigation was conducted on DN 301 and DN 312.

Results of Investigation: Side scan sonar (200%) was completed in 95% of the required AWOIS search radius. Five percent of the search radius was in a foul area making it impossible to tow a side scan fish. Divers investigated the portion of the radius not covered by side scan sonar. The side scan sonar revealed several small contacts that were investigated by divers on DN 312. On DN 301 divers descended down a buoy dropped on the charted position of the AWOIS item and conducted a pattern search of the area. Water visibility was 30 feet. Nothing but small debris was discovered in the area. During SSS contact investigation, divers discovered several pilings laying flat on the bottom, and some large diameter pipe that is discussed under item A-21. No evidence of the barge was found. Detached position #4894 was taken at the charted position of this item for disproval dive site verification.

Mr. Steve Voris of Hi-Tech Divers, a local dive shop, reported that this item was destroyed during hurricane Hugo in 1989.

Comparison with Prior Surveys: See "Source" section above.

Comparison with Chart: Chart #25649 depicts a rectangular shaped box labeled "Wk."

Recommendation: Recommend deleting the "Wk" annotation and rectangular dashed box representing this item from chart #25649. CONCUR

AWOIS 8536

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/18/08.50 N 064/55/13.00 W Search Radius: 500

Datum: MLLW

Type of Feature: Submerged Pontoon - Position Approximate

Source: CL397/32-- Letter, E.L. Simmons, Agent, Harbor Dept., St. Thomas to U.S.C. & G.S. Dated May 8, 1932. Lights on sunken dry dock discontinued (dry dock removed). Five pontoons towed out of harbor and sunk. Dangerous submerged wreck, PA, Plotted in LAT 18/18/08.5 N, LONG 064/55/13.0 W (Scaled from chart 25649, 1:10000 scale, NAD 83). Pontoon is 100 x 50 x 10 feet. Uncharted as of 6/11/93. Brought to attention of N/CG22X3 by N/CG241 for reapplication of CL397/32 and possible NM.

Survey Requirements: 200% Side Scan Sonar, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 280 / A diver investigation was conducted on DN 281. Complete 200% SSS coverage was not conducted because the item was identified through diver investigation.

Results of Investigation: The item appeared on side scan sonar records on DN 280 at fix numbers 3146.0, 3162.65, 3167.5, 3169.5, and 3172.6.

The diver investigation revealed a sunken pontoon / barge measuring 31.7 X 15.5 X 3.0 meters at position 18/18/11.018 N, 064/55/09.045 W (DP #3287). The least depth measured by pneumo-gauge was 17.63 meters corrected to MLLW. Surrounding water depths were 21 meters. The item is not a danger to navigation.

This item matches the AWOIS description.

Comparison with Prior Surveys: Item was not included

Comparison with Chart: Item was not represented on cl

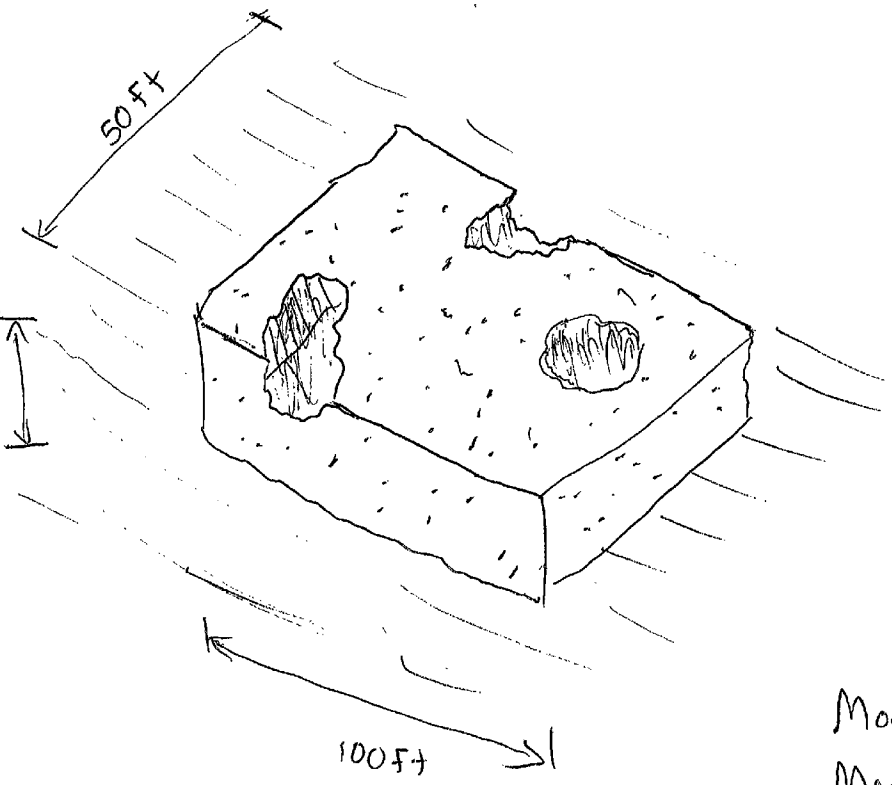
Recommendation: Recommend charting a submerged wr position 18/18/11.018 N, 064/55/09.045 W on chart #2564

CHART AS

Charted w/2 18/18/08.1-4 64/55/13 deleted. B repositioned 18/18/11 - 64/55/09 per survey

NOAA Ship MT MITCHELL Survey: H-10505

8536



AWOIS 8537

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/18/40.51N 064/54/57.26W Search Radius: 100

Datum: MLLW

Type of Feature: Submerged Pontoon

Source: CL379/32-- Letter, E.L. Simmons, Agent Harbor Dept., St. Thomas to U.S.C. & G.S. Dated May 8,1932. Lights on sunken dry dock discontinued (dry dock removed). five pontoons towed out of harbor and sunk. Pontoon is 100 x 50 x 10 feet. Charted as a dangerous submerged wreck.

H8877/66-- OPR-423; not investigated. Hydrographer recommends scaling its position from photograph 65 L 1553.

H9271/72-- OPR-423; drift sounding of 29 feet obtained in Lat. 18-18-47.67N, Long. 64-54-58.74W. Recommends further investigation.

Survey Requirements: 200% Side scan sonar, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 280 / A diver investigation was conducted on DN 281. Complete 200% SSS coverage was not conducted because the item was identified through diver investigation.

Results of Investigation: The item appeared on side scan sonar records on DN 280 at fix numbers 3177.6, 3184.5, and 3190.1. The dive investigation revealed a sunken pontoon / barge measuring 33 X 15 X 2.7 meters at position 18/18/40.660 N, 064/54/56.361 W (DP #3285). The least depth, taken with leadline, was 8.15 meters corrected to MLLW. Surrounding water depths were 10.5 meters. A FATHOMETER DEPTH OF 7.6m, (25FT) IN LATITUDE 18°18'40.608, LONGITUDE 64°54'56.824"W IS SHOALER.

Comparison with Prior Surveys: Prior survey H-8877 and H-9271 depict a submerged wreck near it's charted position. Further investigation was recommended.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck within 30 meters of the surveyed least depth position above. The charted symbol accurately describes the item.

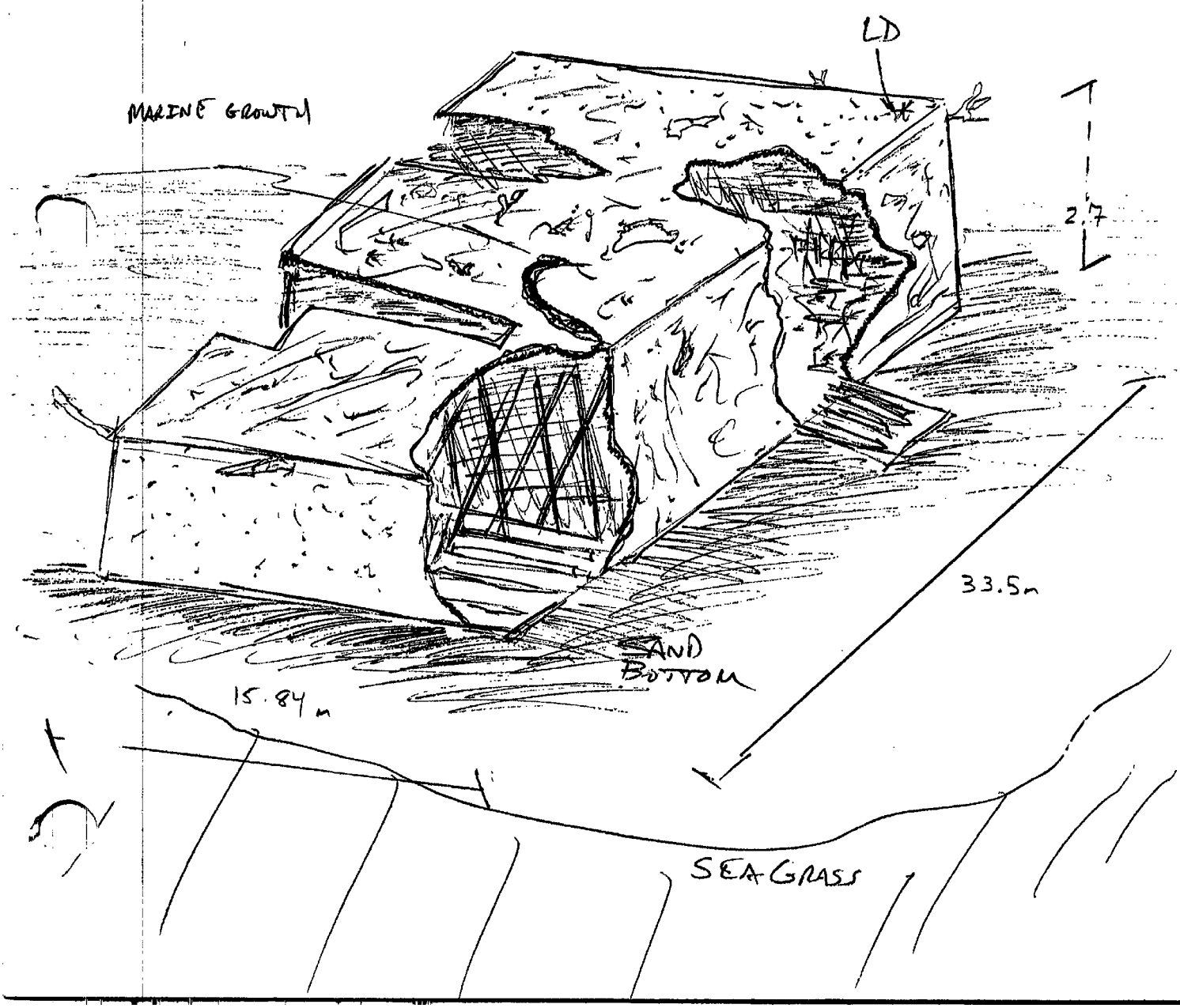
Recommendation: Recommend repositioning the "dangerous submerged wreck" symbol on chart #25649 to new position: 18/18/40.~~660~~ 608 N, 064/54/56.~~361~~ 824 W. Add the annotation "~~8.1m.~~ 7.6m (25FT) CONCUR CHART A3 25 WK

AWOIS 8537

8537

[redacted]

LD = 8.35 @ 1143 HRS
SURROUNDING Depth by Depth SOUNDER
= 36'
= 10.97m



AWOIS 8538

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/18/42.93N 064/54/55.90W Search Radius: 100

Datum: MLLW

Type of Feature: Submerged Pontoon

Source: CL379/32--Letter, E.L. Simmons, Agent, Harbor Dept., St. Thomas to U.S. C & G.S. Dated May 8, 1932. Lights on sunken dry dock discontinued (dry dock removed). Five pontoons towed out of harbor and sunk. Charted as a dangerous submerged wreck. Pontoon is 100 x 50 x 10 feet.

H8877/66-- OPR-423; not investigated. Hydrographer recommends position scaled from photograph no. 65 L 1553.

H9271/72-- OPR-423; Echo sounder LD of 25 feet obtained in Lat. 18-18-50.09N, Long. 64-54-57.38W.

Survey Requirements: 200% Side scan sonar, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 280 / A diver investigation was conducted on DN 281. Complete 200% SSS coverage was not conducted because the item was identified through diver investigation.

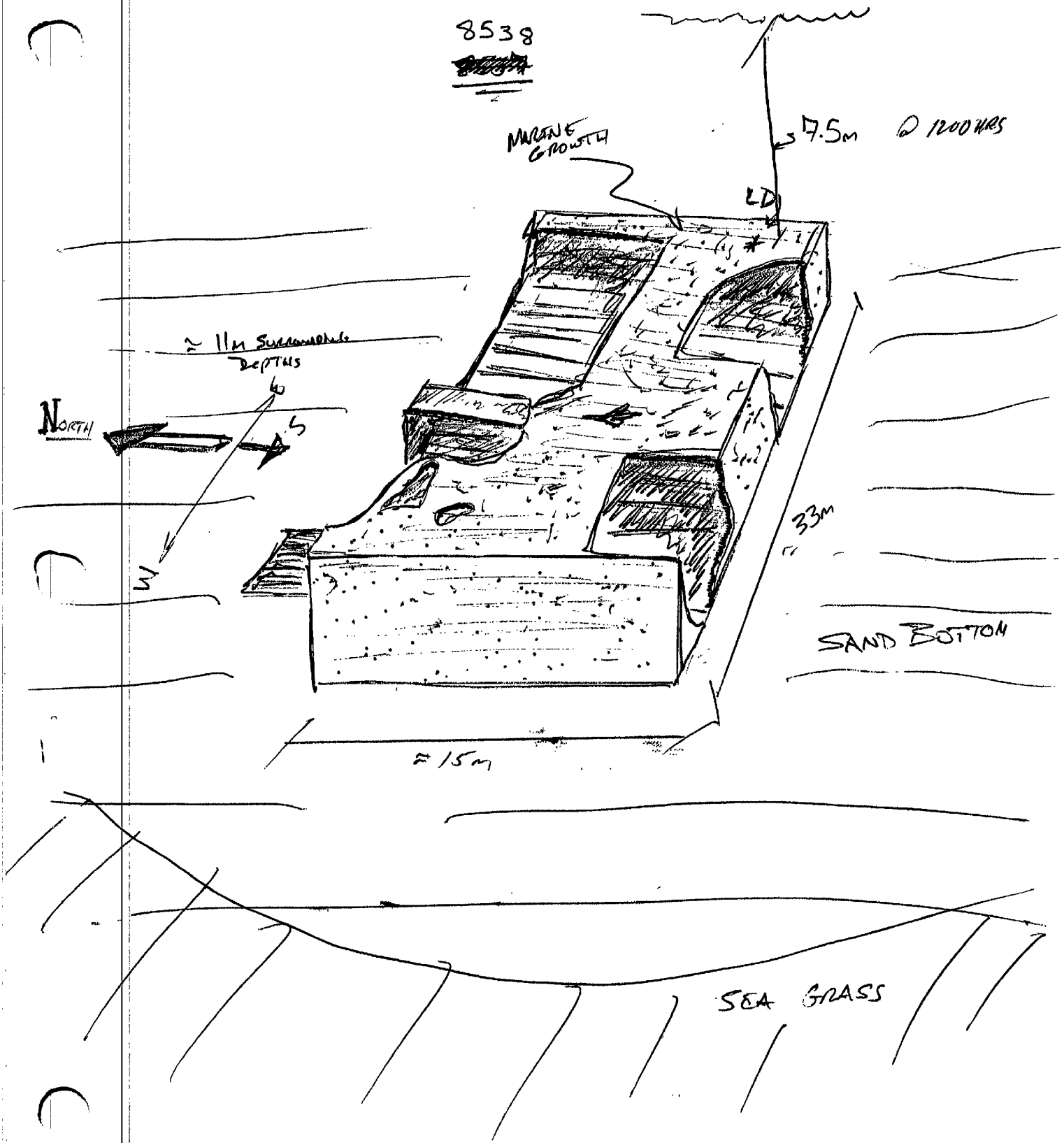
Results of Investigation: The item appeared on side scan sonar records on DN 280 at fix numbers 3184.35, and 3190.2. The dive investigation revealed a sunken pontoon / barge measuring 33 X 15 X 2.7 meters at position 18/18/43.356 N, 064/54/56.068 W (DP #3286). The least depth, taken with leadline, was 7.2 meters corrected to MLLW. Surrounding water depths were 10.6 meters.

Comparison with Prior Surveys: Prior survey H-8877 and H-9271 depict a submerged wreck near it's charted position.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck within 15 meters of the surveyed least depth position above. The charted symbol accurately describes the item.

Recommendation: Recommend repositioning the "dangerous submerged wreck" symbol on chart #25649 to new position: 18/18/43.356 N, 064/54/56.068 W. Add the annotation "7.2m."(23FT) CONCUR CHART AS 23WK

AWOIS 8538


8538
MARINE GROWTH
7.5M @ 1200 HRS
LD
≈ 11M SURROUNDING DEPTHS
NORTH
W
S
33M
SAND BOTTOM
≈ 15M
SEA GRASS

AWOIS 8539

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/18/44.70 N 064/55/00.87 W Search Radius: 100

Datum: MLLW

Type of Feature: Submerged Pontoon

Source: CL379/32--Letter, E.L. Simmons, Agent, Harbor Dept., St. Thomas to U.S. C & G.S. Dated May 8, 1932. Lights on sunken dry dock discontinued (dry dock removed). Five pontoons towed out of harbor and sunk. Charted as a dangerous submerged wreck. Pontoon is 100 x 50 x 10 feet.

H8877/66-- OPR-423; Investigated visually by divers and echo sounder. Appears to be a sunken barge approx. 15 X 25 meters extending 8 feet off the bottom. Located in LAT 18-18-51.8N, LONG 064-55-02.2W (Scaled from smooth sheet, Puerto Rico Datum). Depth of 23 feet (method not stated).

H9271/72-- OPR-423; 25 feet located in LAT 18-18-51.86N, LONG 064-55-02.35W. 23 Foot depth brought forward from H8877/66.

Survey Requirements: 200% Side scan sonar, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 280 / A diver investigation was conducted on DN 281. Complete 200% SSS coverage was not conducted because the item was identified through diver investigation.

Results of Investigation: The item appeared on side scan sonar records on DN 280 at fix numbers 3174.9, 3177.25, 3189.5. The dive investigation revealed a sunken pontoon / barge measuring 33 X 15 X 2.7 meters at position 18/18/44.776 N, 064/55/01.005 W (DP #3289). The least depth taken by leadline was ~~7.95~~ 8.0 meters corrected to MLLW. Surrounding water depths were 10.2 meters.

Comparison with Prior Surveys: Prior survey H-8877 depicts a submerged wreck near it's charted position.

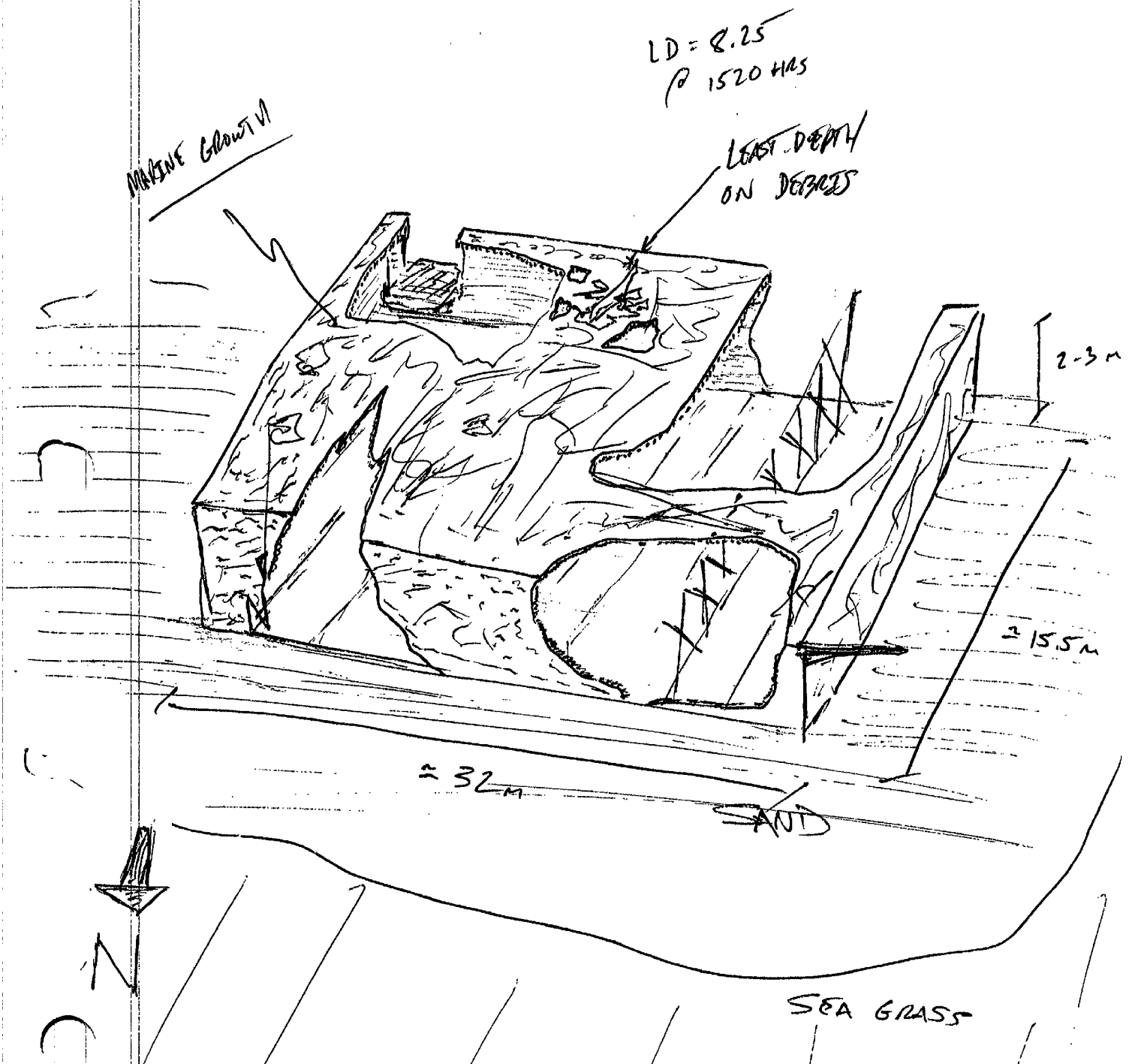
Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck within 10 meters of the surveyed least depth position above. The charted symbol accurately describes this item.

Recommendation: Recommend repositioning the "dangerous submerged wreck" symbol on chart #25649 to new position: 18/18/44.776 N, 064/55/01.005 W; Annotate "~~7.9~~8.0m." (26FT) CONCUR

CHART AS 26WK

AWOIS 6539

LD = 8.25
P 1520 HRS



AWOIS 8540

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/18/40.84 N 064/55/07.32 W Search Radius:100

Datum: MLLW

Type of Feature: Submerged Pontoon

Source: CL379/32--Letter, E.L. Simmons, Agent, Harbor Dept., St. Thomas to U.S. C & G.S. Dated May 8, 1932. Lights on sunken dry dock discontinued (dry dock removed). Five pontoons towed out of harbor and sunk. Charted as a dangerous submerged wreck. Pontoon is 100 x 50 x 10 feet.

H8877/66-- OPR-423; not investigated. Hydrographer recommends position scaled from photograph no. 65 L 1553.

H9271/72-- OPR-423; 39-Foot echo sounder depth on wreck located in LAT 18-18-48.0N, LONG 064-55-08.8W (Scaled from smooth sheet, 1:10,000-scale).

Survey Requirements: 200% Side scan sonar, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 280 / A diver investigation was conducted on DN 281. Complete 200% SSS coverage was not conducted because the item was identified through diver investigation.

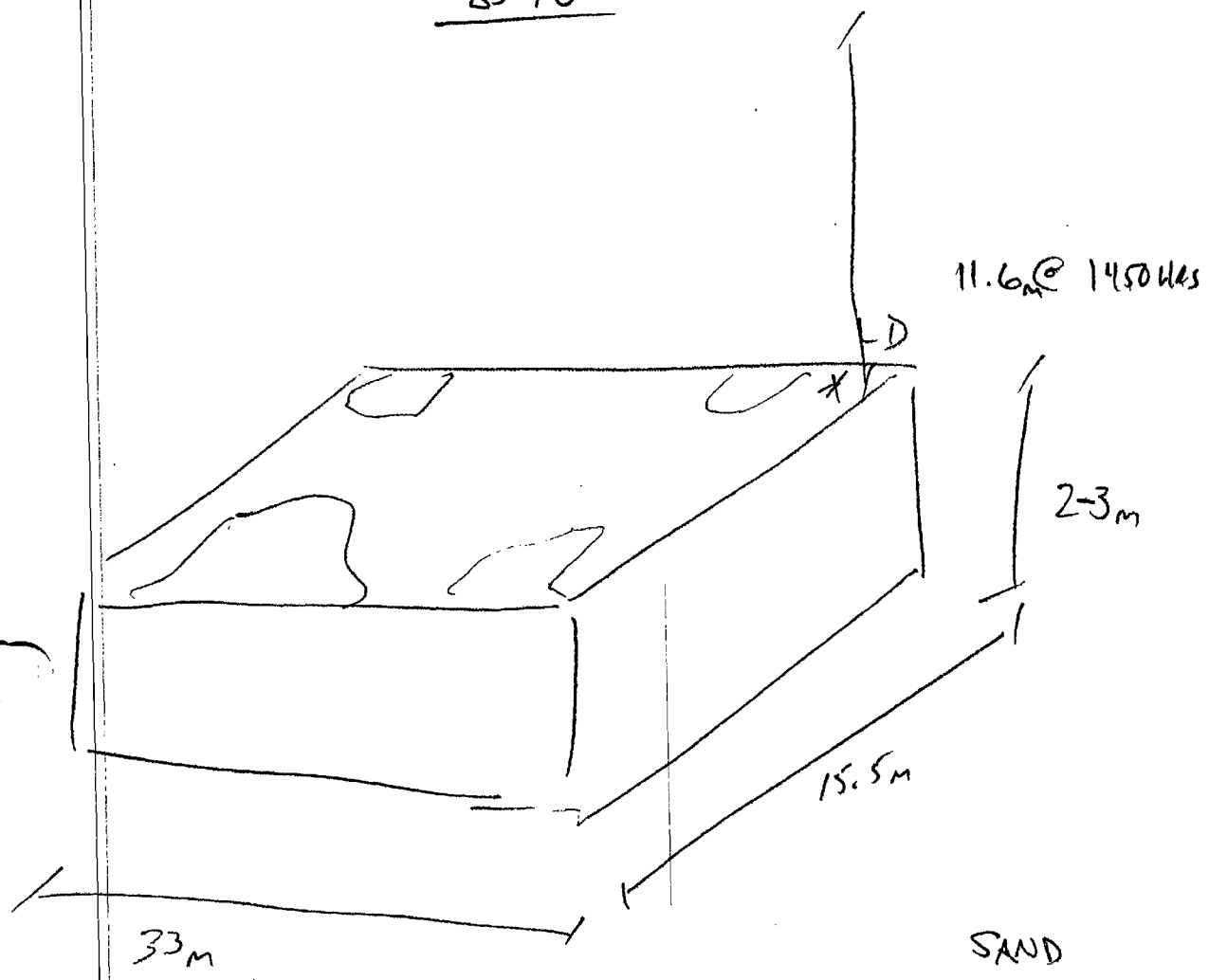
Results of Investigation: The item appeared on side scan sonar records on DN 280 at fix numbers 3174.9, 3177.25, 3189.5. The dive investigation revealed a sunken pontoon / barge measuring 33 X 15 X 2.7 meters at position 18/18/41.794 N, 064/55/07.844 W (DP #3288). The least depth taken by leadline was 11.3 meters corrected to MLLW. Surrounding water depths were 14-15 meters.

Comparison with Prior Surveys: Prior survey H-8877 depicts a submerged wreck near it's charted position.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck within 30 meters of the surveyed least depth position above. The charted symbol accurately describes this item.

Recommendation: Recommend repositioning the "dangerous submerged wreck" symbol on chart #25649 to new position: 18/18/41.794 N, 064/55/07.844 W. Add the annotation "11.3m."(37FT) CONCUR CHART AS 37WK

AWOIS
8540



AWOIS 8541

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/18.70N 064/55/25.60W Search Radius:100

Datum: MLLW

Type of Feature: Obstruction

Source: CL1756/74--Moran Realtors (Roger F. Moran) to NOS, dated 11/22/74; reply to NOS request for as built drawings of jetty and dock at the Holiday Inn, St. Thomas, V.I. COE permit No.73-0234-Pocket Beach and Wharf, St. Thomas. Drawings furnished by Devcon International Corp., P.O. Box No. 3368, St. Thomas, V.I. 00801, R.L. Moorehead, General Manager. Wharf dimensions (irregular rectangle) 70 x 100 x 60 x 100 and extends out to the 10-foot curve. Connected to the shoreline by a 250-foot causeway. Construction of wharf consists of 10-inch prefab, concrete slab covered by 4 inches of poured concrete supported by 2 12 x 20-inch prefab. Beams every 20 feet. All supported by 2-foot dia. reenforced concrete pipes every 20 feet. Listed position is the most offshore corner of the wharf, Lat. 18-19-18.7N, Long. 64-55-25.6W. Scaled from chart 25649, 1:10,000-scale.

BP128368/84--(CRS 002585, NOS); Pier ruins noted. Revised to pier ruins (1984 photography).

Survey Requirements: Echo Sounding, Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver search was conducted on DN 285. 200% side scan on DN 285 & 306.

Results of Investigation: There were no indications of a concrete structure in this area. Water visibility was reported by divers to be 20 feet and all that was found below the surface were large coral and rock formations. Water depths were within 0 to 20 feet.

Conversations with the hotel staff revealed no indications of a concrete structure.

200% SSS coverage was completed in 90% of the required AWOIS search radius. 10% of the search radius was in a shoal or foul area which made SSS operations impossible. Diver investigation covered the rest of the search radius. The investigation did not reveal any structure or ruins, only the charted large rock formations that are awash. Detached Position #7779 was taken at the charted location of the platform for disproval position verification.

A bottom drag is not feasible because of the irregularity of bottom features (rock and coral). Nothing other than the steep rock formations were seen by echo soundings.

Comparison with Prior Surveys: Item is not included in prior surveys.

Comparison with Chart: Chart #26549 shows an exposed rectangular platform at the end of causeway ruins.

Recommendation: Delete the charted rectangular platform and causeway ruins at position 18/19/18.7 N, 064/55/25.60 W. CONCUR

AWOIS 8542

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/20.00 N 064/55/26.00 W Search Radius: 200

Datum: MLLW

Type of Feature: Submerged Wreck, Position Approximate

Source: LNM 16/80-- Add submerged wreck in approximate LAT 18-19-20 N, LONG 064-55-26 W.

Survey Requirements: Side Scan Sonar-200%, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 285 & 306 / Diver investigations were conducted on DN 285 and DN 312.

Results of Investigation: 200% SSS coverage was completed in 90% of the required AWOIS search radius. Ten percent of the search radius was in a shoal or foul area which made SSS operations impossible. Divers covered the portion of the search radius that could not be covered by side scan sonar. Side scan sonar did not reveal any significant contacts. On two occasions, divers descended down a buoy dropped on the charted location and performed a visual pattern search of the AWOIS radius. Visibility was 10-15 feet, nothing but rocks and coral formations were found. Detached position #8185 was taken at the dive site to verify the position.

Jim McManus of Sea Horse Diving Center reported that this item was a wooden vessel that burned to the water line and sunk at the charted location. The remains were completely destroyed by several severe storms and no significant peices of it remain.

Comparison with Prior Surveys: Item is not mentioned on prior surveys.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck "PA."

Recommendation: Recommend deleting the dangerous submerged wreck symbol, annotated "PA", at position 18/19/20.0 N, 064/55/26.0 W, from chart #25649. concur

AWOIS 8543

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/24.00 N 064/55/24.00 W Search Radius:200

Datum: MLLW

Type of Feature: Submerged Wreck, Existence Doubtfull

Source: LNM 45/77-- Add submerged wreck "13 FT REP 1977" in approximate LAT 18-19-24 N, LONG 064-55-24 W.

Survey Requirements: Side Scan Sonar-200%, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 285 / A diver investigation was conducted on DN 285 and DN 307.

Results of Investigation: 200% SSS coverage was completed in 95% of the required AWOIS search radius. The remaining 5% of the search radius was in a shoal or foul area which made SSS operations impossible. Divers covered this area. On DN 307 divers descended on a buoy line dropped on the charted position of AWOIS 8543. Divers discovered the wooden remains of a vessel scattered on the sea floor. One piece of debris rose more than one meter off the bottom. The wood slightly resembled a piece of hull with one end resting on rocks. The piece measured 8.83 meters (length) by 1.2 meters (width). A mast-like structure was lying beside the wreckage flat on the bottom. Other insignificant debris and old engine parts were also found in the area.

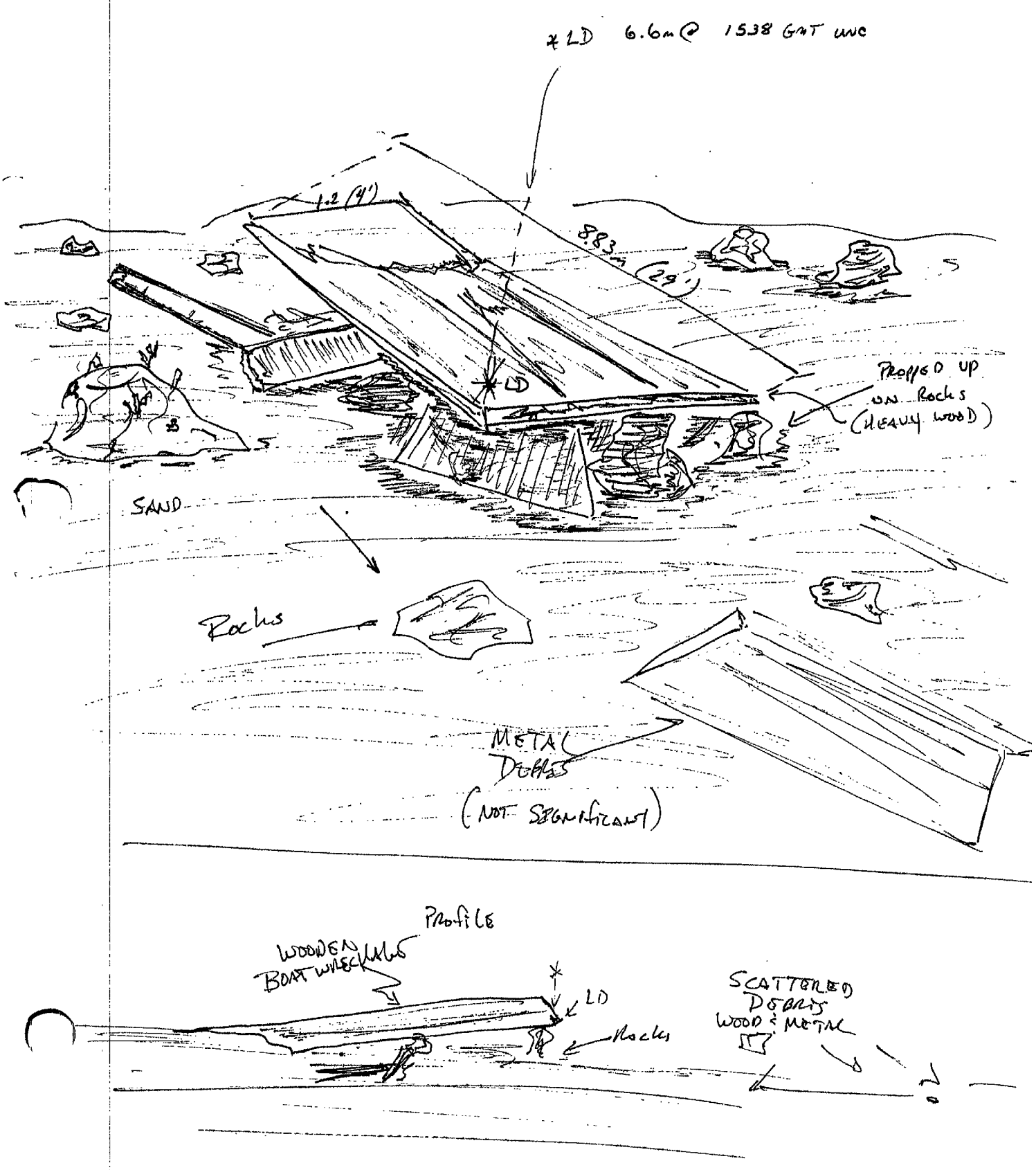
At position 18/19/24.109 N, 064/55/24.228 W (DP #4865) a least depth was taken with leadline and determined to be 6.3 meters corrected to MLLW. Surrounding water depths were 7.1 meters. Refer to the attached sketch.

Comparison with Prior Surveys: This item is not mentioned in prior surveys.

Comparison with Chart: Chart #25649 depicts a submerged wreck, dangerous to navigation, annotated "ED (13 ft rep 1977)," located within 10 meters of the surveyed least depth position. The symbol adequately describes this item.

Recommendation: Recommend retain the submerged wreck symbol as charted. Delete the annotation "ED (13ft rep 1977)." Add the annotation " least depth 6.3m (20.7ft)." DO NOT CONCUR CHART A WRECK WITH A LEAST DEPTH OF 20 FT, (20 WK), IN LATITUDE 18°19'24.109"N, LONGITUDE 64°55'24.228"W. ALSO RECOMMEND DELETE CHARTED DANGEROUS SUNKEN WRECK, WITH NOTATION (13FT REP, 1977) ED.

AWOLS
8543


x LD 6.6m @ 1538 GRT UNC
1.2 (4')
8.8m (29')
LD
PROPPED UP ON Rocks (HEAVY WOOD)
SAND
Rocks
METAL DEBRIS (NOT SIGNIFICANT)
Profile
WOODEN BOAT WRECK
LD
Rocks
SCATTERED DEBRIS WOOD & METAL

AWOIS 8544

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/18/39.50 N 064/56/07.80 W Search Radius:100

Datum: MLLW

Type of Feature: Submerged Wreck, Position Approximate

Source: LNM 4/83-- Add submerged wreck in approx. LAT 18-18-46.5 N, LONG 064-56-09.2 W.

CL238/83-- From CO NOAA Ship MT MITCHELL to Mr. Austin Monsanto, Marine Manager, V.I. Port Authority, RE. sunken barge investigation, dated FEB 22, 1983. Wreck located in position LAT 18-18-51.4 N, LONG 064-56-12.0 W. Divers report LD of 39.7 feet at MLW in charted depths of 58-59 feet. Barge lies upside down, bow facing west with both faces of a movable bow gate extending westerly. Barge is 160 X 40 X 14 feet with a 3-5 foot heavy vertical railing on which sections of the barge are resting. Narrow gash visible on starboard side, aft, 7-8 feet in length. Several lengths of synthetic hawser are suspended above the barge within 15 feet of the surface. Position obtained by sextant angles from a launch alongside a buoy resting directly over the wreck. Attached to MT MITCHELL's letter is correspondence from COE. COE does not consider wreck a danger to traffic in and out of St. Thomas Harbor considering the wreck's position and LD. COE has no removal plans. However, removal of wreck was being discussed at that time.

LNM 9/83-- Barge previously reported sunk in about 60 feet in approx. position 18-18-46.5 N, LONG 064-56-09.2 W with 39 feet over it. Several lengths of synthetic hawser reported 15 feet beneath the surface. Marked by a black can, No. 1.

LNM 12/85-- Wreck previously reported submerged in Charlotte Amalie Harbor is in position LAT 18-18-46.5 N, LONG 064-56-09.0 W. 35 feet over hull.

Survey Requirements: Side Scan Sonar-200%, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 288 / SSS on DN's 280 & 283.

Results of Investigation: Side scan sonar revealed a large contact just outside the 100 meter search radius (Contact #'s 3197.8, 3200.8, 3358.1, 3364.3). A diver investigation revealed a large barge overturned and laying flat on the bottom in approximately 17 meters of water.

The barge measured 46.9 X 13.1 X 3 meters (approximate height). Two large square holes were cut or have fallen through the bottom to the sea floor. The east end of the barge was surrounded by much debris; most of the debris extended to the northeast up to 25

meters away from the barge.

The least depth occurred at the northeast corner of the barge and was measured by pneumo-gauge as 14.7 meters corrected to MLLW using ~~predicted~~ APPROVED tides. A Detached Position (DP # 3830) was taken at this position: LAT 18/18/41.463 N, LONG 064/56/11.170 W. See attached sketch.

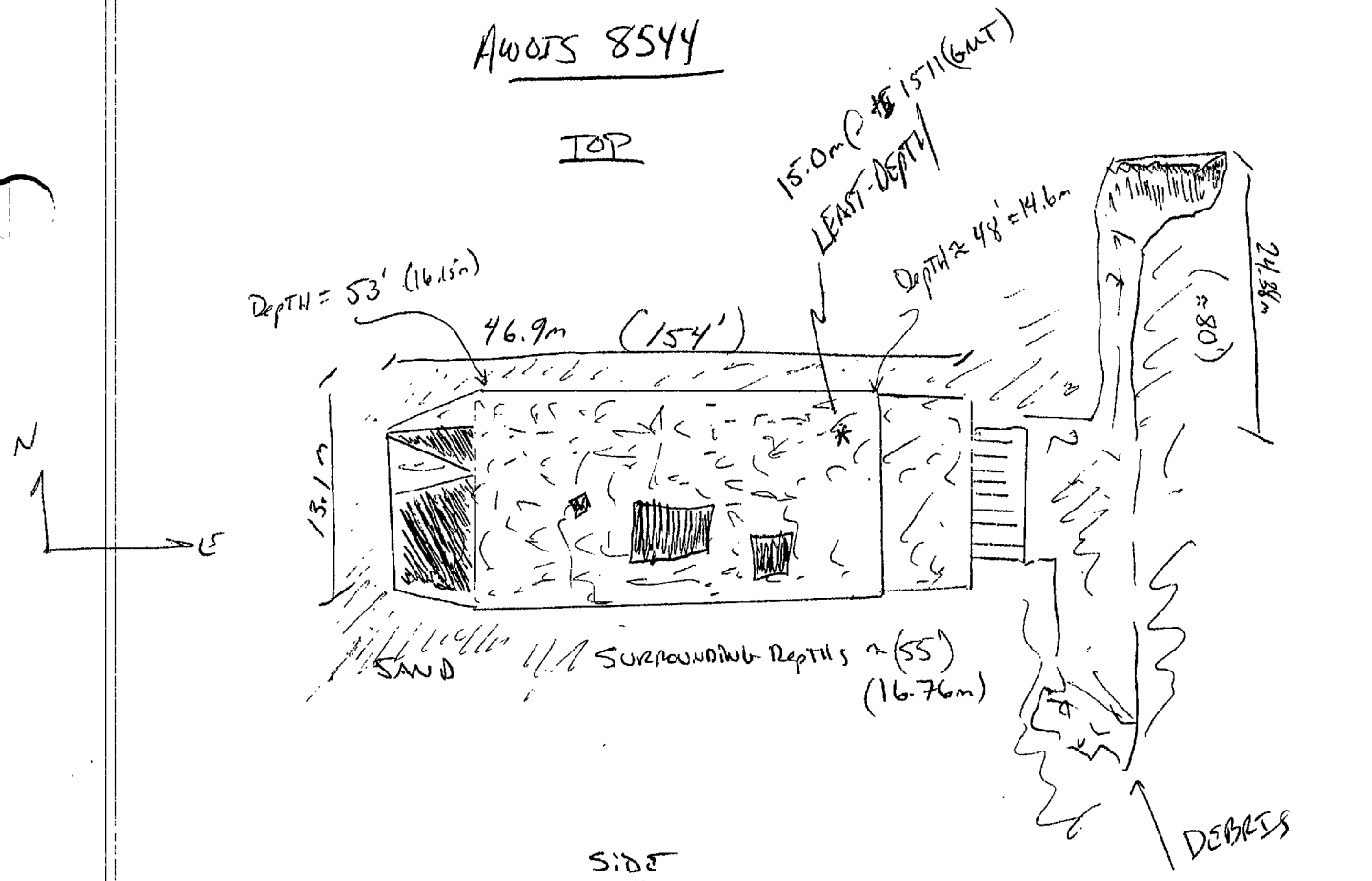
Comparison with Prior Surveys: Item is not included in prior surveys.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck, "PA (35 ft rep)", located 120 meters south-east of the surveyed least depth position above. The charted symbol adequately describes this item.

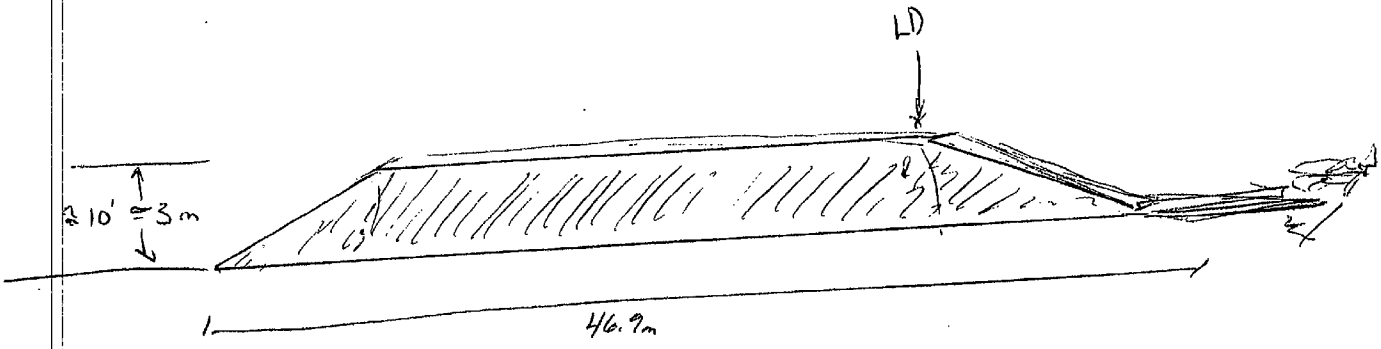
Recommendation: Recommend repositioning the "dangerous submerged wreck" symbol on chart #25649 to new position 18/18/41.463 N, 064/56/11.170 W. Delete the annotation "PA (35 ft rep)", and chart with a least depth of 14.7m/44 ft. CONCUR CHART AS 48 WK

AWOIS 8544

TOP



SIDE



AWOIS 8545

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/57.84 N 064/55/51.52 W Search Radius:200

Datum: MLLW

Type of Feature: Obstruction

Source: CL190/67--Ship visit report, C.O. USS Barney (DDG-6) to branch NAVOCEANO, Norfolk, VA dated 1/3/67. Ship's anchor fouled what appeared to be a new DD size anchor chain in approximate position 18/20/05 N, 64/55/53 W.
NM 11/67--Add obstruction, PA in above position.

Survey Requirements: Side Scan Sonar-400%, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: 400% side scan sonar coverage was completed within the entire AWOIS search radius. 200% of the SSS lines were run in the east-west direction, the other 200% were run in the north-south direction. All contacts were analyzed to see if significant for diver investigation. No dives were made.

Results of Investigation: The 400% single side scan sonar coverage revealed no significant contacts or evidence of an anchor chain on the bottom. If the anchor chain is buried below the sand/silt bottom of the harbor it will not show up on the side scan trace.

Comparison with Prior Surveys: Item is not mentioned in prior surveys.

Comparison with Chart: Chart #25649 depicts an obstruction, dangerous to navigation, annotated "PA."

Recommendation: Recommend deleting the "dangerous obstruction" symbol and annotation "PA," in position 18/19/57.84 N, 064/55/51.52 W, from chart #25649. CONCUR

AWOIS 8546

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/00.90 N 064/55/38.90 W Search Radius:200

Datum: MLLW

Type of Feature: Mast

Source: LMN 50/36--Add dangerous submerged wreck, "masts", PA in approximate position 18/20/00.9 N, 064/55/38.9 W. *Ltr., dated 11/25/91, from Harry Magras, Marine Manager, V.I. Port Authority, St. Thomas to Director, C&GS, N/CG22; states that wreck "shown slightly southwest of anchorage A-3 was removed many years ago."

Survey Requirements: Side Scan Sonar-200%, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: 200% side scan sonar coverage was completed within the entire AWOIS search radii. All contacts were anaylised to see if significant for diver investigation. No dives were made.

Results of Investigation: The 200% single side scan sonar coverage revealed no significant contacts or evidence of masts on the bottom. The local port authority claims the wreck was removed many years ago, however, no Salvage Documentation is available.

Comparison with Prior Surveys: Item is not mentioned in prior surveys.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck, annotated "Mast, PA."

Recommendation: Recommend deleteing the dangerous submerged wreck symbol and annotation "Mast,PA," in position 18/20/00.9 N, 064/55/38.9 W, from chart #25649. CONCUR

AWOIS 8547

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/21.64 N 064/55/57.02 W Search Radius:200

Datum: MLLW

Type of Feature: Visible Wreck, Position Approximate

Source: CL942/79-- COE Jacksonville Dist., San Juan area office to Chief Marine Chart Division, NOS; chart wreck of the S/V KRIST ANN in LAT 18-19-28.80 N, LONG 064-55-58.5 W. 37-foot Irwin Ketch, light green hull with green bottom, cabin, decks, and trim. Broken moorings from undersea center, Frenchmen's Reef according to Water Island Charters, DEC 12, 1977 and is adrift. On DEC 14, 1977, reported located sunk with portion of superstructure visible. Wreck is unlighted in about 20 feet of water.

Survey Requirements: Visual Search, Side Scan Sonar-200%, Diver Investigation, Salvage Documentation

Method of Investigation: A diver investigation was conducted on DN 285. Side scan sonar was conducted on 307.

Results of Investigation: 200% SSS coverage was completed in the required AWOIS search raduis. No significant contacts were found other than the rocks inside the foul area. On DN 285 divers investigated the charted location of the wreck which was an area of heavy sea action offshore of a nearly verticle cliff. Visibility was 5-8 meters. No evidence of a wreck was found.

Jim McManus of Sea Horse Dive Center reported that this item was battered and destroyed by heavy sea action, and that no significant pieces remain.

Comparison with Prior Surveys: Item is not mentioned in prior surveys.

Comparison with Chart: Chart depicts a visible wreck annotated "PA."

Recommendation: Recommend deleteing the visible wreck symbol and annotation "PA," in position 18/19/21.64 N, 064/55/57.02 W, from chart #25649. CONCUR

AWOIS 8548

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/41.64 N 064/55/52.72 W Search Radius:200

Datum: MLLW

Type of Feature: Mast, Position Approximate

Source: NM 18/83-- Add dangerous submerged wreck, mast, PA in approximate LAT 18-19-48.8 N, LONG 064-55-54.2 W.

Survey Requirements: Visual Search, Side Scan Sonar-200%, Diver Investigation, Salvage Documentation

Method of Investigation: A diver investigation was conducted on DN 284. SSS was not conducted because the item was found by divers.

Results of Investigation: The divers conducted an investigation of the bottom and discovered a 16.3 meter metal mast with yardarms in 2.4 meters of water near the charted location. A detached position was taken at the least depth position (DP #3639).

The leadline least depth of 0.31 meters (corrected to predicted tides), occurs at position: LAT 18/19/41.432 N, LONG 064/55/53.582 W (DP #3639). See attached sketch.

Comparison with Prior Surveys: Item is not mentioned in prior surveys.

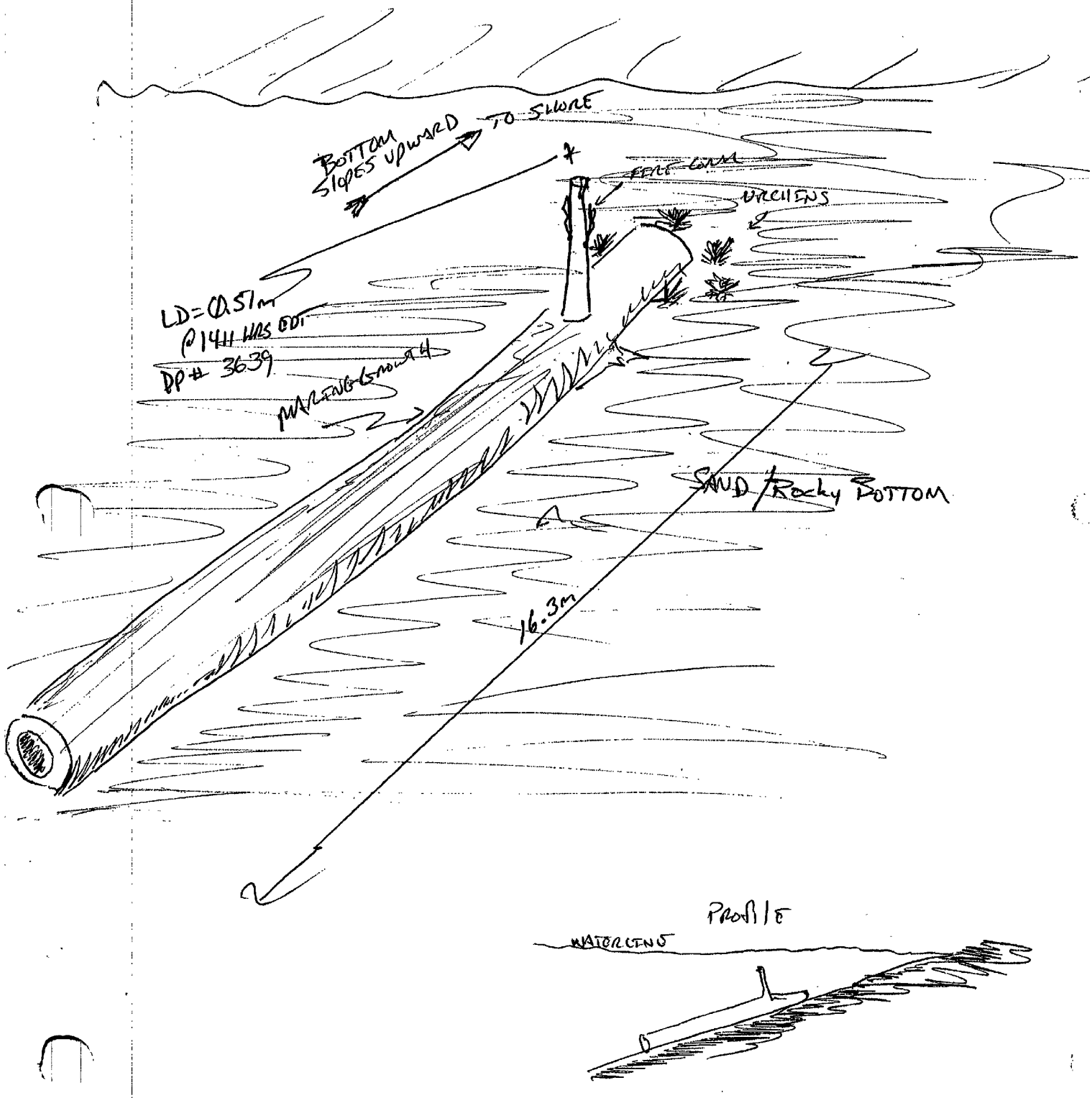
Comparison with Chart: Chart #26549 depicts a submerged wreck, annotated "Mast, PA" located within 25 meters of the surveyed least depth position above. The charted symbol adequately describes this item.

Recommendation: Recommend deleteing the "submerged wreck" symbol and the annotation "Mast, PA" from the chart, and charting an "obstruction," least depth 0.2 ~~.31~~m in position 18/19/41.432 N, 064/55/53.582 W. CONCUR

CHART AS SHOWN ON PRESENT SURVEY

19 (4/8/96, SSV)

AWOSS
8548



PROFILE

AWOIS 8549

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/43.84 N 064/55/52.52 W Search Radius:100

Datum: MLLW

Type of Feature: Submerged Wreck

Source: CL933/37-- Chart correction letter from USC&GS, San Juan, P.R. to Director, USC&GS, Wash. D.C.; Wreck close-in along shore between naval station and Frederick Point. Nearly submerged.

H8877/66-- OPR-423; Wreck confirmed. Shoalest and most offshore point has depth of 3 feet in LAT 18-19.85 N, LONG 064-55.90 W. Wreck extends in a northwesterly direction toward shore.

Survey Requirements: Visual Search, Bottom Drag, Diver Investigation, Salvage Documentation

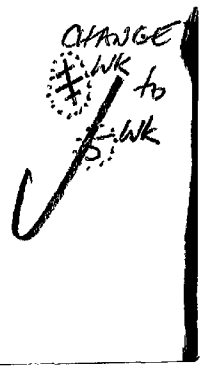
Method of Investigation: A diver investigation was conducted on DN 284.

Results of Investigation: The divers conducted a visual search of the bottom and discovered the remains of a vessel in the charted location. Detached Positions were taken at the least depth positions (DP #'s 3636, 3637) and at the bow (DP #3635) and stern (DP #3638) of the wreck. The wreckage extended 36.5 meters in a northwesterly direction from the stern DP. Surrounding water depths were less than 3 meters.

Two locations on the wreck represent the least depth. The least depth of 1.6 meters measured by leadline occurs at two positions: LAT 18/19/43.95 N, LONG 064/55/52.880 W (DP #3636), and LAT 18/19/43.449 N, LONG 064/55/52.700 W (DP #3637). See attached sketch.

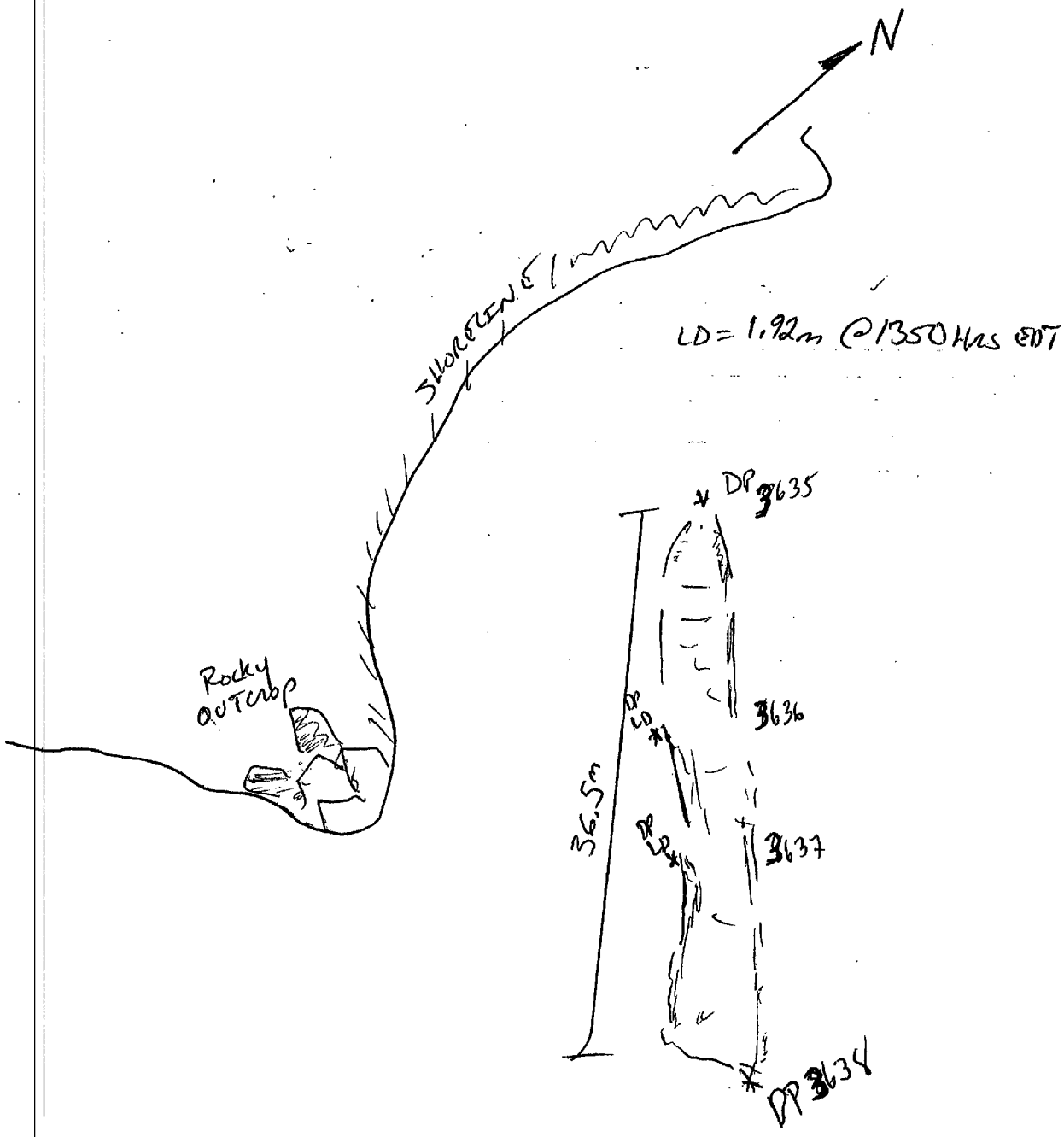
Comparison with Prior Surveys: Prior survey H-8877 depicts a submerged with a least depth of 3 feet located near the charted position.

Comparison with Chart: Chart #25649 depicts a sunken wreck located wit the center of the two surveyed least depth positions above. The charted symb describes this item.



Recommendation: Recommend retain sunken wreck symbol in position and least depth of 1.6 meters. (5FT) DO NOT CONCUR CHART A 5WK AND THE LIMITS AS SHOWN ON PRESENT SC SCALE OF THE CHART ALLOWS.

AWOIS 8549


N
SHORELINE
LD = 1.92m @1350 Hrs EDT
Rocky Outcrop
DP 3635
DP LD #1
3636
DP LD #2
3637
36.5m
DP 3634

AWOIS 8550

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/53.64 N 064/56/00.27 W Search Radius:100

Datum: MLLW

Type of Feature: Submerged Piling

Source: H8877/66-- OPR-423; Area investigated for pier ruins. Negative. Local pilot who lives on careening cove wharf reported no longer a danger to surface navigation from old pier, although anchoring in area is dangerous due to old steel piles and braces which are broken off close to the bottom. Fathogram indicated stubs of submerged piling extending northwestward from Careening Cove, Hassel Island, off Caroline Point. These are not dangerous to navigation but might affect anchoring and the use of fish nets in the area. Offshore end of charted submerged piles scaled from smooth sheet (1:5000) in LAT 18-20-00.80 N, LONG 064-56-01.75 W (Puerto Rico Datum). Inshore end scaled in LAT 18-19-57.40 N, LONG 064-56-00.60 W.

Survey Requirements: Side Scan Sonar-200%, Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 284 / SSS was conducted on DN 284.

Results of Investigation: The divers conducted a series of circle searches from a buoy line dropped on the charted location. Each search revealed sunken sailboats within the search radius of the AWOIS Item. See new items A7, A8, & A9 in this section for a description and recommendation for the discovered wrecked sailboats. The piles were not found by divers although they may exist underneath the sunken sailboats.

200% SSS coverage was completed in the required AWOIS search raduis. No significant contacts were found other than the new items listed above.

Comparison with Prior Surveys: Prior survey H-8877 depicts stubs of metal pilings extending 2-3 feet off the bottom.

Comparison with Chart: Chart #25649 depicts a row of submerged pilings. The charted symbols no longer adequately describe this area.

Recommendation: Recommend delete the charted submerged pilings symbol from chart #25649. The submerged wrecks (A-7,8,9) are the predominant feature in this area. CONCUR ALSO RECOMMEND DELETE NOTATION "SUBM PILING".

AWOIS 8551

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/57.34 N 064/56/04.12 W Search Radius: 50

Datum: MLLW

Type of Feature: Submerged Wreck

Source: H4544a/25-- Signal "wreck" in LAT 18/20/04.5N, LONG 064/56/05.6W.
H8877/66-- OPR-423; Located in above position. Now in ruins.

Survey Requirements: Visual Search, Bottom Drag, Salvage Documentation

Method of Investigation: A diver investigation was conducted on DN 279.

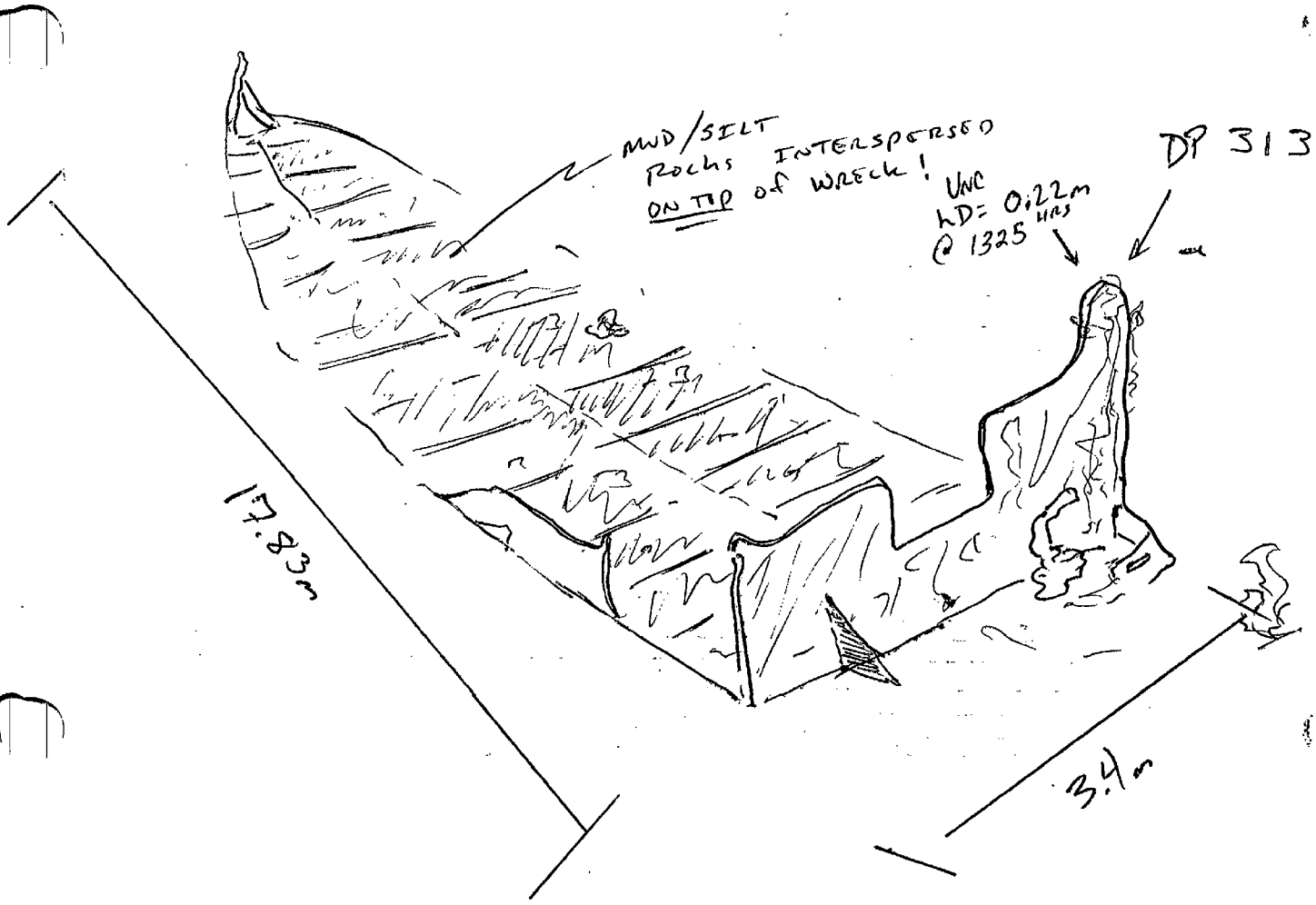
Results of Investigation: The visual search revealed a wreck 17.8 meters in length. The vessel lies parallel to the shoreline, approximately 10 meters offshore near a large rock formation in 1.5 meters of water. At MLLW a portion of the stern is awash. The vessel is in ruins with only the stern rising significantly off the bottom. A detached position was taken on the stern of the vessel. The position of the vessel, as determined with DGPS (DP #3131), is LAT 18/19/57.595 N, LONG 064/56/04.462 W. See attached sketch.

Comparison with Prior Surveys: Prior survey H-8877 depicts wreckage near the charted location, baring 2 feet at MLW.

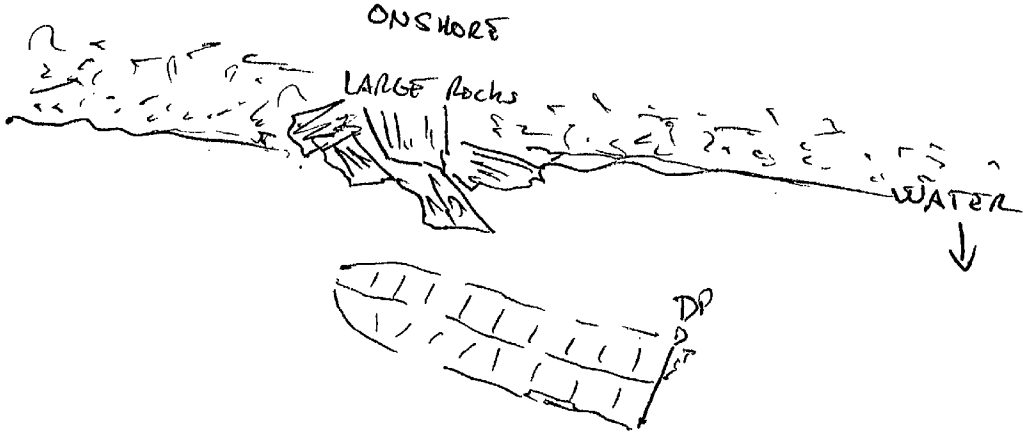
Comparison with Chart: Chart #25649 displays the annotation"Wk" and a small semicircular contour adjacent to the shoreline. The charted position is within 10 meters of the surveyed least depth position above. The charted symbol adequately describes the item

Recommendation: Recommend repositioning the charted "Wk" symbol to revised position 18/19/57.55 N, 064/56/04.462 W. DO NOT CONCUR
DELETE THE CHARTED WRECK AND CHART A WRECK AS SHOWN ON ON PRESENT SURVEY.

AWOIS 8551



TOP VIEW



AWOIS 8552

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/55.10 N 064/56/01.90 W Search Radius: 200

Datum: MLLW

Type of Feature: Submerged Wreck

Source: LNM 43/86--Add Dangerous submerged wreck, PA, 25ft rep. (1988), in posit. 18/19/55.1 N, 064/56/01.9 W. Wreck of the fishing vessel TORHELGA.

Survey Requirements: Side scan sonar 200%, Diver investigation, Salvage Documentation, Visual Search

Method of Investigation: Side scan sonar was conducted on DN 284 & 285. Dives were conducted in the area on DN's 284, 307, 310, & 314.

Results of Investigation: 80% of the required search radius was covered with 200% side scan sonar. 20% of the radius is in shoal water, a foul area, or a crowded sailboat mooring area which made SSS operations impossible. Areas not covered by the side scan sonar were searched by diver investigations. Several wrecks were found within or near the search radius (See new items A-7,8,9,10,15,16,18,&22), however, none could be positively identified as this item. No wreck could be found at the charted position.

Comparison with Prior Surveys: Item is not mentioned on prior surveys.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck, annotated "25ft rep (1988) PA."

Recommendation: Recommend deleteing the charted "dangerous submerged wreck" symbol, annotated "25ft rep (1988) PA," at position 18/19/55.10 N, 064/56/01.90 W, from chart #25649. Charting recommendations for the other items will be made in their item write ups. CONCUR

AWOIS 8553

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/11.00 N 064/56/22.50 W Search Radius: 100

Datum: MLLW

Type of Feature: Visible Wreck Position Approximate

Source: LNM 43/86--Add Dangerous submerged wreck in approximate LAT 18/20/08.00 N, LONG 064/56/21.00 W.
LNM41/77-- Above information revised to a visible wreck, PA, in approximate LAT 18/20/11.0 N, LONG 064/56/22.5 W.

Survey Requirements: Side scan sonar 200%, Diver investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 301. Side scan sonar on DN 306.

Results of Investigation: 40% of the required search radius was covered with 200% side scan sonar. 60% of the search radius was in a foul area or a crowded sailboat mooring area which made SSS operations impossible. Areas not covered by the SSS were searched by diver investigations. Side scan sonar and the diver investigation did not find any contacts which fit the AWOIS description. Some significant items were found in the area and have been documented in New Item Reports A-13 and A-17.

Comparison with Prior Surveys: Item is not mentioned in prior surveys.

Comparison with Chart: Chart #25649 depicts a visible wreck annotated "PA."

Recommendation: Recommend delete the "visible wreck" symbol, annotated "PA," in position 18/20/11.0 N, 064/56/22.5 W, from chart #25649. CONCUR

AWOIS 8555

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/40.00 N 064/56/52.00 W Search Radius: 200

Datum: MLLW

Type of Feature: Submerged Wreck

Source: Source unknown-- Charted since 1933 in LAT 18/19/40.0 N, LONG 064/56/52.0 W (Scaled from chart 25649, 1:10,000). Brought forward on H-8877/66 via T-12952.

Survey Requirements: Side scan sonar 200%, Bottom Drag, Diver investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 310.

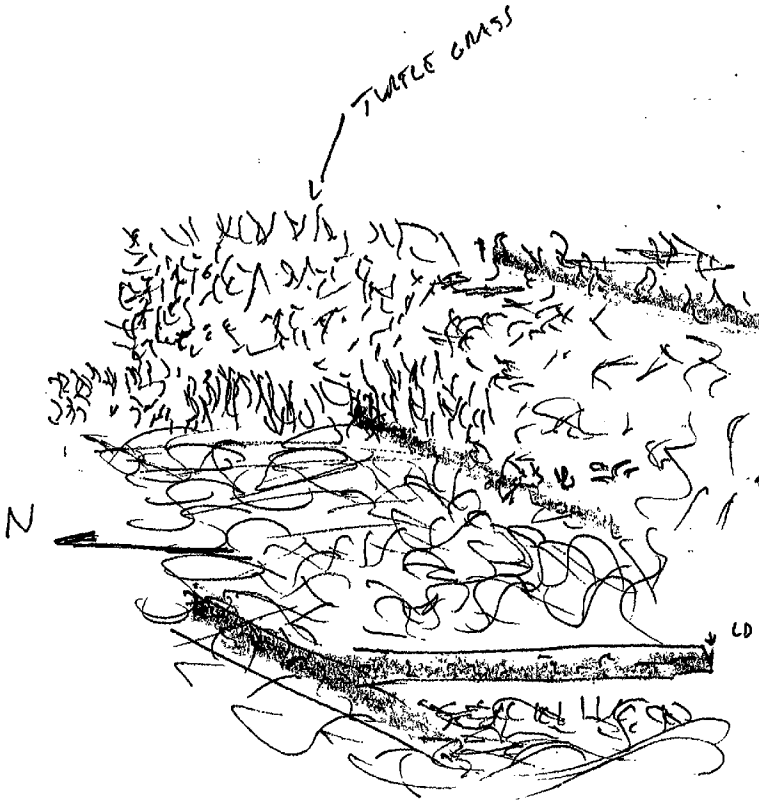
Results of Investigation: The diver investigation revealed a submerged wreck in the charted position. Frames of a vessel were discovered in the seabed covered by sand and turtle grass. One frame had a metal beam attached which extended upwards towards the water surface. The least-depth (DP #8173) was measured by leadline and found to be 0.7 6 meters corrected to MLLW using APPROVED predicted tides. Surrounding water depths were 1.3 meters corrected to MLLW. See the attached sketch.

Comparison with Prior Surveys: Prior survey H-8877 depicts a dangerous submerged wreck in the charted position.

Comparison with Chart: Chart #25649 depicts a dangerous submerged wreck charted within 5 meters of the surveyed least depth position. The symbol adequately describes this item. CONCUR

Recommendation: Recommend retain the "dangerous submerged wreck" symbol on chart #25649 as depicted in position 018/18/40.073 N, 064/56/52.034 W. Add the annotation ".7m (2ft)." DO NOT CONCUR DELETE THE CHARTED WRECK SYMBOL AND CHART A WRECK WITH A LEAST DEPTH OF 2 FT (0.6m), (2WK) IN LATITUDE 18°19'40.073"N, LONGITUDE 64°56'52.034"W.

8555



WATER DEPTH ≈ 1.5m

LD: 1.0m UNC

1500 HRS => 1900 HRS GMT

DP 8173

AWOIS 8557

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/09.04 N 064/56/18.92 W Search Radius: 100

Datum: MLLW

Type of Feature: Submerged Wrecks

Source: BP30583/36-- COE Blueprint; wrecks charted in LAT 18/20/16.2 N, LONG 064/56/20.4 W.

T12952/66-- Wrecks visible on NOS photographs.

H-8877/66-- OPR-423; 4-foot echo sounder depths obtained on 2 wrecks. Poor visibility made identification impossible.

Survey Requirements: Visual Search, Echo sounding, Bottom Drag, Salvage Documentation

Method of Investigation: A diver investigation was conducted on DN 301 and again on 310. Side scan sonar was utilized to assist in dive operations.

Results of Investigation: On DN 301, divers conducted a visual search of the AWOIS search radius. Only insignificant debris was found.

On DN 310 a buoy was dropped on the charted location (DP # 8176) and a circle search was conducted in the search radius. Water visibility was 20 feet. Nothing was found in the charted location or within the search radius; however, insignificant remains of a wooden vessel were found nearby at LAT 18/20/10.07 N, LONG 064/56/17.056 W (Fix #4652).

Comparison with Prior Surveys: Prior survey H-8877 depicts two hull outlines as charted.

Comparison with Chart: Chart #25649 depicts two hull outlines, each annotated "Wk," located within a foul area.

Recommendation: Recommend deleteing the two hull outlines, annotated "Wk," charted within a foul area in position 18/20/09.04 N, 064/56/18.92 W. CONCUR

AWOIS 8558

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/04.4 N 064/56/21.0 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H-8877/66-- OPR-423; "Cabin" located in LAT 18/20/24.4 N, LONG 064/56/21.0 W.

Survey Requirements: Visual Search, Bottom Drag, Diver Investigation, Salvage Documentation

Method of Investigation: A diver investigation was conducted on DN 301 and DN 310.

Results of Investigation: On DN 301, divers conducted a visual search of the AWOIS search radius. Only insignificant debris was found.

On DN 310 a buoy was dropped in the charted location (DP # 8177) and a circle search was conducted in the search radius. Water visibility was 20 feet. Nothing resembling the AWOIS description was found within the search radius, only an insignificant large diameter pipe laying flat, and nearly covered in the bottom. Water depths varied between 0.5 and 5 meters.

Comparison with Prior Surveys: See "Source" section above.

Comparison with Chart: Chart #25649 depicts a square black box annotated "Wk," located within a foul area.

Recommendation: Delete the square box annotated "Wk," charted within a foul area in position 18/20/~~24.4~~ 04.4 N, 064/56/21.0 W, from chart #25649. CONCUR

AWOIS 8559

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/06.00 N 064/56/19.00 W Search Radius: 100

Datum: MLLW

Type of Feature: Submerged Wreck

Source: H-8877/66-- Wreck located in LAT 18/20/06.00 N, LONG 064/56/19.0 W. Charted as outline of hull.

Survey Requirements: Visual Search, Bottom Drag, Diver Investigation

Method of Investigation: A diver investigation was conducted on DN 301 and again on 310.

Results of Investigation: On DN 301, divers conducted a visual search of the AWOIS search radius. Remains (hull) of a vessel were discovered approximately 3 meters from the shoreline.

On DN 310 divers fully investigated the insignificant remains of the metal vessel. The vessel was located in water depths of less than 1.5 meters and had a length of 12 meters. The measured beam was approximately 1.2 meters.

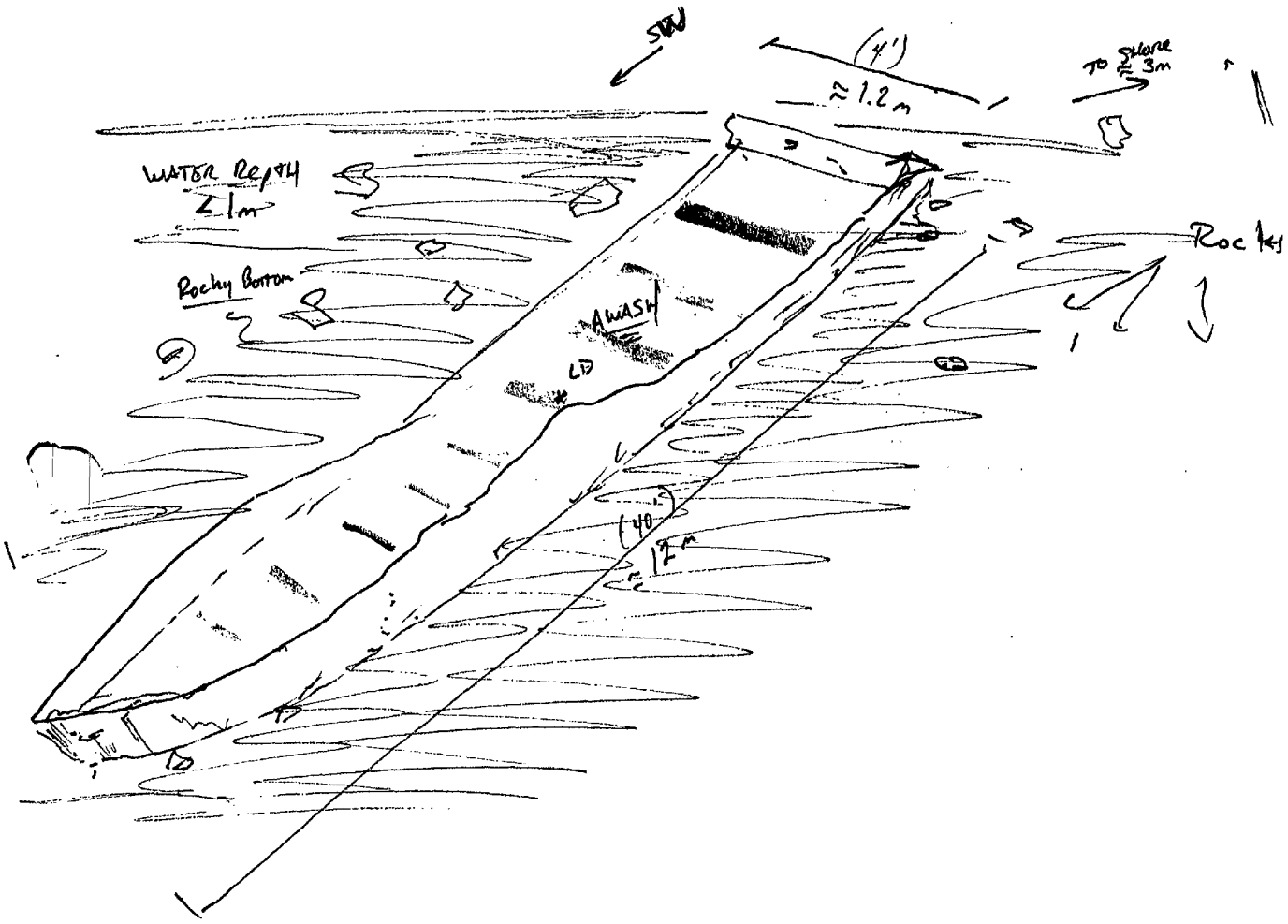
A least-depth was taken by leadline and was found to be awash when corrected to MLLW using predicted tides. A detached position was taken on the item (DP #8178); this position, LAT 18/20/06.209 N, LONG 064/56/18.929 W, matches the charted location of the vessel. See the attached sketch.

Comparison with Prior Surveys: See "Source" section above.

Comparison with Chart: Chart #25649 depicts the outline of a hull annotated "Wk" within 5 meters of the surveyed least depth position.

Recommendation: Recommend retain the charted hull outline and annotation "Wk" as depicted in position 18/20/06.209 N, 064/56/18.929 W, on chart #25649. DO NOT CONCUR DELETE THE CHARTED HULL AND CHART A WRECK AS SHOWN ON PRESENT SURVEY.

8559


SSW
(4')
≈ 1.2m
To shore ≈ 3m
WATER Depth
2 1m
Rocky Bottom
AWASH
Rocks
(40
12m

AWOIS 8561

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/13.50 N 064/56/46.50 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: LNM 7/86--Add submerged piles, PA, in position 18/20/13.5 N, 064/56/46.5 W

Survey Requirements: Visual Search, Bottom Drag, Diver Investigation

Method of Investigation: A diver investigation was conducted on DN 307. 200% side scan sonar coverage was also completed within the search radius on DN 306.

Results of Investigation: On DN 307, divers conducted a visual search of the AWOIS search radius. Visibility was 15-20 feet. Two submerged wooden piles were found close to the seawall approximately 10 meters apart in 5 meters of water. Both piles were bent over at an angle, and only one rose significantly from the bottom. A detached position (#4891) and least depth (3.0m corrected to ~~predicted~~ APPROVED tides) were taken on the significant pile. Other piles were found laying completely flat on the bottom within the search radius. Side scan revealed no evidence of further piles in the area.

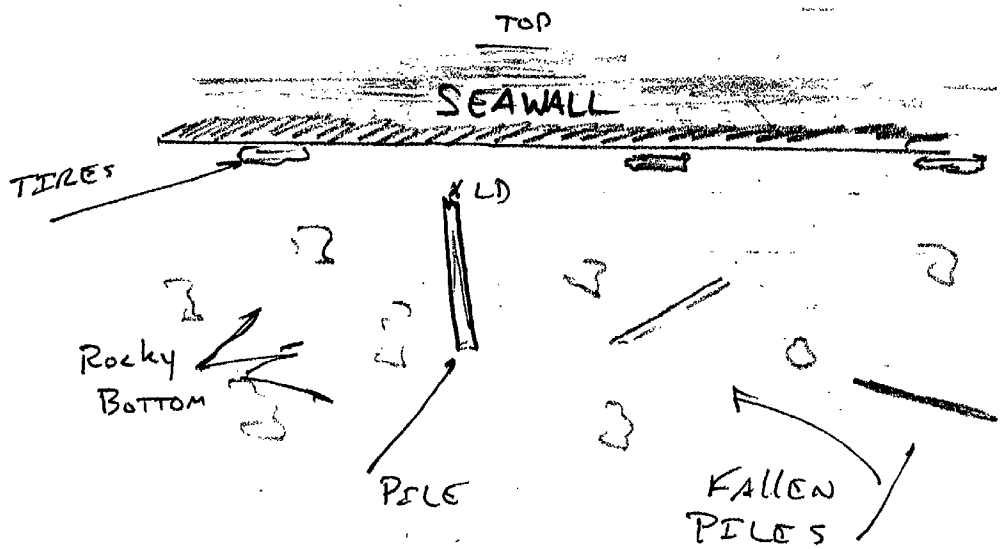
Comparison with Prior Surveys: Item not mentioned on prior surveys.

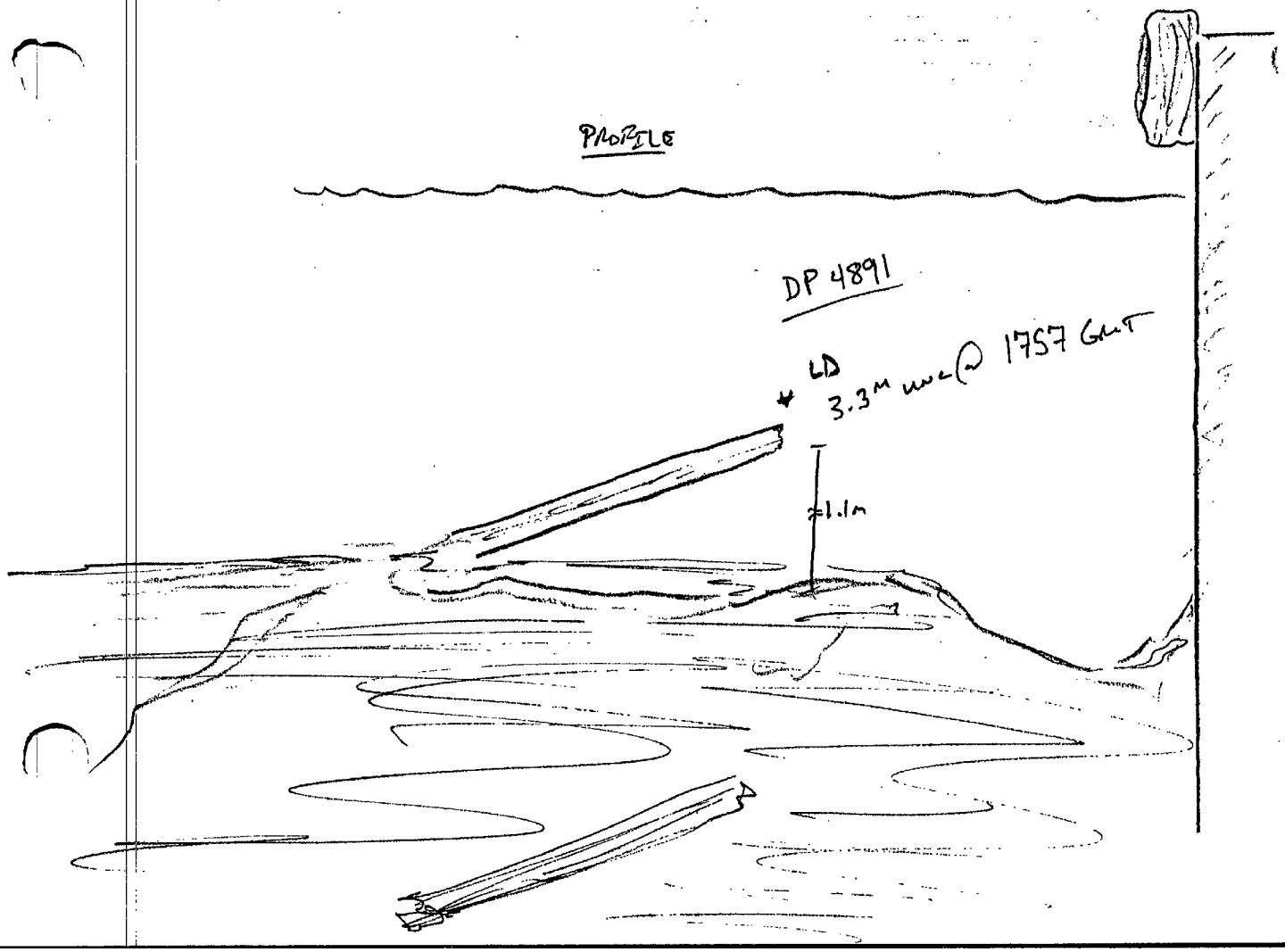
Comparison with Chart: Chart #25649 depicts "submerged piles, PA" 40 meters south of the discovered piles.

Recommendation: Recommend reposition the "submerged piles" symbol on chart #25649 to position 18/20/07.703 N, 064/56/44.936 W. Delete the annotation "PA." Annotate a least depth of 3.0m (~~9~~10ft). DO NOT CONCUR DELETE THE CHARTED SUBMERGED PILES, PA, AND CHART AN OBSTRUCTION (PILE) WITH A LEAST DEPTH OF 10 FT (3.0m), 10 OBSTR (PILE), IN LATITUDE 18°20'07.703"N, LONGITUDE 64°56'44.936"W.

See Rec. Rept, Sec 0.4

8561


TOP
SEAWALL
TIRES
LD
Rocky
Bottom
PILE
FALLEN
PILES


PROFILE
DP 4891
LD
3.3M MLLW 1757 GMT
≈1.1m

AWOIS 8562

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/24.80 N 064/55/43.70 W Search Radius: 50

Datum: MLLW

Type of Feature: Obstruction

Source: H8877/66--Pier intact on smooth sheet in LAT 18/20/24.8 N, LONG 064/55/43.7 W. BP128368/84--CRS 00258; pier in ruins on photographs.

Survey Requirements: Visual Search, Bottom Drag, Salvage Documentation

Method of Investigation: A diver investigation and visual search was conducted on DN 310.

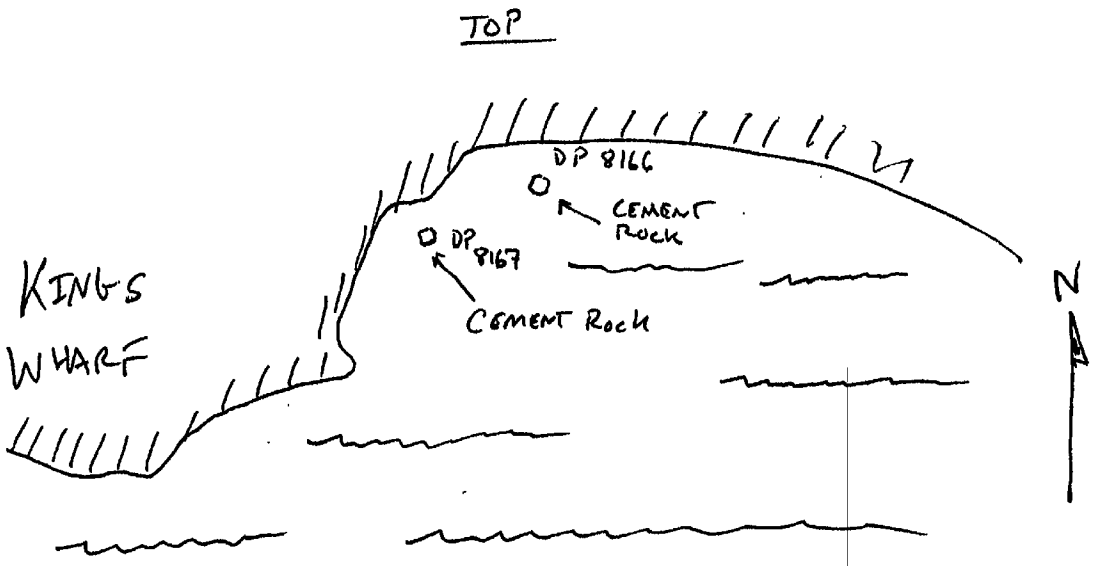
Results of Investigation: On DN 310 divers conducted a visual search of the AWOIS search radius. Visibility was poor but water depths were such that the divers could stand and walk a pattern search along the bottom. Two concrete boulders were found in less than 1 meter of water. Both boulders were found to be awash at MLLW with ~~predicted~~ APPROVED tides. A detached position was taken on each boulder (DP #8166 & 8167). No other evidence of the pier were found.

Comparison with Prior Surveys: See "Source" section above.

Comparison with Chart: Chart #25649 depicts a straight, short pier in ruins.

Recommendation: Recommend delete the pier ruins symbology in position 18/20/24.8 N, 064/55/43.7 W from chart #25649. Add ~~another pile~~ OBSTRUCTION symbol in position 18/20/25.03 N, 064/55/43.237 W. CONCUR DELETE THE THREE CHARTED PILES AND THE NOTATION "PILING". CHART OBSTRUCTION AS SHOWN ON PRESENT SURVEY.

AWOIS 8562



AWOIS 8564

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/50.04 N 064/56/03.82 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H8877/66-- OPR-423; Piling, offshore end covered 1 foot MLW in LAT 18/19/57.2N, LONG 064/56/05.3 W. Scaled from H-8877, 1:5000 Scale.

Survey Requirements: Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search from listed position shoreward.

Method of Investigation: A diver investigation was conducted on DN 279.

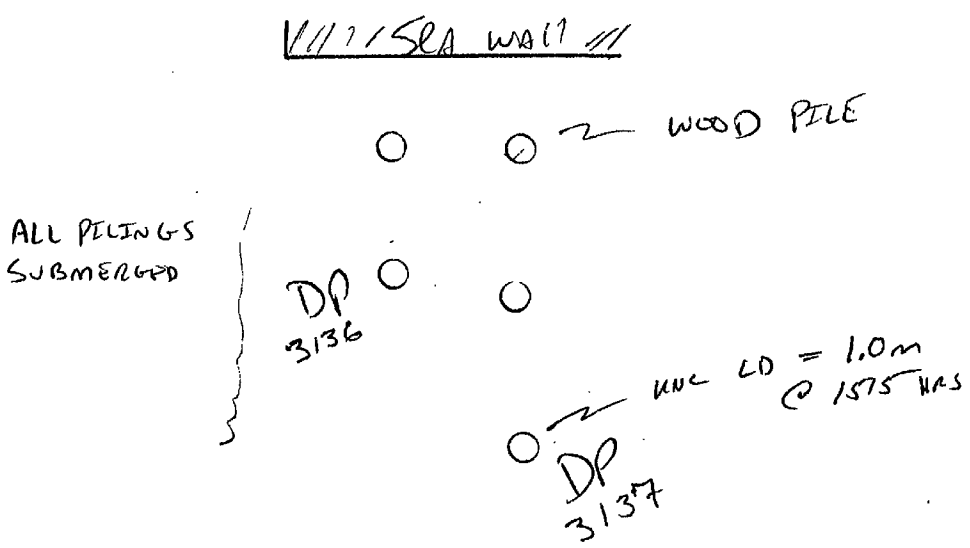
Results of Investigation: The diver investigation revealed two submerged pilings on the western side of three exposed pilings. The corrected least depth of the pilings as taken with leadline was 0.7 meters. The position, as determined with DGPS (DP #3137), was LAT 18/19/50.593 N, LONG 064/56/04.112 W and represents the seaward extent of the pier ruins. An additional detached position was taken on the second submerged piling: (DP #3136). Surrounding water depths were less than 2 meters See attached sketch.

Comparison with Prior Surveys: Prior survey H-8877 depicts pier ruins as shown on the chart.

Comparison with Chart: The chart depicts two rows of pier ruins extending from the seawall. The position of the outermost piling found is within 15 meters of the charted position.

Recommendation: Recommend repositioning the "pier ruins" symbology on the chart to extend straight out from the shore to the position of the outermost surveyed piling (18/19/50.593 N, 064/56/04.112 W). DO NOT CONCUR DELETE CHARTED PIER RUINS AND CHART PIER RUINS AS SHOWN ON PRESENT SURVEY.

AWOIS 8564


SEA WALL
WOOD PILE
ALL PILINGS SUBMERGED
DP 3136
KNC LD = 1.0m @ 1575 HRS
DP 3137

AWOIS 8565

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/52.34 N 064/56/02.52 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H-8877/66-- OPR-423; Piling, offshore covered 2 feet MLW in LAT 18/19/59.5N, LONG 064/56/04.0 W. Scaled from H-8877, 1:5000 Scale.

Survey Requirements: Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search from listed position shoreward.

Method of Investigation: A diver investigation was conducted on DN 279.

Results of Investigation: This item adjoins and includes AWOIS Item 8566, and is described below as one feature.

The visual search revealed numerous submerged pilings extending approximately 17 meters from shore. Detached Positions (#3132-#3135) were taken to outline the pilings (see attached sketch). Water depths were from 2-8 meters.

The corrected least depth of the shoalest piling as taken with leadline on the perimeter was 0.41 meters (DP #3132). The seaward extent of the pier ruins is represented by DP #3134 (LAT 18/19/52.521 N, LONG 064/56/03.505 W). Additional Detached Positions were DP #'s 3133, and 3135. See attached sketch.

Comparison with Prior Surveys: Prior survey H-8877 depicts two sets of pier ruins (covered 1-2 ft. at MLW) located near their charted position.

Comparison with Chart: Chart #24659 depicts two sets of pier ruins extending from the shoreline. The charted symbols do not adequately describes these items.

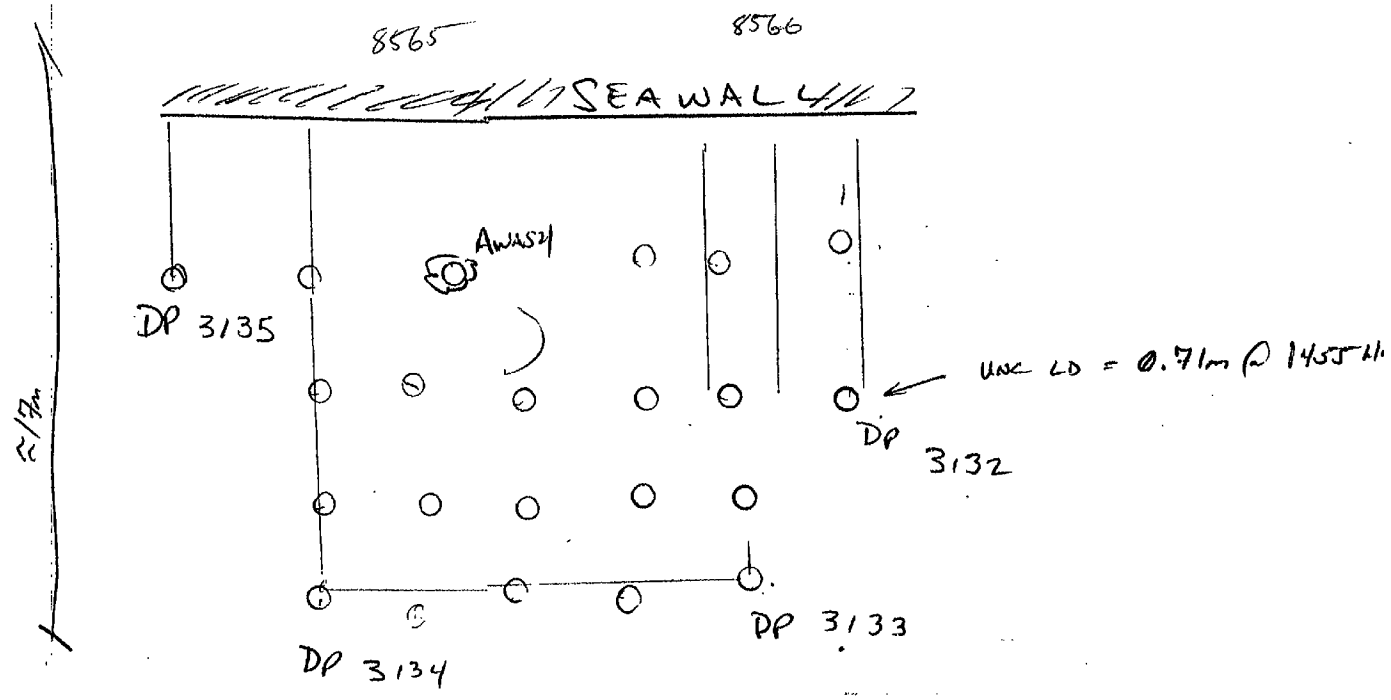
Recommendation: Recommend deleting the two sets of pier ruins delineating AWOIS items 8565 and 8566 on chart #24659. Replace the pier ruins with a submerged piling foul area delineated by the shoreline and the following four outermost positions: (See sketch)

DP #3132	18/19/52.710 N	064/56/03.383 W
DP #3133	18/19/53.016 N	064/56/03.015 W
DP #3134	18/19/52.521 N	064/56/03.505 W
DP #3135	18/19/52.710 N	064/56/03.284 W

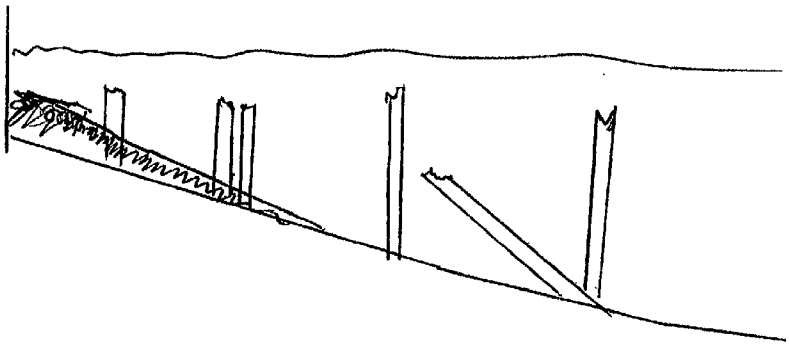
CONCUR

CHART FOUL LIMITS AS SHOWN ON PRESENT SURVEY.

AWOIS 8565, 8566



Profile



AWOIS 8566

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/19/53.14 N 064/56/03.22 W Search Radius: 50

Datum: MLLW

Type of Feature: Obstruction

Source: H-8877/66-- OPR-423; Piling, offshore end covered 2 feet MLW in LAT 18/20/00.3N, LONG 064/56/04.7 W.

Survey Requirements: Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search from listed position shoreward.

Method of Investigation: A diver investigation was conducted on DN 279.

Results of Investigation: The visual search revealed numerous submerged pilings extending approximately 17 meters from shore. This item adjoins AWOIS Item 8565, and is considered one feature. Refer to AWOIS 8565 item investigation for the description and recommendation for this item.

Comparison with Prior Surveys: See AWOIS 8565.

Comparison with Chart: See AWOIS 8565.

Recommendation: See AWOIS 8565. CONCUR

AWOIS 8569

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/04.03 N 064/56/04.02 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H-8877/66-- OPR-423; Offshore end of pier in ruins covered 2 feet MLW in LAT 18/20/11.2 N, LONG 064/56/05.6 W. Adjacent pier in ruins located in LAT 18/20/12.0 N, LONG 064/56/06.7 W.

Survey Requirements: Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 279. Side scan was conducted on DN 284. An additional diver investigation was conducted on DN 301.

Results of Investigation: On DN 279, the diver investigation revealed numerous submerged pilings laying on the bottom. Other debris such as a bed and a metal drum was found within the area.

Side scan was conducted on DN 284 and revealed seven piles in a vertical orientation (Fix Numbers 3621.2 - 3621.5).

On DN 301 divers descended down a buoy line and discovered the seven submerged piles 27 meters from the seawall face in 2-9 meters of water. Two piles were found in a vertical orientation with significant heights from the sea floor. The least depth (taken by leadline) on the tallest pile was 3.2 meters (corrected to MLLW using ~~predicted~~ APPROVED tides (DP #8105)). An additional Detached Position (DP #8108) was taken on the adjacent pile with a corrected least depth (leadline) of 5.3 meters. Only the eastern piles remain, the rest of the structure has fallen. See attached sketch.

Comparison with Prior Surveys: Prior survey H-8877 depicts two rows of piling, offshore end covered by 2 feet of water at MLW.

Comparison with Chart: Chart #25649 depicts three rows of submerged pilings leading perpendicular from the shore to a ruined pier (running parallel to the shore) which adjoins the three rows of pilings. The delineation of the pier ruins on the chart no longer accurately describes this item.

Recommendation: Recommend deleting the "pier ruins" symbology on the chart.* Replace the pier ruins with a dashed box delineating a foul/wreckage area. Within the foul area, place a symbol for a "submerged pile" in the following two positions:

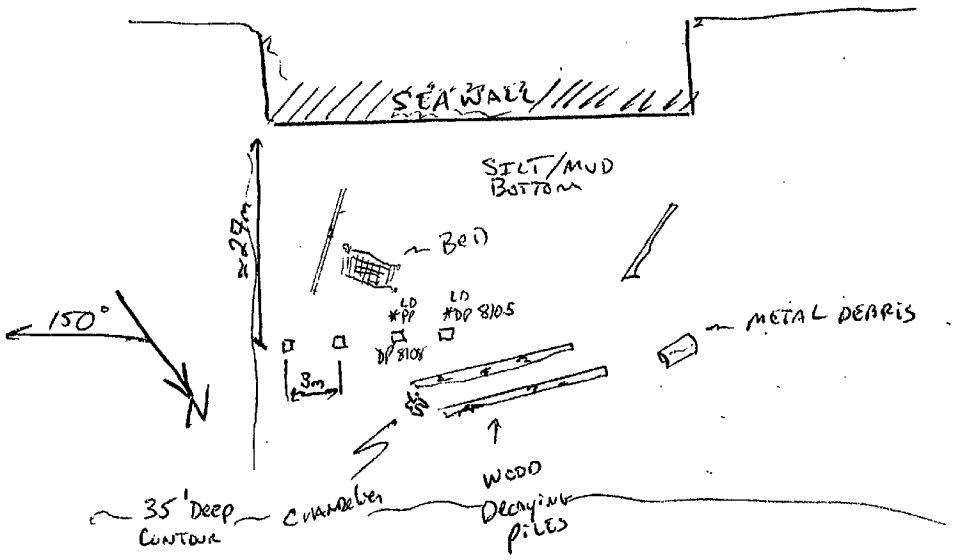
* CONCUR

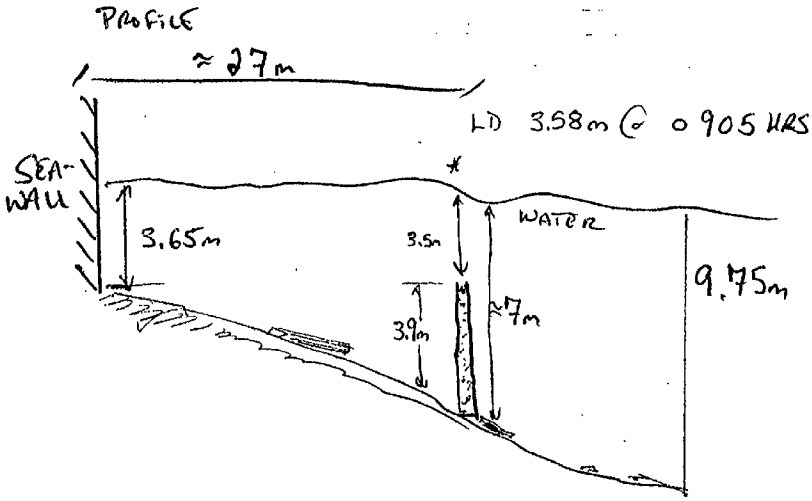
DO NOT CONCUR

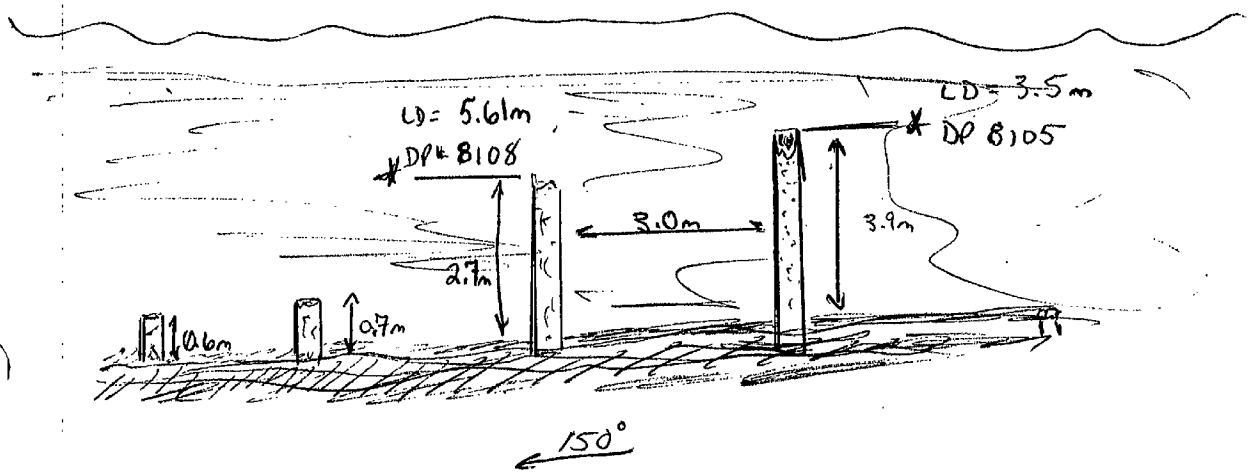
DP #8105	18/20/03.213 N	064/56/03.814 W
DP #8108	18/20/02.923 N	064/56/03.712 W

CHART PIER RUINS AS SHOWN ON PRESENT SURVEY.

AWOIS 8569


SEA WALL
SILT/MUD BOTTOM
≈27m
BED
LD #PP
LD #DP 8105
DP 8108
METAL DEBRIS
150°
3m
35' DEEP CONTOUR
CHANNEL
WOOD DECAYING PILES


PROFILE
≈27m
LD 3.58m @ 0905 HRS (EDT)
SEA-WALL
3.65m
3.5m
WATER
9.75m
3.9m
≈7m


LD = 5.6lm
DP# 8108
LD = 3.5m
DP 8105
3.0m
3.9m
2.7m
0.6m
0.7m
150°

AWOIS 8570

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/08.04 N 064/56/06.92 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H-8877/66-- OPR-423; Pier ruins in LAT 18/20/15.20 N, LONG 064/56/08.40 W. Listed position is offshore corner of "L-shaped" ruins. Each leg of "L" measured approximately 60 meters long.

Survey Requirements: Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 279.

Results of Investigation: A visual diver search revealed no submerged pilings. All pilings were exposed above the surface 1 - 1.5 meters. Detached Positions (# 3073, 3074, 3072, 3071) were taken to outline the pier ruins (see attached sketch). Water depths were from 2-8 meters.

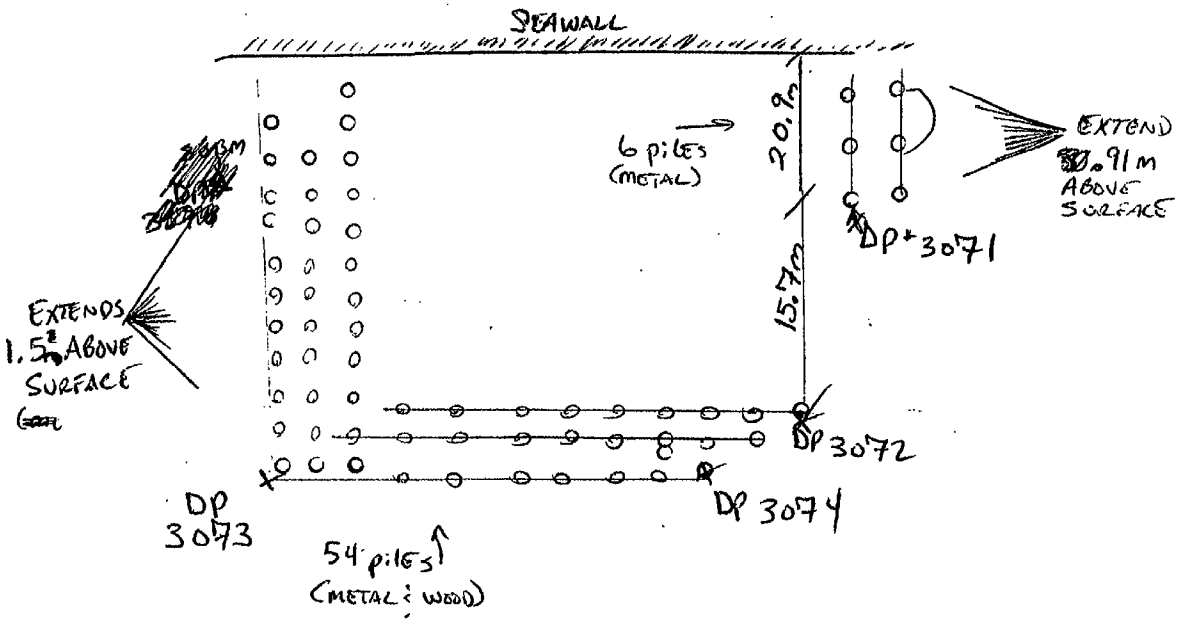
Comparison with Prior Surveys: Prior survey H-8877 depicts pier ruins as shown on the chart.

Comparison with Chart: Chart #25649 depicts a ruined outline of a marina bulkhead/pier. The charted symbology adequately describes this item.

Recommendation: Recommend retain this item in position as depicted on chart #25649.
DO NOT CONCUR

RECOMMEND DELETE CHARTED PIER RUINS AND CHART PIER RUINS AS SHOWN ON PRESENT SURVEY.

AWOIS 8570


SEAWALL
6 piles
(METAL)
20.9m
15.7m
EXTEND
30.91m
ABOVE
SURFACE
DP 3071
EXTENDS
1.5m ABOVE
SURFACE
DP 3072
DP 3073
DP 3074
54 piles
(METAL & WOOD)

AWOIS 8571

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/06.00 N 064/56/07.8 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H4544a/25-- Pier Located in LAT 18/20/06.0 N, LONG 064/56/07.8 W. Position scaled from chart 25649 (1:10,000).
H-8877/66-- OPR-423; Not shown on smooth sheet. Pier ruins charted on the 1960 edition of chart 25649.

Survey Requirements: Visual Search, Bottom Drag, Salvage Documentation

Method of Investigation: A diver investigation was conducted on DN 279.

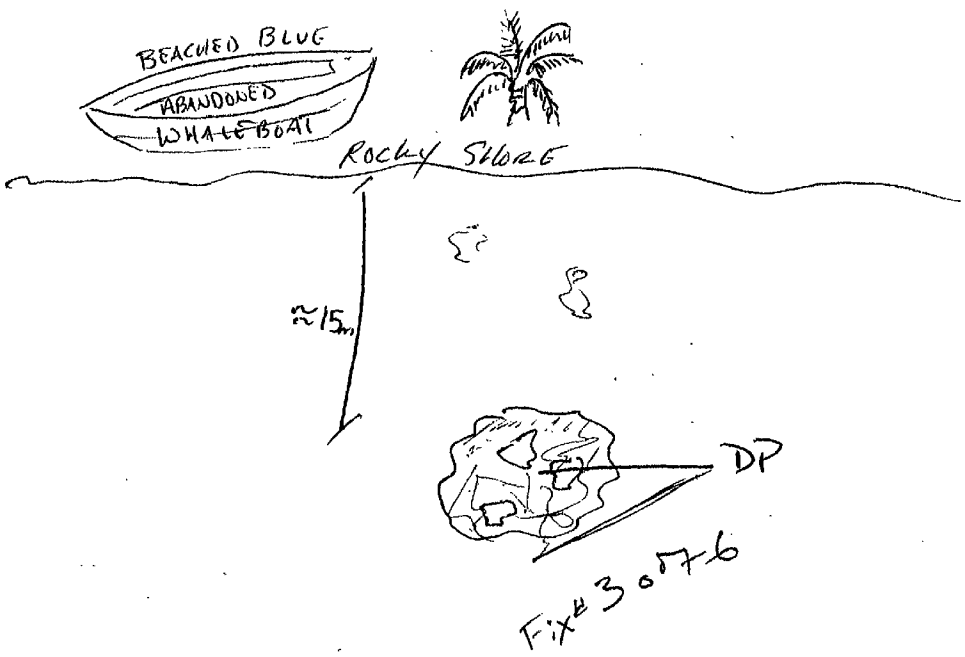
Results of Investigation: A visual diver search revealed a mound of broken reinforced concrete submerged in 2 meters of water and covered in marine growth. A detached position (# 3076) and leadline least-depth (0.~~67~~ meters corrected to MLLW) were taken on the item. Smaller pieces of concrete were scattered shoreward from the position of LAT 18/20/05.776 N, LONG 064/56/07.448 W.

Comparison with Prior Surveys: This item is not depicted on prior surveys.

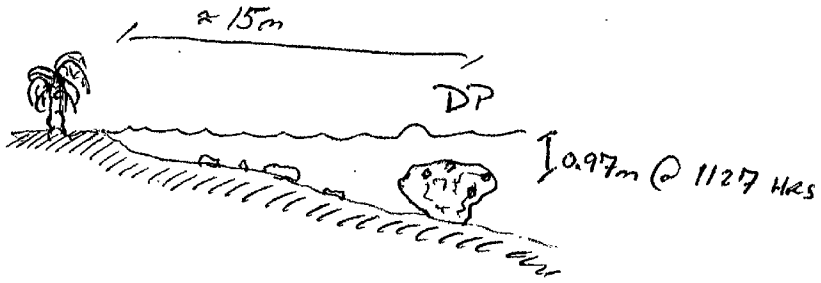
Comparison with Chart: Chart #25649 depicts pier ruins extending north-eastward from the shoreline. The charted symbol does not adequately describe this item.

Recommendation: Recommend delete the "pier ruins" symbology from chart #25649. Replace with symbol for "obstruction, depth ~~.97m~~ 0.7m (~~3~~ 2 ft)," in the least depth position: 18/20/05.776 N, 064/56/07.448 W. CONCUR CHART 2 OBSTR

AWOIS 8571



PROFILE



AWOIS 8572

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Charted Position: 18/20/11.00 N 064/56/12.00 W Search Radius: 100

Datum: MLLW

Type of Feature: Obstruction

Source: H4544a/25-- Pier located in LAT 18/20/11.0 N, LONG 064/56/12.0 W. Position scaled from chart 25649 (1:10,000).

H-8877/66-- OPR-423; Pier shown in ruins. However, this feature was used to support a portable tide station and a control station "ABE." The tide station was located in LAT 18/20/17.40 N, LONG 064/56/13.80 W (Puerto Rico Datum).

Survey Requirements: Bottom Drag, Diver Investigation, Salvage Documentation, Visual Search

Method of Investigation: A diver investigation was conducted on DN 279.

Results of Investigation: The diver investigation revealed two submerged pilings west of 18 exposed pilings extending 24 meters from shore. The two submerged pilings had corrected least depths of 0.8 and 0.6 meters measured by leadline. A detached position was taken on the outermost submerged piling (DP # 3068) and at the corner of the exposed pilings (DP # 3070-See sketch). No pilings exist east of the exposed pilings as charted. Surrounding water depths were 2-6 meters.

Comparison with Prior Surveys: Prior survey H-8877 depicts pier ruins extending staight out from the shoreline.

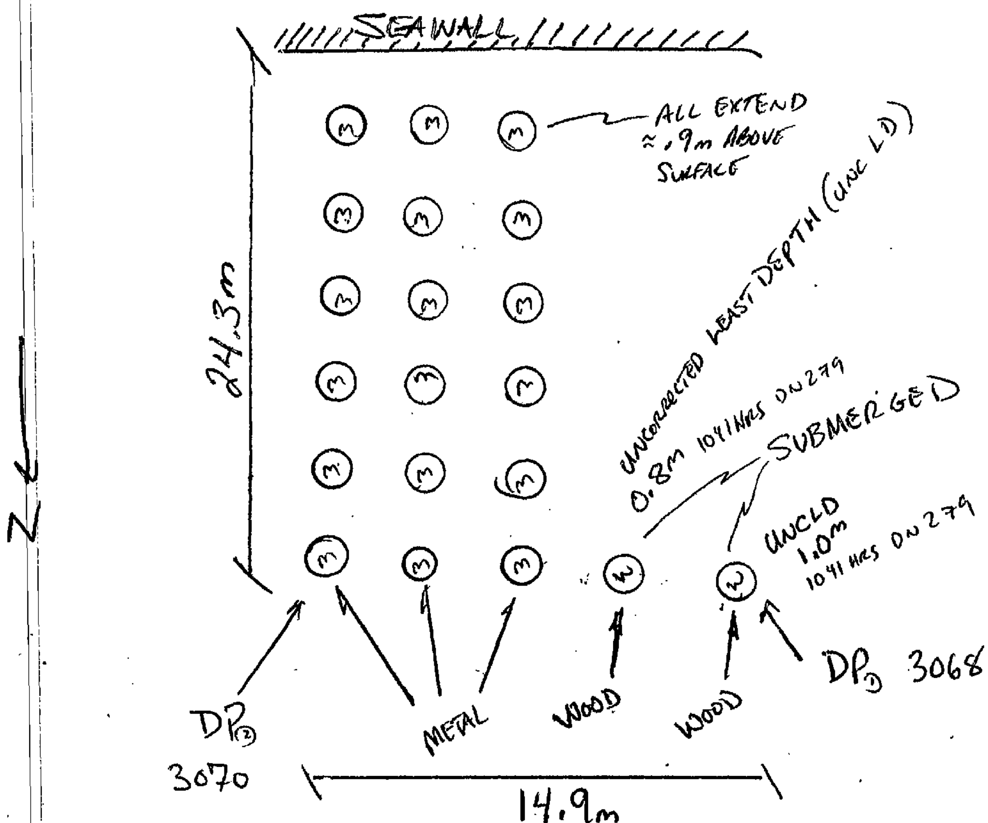
Comparison with Chart: Chart #25649 depicts ruins of a "T" shaped pier extending from the shoreline. The charted outline of the ruins does not adequately describe this item.

Recommendation: Recommend delete the "T" shaped outline of "pier ruins" on chart #25649.* Replace with an outline of a ruined straight pier extending from the shoreline to the surveyed outermost position: 18/20/10.941 N, 064/56/11.787 W. Chart two "submerged piles," in position: 18/20/10.925 N, 064/56/12.311 W. DO NOT CONCUR
CHART AREA AS SHOWN ON PRESENT SURVEY IN THE VICINITY OF LATITUDE 18°20'10.8"N, LONGITUDE 64°56'12.0"W

*CONCUR

AWOIS 8572

ALL SUBSURFACE MEASUREMENTS TAKEN WITHIN 10 MINUTES OF 1041



Michael R. S[illegible] ENS/NOAA

New Item A3

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-46.956 N 064-56-04.803 W

Type of Feature: Submerged Wreck

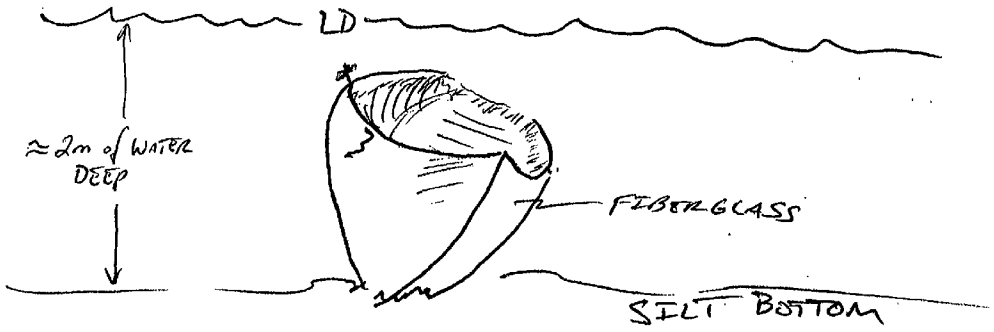
Description: A fiberglass hull was discovered in Careening Cove in approximately 2 meters of water on DN 284. The hull is 10.6 meters in length and has a corrected least depth (leadline) of 0.28 meters at MLLW (DP #3614). The vessel is oriented in an East-West direction with a 4.1 meter beam. See the attached sketch.

A Danger to Navigation report was submitted for this wreck.

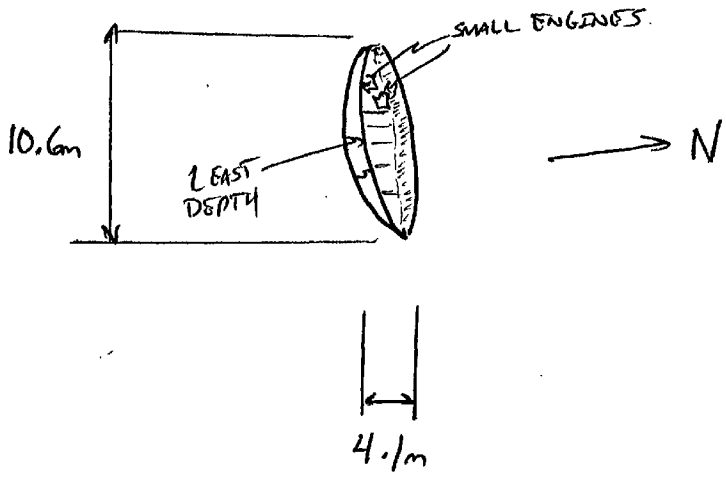
Recommendation: Chart a submerged dangerous wreck in position: 18/19/46.956 N, 064/56/04.803 W, WITH A LEAST DEPTH OF 1 FT (0.3m), (1WK) PRESENTLY SHOWN ON CHART 25649 (17TH ED.).

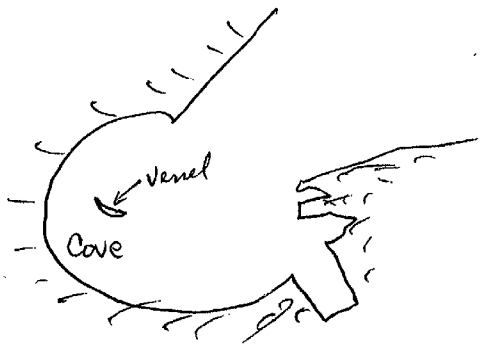
A-3

DP 3614 [redacted]
LD
0.48m @ 0925 EDT



TOP VIEW





New Item A4

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

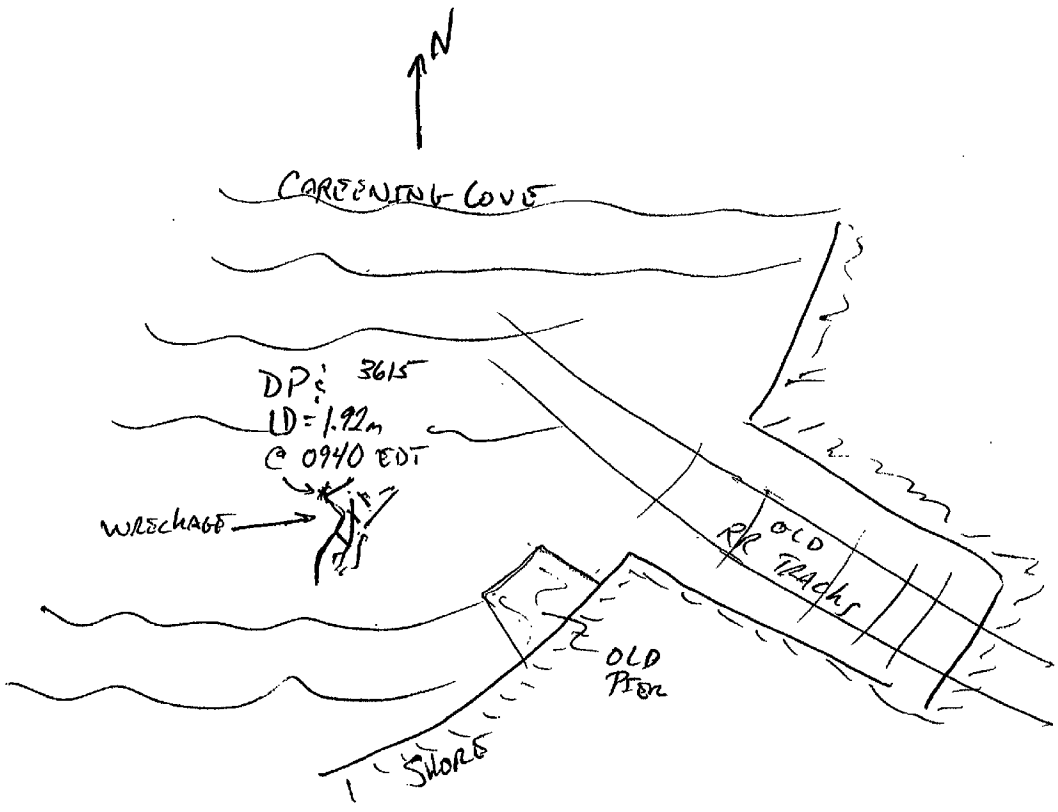
Location: 18-19-46.286 N 064-56-03.911 W

Type of Feature: Submerged Wreckage

Description: The remains of a small vessel were discovered in Careening Cove on DN 284. The wreckage is mostly on the bottom with few points rising above 0.15 meters off the bottom (DP #3615). See the attached sketch.

Recommendation: Recommend not charting this item. It is not a hazard to navigation.
CONCUR

A 4


N
CORRENTING COVE
DP's 3615
LD = 1.92m
@ 0940 EDT
WRECKAGE
OLD RR TRACKS
OLD PIER
SHORE

New Item A5

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-47.513 N 064-56-05.066 W

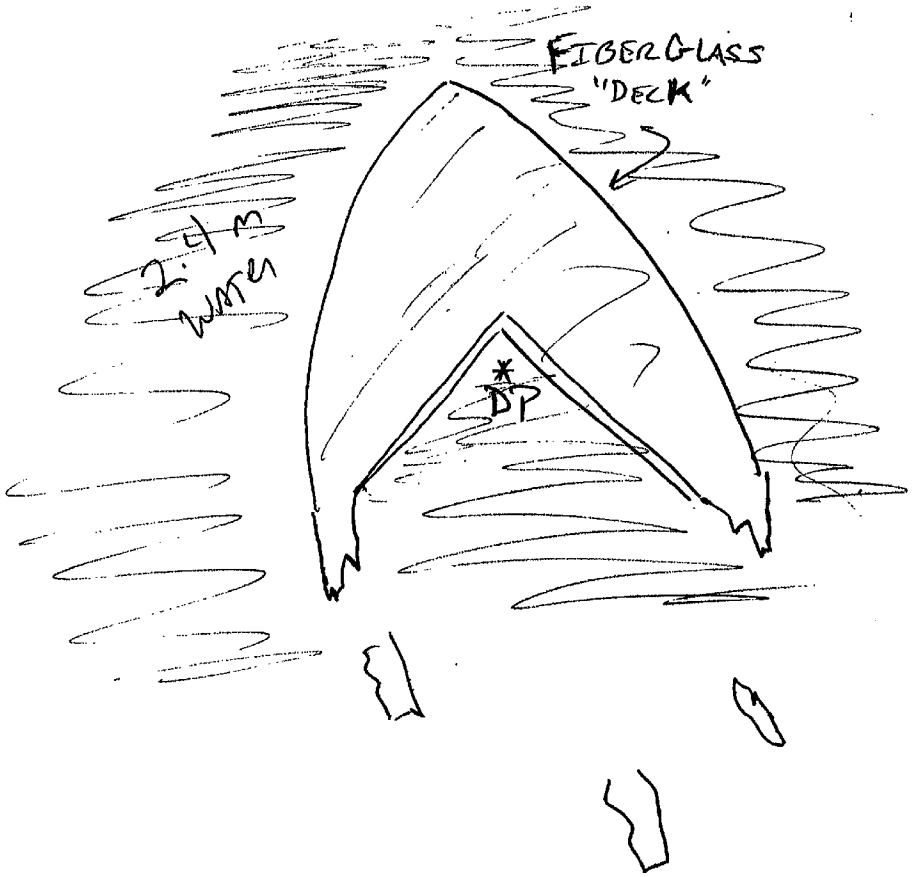
Type of Feature: Submerged Wreck

Description: A fiberglass deck from the bow of a small sailboat was discovered in Careening Cove in approximately 2.5 meters of water (Detached Position #3616) on DN 284. The item lays nearly flat on the bottom. See attached sketch.

Recommendation: This item is not considered a hazard to navigation. Recommend not charting this item. CONCUR

A 5

DP # 3616



New Item A6

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-48.557 N 064-56-05.083 W

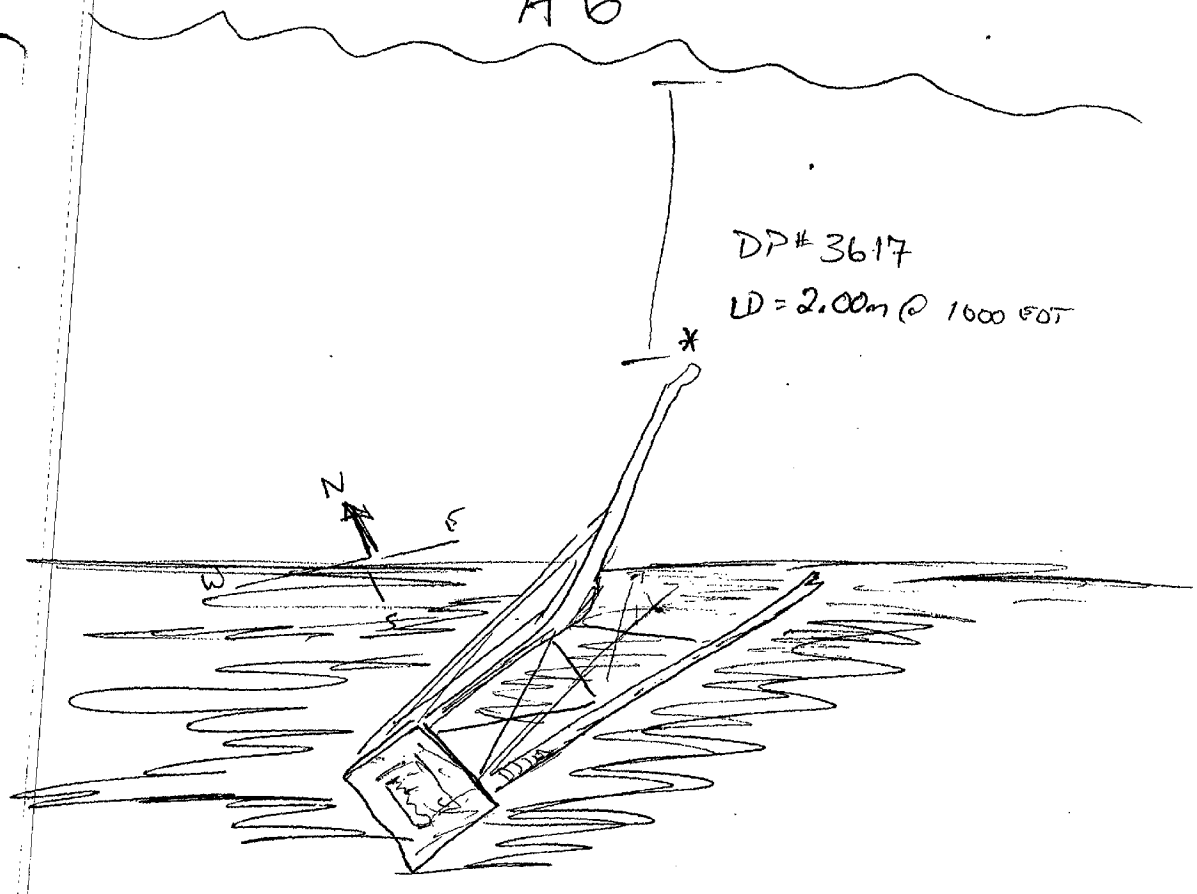
Type of Feature: Obstruction

Description: A metal "conning" tower approximately 3 meters in length was discovered in 3.27 meters of water in Careening Cove on DN 284. The tower was laying on its side with one of its four legs turned upward towards the surface of the water. A least depth (leadline) was measured at 1.8 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Detached Position # 3617 was taken to mark the location of the least depth.

A Danger to Navigation report was submitted for this ~~wreck~~ OBSTRUCTION.

Recommendation: Recommend charting an "obstruction, least depth 1.8m (~~5-3/4ft~~ 6FT)," in position: 18/19/48.557 N, 064/56/05.083 W. CONCUR CHART AS 6 OBSTR PRESENTLY SHOWN ON CHART 25649 (17TH. ED.)

A6



New Item A7

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-51.018 N 064-55-59.626 W

Type of Feature: Submerged Wreck

Description: During the AWOIS Item 8550 diver investigation (DN 284), the fiberglass sailboat "FRENCH KISS" was discovered off the point at Careening Cove in 10 meters of water. The boat had little marine growth and was sitting upright,oriented in a north-south direction (bow to the south). The hull and decks were white, with blue racing stripes and orange lettering tape across the stern.

The boat measured 10.05 meters (33 feet) in length with a beam of 3.65 meters (12 feet). The hull extended 1.8 meters (6.2 feet) from the bottom. All hatches were open and no apparent damage to the hull was noticeable. The mast was broken, leaning over the starboard side of the vessel and was the location of the least depth.

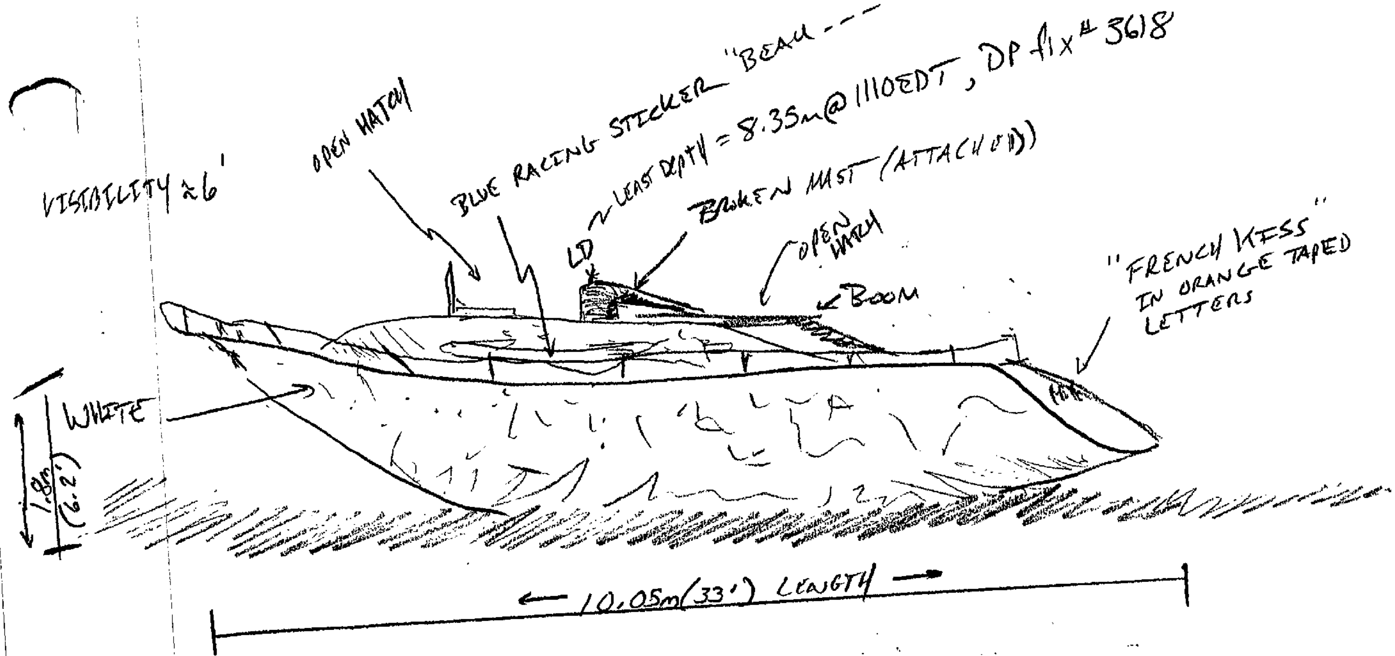
The least depth was measured by leadline to be 8.~~15~~2 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Detached Position #3618 was taken at the site of the least depth. This vessel appears on side scan fix number 3626.19. New Item A8 was discovered 12 meters off the port bow of this wreck. See the attached sketch.

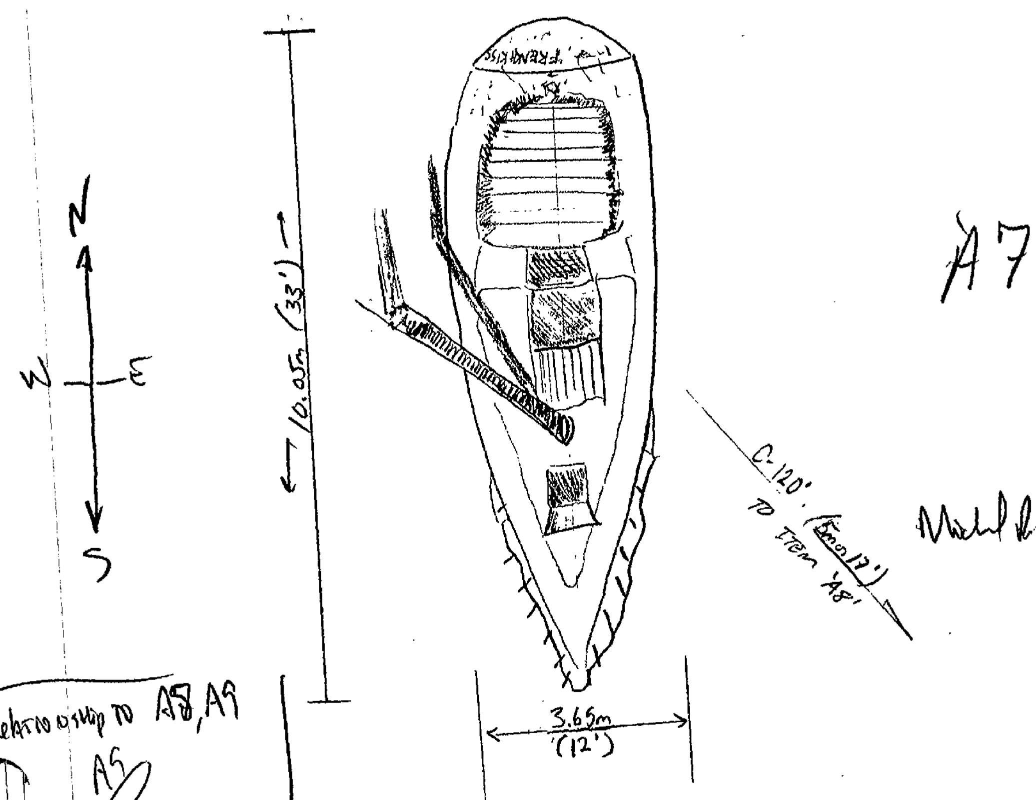
A Danger to Navigation report was submitted for this wreck.

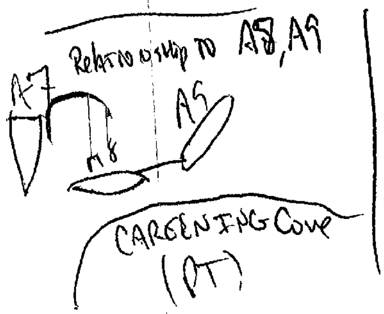
Recommendation: Recommend charting a "wreck, least depth 8.~~15~~2m (~~26~~27 ft)," in position: 18/19/51.018 N, 064/55/59.626 W. CONCUR CHART AS 27 WK "FRENCH KISS" SHOULD THE SCALE OF THE CHART ALLOW.

SEE ALSO SECTION N. OF THE EVALUATION REPORT.

A7


VISIBILITY ≈ 6'
OPEN HATCH
BLUE RACING STICKER "BEAU - - -"
LD ~ LEAST DEPTH = 8.35m @ 1110EDT, DP fix # 3618
BROKEN MAST (ATTACHED)
OPEN HATCH
BOOM
"FRENCH KISS" IN ORANGE TAPED LETTERS
WHITE
1.8m (6.2')
10.05m (33') LENGTH


N
W
E
S
10.05m (33')
"FRENCH KISS"
3.65m (12')
c. 120' (5m / 12') TO ITEM 'A8'
A7'


Relationship to A8, A9
A7
A8
A9
CAREENING COVE (PT)

New Item A8

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-50.888 N 064-55-59.330 W

Type of Feature: Submerged Wreck

Description: During the AWOIS Item 8550 diver investigation (DN 284), the fiberglass sailboat "QUEST" was discovered off the point at Careening Cove in 10 meters of water. The boat had little marine growth and was sitting upright, oriented in an east-west direction (bow to the east). The hull and decks were white, with blue trim and lettering on the bow.

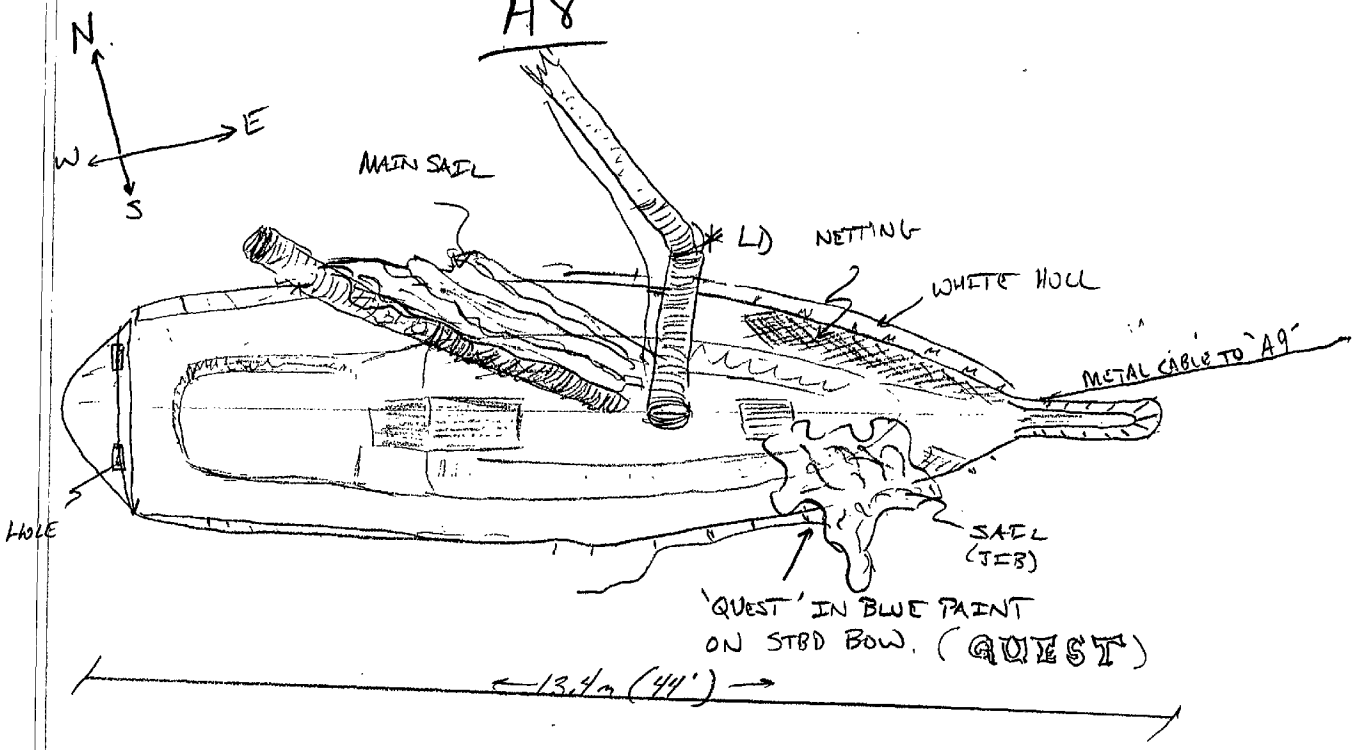
The boat measured 13.4 meters (44 feet) in length with a beam of 4.56 meters (15 feet). No apparent damage to the hull was noticeable. The mast was broken, leaning over the port side of the vessel with the main sail and jib covering the forward end of the vessel. The mast was the location of the least depth.

The least depth was measured by leadline to be 5.56 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Detached Position #3619 was taken at the site of the least depth. This vessel appears on side scan fix numbers 3625.05 and 3626.25. A metal anchor cable extended from the bow and was fouled on another submerged sailboat (New item A9). See the attached sketch.

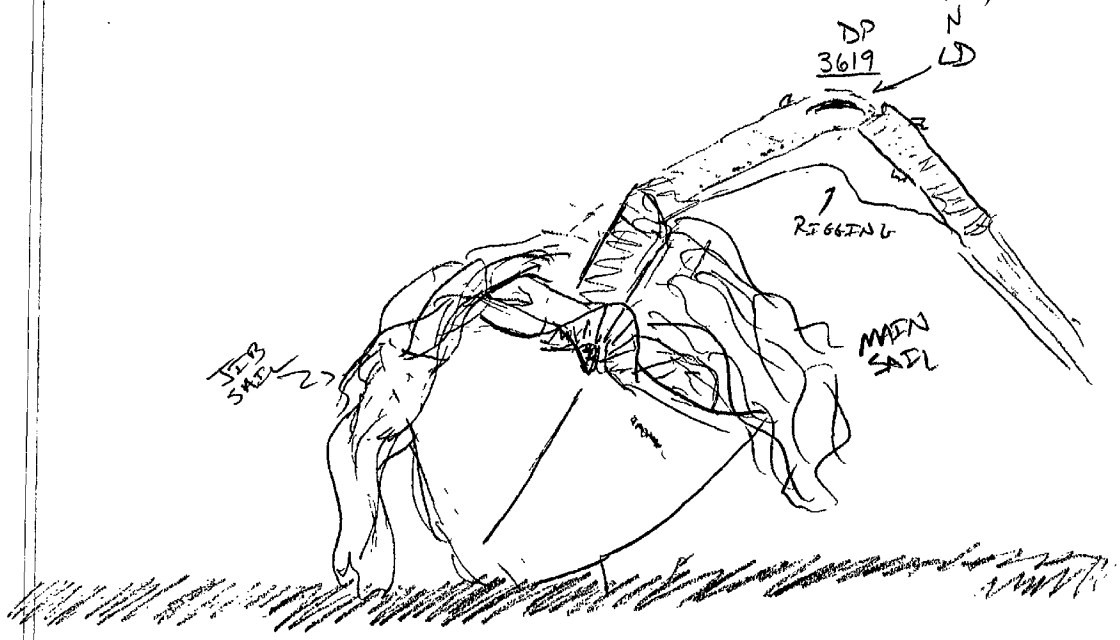
A Danger to Navigation report was submitted for this wreck.

Recommendation: Recommend charting a "wreck, least depth 5.6m (18 ft)," in position: 18/19/50.888 N, 064/55/59.330 W. CONCUR CHART AS IBWK "QUEST" SEE ALSO SECTION N. OF THE EVALUATION REPORT.

A8



LEAST DEPTH = 5.76m @ 1133



New Item A9

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-50.215 N 064-55-58.567 W

Type of Feature: Submerged Wreck

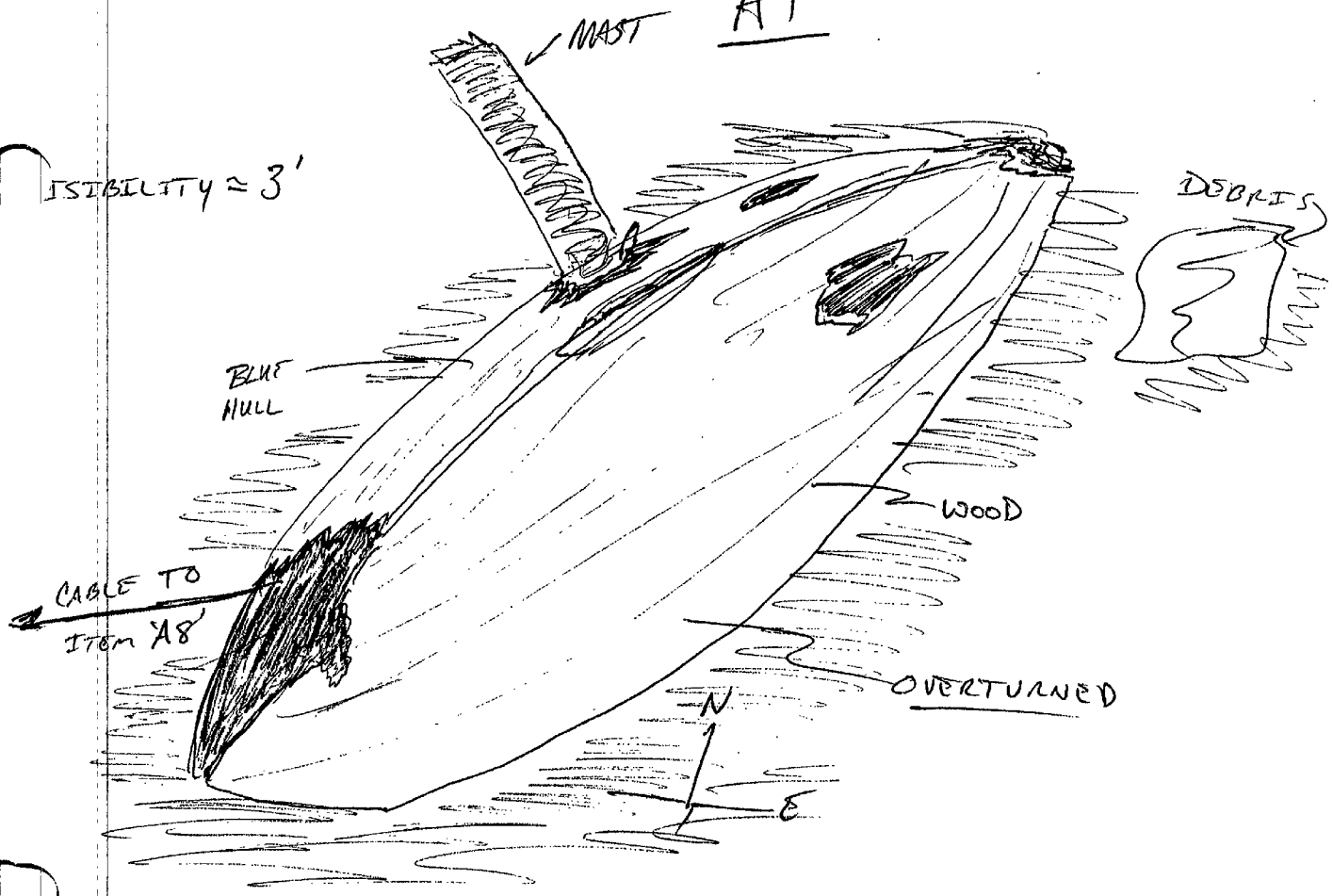
Description: During the AWOIS Item 8550 diver investigation (DN 284), a wooden sailboat was discovered off the point at Careening Cove in 6 meters of water. The decomposing boat was overturned, with the mast protruding through the hull. The vessel length ran to the north-east with the bow pointing to the south-west. The boat was at the base of the shoreline gradient as depicted in the attached sketch. A metal cable connected this vessel to the submerged sailboat "QUEST" (New item A8).

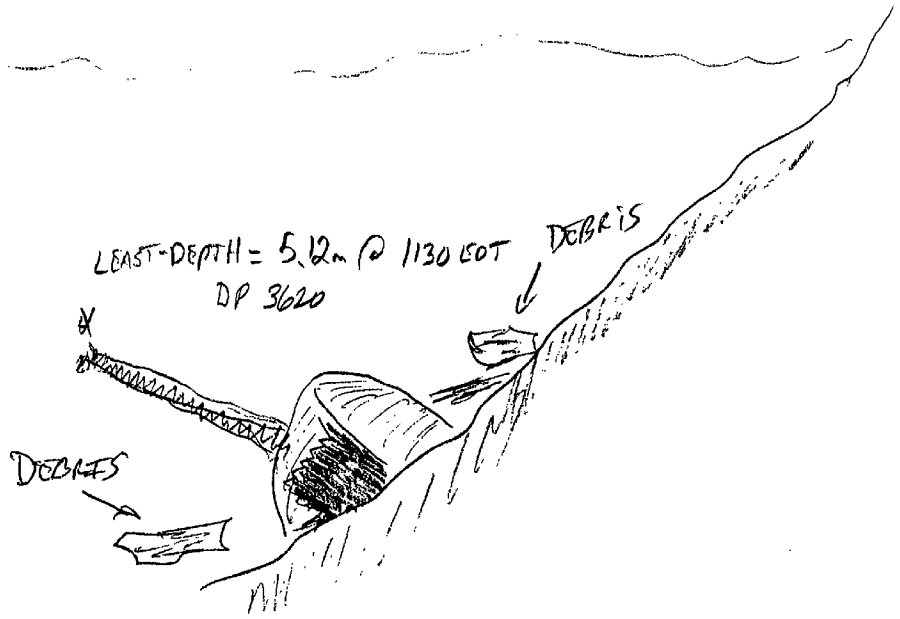
The boat was approximately 10 meters (30 feet) in length with a blue hull. The least depth was measured by leadline at the mast to be 4.92 8 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Detached Position #3620 was taken at the site of the least depth. This vessel appears on side scan fix number 3624.85. See the attached sketch.

A Danger to Navigation report was submitted for this wreck.

Recommendation: Recommend charting a "wreck, least depth 4.92 8 m (~~16~~ 15 ft)" in position: 18/19/50.215 N, 064/55/58.567 W. CONCUR CHART AS 15 WK

A9


MAST
ISIBILITY ≈ 3'
DEBRIS
BLUE HULL
WOOD
CABLE TO ITEM A8'
OVERTURNED
N
E


LEAST-DEPTH = 5.2m @ 1130 EOT
DP 3620
DEBRIS
DEBRIS

New Item A10

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-51.623 N 064-55-55.594 W

Type of Feature: Submerged Wreck

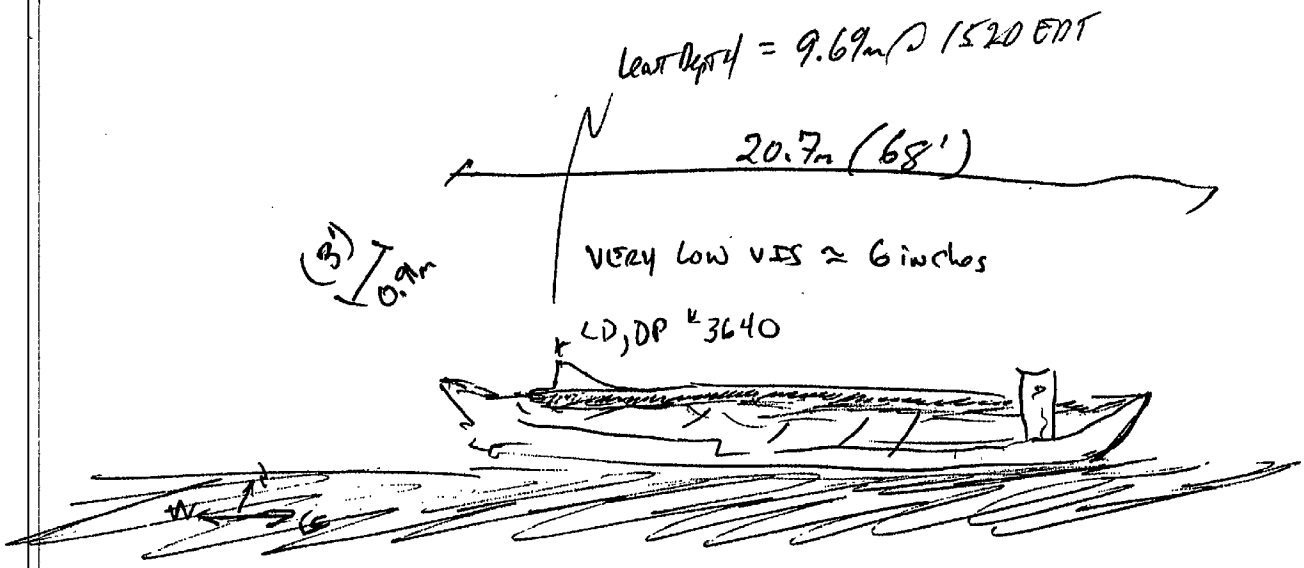
Description: During the development of New Items A7, A8, and A9, New Item A10 was discovered on side scan (DN 284 & DN 306). Diver investigation on DN 284 revealed a highly decomposed wooden vessel, oriented in an east-west direction, 20.7 meters (68 feet) in length, with a remaining beam of 0.91 meters (3 feet). Surrounding water depth was 10 meters.

This vessel appears on side scan at fix numbers 3624.05, 3626.85, 3628.20, and 4791.43. The least depth was measured by leadline to be 9.~~39~~ 4 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Detached position #3640 was taken at the site of the least depth. See the attached sketch. USING THE SHOALER FATHOMETER DEPTH OF 9.2m (30FT) AT POSITION 4223+7.

A Danger to Navigation report was submitted for this wreck.

Recommendation: Recommend charting a "wreck, least depth 9.~~39~~ 2m (30ft)," in position: 18/19/51.~~623~~ 454 N, 064/55/55.~~594~~ 427 W. CONCUR CHART AS SOUK PRESENTLY SHOWN ON CHART 25649 (17TH ED.)

A10


Least Depth = 9.69m @ 1520 EDT
20.7m (68')
(3') 0.9m
VERY LOW VIS ≈ 6 inches
LD, DP #3640

New Item A11

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-49.879 N 064-56-34.137 W

Type of Feature: Submerged Pontoon

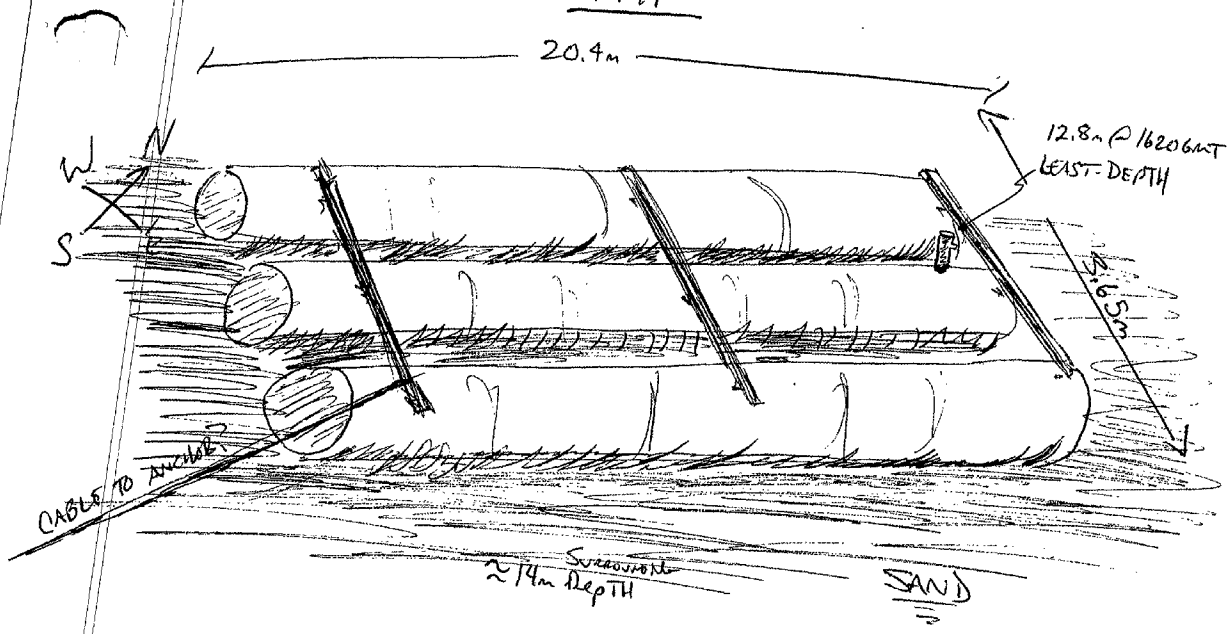
Description: A dive was conducted on DN 288 to investigate side scan sonar contacts (Fix # 3726.67, 3701.36, 3753.30). Divers descended down a buoy placed on the item and discovered the remains of a pontoon dock or small dry dock in 13 meters of water. Three rigidly connected cylinders were lying flat on the bottom and extending to the northeast.

The pontoon measured 20.4 meters by 3.65 meters. A bollard extended from one end of the pontoon, making the item significant. A least depth of 12.5 meters (corrected to MLLW and ~~predicted~~ APPROVED tides) was measured by leadline (DP # 3831).

A Danger to Navigation report was submitted for this wreck.

Recommendation: Recommend charting a "~~wreck,~~ OBSTR least depth 12.5m (40ft)," in position: 18/19/49.879 N, 064/56/34.137 W. CONCUR CHART AS 41 OBSTR
PRESENTLY SHOWN ON CHART 25649 (17TH ED.)

A11


20.4m
12.8m @ 1620 GMT
LEAST DEPTH
W
N
S
CABLE TO ANCHOR
≈14m DEPTH
SAND

New Item A12

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-20-17.099 N 064-56-21.258 W

Type of Feature: Submerged Tank

Description: A dive was conducted on DN 301 to investigate a side scan sonar contact (SSS data not saved) within Haulover Cut. Divers searched the area and discovered a large cylindrical tank. The tank was 10.5 meters in length and had a diameter of 1.82 meters. It was on its side with its axis parallel to the seawall at a distance of 10-15 meters south of the seawall. Surrounding water depths were 3-4 meters.

A least depth was measured by leadline (DP # 8147) to be 3.4 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Reference the attached sketch.

A Danger to Navigation report was submitted for this obstruction.

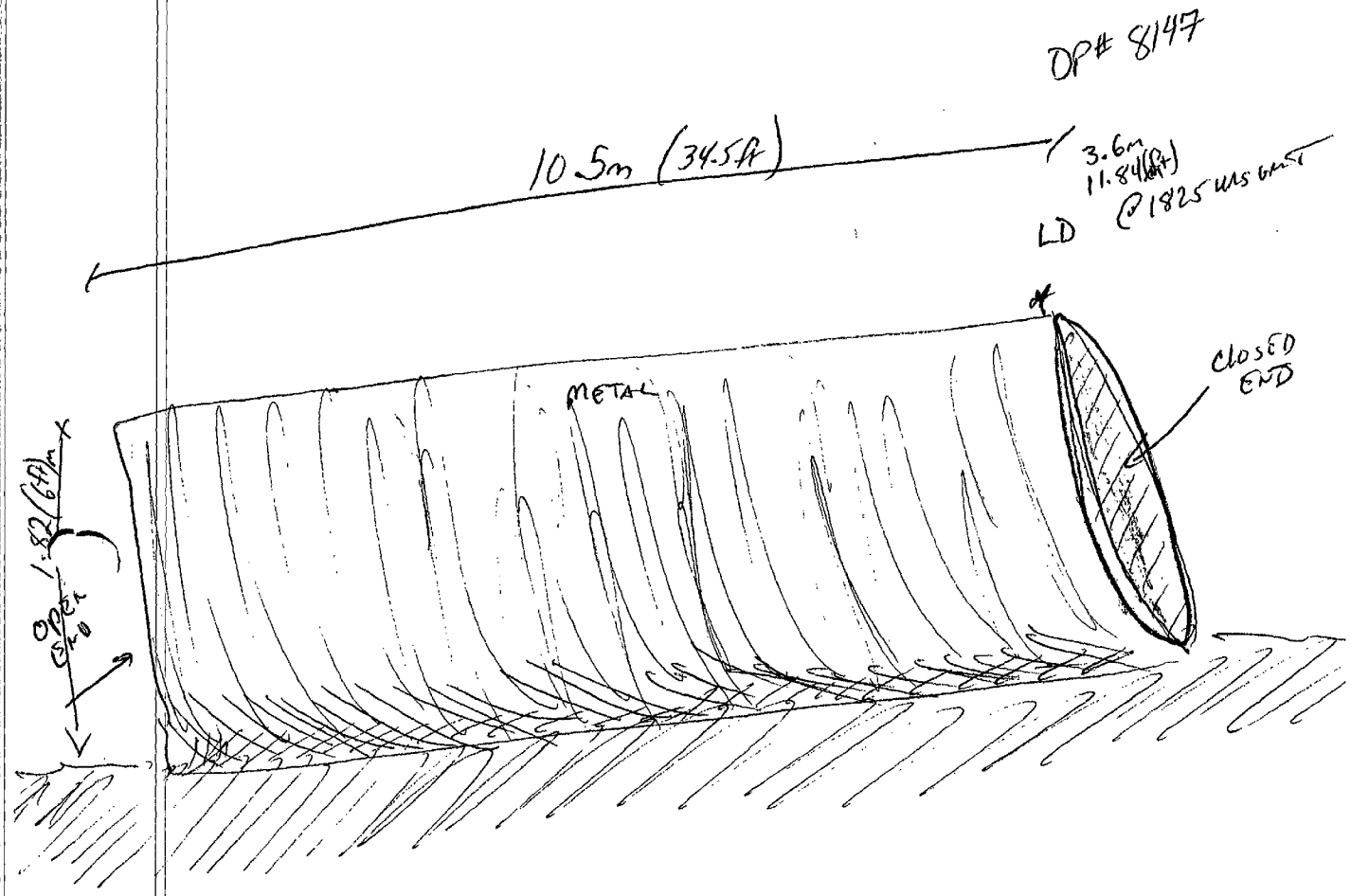
Recommendation: Recommend charting an "obstruction, least depth 3.4m (11 ft)," in position: 18/20/17.099 N, 064/56/21.258 W. CONCUR CHART AS 11 OBSTR SEE ALSO SECTION N. OF THE EVALUATION REPORT.

Delete per subsequent information chart letter 154 (1995). Only show 11 ft. sdg. on chart.

GEH
5/13/96

cnt items 1-27 Superseded by L 1514/95

A-12


DP# 8147
10.5m (34.5ft)
3.6m
11.84(ft)
@1825 lbs each
LD
METAL
CLOSED END
1.82(6ft)m
OPEN END

New Item A13

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-20-06.271 N 064-56-22.962 W

Type of Feature: Submerged Wreckage

Description: A dive was conducted on DN 301 to investigate a side scan sonar contact (Fix #4649.68). Divers searched the area and discovered the remains of a small fiberglass sailboat and a metal pontoon structure. Neither item was considered significant because they extended less than 0.5 meters off the bottom. The remains of the sailboat consisted of a bow section (half-length and forward) inverted on the bottom. Refer to the attached sketch. Surrounding water depths were 5 meters.

A least depth (DP # 8119) was measured by leadline to be 4.~~5~~ 6 meters corrected to MLLW using ~~predicted~~ APPROVED tides. This item was not considered a hazard to navigation.

Recommendation: Recommend not charting this item. DO NOT CONCUR CHART A 15WK IN LATITUDE 18°20'06.271"N, LONGITUDE 64°56'~~27.962~~ 22"W SHOULD THE CHART SCALE ALLOW.

New Item A13A

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-20-06.958 N 064-56-23.265 W

Type of Feature: Submerged Wreck

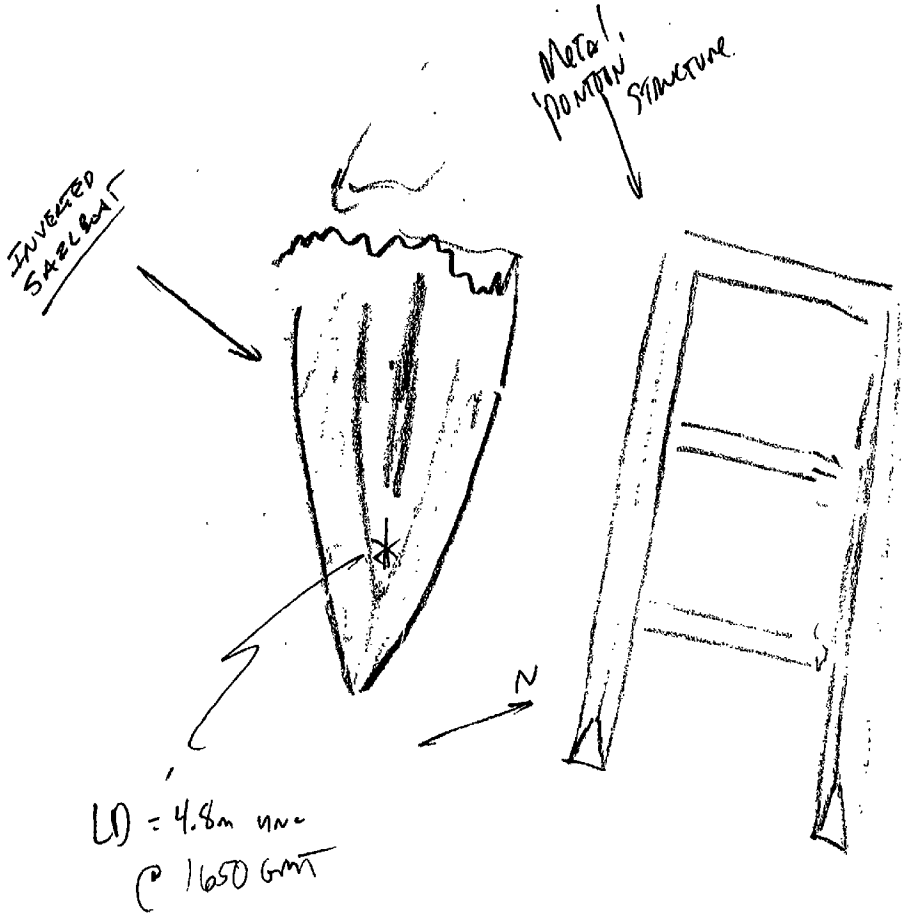
Description: During the investigation of Item A13 an overturned fiberglass / wood vessel was discovered in 4 meters of water. The inverted hull was approximately 12.2 meters in length. The least-depth occurred at the bow and the bow was marked by a mooring buoy. Refer to the attached sketch.

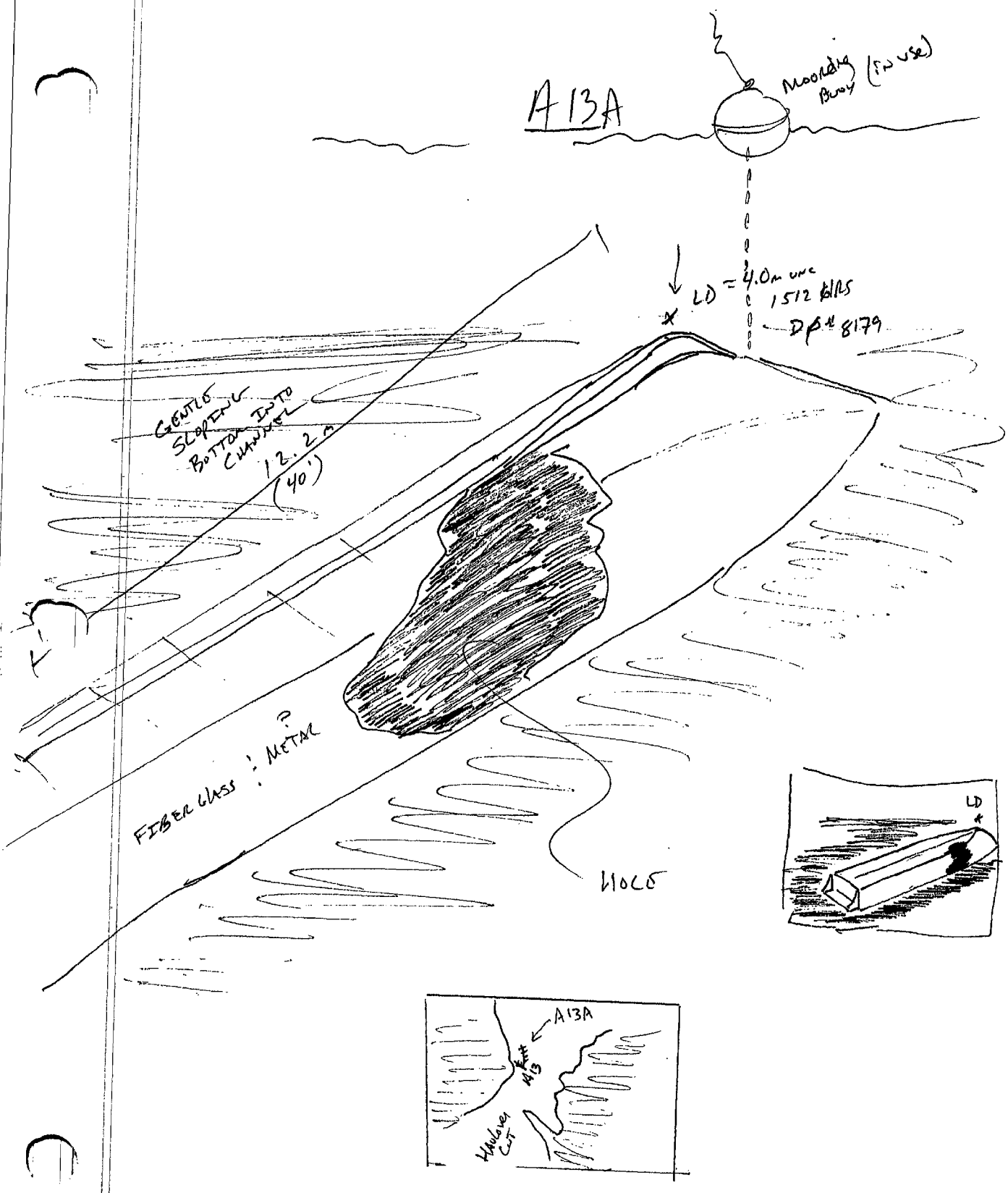
A least depth (DP # 8179) was measured by leadline to be 3.~~7~~ 6 meters corrected to MLLW using ~~predicted~~ APPROVED tides.

Recommendation: Recommend charting a "wreck, least depth 3.~~7~~ 6m (12ft)," in position: 18/20/06.958 N, 064/56/23.265 W. CONCUR CHART AS 12WK

A13

TOP


Metal 'POINTON' STRUCTURE
INVERTED SAILBOAT
N
LD = 4.8m min
@ 1650 GMT


A13A
Mooring Buoy (in use)
LD = 4.0m unc
1512 bars
DP # 8179
GENTLE SLOPING BOTTOM INTO CHANNEL
12.2 m
(40')
FIBER GLASS ? METAL ?
BLOCK
LD
A13A
A13
Hawkins Cut

New Item A14

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-59.929 N 064-56-41.353 W

Type of Feature: Submerged Mooring Anchor

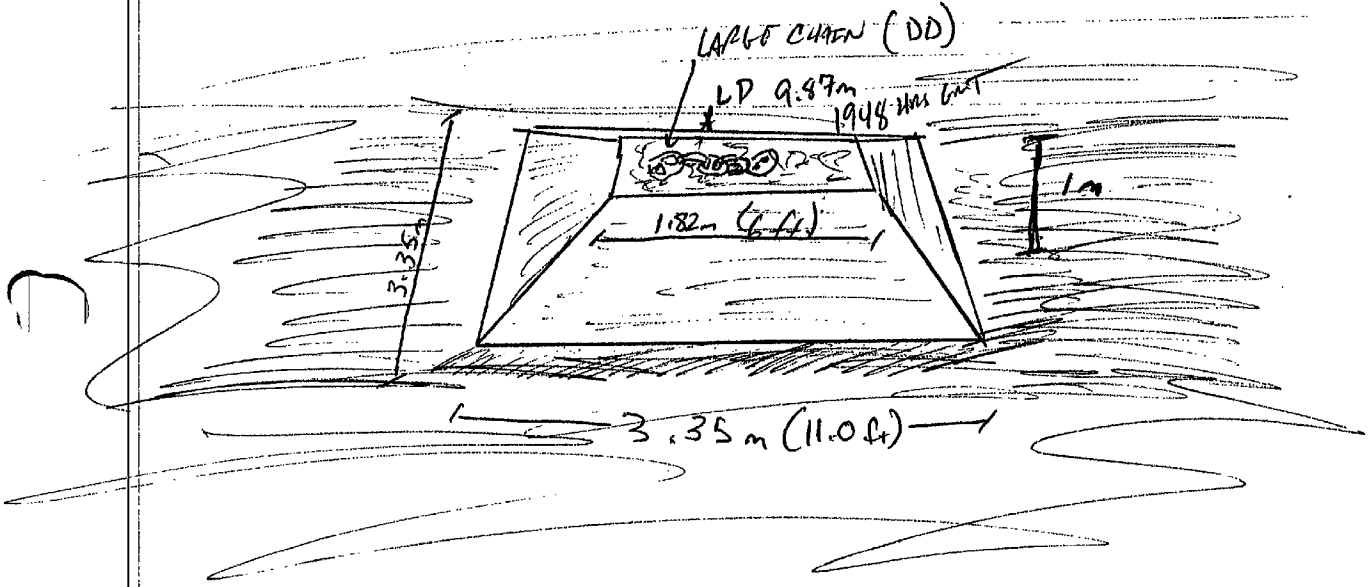
Description: A dive was conducted on DN 301 to investigate a side scan sonar contact (Fix #3749.25). Divers descended down a buoy placed on the item and discovered a cement mooring anchor in approximately 13 meters of water. The anchor had a square base (3.35 meters per side) and tapered upward to a square top (1.82 meters per side). On the top were several links of large chain connected to the center. See the attached sketch.

A least depth (DP # 8152) was measured by leadline to be 9.~~67~~ 57 meters corrected to MLLW using ~~predicted~~ APPROVED tides. The least depth from the fathometer was 9.2 meters corrected to MLLW using predicted tides and velocity tables. Current through the Gregorie Channel may have affected the leadline measurements.

A Danger to Navigation report was submitted for this obstruction.

Recommendation: Recommend charting an "obstruction, least depth 9.~~2~~7m (~~30~~ 32 ft)," in position: 18/19/59.929 N, 064/56/41.353 W. CONCUR CHART AS 32 OBSTR DELETE CHARTED OBSTRUCTION WITH NO DEPTH AND DANGER CURVE.

A 14


LARGE CHAIN (DD)
LD 9.97m
1.948 Hms Unit
1m
1.82m (6 ft)
3.35m
3.35 m (11.0 ft)

New Item A15

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-50.225 N 064-56-03.318 W

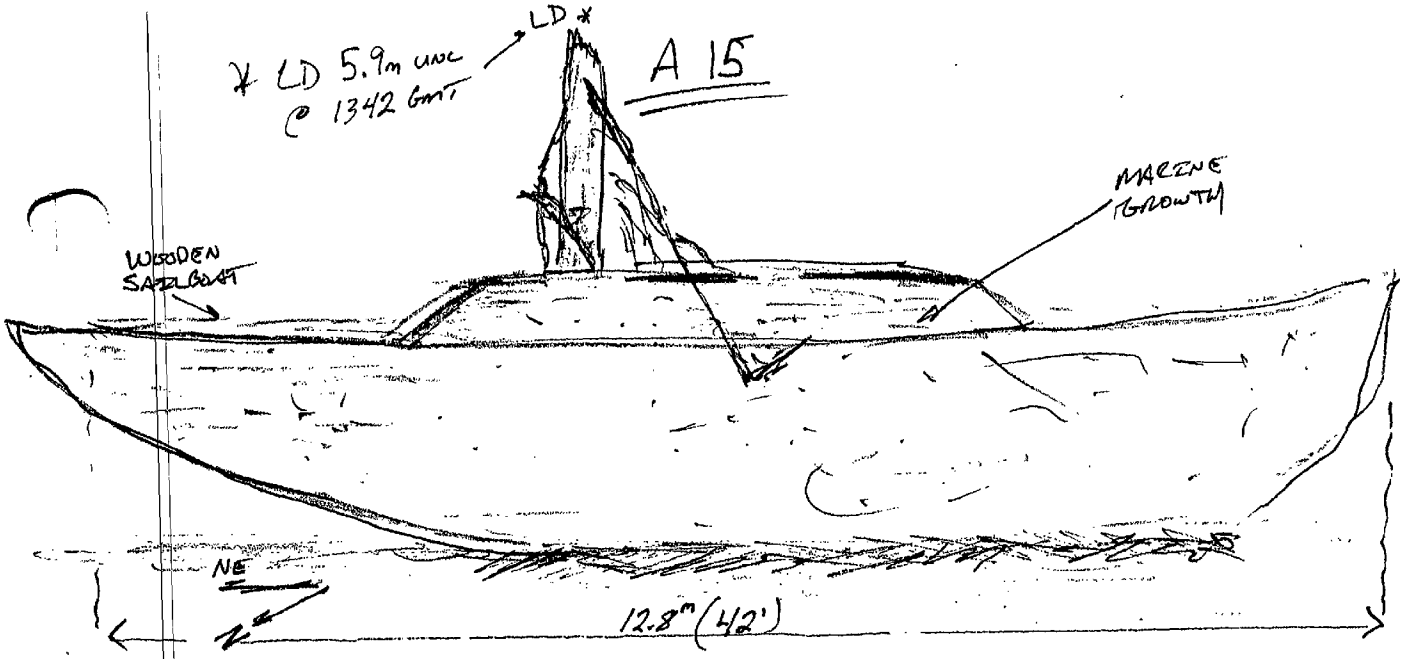
Type of Feature: Submerged Sailboat

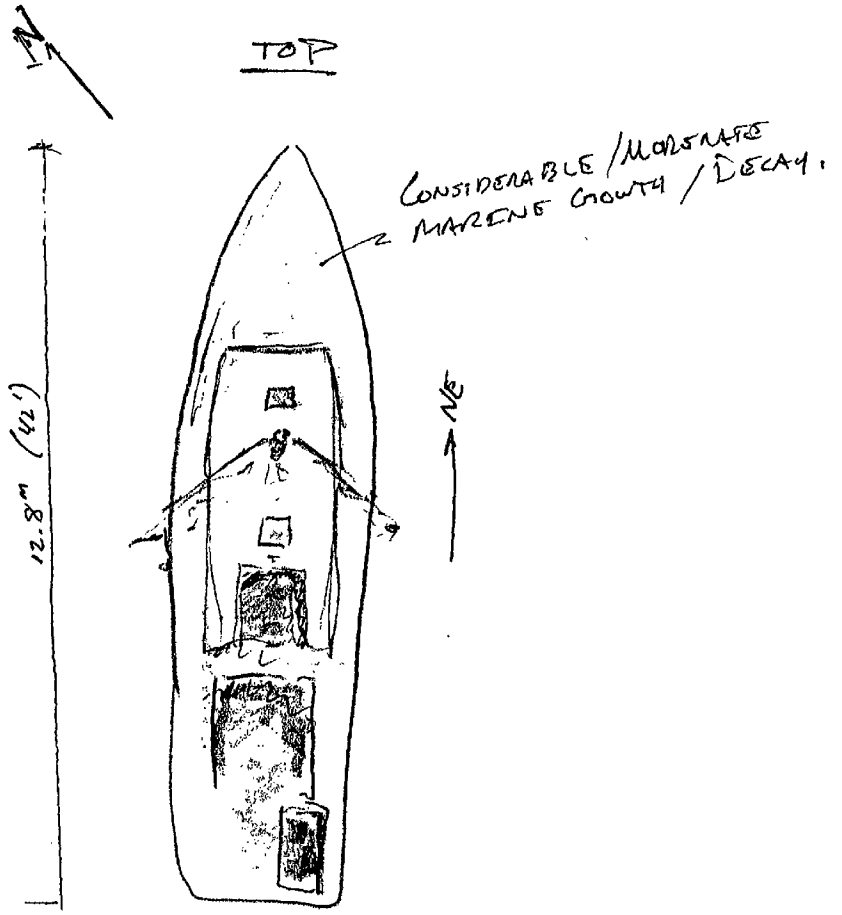
Description: A dive was conducted on DN 307 to investigate a possible wreck area mentioned by locals. Divers conducted a series of circle searches and discovered a 12.8 meter (42 feet) wooden sailboat with a 3.65 meter (12 feet) beam in 6-8 meters of water. The wreck had significant marine growth and appeared to have been submerged for several years. The bow pointed in the direction of 050 degrees.

A least depth (DP # 8154) was measured by leadline to be 5.6 meters corrected to MLLW using ~~predicted~~ APPROVED tides. See the attached sketch.

A Danger to Navigation report was NOT submitted for this wreck.

Recommendation: Recommend charting a "wreck, least depth 5.6m (18ft)," in position: 18/19/50.225 N, 064/56/03.318 W. CONCUR CHART AS 18WK


* LD 5.9m UNC @ 1342 GMT
LD *
A 15
MARINE GROWTH
WOODEN SAILBOAT
NE
12.8m (42')


TOP
CONSIDERABLE / MODERATE MARINE GROWTH / DECAY.
12.8m (42')
NE
3.65m (12')

New Item A16

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-51.744 N 064-56-01.734 W

Type of Feature: Obstruction

Description: A dive was conducted on DN 307 to investigate a side scan sonar contact (Fix #'s 3625.40 and 3625.77). Divers descended down a buoy placed on the item and discovered a rectangular metal frame in 9-10 meters of water. The frame measured 3.96 meters in length by approximately 1.82 meters in width. The least depth occurred at the southern end of the structure. See the attached sketch.

A least depth (DP # 8155) was measured by leadline to be 9.2 meters corrected to MLLW using ~~predicted~~ APPROVED tides.

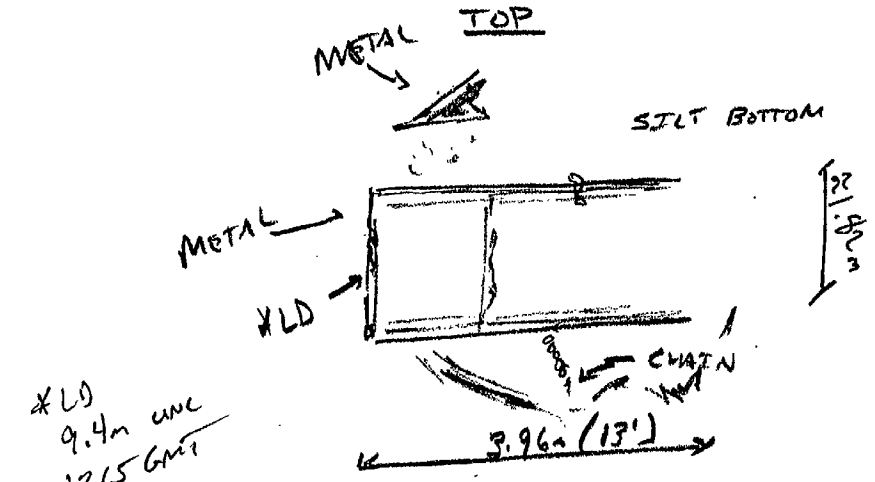
Recommendation: Recommend charting an "obstruction, least depth 9.2m (30 ft)," in position: 18/19/51.744 N, 064/56/01.734 W. CONCUR CHART AS 30 OBSTR SHOULD THE SCALE OF THE CHART ALLOW.

cpt 2-23

Question charted 18 ?

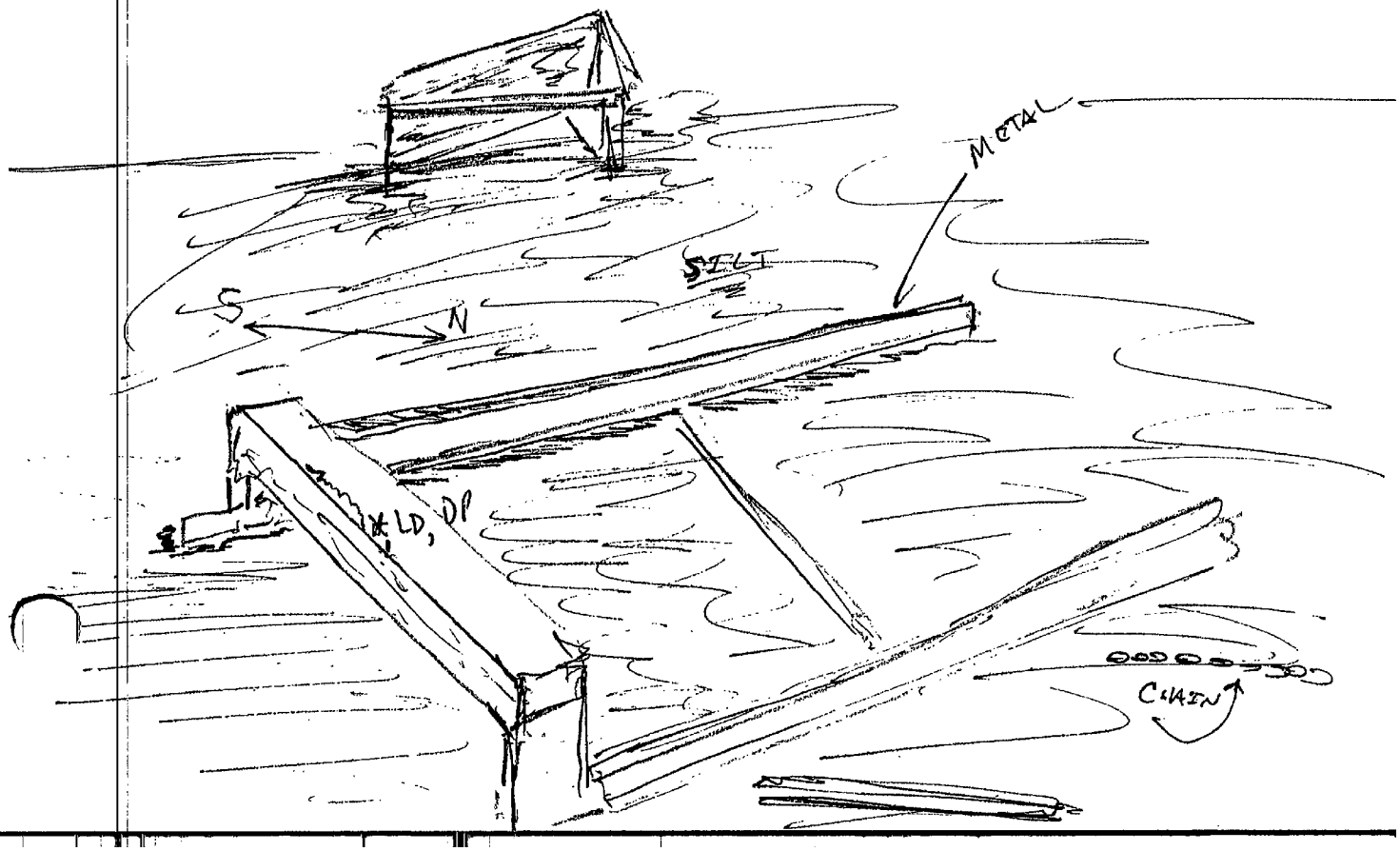
NOAA Ship MT MITCHELL Survey: H-10505

A16



*LD
9.4m unc
@ 1315 GMT

DP# 8155



New Item A17

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-20-08.503 N 064-56-24.140 W

Type of Feature: Submerged Sailboat

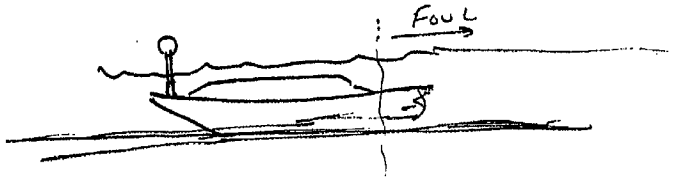
Description: A dive was conducted on DN 301 & DN 307 to investigate a wreck marked by a small privately maintained marker. The wreck was a cream colored fiberglass sailboat sitting upright on the bottom in 2 meters of water. See the attached sketch.

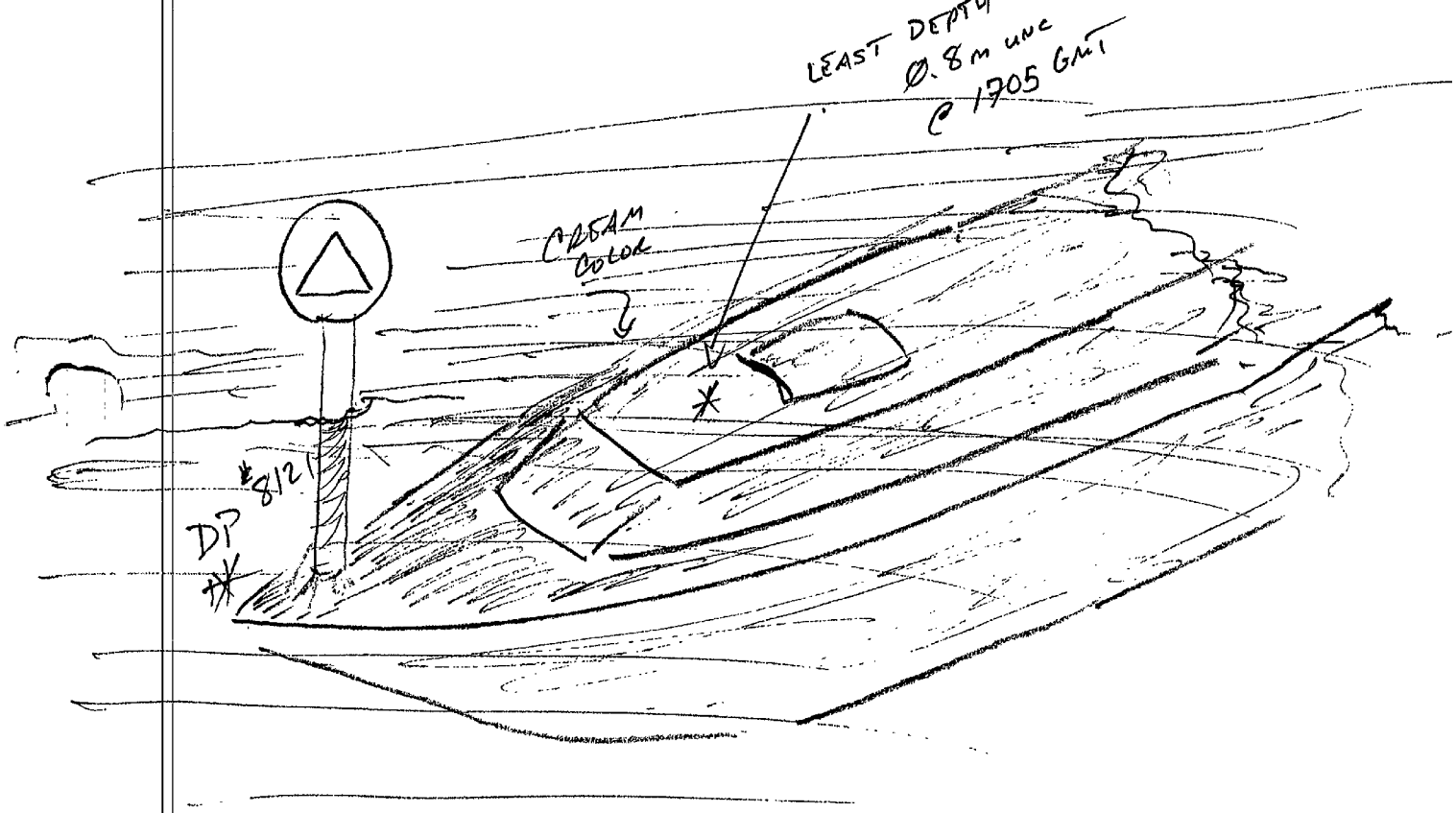
A least depth (DP # 8121) was measured by leadline to be 0.~~5~~ 6 meters corrected to MLLW using ~~predicted~~ APPROVED tides.

Recommendation: Recommend charting a "wreck, least depth 0.~~5~~ 6m (~~1.5~~ 2.0 ft)," in position: 18/20/08.503 N, 064/56/24.140 W. CONCUR CHART AS 2WR

A27

PROFILE





New Item A18

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-20-00.851 N 064-55-58.287 W

Type of Feature: Submerged Wreck

Description: A dive was conducted on DN 310 to investigate a side scan sonar contact (Fix #4329.50). Divers descended down a buoy line placed on the contact. Visibility was very poor, so divers conducted a thorough circle search of the area. Several rocks (0.2-0.5 meters high) were discovered. The divers continued the circle search and discovered a metal vessel. The vessel had a length of 9.7 meters and rose 1.52 meters off of the bottom. Surrounding water depths were 10-11 meters.

A least depth (DP # 8158) was measured by leadline to be 9.8 meters corrected to MLLW using ~~predicted~~ APPROVED tides.

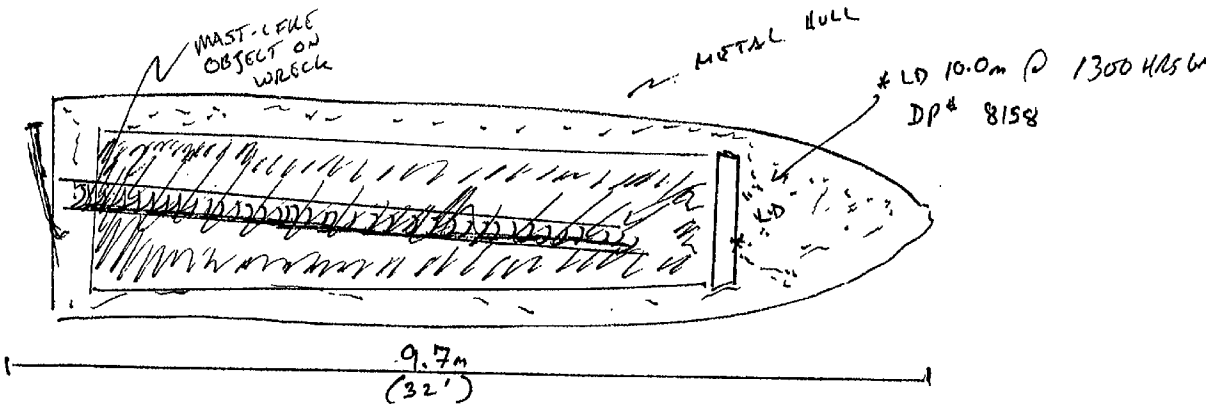
A Danger to Navigation report was submitted for this wreck.

Recommendation: Recommend charting a "wreck, least depth 9.8m (32ft)," in position: 18/20/00.851 N, 064/55/58.287 W. CONCUR CHART AS 32 WK

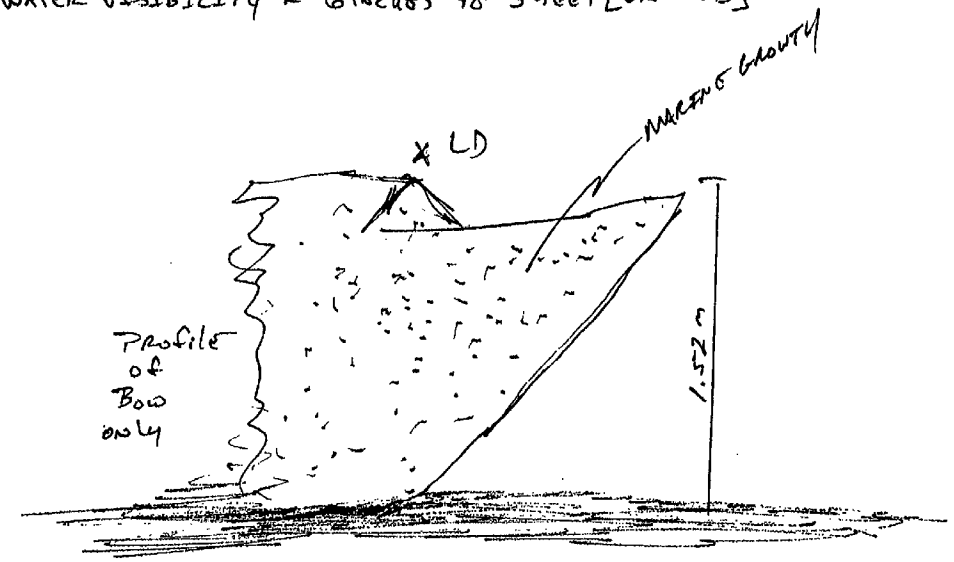
DUE TO LOW WATER VISIBILITY, DRAWING MAY BE INNACCURATE

A-18

TOP VIEW



WATER VISIBILITY ≈ 6 INCHES TO 3 FEET [VARIED]



New Item A19

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-30.587 N 064-55-42.798 W

Type of Feature: Submerged Wreckage

Description: A dive was conducted on DN 310 to investigate a side scan sonar contact (Fix #3450.51). Divers descended down a buoy line dropped on the contact site and discovered a fiberglass bow section leaning to one side and extending 1.79 meters from the sea floor. It was 4.8 meters in length and moved very slightly (horizontally and vertically) in the sea surge. A large crack had occurred in the middle of the port side; the starboard bow was partially buried in a sand bottom. Surrounding water depths were 11 meters. See the attached sketch.

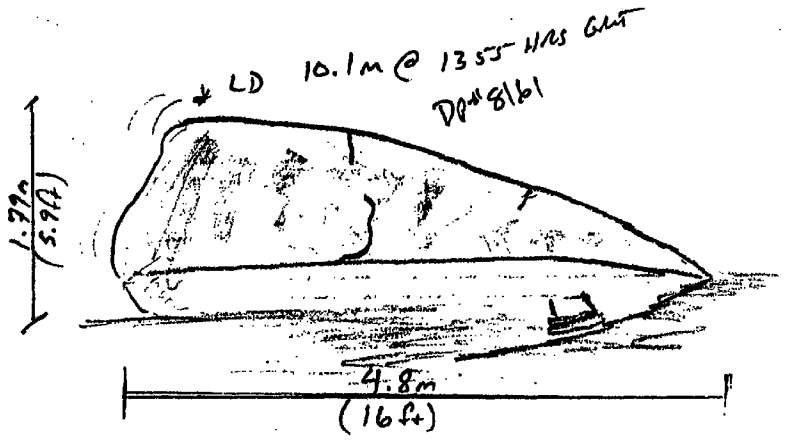
A least depth (DP # 8161) was measured by leadline to be 9.9 meters corrected to MLLW using ~~predicted~~ APPROVED tides.

A Danger to Navigation report was submitted for this wreck. This item lies very close to the range line used by deep draft vessels entering the St. Thomas Harbor.

Recommendation: Recommend charting a "wreck, least depth 9.9m (32ft)," in position: 18/19/30.587 N, 064/55/42.798 W. CONCUR CHART AS 32 WK
DELETE THE NOTATION "PA" FROM CHART 25649 (17TH ED.)

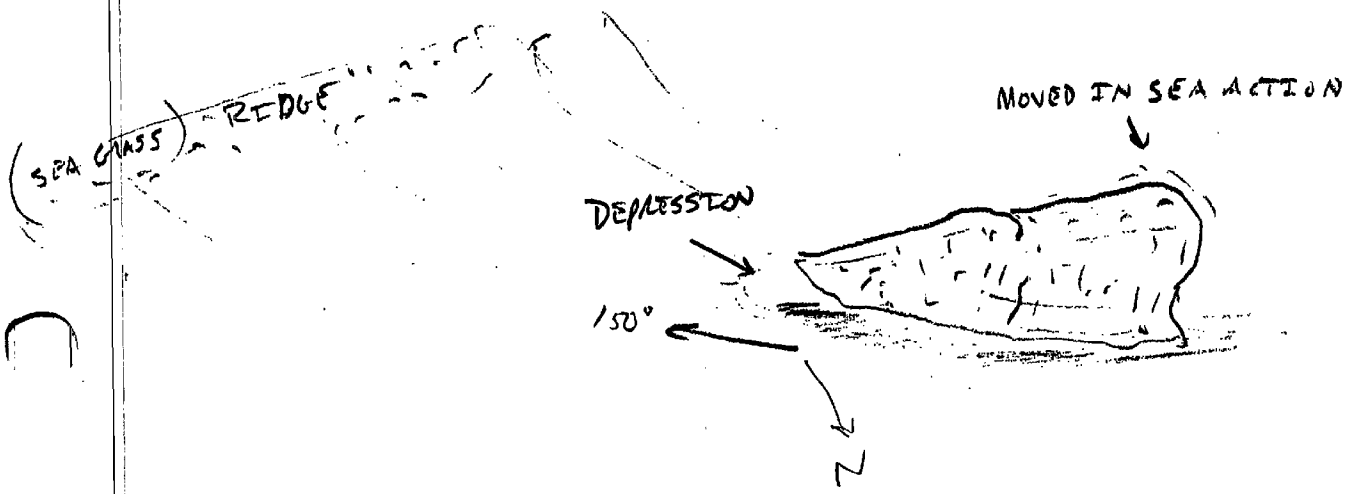
A19

VIEW FROM SOUTH



ENTIRE HULL MOVED IN SEA ACTION!!!

VIEW FROM NORTH



New Item A20

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-47.036 N 064-56-28.460 W

Type of Feature: Obstruction

Description: A dive was conducted on DN 310 to investigate a side scan sonar contact (Fix #4756.25). Divers descended down a buoy line dropped on the contact and immediately discovered two large cubic concrete blocks. The blocks rested side by side on one edge and extended 1.1 meters off of the sea floor in 13 meters of water. See the attached sketch.

A least depth (DP # 8170) was measured by leadline to be ~~12.2~~ 11.8 meters corrected to MLLW using ~~predicted~~ APPROVED tides. Due to the choppy seas and strong current in the channel, one diver ascended to 15 feet during the leadline measurement to ensure that the leadline remained vertical while the other diver recorded the readings. The detached position fathometer reading of 10.5 meters (corrected to MLLW with ~~predicted~~ APPROVED tides) is considered in error, and was caused by the choppy sea conditions encountered (2-3 feet) in the channel. CONCUR

A Danger to Navigation report was submitted for this obstruction.

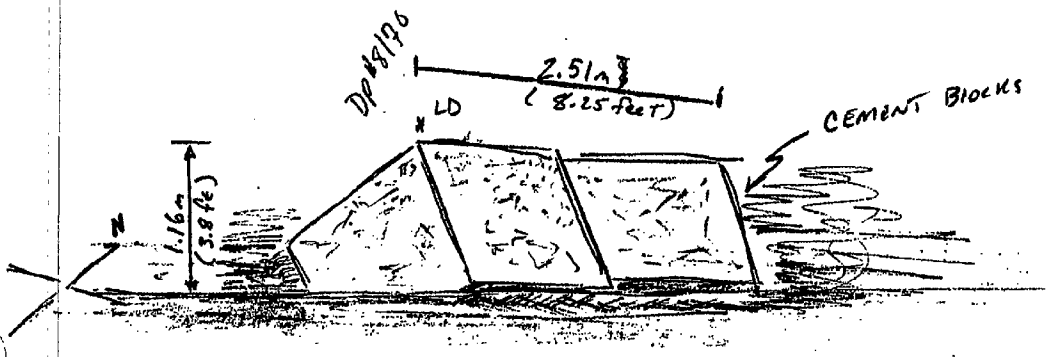
Recommendation: Recommend charting an "obstruction, least depth ~~12.2m~~ 11.8m (~~40~~ 38ft)," in position: 18/19/47.036 N, 064/56/28.460 W. CONCUR CHART AS 38 OBSTR PRESENTLY SHOWN AS 39 OBSTN ON CHART 25649 (17TH ED.) RECOMMEND THE CHARTED 39 OBSTN BE DELETED.

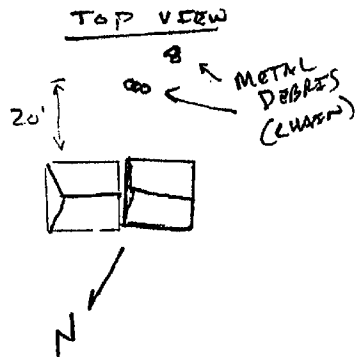
Supersedes CRT

NOAA Ship MT MITCHELL Survey: H-10505

A20

LEAST DEPTH = 12.2m unc @ 1840 HRS GMT, LEADLINE





New Item A21

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18-19-59.939 N 064-56-42.722 W

Type of Feature: Obstruction

Description: A dive was conducted on DN 312 to investigate a side scan sonar contact (Fix #4741.38). Divers descended down a buoy line placed on the contact and conducted a 10 meter circle search of the area. The divers discovered two pieces of large diameter pipe, one laying across the top of the other in 9 meters of water. The pipe had a length of 7.6 meters and rose 1.02 meters off of the bottom. See attached sketch.

A least depth (DP # 8181) was measured by leadline to be 8.2 meters corrected to MLLW using ~~predicted~~ APPROVED tides.

A Danger to Navigation report was submitted for this obstruction.

Recommendation: Recommend charting an "obstruction, least depth 8.2m (27ft)," in position: 18/19/59.939 N, 064/56/42.722W. CONCUR
PRESENTLY SHOWN AS A 27 OBSTN ON CHART 25649 (17TH ED.). RECOMMEND THE CHARTED 27 OBSTN BE DELETED.

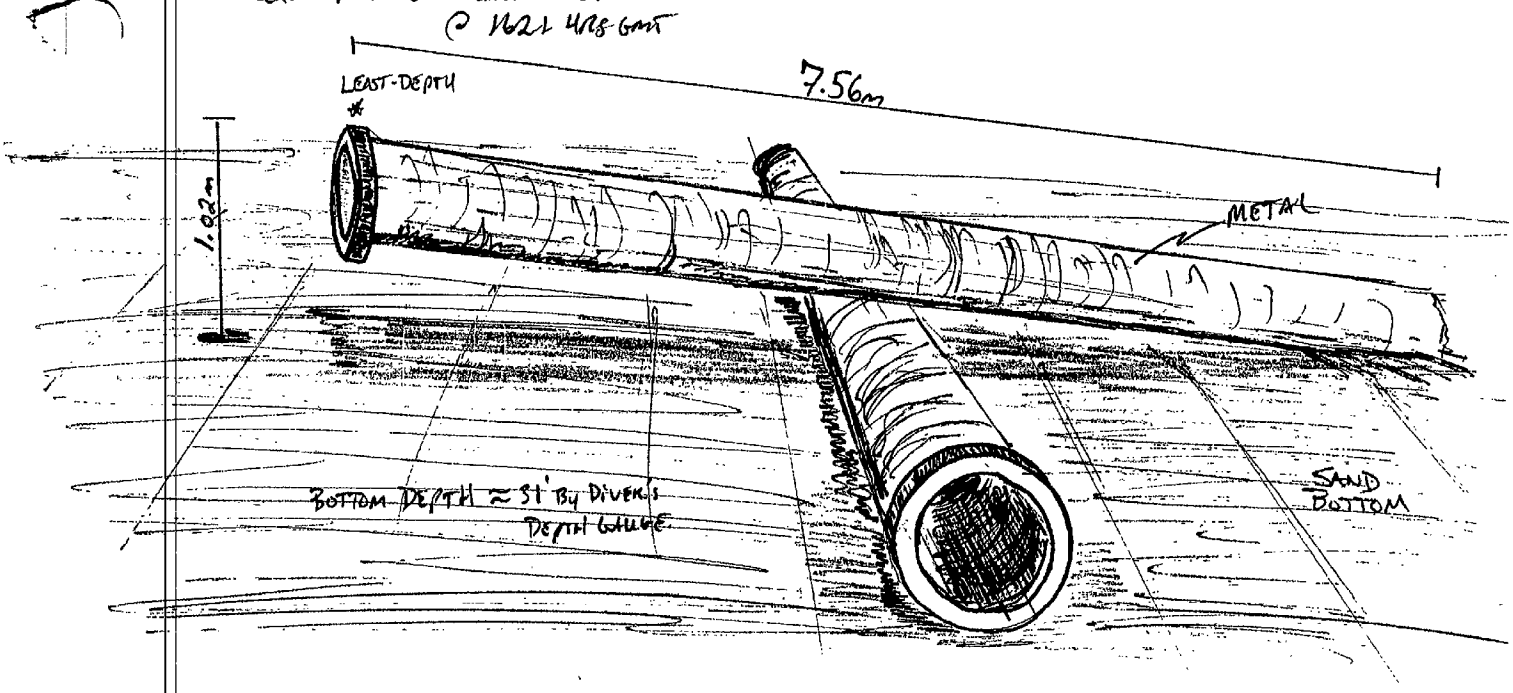
Revise to 26 Obstn per Survey

NOAA Ship MT MITCHELL Survey: H-10505

A-21

DP# 8181

LEAST DEPTH = 8.4m uncorrected
@ 1621 4/18 GMT



New Item A22

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18/19/52.427 N 064/56/01.261 W

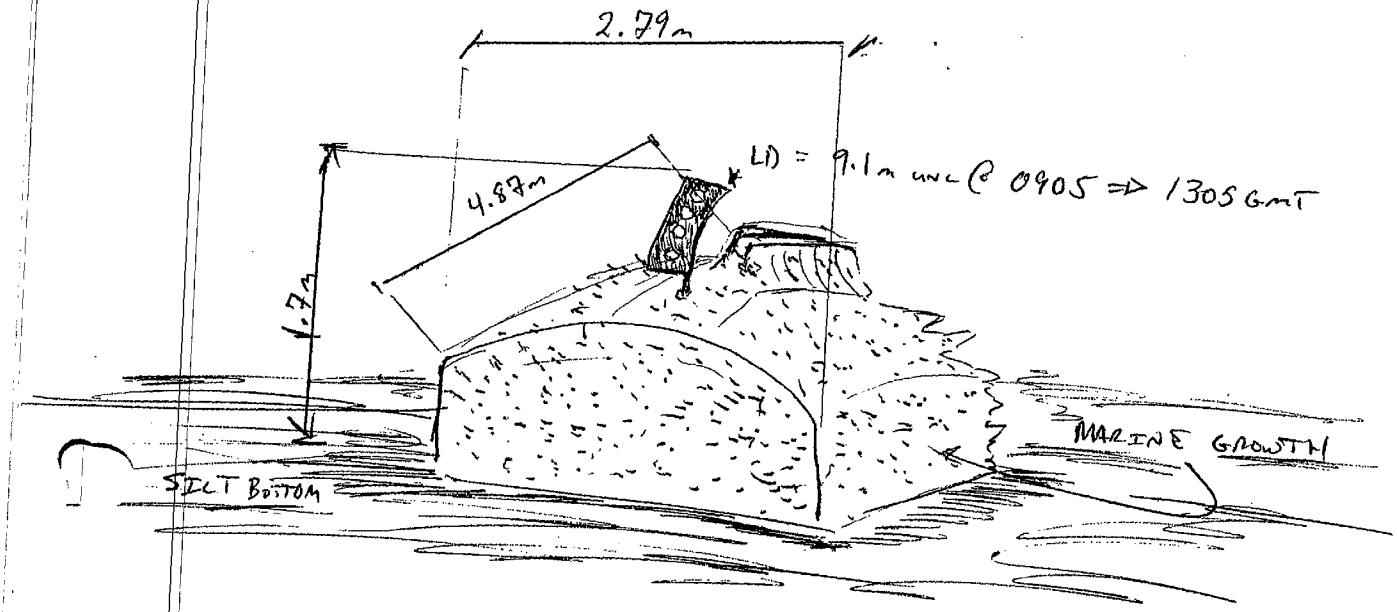
Type of Feature: Submerged Wreck

Description: A dive was conducted on DN 314 to investigate two side scan sonar contacts (Fix#'s 5064.19 &5064.24). Divers descended down a buoy line dropped on the first contact and discovered an insignificant lobster pod on the bottom. During a circle search around the lobster pod a fiberglass stern of a sailboat (the second contact) was found in about 10 meters of water. The stern section has a width of 2.79m, height of 1.7m, and length of 4.87m. A detached position (DP# 8186) and a leadline least depth (8.9m corrected to ~~predicted~~ APPROVED tides) were taken on the item. Surrounding depths were 10-11 meters. See the attached sketch.

A Danger to Navigation report was submitted for this wreck.

Recommendation: Recommend charting a "wreck, least depth 8.~~9~~8m (~~28~~29ft)," in position: 18/19/52.427 N, 064/56/01.261 W. CONCUR CHART AS 29WK

A-22


2.79m
4.87m
1.7m
LD = 9.1m UNL @ 0905 => 1305 GMT
MARINE GROWTH
SILT BOTTOM

New Item A23

State and Locality: St. Thomas, U.S.V.I., Charlotte Amalie

Location: 18/19/18.533 N 064/55/40.827 W

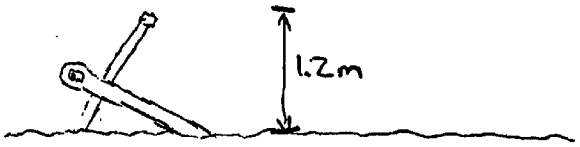
Type of Feature: Obstruction

Description: A dive was conducted on DN 315 to search for obstructions in the Scorpion Rocks area marked on chart #25649 by green buoy G "3." Divers descended down the buoy chain and conducted a visual search of the area. An old fashioned metal anchor was found, its shaft and stock extending 1.2m from the seabottom in 10 meters of water. The item is 20 feet from a large concrete block which anchors green buoy "3". A detached position (DP #5076) and leadline least depth (9.2m corrected to ~~predicted~~ Approved tides) were taken on the item. See attached sketch.

Recommendation: Recommend not charting this item due to the close proximity to the concrete block anchoring green buoy "3" which is a much more significant feature. DO NOT CONCUR CHART AN OBSTRUCTION WITH A LEAST DEPTH OF 30 FT, (30 OBSTR), IN LATITUDE 18°19'18.533"N, LONGITUDE 64°55'40.827"W.

hydro pos & NTM pos (corr'd) not in agreement & NTM from preliminary hydro report chart as per H drawing

A-23



O. COMPARISON WITH THE CHART - SEE ALSO THE EVALUATION REPORT.

O.1 The following chart is affected by this survey:

Chart #	Edition	Date	Scale
25649	16th	May 1, 1993	1:10,000

No Notice to Mariner changes affected chart #25649 during this survey.

O.2 Danger to navigation reports were submitted on ~~fifteen~~ THIRTEEN of the items discussed under section N. Copies of the Danger to Navigation reports can be found ~~in Appendix I~~ APPENDED TO THIS REPORT.

O.3 **a)** Soundings from Chart #25649 were compared to this survey. Twenty soundings from the chart were overlayed onto the depth plot and compared to the shoalest depth within a .5 inch diameter circle. On average, soundings from this survey were .25 meters deeper than the charted depths.

b) General trends depicted on Chart #25649 were in agreement with this survey. Contour line agreement between the chart and this survey is very good.

c) There were no hydrographic findings of special note.

d) There are no dredged channels within the survey area.

e) The approach to Charlotte Amalie and the East Gregerie channel were covered with East-West sounding lines with 25 meter spacing. An additional cross line was run along the range line for the approach to Charlotte Amalie, and down the center of the East Gregerie channel. Ten charted soundings along the approach to Charlotte Amalie harbor and five soundings within the East Gregerie channel were overlayed on the sounding plot and compared to the shoalest depth within a .75 inch diameter circle. On average, the soundings from this survey were .3 meters deeper than the charted depths along the range line, and .25 meters deeper in the East Gregerie channel.

O.4 Non-sounding features along the shoreline are discussed under section J. Other non-sounding features found in the survey area follow:

Item	Designation	DP Fix #	Latitude	Longitude
Mooring Buoy	USCG	7777	018/20/23.446 N	064/55/52.731 W
Mooring Buoy	USCG	8112	018/20/10.669 N	064/55/45.044 W
Mooring Buoy	N/A	7750	018/19/47.874 N	064/55/36.182 W

All of the above are located within 27 meters of their charted position.

Two charted mooring buoys in Long Bay and six yellow special purpose nun buoys delineating the Charlotte Amalie small boat anchorage area were *not found*. The detached positions below were taken at the buoy's charted location for disproval position verification. The letter written to Director, C&GS on November 25, 1991 stated that the mooring buoys were non existent and that all privately maintained aids around anchorage A have not existed in over eight years. Recommend removing these items from chart #25649. CONCUR

Buoy	Charted Position		Disproval DP#
Mooring	Lat:	018:20:05.4	8168
	Lon:	064:55:18.6	
Mooring	Lat:	018:20:09.0	8169
	Lon:	064:55:20.7	
Y SP "B"	Lat:	018:20:15.6	8113
	Lon:	064:55:51.0	
Y SP "C"	Lat:	018:20:16.2	8114
	Lon:	064:55:43.2	
Y SP "D"	Lat:	018:20:16.8	8115
	Lon:	064:55:35.4	
Y SP "E"	Lat:	018:20:11.1	8117
	Lon:	064:55:33.0	
Y SP "F"	Lat:	018:20:08.4	8116
	Lon:	064:55:26.4	
Y SP "G"	Lat:	018:20:06.0	8118
	Lon:	064:55:19.5	

DELETE 2 Mooring Buoys OK

Detached positions were taken on 168 small craft mooring buoys inside the harbor area. The buoys are maintained by the St Thomas Department of Planning and Natural Resources. The buoys are plotted on the final DP plot. AREA LIMITS ARE SHOWN ON PRESENT SURVEY.

O.5 No changes to the scale or coverage of the published charts of the survey are recommended. CONCUR

P. ADEQUACY OF SURVEY - SEE ALSO THE EVALUATION REPORT.

P.1 The H-10505 survey is sufficiently complete to supersede prior surveys. Thirty-two AWOIS Items have been resolved. Twenty-two new significant items have been found.

P.2 This survey is complete and adequate for the purpose of updating the charted sounding data.

Q. AIDS TO NAVIGATION

Q.1 The MT MITCHELL did not correspond with the U.S. Coast Guard regarding floating aids to navigation. Detached Positions were taken on all floating aids and navigational aids accessible by survey launch.

Q.2 Floating Aids

Chart #25649 depicts six floating aids to navigation in the approach to Charlotte Amalie and in the East Gregerie Channel. A comparison between charted locations and survey locations revealed that all aids are charted within 7.6 - 46 meters of the survey determined positions, and agree with their respective charted light characteristics. The mooring buoy by the West India cruise ship pier is not lighted, but has an orange reflective post extending from the center of the buoy. All of the floating aids serve their intended purpose of marking the limits of the channels. CONCUR

AIDS TO NAVIGATION POSITION COMPARISON:

Name:	Charted Position:	Survey Position:	Distance (m)/ D.P. Number:
Coast Guard Mooring Buoy at Pier	East: 13990.7 North: 9924.5 Lat: 018:20:22.8 Lon: 064:55:52.2	East: 13973.3 North: 9944.4 Lat: 018:20:23.4 Lon: 064:55:52.8	26.4 7777
Coast Guard Mooring Buoy in Harbor	East: 14184.5 North: 9546.4 Lat: 018:20:10.5 Lon: 064:55:45.6	East: 14200.8 North: 9551.6 Lat: 018:20:10.7 Lon: 064:55:45.0	17.1 8112

Name:	Charted Position:	Survey Position:	Distance (m)/ D.P. Number:
G "3" East Gregerie Channel	East: 12669.5 North: 8891.4 Lat: 018:19:49.2 Lon: 064:56:37.2	East: 12676.9 North: 8889.3 Lat: 018:19:49.1 Lon: 064:56:36.9	7.6 7799
R "6" Sandy Point	East: 12237.8 North: 8983.7 Lat: 018:19:52.2 Lon: 064:56:51.9	East: 12230.4 North: 8966.2 Lat: 018:19:51.6 Lon: 064:56:52.1	19.0 7800
Mooring Buoy, end of West Indian Dock	East: 14448.8 North: 8873.1 Lat: 018:19:48.6 Lon: 064:55:36.6	East: 14461.1 North: 8850.8 Lat: 018:19:47.8 Lon: 064:55:36.2	25.5 7750
R "2" Hassel Island	East: 13814.7 North: 7876.9 Lat: 018:19:16.2 Lon: 064:55:58.2	East: 13799.6 North: 7833.6 Lat: 018:19:14.8 Lon: 064:55:58.7	45.8 7752
G "3" Scorpion Rock	East: 14343.2 North: 7950.8 Lat: 018:19:18.6 Lon: 064:55:40.2	East: 14326.0 North: 7957.8 Lat: 018:19:18.8 Lon: 064:55:40.8	18.5 8111
R "4"	East: 14563.4 North: 8024.6 Lat: 018:19:21.0 Lon: 064:55:32.7	East: 14522.4 North: 8026.2 Lat: 018:19:21.0 Lon: 064:55:34.1	41.0 7755
R "6" Rupert Rock	East: 14396.0 North: 8688.6 Lat: 018:19:42.6 Lon: 064:55:38.4	East: 14372.3 North: 8684.3 Lat: 018:19:42.5 Lon: 064:55:39.2	24.1 7751
G "WR1"	East: 13638.6 North: 6705.5 Lat: 018:18:38.1 Lon: 064:56:04.2	East: 13613.6 North: 6700.8 Lat: 018:18:37.9 Lon: 064:56:05.1	25.4 7753

Name:	Charted Position:	Survey Position:	Distance (m)/ D.P. Number:
R "2" Triangle Rocks	East: 15400.5 North: 6604.3 Lat: 018:18:34.8 Lon: 064:55:04.2	East: 15372.1 North: 6595.7 Lat: 018:18:34.5 Lon: 064:55:05.2	29.7 7754

Non-floating Aids

The positions of the non-floating aids to navigation were determined during the horizontal control survey described in Section H.4. A comparison between charted locations and survey locations revealed that all non-floating aids are charted within 25 meters of the survey determined positions, and agree with their respective charted light characteristics. All surveyed positions are Third Order Class I positions or better. See the Horizontal Control Report for more details. Recommend repositioning these aids to navigation on chart #25649 to their surveyed positions listed in the table below.

Name: Distance:	Charted Position:	Surveyed Position:	
St Thomas Harbor Front Range Light	Lat: 018:20:37.0 Lon: 064:55:59.0	Lat: 018:20:36.794 Lon: 064:55:59.490	25m
St Thomas Harbor Rear Range Light	Lat: 018:20:40.0 Lon: 064:56:01.0	Lat: 018:20:40.414 Lon: 064:56:00.564	14.7m
Rupert Rocks Hazard Marker	Lat: 018:19:41.0 Lon: 064:55:36.0	Lat: 018:19:41.347 Lon: 064:55:35.852	11.5m
West Gregerie Channel Light Fl R "6"	Lat: 018:19:52.0 Lon: 064:56:52.0	Lat: 018:19:51.750 Lon: 064:56:52.107	8.3m

Q.3 The horizontal control party established the position on a privately maintained light located on the end of the West Indian Company Dock extension. The light characteristic is fixed red and it is maintained by the West Indian Company.

West Indian Dock Light	Lat: 018:19:49.815 Lon: 064:55:34.148	

Q.4 No bridges, overhead cables or pipelines were within the survey limits.

Q.5 a) One submarine cable area was included in the survey. The cable area is in Haulover Cut, located between Cay Bay and the East Gregerie channel. The area is charted and is marked on either shoreline by a large white rectangular sign with black letters: "DANGER, HIGH VOLTAGE SUBMERGED CABLE, NO ANCHORING."

b) No pipelines crossing to shore were present within the survey limits.

c) There are no designated ferry routes. However, numerous private ferry boats dock alongside the seawall at Charlotte Amalie and transit the main channel when running to and from the surrounding islands.

Q.6 There were no designated ferry terminals in the survey area.

R. STATISTICS

		VN 2220	VN 2223	VN 2224	VN 770	Total
R.1	a) Number of positions:		4077		1247	5324
	b) Lineal nm coverage: (Hydrography)		282.6		60.2	342.8
	Lineal nm coverage: (Side Scan Sonar)		70.4			70.4
R.2	a) Total square nautical miles:		10.9		0.7	11.6
	b) Total days of production:	2	29	1	15	33
	c) Detached positions:		42		338	380
	d) Bottom samples:		186		0	186
	e) Velocity casts:	2	1	1		4
	f) Dives:					99

S. MISCELLANEOUS

S.1 a) No unusual silting was noted during this survey. Comparisons with prior surveys indicate a possible subsidence of the land mass since 1966, resulting in surveyed depths of 0.3 meters greater than prior surveys.

b) All unusual submarine features have been discussed previously.

c) No anomalous tidal conditions were encountered.

d) No significant currents were encountered during this survey. A 1.0 knot current runs East-West through the Crown Bay area.

e) No magnetic anomalies were encountered during this survey.

S.2 Bottom samples were collected but not submitted to the Smithsonian Institution

T. RECOMMENDATIONS - SEE ALSO SECTION P. OF THE EVALUATION REPORT.

T.1 No inadequacies have been noted.

T.2 There is no present or planned construction or dredging that will affect the results of this survey. As the ship sailed from the St Thomas harbor the Port Authority was planning to have several of the danger to navigation items, discovered during this survey, removed. It is recommended that all of these items be charted as described in this survey until notification of their removal is received.

T.3 This survey should supersede all other prior AWOIS reports. No further investigation of this area is recommended.

U. REFERRAL TO REPORTS

The following reports are not included with the survey records:

Horizontal Control Report

User Evaluation Report

Coast Pilot Report

SUBMITTAL SHEET
Survey H-10505

This descriptive report accurately describes all activities pertaining to the control, collection and processing of data for this survey, and is respectfully submitted by:

Ensign Jon D. Swallow, NOAA

Station 001 - T-41

LAT: 29° 15' 57.30111" N
LONG: 089° 57' 17.39008" W

ANTENNA ELEVATION: 416.5 meters

CARTOGRAPHIC CODE: 890

SOURCE: NGS Database, established in 1955

Station 002 - SUB 1985

LAT: 18° 19' 52.3849" N
LONG: 064° 57' 09.0654" W

CARTOGRAPHIC CODE: 890

SOURCE: Airport Surveys Group, January, 1993

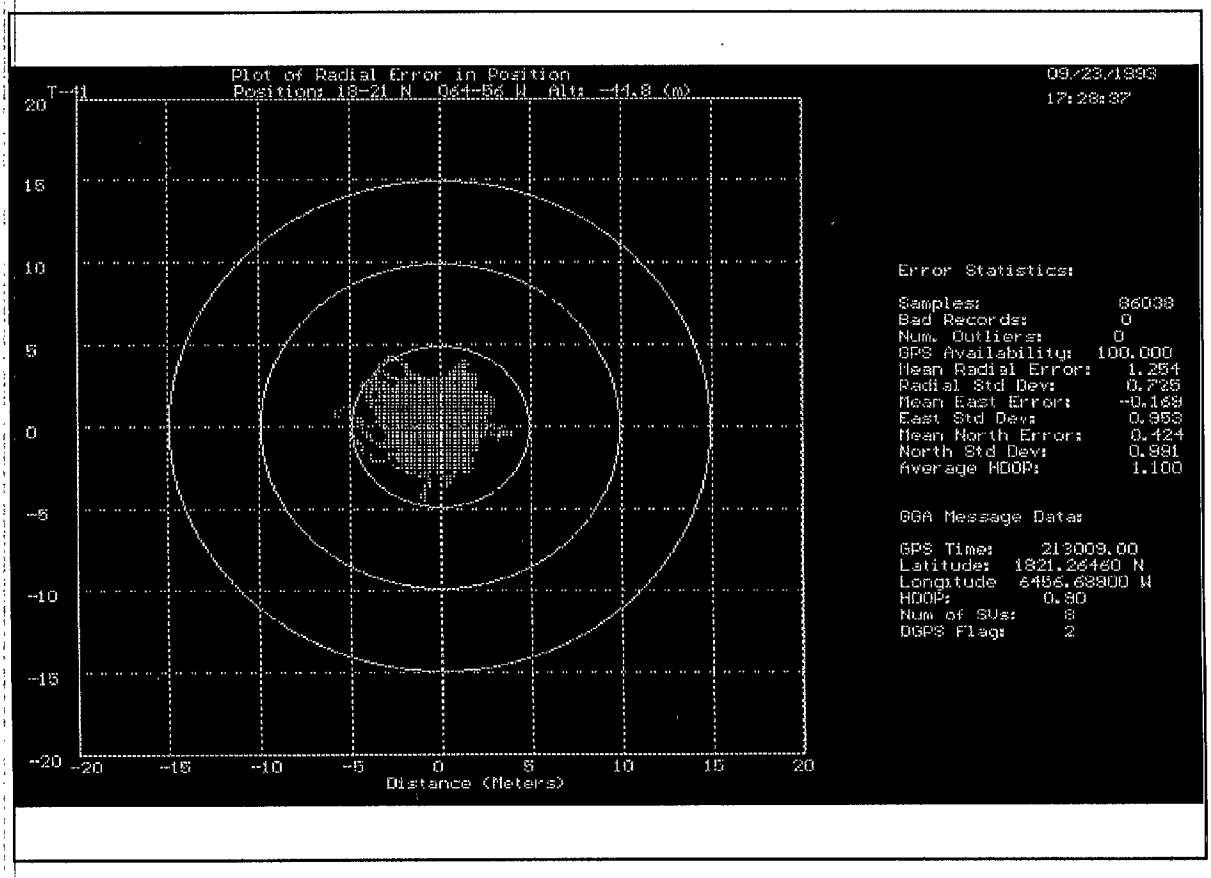
Station 003 - SUB 1985 - RM1

LAT: 18° 19' 54.1679" N
LONG: 065° 57' 09.0484" W

CARTOGRAPHIC CODE: 890

SOURCE: Airport Surveys Group, January, 1993

MONITOR program output scatter plot and statistics



NOAA FORM [illegible]-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

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)

☐ TO BE CHARTED
☒ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
MT MITCHELL	VIRGIN ISLANDS	ST THOMAS	11/93

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-I173-MI-93	N/A	H-10505	NAD 83

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
Marker	Rupert Rock Hazard Marker	18 19	41 N	064 55	36 W		F-3-6-V 10/22/93	25649
Flagpole	Bluebeard Castle flagpole	18 20	25N	064 55	27 W		F-3-6-V 10/22/93	25649
Flagpole	Blackbeard Castle flagpole	18 20	38 N	064 55	47 W		F-3-6-V 10/22/93	25649
Range LT	ST THOMAS Harbor Rear Rng LT	18 20	40 N	064 56	01 W		F-3-6-V 10/22/93	25649
Range LT	ST THOMAS Harbor Front Rng LT	18 20	37 N	064 55	59 W		F-3-6-V 10/22/93	25649
Tower	Signal Hill Cellular One tower	18 21	16 N	064 56	41 W		F-3-6-V 10/22/93	25649
Mast	Cowell Battery Signal Mast	18 19	32 N	064 55	57 W		F-3-6-V 10/22/93	25649

NOAA FORM 76-40
(8-74)

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Replaces C&GS Form 567.

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)

☐ TO BE CHARTED ☒ TO BE REVISED ☐ TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	MT MITCHELL	VIRGIN ISLANDS	ST THOMAS	11/93

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-I173-MI-93	N/A	H-10505	NAD 83

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
Tower	Careen Hill WSTA radio tower	18 20	04 N	064 56	39 W		F-3-6-V 10/22/93	25649
Light	West Gregerie Channel Light #6	18 19	52 N	064 56	52 W		F-3-6-V 10/22/93	25649

NOAA FORM 76-40
(8-74)

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Replaces C&GS Form 567.

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)

☐ TO BE CHARTED
☐ TO BE REVISED
☒ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
MT MITCHELL	VIRGIN ISLANDS	ST THOMAS	11/93

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-I173-MI-93	N/A	H-10505	NAD 83

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE // D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE // D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
Tower	Delete Louisenhoj square tower. Chart Louisenhoj flagpole.	18 21.	14 N	064 55.	46 W		F-3-6-V 10/22/93	25649

NOAA FORM 76-40
(8-74)

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Replaces C&GS Form 567.

ORIGINATING ACTIVITY
- [ ] HYDROGRAPHIC PARTY
- [XX] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

[XX] TO BE CHARTED
[ ] TO BE REVISED
[ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
MT MITCHELL	VIRGIN ISLANDS	ST THOMAS	11/93

The following objects HAVE [XX] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-I173-MI-93	N/A	H-10505	NAD 83

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
Flagpole	Louisenhoj flagpole	18 21	037 N	064 55	29 W		F-3-6-V 10/22/93	25649
Tower	Mafolie micro tower	18 21	05 N	064 55	41 W		F-3-6-V 10/22/93	25649
Tower	Flag Hill radio tower	18 19	48 N	064 54	40 W		F-3-6-V 10/22/93	25649

11AZSTVI.A1

R 171602Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
   CCGDSEVEN MIAMI FL//OAN
   DMAHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: SUBMERGED REMAINS OF A WOODEN SAILBOAT WAS DISCOVERED AT POSITION 18-19-51.744N0, 064-56-01.734W6. THE VESSEL WAS 42 FEET (12.8 METERS) IN LENGTH WITH A BEAM OF 12 FEET (3.65 METERS).
THE LEAST DEPTH WAS MEASURED TO BE 18.3 FEET (5.6 METERS)CORRECTED TO MLLW USING TIDE PREDICTIONS AND OCCURS AT ITS MAST SUPPORT.
THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS.
THE CHARTED WATER DEPTH IS BETWEEN THE 18 AND 30 FEET (5.4 AND 9.1 METERS) CONTOURS.

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-51.744N
LONGITUDE	064-56-01.734W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

HAZSTVI.A2

R 171603Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
   CCGDSEVEN MIAMI FL//OAN
   DMAHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: SUBMERGED REMAINS OF A FIBERGLASS SAILBOAT WAS DISCOVERED AT POSITION 18-19-52.427N9, 064-56-01.261W1. THE STERN SECTION WAS ALL THAT REMAINED OF THE VESSEL. THE SECTION MEASURED 16 FEET (4.87 METERS) IN LENGTH AND HAD A MAXIMUM WIDTH OF 9.1 FEET (2.8 METERS).
THE LEAST DEPTH WAS MEASURED TO BE 26.2 FEET (8.9 METERS)CORRECTED TO MLLW USING TIDE PREDICTIONS AND OCCURS AT ITS RUDDER.
THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS.
THE CHARTED WATER DEPTH IS 30 FEET (9.1 METERS) CONTOURS.

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-52.427N
LONGITUDE	064-56-01.261W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

HAZ STVI. A3

R 171600Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
   CCGDSEVEN MIAMI FL//OAN
   DMAHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

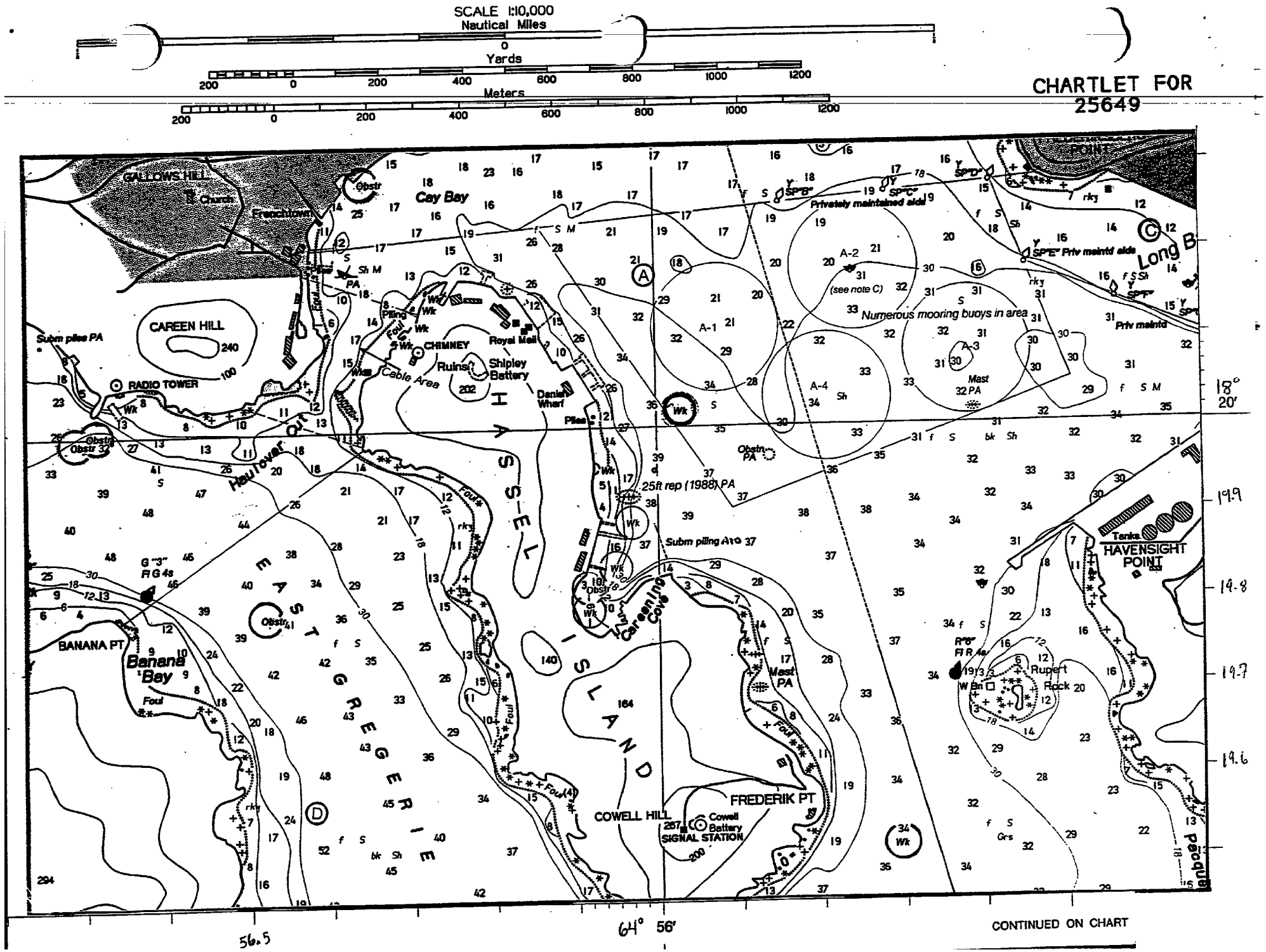
THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: SUBMERGED HULL OF A FIBERGLASS VESSEL WAS DISCOVERED AT POSITION 18-19-46.956N9, 064-56-04.803W6. THE WRECK IS 35 FEET (10.6 METERS) IN LENGTH WITH A BEAM OF 11.7 FEET (4.1 METERS). THE LEAST DEPTH WAS MEASURED TO BE 0.9 FEET (0.28 METERS) CORRECTED TO MLLW USING TIDE PREDICTIONS.THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 6 FEET (1.82 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-46.956N
LONGITUDE	064-56-04.803W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN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Nautical Miles
0
Yards
200 0 200 400 600 800 1000 1200
Meters
200 0 200 400 600 800 1000 1200
CHARTLET FOR
25649
GALLOWS HILL
Church
Freachtown
Cay Bay
Obstr
Privately maintained aids
SPA
SPB
SPC
SPD
SPE
SPF
Priv maintd aids
Priv maintd
Long B
Point
CAREEN HILL
240
100
Subm piles PA
RADIO TOWER
Wk
Piling
Foul
CHIMNEY
Ruins
Royal Mail
Shipley Battery
202
Cable Area
Danish Wharf
Piles
Numerous mooring buoys in area
(see note C)
A-1
A-2
A-3
A-4
Sh
Mast
32 PA
Obstn PA
25ft rep (1988) PA
Subm piling
Careening Cove
Careening Cove
Tanks
HAVENSIGHT POINT
Rupert Rock
Wreck
R "6" Fl R 4s
G "3" Fl G 4s
BANANA PT
Banana Bay
Foul
EASTGREGERIE
SELI ISLAND
COWELL HILL
267
Cowell Battery
SIGNAL STATION
FREDERIK PT
Mast PA
Peaguba
A
B
C
D
18° 20'
19.9
19.8
19.7
19.6
56.5
64° 56'
CONTINUED ON CHART

=R=(N=6,A=MCU043)
R 181301Z OCT 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
GDSEVEN SAN JUAN, RQ//OAN
MAHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: THREE SUBMERGED SAILBOATS WERE DISCOVERED AT POSITION 18-19-50.215N2, 064-55-58.567W1. THE LEAST DEPTH WAS 16.14 FEET (4.92 METERS) CORRECTED TO MLLW USING TIDE PREDICTIONS. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHATED WATER DEPTH IS 29 FEET.

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-50.215N
LONGITUDE	064-55-58.567W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

A7,8,9

=R=(N=6,A=MCU043)
R 181303Z OCT 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
GDSEVEN SAN JUAN, RQ//OAN
AHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

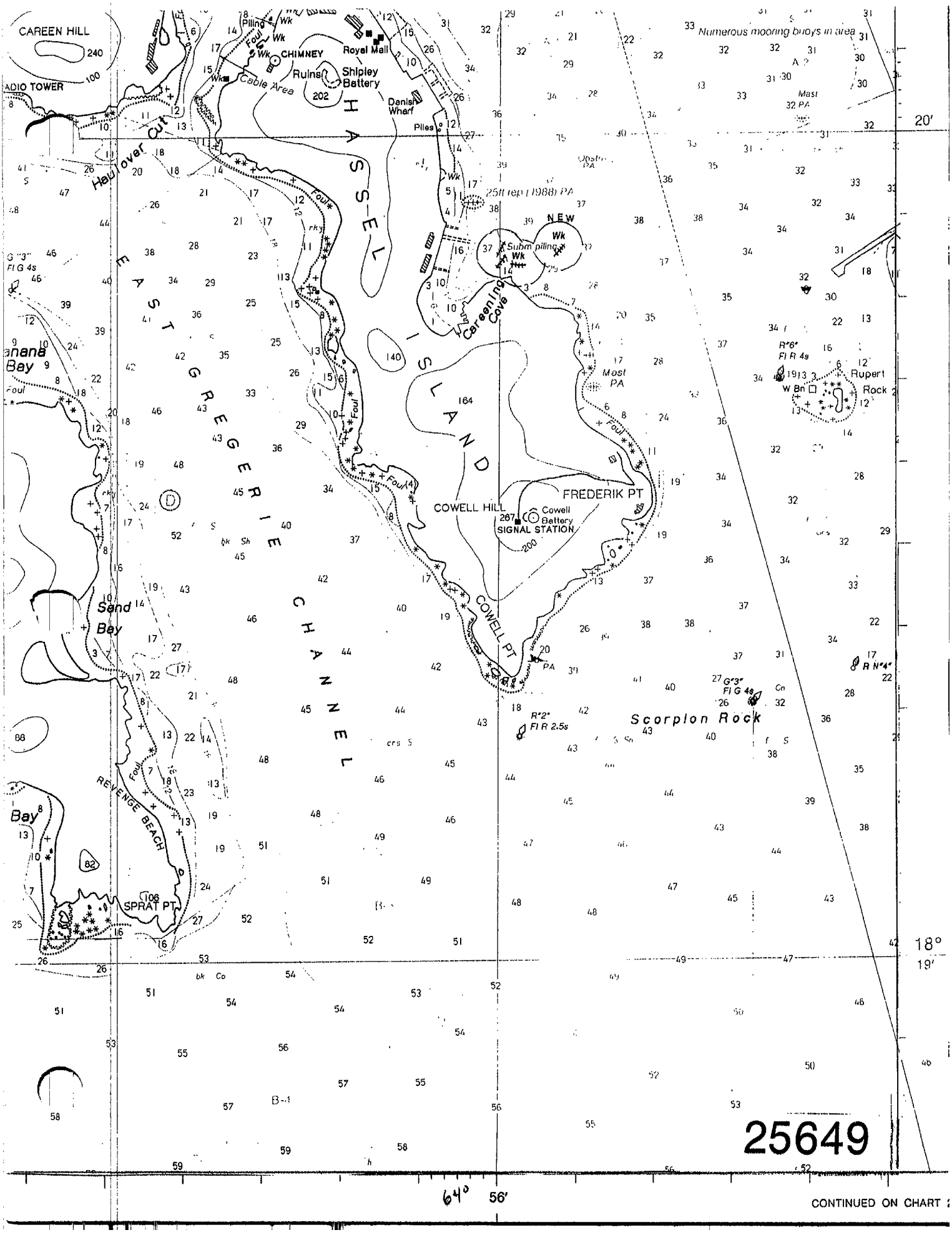
THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: SUBMERGED REMAINS OF A WOODEN VESSEL WAS DISCOVERED AT POSITION 18-19-51.623N1, 064-55-55.594W8. THE VESSEL IS 68 FEET (20.7 METERS) IN LENGTH WITH A BEAM OF 3 FEET (0.91 METERS). THE LEAST DEPTH WAS MEASURED TO BE 30.08 FEET (9.17 METERS)CORRECTED TO MLLW USING TIDE PREDICTIONS AND OCCURS NEAR THE STERN OF THE VESSEL.THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS.THE CHARTED WATER DEPTH IS EET (11.27 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-51.623N
LONGITUDE	064-55-55.594W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN


CAREEN HILL
240
100
RADIO TOWER
Piling
Wk
Foul
CHIMNEY
Royal Mail
Ruins
Shipley Battery
202
Cable Area
Danish Wharf
Piles
Numerous mooring buoys in area
Mast
32 PA
20'
Hauliover Cut
HASSEL ISLAND
25ft rep (1988) PA
NEW
Subm piling
Careening Cove
EAST GREGERIE CHANNEL
Most PA
R"6" Fl R 4s
Rupert Rock
W Bn
Foul
Sand Bay
COWELL HILL
267
Cowell Battery
SIGNAL STATION
FREDERIK PT
COWELL PT
PA
R"2" Fl R 2.5s
Scorpion Rock
G"3" Fl G 4s
R N"4"
REVENGE BEACH
SPRAT PT
82
106
18°
19'
64°
56'
25649
CONTINUED ON CHART

=R=(N=6,A=MCU043)
R 181304Z OCT 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
GDSEVEN SAN JUAN, RQ//OAN
MAHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: SUBMERGED REMAINS OF A DOCK OR FLOATING STRUCTURE WAS DISCOVERED AT POSITION 18-19-49.879N6, 064-56-34.137W9. THE REMAINS CONSIST OF THREE PONTOONS EXTENDING TO THE SOUTHWEST RIGIDLY CONNECTED BY THREE BRACES. THE STRUCTURE IS 67 FEET (20.4 METERS) IN LENGTH WITH A WIDTH OF 12 FEET(3.65 METERS). THE LEAST DEPTH WAS MEASURED AT 41 FEET (12.50 METERS)CORRECTED TO MLLW USING TIDE PREDICTIONS AND OCCURS AT THE EASTERN END.THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 46 FEET (14.02 METERS).

THIS ITEM AFFECTS NAUTICAL CHART:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-49.879N
LONGITUDE	064-56-34.137W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

R 161900Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
   CGDSEVEN MIAMI, FL//OAN
   DMAHTC (NAVWARN) WASHINGTON DC//MCMN//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING THE HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: A SUBMERGED CYLINDRICAL TANK WAS DISCOVERED AT POSITION 18-20-17.099N7, 064-56-21.258W9. THE LENGTH OF THE CYLINDER IS APPROXIMATELY 35 FEET (10.5 METERS) AND HAS A DIAMETER OF APPROXIMATELY 6 FEET (1.82 METERS). THE LEAST DEPTH OF THE TANK IS 11.84 FEET (3.6 METERS) CORRECTED TO MLLW USING PREDICTED TIDES. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 15 FEET (4.6 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 1993
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-20-17.099N
LONGITUDE	064-56-21.258W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

R 161901Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
   CGDSEVEN MIAMI, FL//OAN
   DMAHTC (NAVWARN) WASHINGTON DC//MCMN//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING THE HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: A SUBMERGED MOORING ANCHOR WAS DISCOVERED AT POSITION 18-19-59.929N3, 064-56-41.353W7. THE ANCHOR HAS AN 11 FEET (3.35 METERS) SQUARE BASE TAPERING UP TO A 6 FEET (1.82 METER) SQUARE TOP. THE HEIGHT OF THE ANCHOR IS 3.4 FEET (1 METER) FROM THE SEA FLOOR.
THE LEAST DEPTH OF THE ANCHOR IS 30.1 FEET (9.2 METERS) CORRECTED TO MLLW USING PREDICTED TIDES. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 32 FEET (9.7 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 1993
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-59.929N
LONGITUDE	064-56-41.353W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

R 161902Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
  CGDSEVEN MIAMI, FL//OAN
  DMAHTC (NAVWARN) WASHINGTON DC//MCMN//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING THE HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: A SUBMERGED WRECK WAS DISCOVERED AT POSITION 18-20-00.851N5, 064-55-58.287W0. THE WRECK IS A METAL HULL WITH A LENGTH OF 32 FEET (9.7 METERS). THE WRECK EXTENDS 5 FEET (1.5 METERS) FROM THE SEA FLOOR. THE LEAST DEPTH OF THE WRECK IS 32.15 FEET (9.8 METERS) CORRECTED TO MLLW USING PREDICTED TIDES. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 36 FEET (10.9 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 1993
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-20-00.851N
LONGITUDE	064-55-58.287W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

R 161903Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
  CGDSEVEN MIAMI, FL//OAN
  DMAHTC (NAVWARN) WASHINGTON DC//MCMN//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING THE HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: A SUBMERGED FIBERGLASS BOW WAS DISCOVERED AT POSITION 18-19-30.587N2, 064-55-42.798W0. THE BOW EXTENDS 6 FEET (1.8 METERS) FROM THE SEA FLOOR WITH THE STARBOARD SIDE PARTIALLY BURIED IN SAND.
THE BOW SECTION IS 16 FEET (4.8 METERS) LONG AND MOVES IN THE WATER SURGE. THE LEAST DEPTH OF THE WRECK IS 32.4 FEET (9.9 METERS) CORRECTED TO MLLW USING PREDICTED TIDES. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 34 FEET (10.3 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 1993
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-30.587N
LONGITUDE	064-55-42.798W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

R 161904Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
  CGDSEVEN MIAMI, FL//OAN
  DMAHTC (NAVWARN) WASHINGTON DC//MCMN//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING THE HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: TWO CONCRETE BLOCKS WERE DISCOVERED AT POSITION 18-19-47.036N9, 064-56-28.460W1. THE BLOCKS ARE POSITIONED SIDE BY SIDE WITH EDGES IMBEDDED IN THE SEA FLOOR. THE PAIR MEASURE 8.3 FEET (2.5 METERS) IN LENGTH. THEY EXTEND 3.8 FEET (1.2 METERS) FROM THE SEA FLOOR.
THE LEAST DEPTH OF THE BLOCKS IS 39 FEET (11.9 METERS) CORRECTED TO MLLW USING PREDICTED TIDES. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 41 FEET (12.4 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:
     CHART NUMBER 25649
     EDITION NUMBER 16TH
     DATE 01 MAY 1993
     CHARTED HORIZ. DATUM NAD 83
     GEOGRAPHIC POSITION
          LATITUDE 18-19-47.036N
          LONGITUDE 064-56-28.460W
QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

R 161905Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
  CGDSEVEN MIAMI, FL//OAN
  DMAHTC (NAVWARN) WASHINGTON DC//MCMN//
BT
UNCLAS

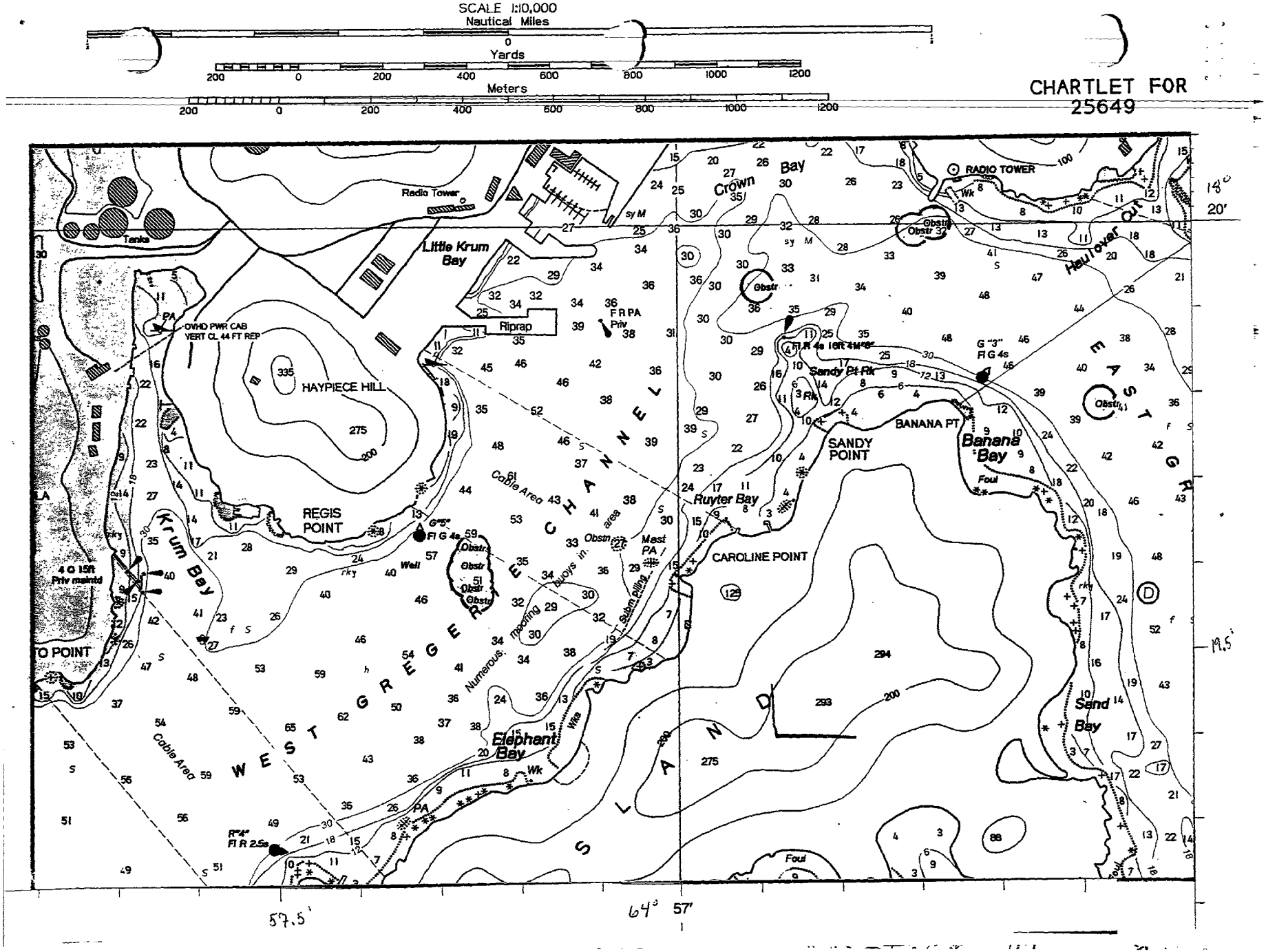
SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING THE HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: TWO PIPES WERE DISCOVERED AT POSITION 18-19-59.939N4, 064-56-42.722W8. ONE PIPE LIES ACROSS THE OTHER RISING OFF THE SEA FLOOR 3.3 FEET (1.02 METERS).
THE LEAST DEPTH OF THE PIPE IS 26.9 FEET (8.2 METERS) CORRECTED TO MLLW USING PREDICTED TIDES. THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 33 FEET (10 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:
     CHART NUMBER 25649
     EDITION NUMBER 16TH
     DATE 01 MAY 1993
     CHARTED HORIZ. DATUM NAD 83
     GEOGRAPHIC POSITION
          LATITUDE 18-19-59.939N
          LONGITUDE 064-56-42.722W
QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN


SCALE 1:10,000
Nautical Miles
0
Yards
200 0 200 400 600 800 1000 1200
Meters
200 0 200 400 600 800 1000 1200
CHARTLET FOR
25649
Radio Tower
Tanks
Little Krum Bay
Crown Bay
RADIO TOWER
Obstr
Haul Tower Cut
PA
OVHD PWR CAB
VERT CL 44 FT REP
HAYPIECE HILL
335
275
300
Riprap
F R PA
Priv
Fl R 4s 16ft 4M "G"
G "3"
Fl G 4s
Sandy Pt Rk
Rk
BANANA PT
SANDY POINT
Banana Bay
Foul
EASTGATE
Obstn
Ruyter Bay
REGIS POINT
Krum Bay
Cable Area
CHANNEL
G"5"
Fl G 4s
Obstr
Well
Mast
PA
CAROLINE POINT
4 Q 15ft
Priv maintd
TO POINT
buoys in
mooring
area
Numerous
Submerg piling
WESTGATE
Elephant Bay
Wk
Sand Bay
SLAND
294
293
200
275
88
Foul
R"4"
Fl R 2.5s
PA
18°
20'
19.5'
57.5'
64° 57'

HAZSTVE.A6

R 171601Z NOV 93
FM NOAAS MT MITCHELL
TO NOAAMOA NORFOLK VA
   CCGDSEVEN MIAMI FL//OAN
   DMAHTC (NAVWARN) WASHINGTON DC//MCNM//
BT
UNCLAS

SUBJ: REPORT OF DANGER TO NAVIGATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10505
SURVEY TITLE: U.S. VIRGIN ISLANDS CHARLOTTE AMALIE HARBOR
STATE: U.S. VIRGIN ISLANDS
GENERAL LOCALITY: ST THOMAS
SUBLOCALITY: CHARLOTTE AMALIE
PROJECT NUMBER: OPR-I173-MI-93, NOAA SHIP MT MITCHELL

THE FOLLOWING ITEM WHICH IS A POTENTIAL DANGER TO NAVIGATION WAS DISCOVERED DURING HYDROGRAPHIC SIDE SCAN SONAR SURVEY OPERATIONS BY THE NOAA SHIP MT MITCHELL:

OBJECT DISCOVERED: SUBMERGED METAL CONNING TOWER WAS DISCOVERED AT POSITION 18-19-48.557N8, 064-56-05.083W7. THE TOWER IS APPROXIMATELY 8 FEET (2.43 METERS) IN LENGTH WITH ONE LEG EXTENDING MORE THAN 3.3 FEET (1 METER) OFF THE BOTTOM. THE LEAST DEPTH WAS MEASURED TO BE 5.9 FEET (1.8 METERS) CORRECTED TO MLLW USING TIDE PREDICTIONS.THE POSITION OF THE DANGER WAS DETERMINED USING DIFFERENTIAL GPS. THE CHARTED WATER DEPTH IS 6 FEET (1.82 METERS).

THIS ITEM AFFECTS NAUTICAL CHARTS:

CHART NUMBER	25649
EDITION NUMBER	16TH
DATE	01 MAY 93
CHARTED HORIZ. DATUM	NAD 83
GEOGRAPHIC POSITION	
LATITUDE	18-19-48.557N
LONGITUDE	064-56-05.083W

QUESTIONS CONCERNING THIS REPORT SHOULD BE DIRECTED TO THE ATLANTIC MARINE CENTER AT (804) 441-6206.
BT
NNNN

The West Indian Company Limited

DOCK OPERATIONS DEPARTMENT

G.P.O. Box 7440
Charlotte Amalie
St. Thomas
U.S. Virgin Islands 00801
FAX: (809) 775-4008
Telex: 3472313
Telephone: (809) 774-1780

November 23rd, 1993

Captain McFarland
Executive Officer
N.O.A.A. Ship Mt. Mitchell 5-222
439 West York Street
Norfolk, Virginia 23510

Dear Captain McFarland:

Please find attached the invoice from Pat Boatwright's Company, Deeper Cheaper, for the removal of debris from the bottom of WICO berth number four.

On behalf of WICO, I thank you for all the fine service you and your professional crew rendered us. Please call on us anytime if we can be of assistance.

Very best regards,

THE WEST INDIAN COMPANY LIMITED

Mike McFadden
Manager, Operations Department

Deeper Cheaper

P.O. Box 2445 - Veterans Drive Station
St. Thomas, U.S. Virgin Islands 00803 - (809) 774-6266 / 774-2471

Invoice No. 2006

Date: November 21, 1993

To: West Indian Company
G.P.O. Box 7660
St. Thomas, U.S. Virgin Islands 00801

Attn: Mr. Mike McFadden

Monday, November 15, 1993
Recovered debris from the bottom- WICO Dock.
The items are: 3 Trash Baskets
H Beam-approx. 10 ft. long
1 Compact Car
Sign Base Stand-approx. 8 ft. high
Fender railing board for dock-approx. 12 in. by 12 in. by 8 ft.

Master Diver

Diver

Dive-Tender

Dive-Boat m/v "Thumper"

Lift Bags, equipment

Total $ 600.00

Pat Boatright

Pat Boatright
President

Letter of Approval

Registry No. H-10505

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personal checks of progress and adequacy. This report, final field sheets, and all accompanying data have been closely reviewed and are considered complete and adequate for updating the nautical chart.

David B. MacFarland, CAPT, NOAA
Commanding Officer
NOAA Ship MT MITCHELL

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 16, 1994

MARINE CENTER: Atlantic

HYDROGRAPHIC PROJECT: OPR-I173-MI

HYDROGRAPHIC SHEET: H-10505

LOCALITY: United States Virgin Islands, Caribbean Sea, Charlotte Amalie Harbor

TIME PERIOD: September 27 - November 11, 1993

TIDE STATION USED: 975-1639 Charlotte Amalie, V.I.
Lat. 18° 20.1'N Lon. 64° 55.2'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 5.16 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.8 ft.

REMARKS: RECOMMENDED ZONING

Times and heights are direct on Charlotte Amalie, V.I. (975-1639).

Note: Times are tabulated in Atlantic Standard Time.

for Frederick C. Cunningham
CHIEF, DATUMS SECTION

NOAA FORM 76-155 (11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10505

Page 1 of 2

Name on Survey	A ON CHART NO. 25649	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
BANANA BAY	X		X							1
BANANA POINT	X		X							2
BARREL OF BEEF (isl)	X		X							3
CARIBBEAN SEA	X		X							4
CAROL POINT	X		X							5
CAROLINE POINT	X		X							6
CAREENING COVE	X		X							7
CAY BAY	X									8
CHARLOTTE AMALIE (ppl)	X		X							9
COWELL POINT	X		X							10
EAST GREGERIE CHANNEL	X		X							11
FREDERIK POINT	X		X							12
FREDERIKSBERG POINT	X									13
HASSEL ISLAND	X		X							14
HAULOVER CUT	X		X							15
HAVENSIGHT POINT	X		X							16
KINGS WHARF	X		X							17
KNOLL, POINT	X		X							18
LIMESTONE BAY	X		X							19
LIMESTONE ROCK	X		X							20
LONG BAY	X		X							21
MORNINGSTAR BAY	X		X							22
MUHLENFELS POINT	X		X							23
PACQUEREAU BAY	X		X							24
REVENGE BEACH	X		X							25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-10505

GEOGRAPHIC NAMES

Page 2 of 2

Name on Survey	A ON CHART NO. 25649	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ROHDE BANK	X									1
RUPERT ROCK	X		X							2
SAND BAY	X		X							3
SANDY POINT	X		X							4
SCORPION ROCK	X									5
SPRAT BAY	X		X							6
SPRAT POINT	X		X							7
SAINT THOMAS (isl)	X		X							8
SAINT THOMAS HARBOR (title)			X							9
TRIANGLE ISLAND	X		X							10
VIRGIN ISLANDS (title)			X							11
WATER ISLAND	X		X							12
										13
										14
										15
										16
										17
										18
										19
					Approved					20
										21
										22
					Chief Geographer					23
					NOV 16 1995					24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

03/27/96

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10505

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	5324
NUMBER OF SOUNDINGS	33046

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	273	09/13/94
VERIFICATION OF FIELD DATA	438	11/14/95
QUALITY CONTROL CHECKS	91	
EVALUATION AND ANALYSIS	27	
FINAL INSPECTION	34	11/09/95
COMPILATION	210	03/27/96
TOTAL TIME	1073	

ATLANTIC HYDROGRAPHIC BRANCH APPROVAL 11/30/95

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H-10505 (1993)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System (HPS)
AutoCAD, Release 12
NADCON, version 2.10

The smooth sheet was plotted using an ENCAD NovaJet III plotter.

H. CONTROL

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). The smooth sheet has been annotated with ticks showing the computed mean shift between the NAD 83 and the Puerto Rico Datum.

To place this survey on the Puerto Rico Datum, move the projection lines 7.160 seconds (220.147 meters or 44.03 mm at the scale of the survey) south in latitude, and 1.497 seconds (43.425 meters or 8.68 mm at the scale of the survey) east in longitude.

J. SHORELINE

Shoreline originates with unreviewed digital shoreline manuscripts DM-10199 and DM-10200, dated, February, 1992.

L. JUNCTIONS

H-10506 (1993) to the west

A standard junction was effected between the present survey and survey H-10506 (1993).

There are no contemporary surveys to the south and southeast of the present survey. Present survey depths are in harmony with the charted hydrography to the south and southeast.

M. COMPARISON WITH PRIOR SURVEYS

Hydrographic

FE-195	(1964)	1:10,000
FE-279	(1985)	1: 5,000
H-8877	(1966)	1: 5,000

H-9271 (1972) 1:10,000

1. Prior survey FE-195 (1964) covers the northeastern portion of the present survey. Prior survey depths are generally 1 ft (0^3 m) shoaler than the present survey depths. The following should be noted:

a) A charted 16 ft (4^9 m) depth in the vicinity of Latitude 18°20'10.5"N, Longitude 64°55'36.3"W originating with the prior survey was incorrectly plotted on the prior survey and incorrectly charted according to a note on page 1, section 4.a. of the review of the prior survey. This prior survey depth was also brought forward to H-8877 (1966). Present survey depths in this area range from 32 to 34 feet (9^7 to 10^3 m). It is recommended that the charted 16 ft (4^9 m) depth be deleted from the chart, and the area be charted as shown on present survey.

b) An uncharted 16 ft (4^9 m) depth, in Latitude 18°20'15.5"N, Longitude 64°56'19.4"W, originating with the prior survey is located in an area where present survey depths range from 22 to 25 feet (6^7 to 7^6 m). There is no indication of this depth on the present survey. No change in charting status is recommended.

2. Prior survey FE-279 (1985) covers a small portion of the north western section of the present survey. Prior survey depths show a general trend of being 1 to 2 feet (0^3 to 0^6 m) shoaler than present survey depths. There are some scattered soundings in the vicinity of Latitude 18°20'04.0"N, Longitude 64°56'54.5"W that are 6 to 8 feet (1^8 to 2^4 m) shoaler than the present survey depths. These depth are considered disproved by the present survey.

3. Prior survey H-8877 (1966) covers the northern half of the present survey. Prior survey depths generally vary plus or minus (±) 1 to 2 feet (0^3 to 0^6 m) from present survey depths. The following should be noted:

a) A charted rock with a depth of 6 feet (1^8 m), in Latitude 18°19'11.3"N, Longitude 64°56'53.8"W, originating with the prior survey was neither verified nor disproved by the field unit. The rock has been brought forward from the prior survey to supplement the present survey. No change in charting status is recommended.

b) Four charted piles in the vicinity of Latitude 18°20'11.5"N, Longitude 64°56'25.0"W originate with the prior survey. The piles were investigated and not found by the hydrographer. It is recommended that the piles be deleted from

the chart.

c) Numerous charted features originating with the prior survey have been brought forward from the prior survey to supplement the present survey. It is recommended that these features be retained as charted.

d) A charted rock with a depth of 3 feet (0^9 m), in Latitude 18°19'48.0"N, Longitude 64°56'51.0"W, originating with the prior survey was neither verified nor disproved by the field unit. The rock has been brought forward from the prior survey to supplement the present survey. No change in charting status is recommended.

4. Prior survey H-9271 (1972) covers the southern half of the present survey. Prior survey depths from H-9271 (1972) generally vary plus or minus (±) 1 to 2 feet (0^3 to 0^6 m) from present survey depths. The following should be noted:

A charted rock awash, in Latitude 18°18'49.0"N, Longitude 64°54'51.2"W, is shown on the prior survey and originates with an unascertainable source. The rock was investigated but not found by the field unit. Water visibility in the area was 5 meters. It is recommended that the rock awash be deleted from the chart.

Except as noted above the present survey is adequate to supersede the prior surveys within the common area.

Wire Drag

H-4544b (1923-27)

Three uncharted groundings originating with the prior survey fall within the present survey limits. These groundings are considered disproved considering present survey depths and 200% side scan sonar coverage of the area. No change in charting is recommended. There are no conflicts between the prior survey effective clearance depths and present survey depths.

N. ITEM INVESTIGATIONS

1) A charted dangerous sunken wreck with a depth of 26 feet, [7^9 m] (26 *Wk*), in Latitude 18°19'52.427"N, Longitude 64°56'01.261"W, Item A7 of the Descriptive Report, originates with a message sent to the Seventh Coast Guard District (oan), dated 17 November 1993 and is incorrectly charted on chart 25649 (17^{th} Edition, Mar. 4/95). The correct position is Latitude 18°19'51.02"N, Longitude 64°55'59.63"W, and the revised depth is 27 feet (8^2 m) It is recommended that the charted dangerous

sunken wreck with a depth of 26 feet, [7^{9} m] (26 *Wk*) be deleted, and a dangerous sunken wreck with a depth of 27 feet, [8^{2} m] (27 *Wk*) be charted as shown on the present survey.

2) A charted dangerous sunken wreck with [5^{5} m](18 *Wk*), in Latitude 18°19'51.74"N, Long Item A8 of the Descriptive Report, originates to the Seventh Coast Guard District (oan), da and is incorrectly charted on chart 25649 (17 4/95). The correct position is Latitude 18°1 64°55'59.33"W. It is recommended that the ch sunken wreck with a depth of 18 feet, [5^{5} m] (and a dangerous sunken wreck with a depth of *Wk*) be charted as shown on the present survey.

Item 1 not charted Item 2 charted same loc

3) A charted dangerous submerged obstruction with a depth of 19 feet [5^{8} m] (19 *Obstn*), in Latitude 18°20'17.10"N, Longitude 64°56'21.26"W, Item A12 of the Descriptive Report, originates with a message sent to the Seventh Coast Guard District (oan), dated 17 November 1993 and is incorrectly charted on chart 25649 (17th Edition, Mar 4/95). The revised depth for this obstruction is 11 feet (3^{4} m). It is recommended that the dangerous submerged obstruction with a depth of 19 feet, (19 *Obstn*) be revised to a dangerous submerged obstruction with a depth of 11 feet, [3^{4} m] (11 *Obstn*).

Delete Obstr. per CL 15 4(95) GPM 5/13/96

O. COMPARISON WITH CHART 25649 (16th Edition, May 1/93)

Hydrography

The charted hydrography originates with the previously discussed prior surveys and needs no further discussion. The hydrographer makes adequate chart comparisons in sections N. and O. of the Descriptive Report. The following should be noted:

1) Two charted piers in ruin in Latitude 18°20'13.0"N, Longitude 64°56'23.4"W and Latitude 18°20'11.6"N, Longitude 64°56'23.5"W, originate with an unknown source. The pier ruins were verified but not located by the field unit. No change in charting status is recommended.

2) A charted coral ledge in the vicinity of Latitude 18°20'03.5"N, Longitude 64°56'28.0"W originates with an un source. The ledge was verified but not located by the hydrographer. No change in charting status is recommended.

3) A charted platform in Latitude 18°20'15.5"N, Longi 64°55'26.5"W was not found by the hydrographer. It is recommended that the platform be deleted from the chart.

DELETE Platform

4) AWOIS item #8561 is a charted submerged piles PA, in Latitude 18°20'13.5"N, Longitude 64°56'46.5"W. The item was found by the hydrographer as a submerged pile with a least depth of 10 feet (10 *Obstr*) in Latitude 18°20'07.703"N, Longitude 64°56'44.936"W. Removal of this pile, between the dates of December 2-7, 1993, has been confirmed by Mr Pat Boatright, Divemaster for the company DEEPER CHEEPER, St Thomas, U. S. Virgin Islands. It is recommended that the submerged piles PA be deleted from the chart. It is also recommended that the submerged pile with a least depth of 10 feet (10 *Obstr*) not be charted.

Except as noted above the present survey is adequate to supersede the chart in the common area.

Dangers to Navigation

1) Thirteen Danger to Navigation reports were submitted by the hydrographer to Commander (oan), Seventh Coast Guard District, Miami, Florida for inclusion in the local Notice to Mariners, and to Marine Chart Division, N/CS3x1, Silver Spring, Maryland. Copies of the reports are appended to the Descriptive Report.

2) A Danger to Navigation report was submitted during office processing to Commander (oan), Seventh Coast Guard District, Miami, Florida for inclusion in the local Notice to Mariners, and to Marine Chart Division, N/CS3x1, Silver Spring, Maryland. A discussion of three discrepancies found on the latest edition of NOS chart 25649 (17th Ed., Mar 4/95) was the basis for the report. A copy of the report is appended to this report. See also section N. of this report for a discussion of these items.

P. ADEQUACY OF SURVEY

This is an adequate hydrographic/side scan sonar survey; no additional work is recommended.

S. MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. The chart compilation was done using the present survey as it's primary source; however, subsequent information was provided to this office. This information is registered as Chart Letter 1514 of 1995 (CL-1514/95) and has been incorporated as part of the compiled data. A copy of the chart letter is attached to this report. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

MT MITCHELL Processing Team

Richard H. Whitfield
Cartographer
Verification and Evaluation and Analysis

APPROVAL SHEET
H-10505

Initial Approvals:

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 digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. A final sounding printout of the survey has been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Date: Nov 30, 1995

Norris A Wike
Cartographer
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Date: Nov 30, 1995

Nicholas E. Perugini
CDR, NOAA
Chief, Atlantic Hydrographic Branch

****

Final Approval:

Approved: Date: 6-10-96

Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

- whitfield

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

October 27, 1995

Commander, (oan)
Seventh Coast Guard District
Brickell Plaza Building
909 SE 1st Avenue
Miami, FL 33131-3050

Dear Sir,

During office processing three discrepancies were discovered on a chart that covers St. Thomas Harbor, U. S. Virgin Islands.

REPORT OF DANGER TO NAVIGATION

Hydrographic Survey Registry Number....H-10505
State.....U.S. Virgin Islands
General Locality.....St. Thomas
Locality.....St. Thomas Harbor
Project Number.....OPR-I173
Surveyed by.....NOAA Ship MT MITCHELL

Objects Addressed:

1. Delete the charted dangerous sunken wreck with a depth of 18 feet (18 Wk) in Latitude 18°19'51.744"N, Longitude 64°56'01.734"W.

2. Delete the charted dangerous sunken wreck with a depth of 26 feet (26 Wk) in Latitude 18°19'52.427"N, Longitude 64°56'01.261"W.

3. Add a dangerous sunken wreck with a depth of 18 feet (18 Wk) in Latitude 18°19'50.888"N, Longitude 64°55'59.330"W. ✓

4. Add a dangerous sunken wreck with a depth of 27 feet (27 Wk) in Latitude 18°19'51.018"N, Longitude 64°55'59.626"W. ✓

5. Revise the charted dangerous submerged obstruction located at Latitude 18°20'17.099"N, Longitude 64°56'21.258"W. Change the depth from 19 feet to 11 feet. ✓

Affected Nautical Chart:

CHART	EDITION NO.	DATE	HORIZ. DATUM
25649	17th	Mar 4/95	NAD 83

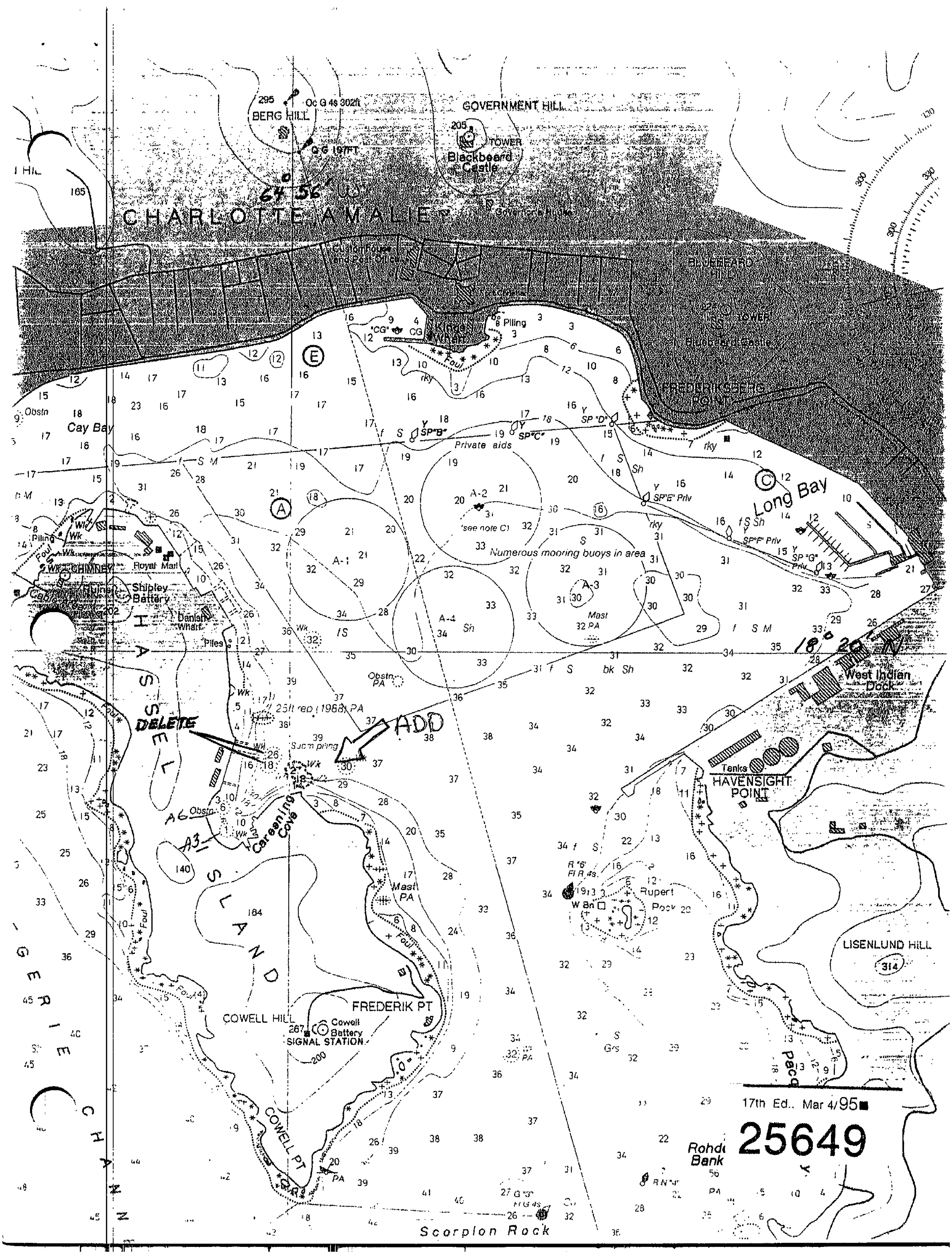
Questions concerning this report should be directed to the Atlantic Hydrographic Branch, by calling 804 441-6746.

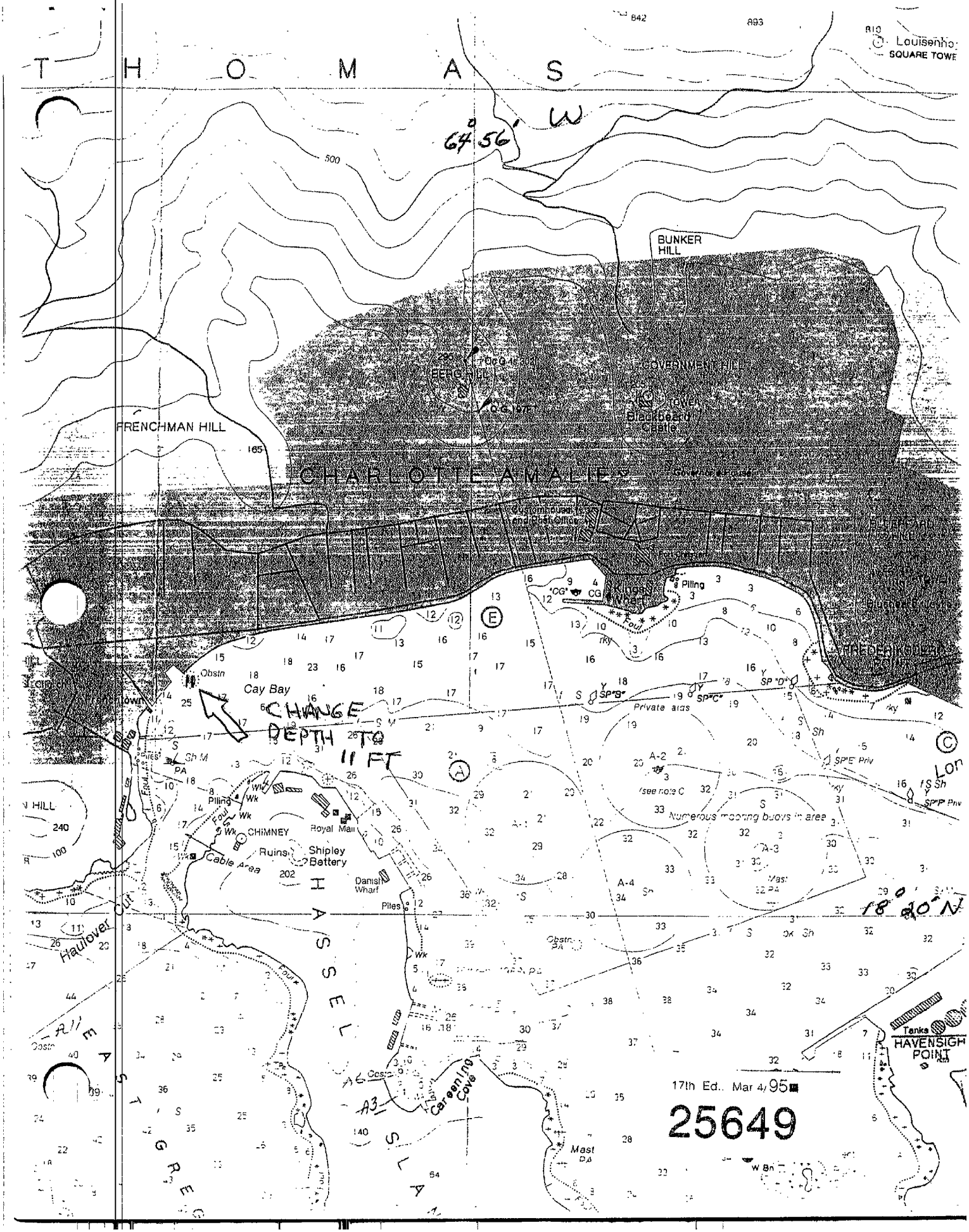
Sincerely,

Nicholas E. Perugini

Nicholas E. Perugini, CDR, NOAA
Chief, Atlantic Hydrographic Branch

Attachments


BERG HILL
GOVERNMENT HILL
TOWER
Blackbeard Castle
64 56'
CHARLOTTE AMALIE
Customhouse and Post Office
Piling
Kings Wharf
Foul
FREDERIKSBERG POINT
Obstn
Cay Bay
Private aids
SP "B"
SP "C"
SP "D"
SP "E" Priv
SP "F" Priv
SP "G" Priv
Long Bay
see note C
Numerous mooring buoys in area
A-1
A-2
A-3
A-4
Mast
Royal Mail
Shipley Battery
Danish Wharf
Piles
CHIMNEY
18° 20' N
West Indian Dock
DELETE
ADD
25ft rep (1988) PA
Obstn PA
Carenng Cove
A6
A3
Tanks
HAVENSIGHT POINT
Rupert Rock
LISENLUND HILL
HASSEL ISLAND
FREDERIK PT
COWELL HILL
Cowell Battery
SIGNAL STATION
COWELL PT
GREGERIE CHANN
Rohde Bank
Scorpion Rock
17th Ed.. Mar 4/95
25649


T H O M A S
64° 56' W
BUNKER HILL
GOVERNMENT HILL
BERG HILL
FRENCHMAN HILL
CHARLOTTE AMALIE
Blackbeard Castle
Customhouse and Post Office
Cay Bay
CHANGE DEPTH TO 11 FT
Private alas
Numerous mooring buoys in area
Royal Mail
CHIMNEY
Ruins
Shipley Battery
Danish Wharf
Piles
Hallover Cut
Careening Cove
HAVENSIGHT POINT
Tanks
18° 20' N
17th Ed., Mar 4/95
25649

CL1514(95)
10505

VIRGIN ISLANDS PORT AUTHORITY

POST OFFICE BOX 2216

CHARLOTTE AMALIE, ST. THOMAS, VIRGIN ISLANDS, U.S.A. 00803

OFFICE OF THE MARINE MANAGER

December 7, 1995

Commander Nicholas E. Perugini, NOAA
Chief, Atlantic Hydrographic Branch
Atlantic Marine Center, NOAA
439 West York Street
Norfolk, Virginia 23510-1114

Dear Commander Perugini:

At the recommendation of Captain David MacFarland, Marine Chart Division, we are submitting to you a list of items which are our greatest concerns on NOAA Chart number 25649, 17th edition. In this compilation we have included documentation on significant hazards or encumbrances that have been removed from navigatible waters.

We have divided the letter into four (4) sections, which detail items that have been removed, important corrections, hydrographic concerns, and new obstruction data. Where possible, all changes that are non-NOAA in origin, or where corrective action has taken place after the departure of Mt. Mitchell, documentation has taken place in the form of numbered attachments.

1. DELETIONS

First let me address the major harbor obstructions in St. Thomas that were noted by the NOAA ship Mt. Mitchell in May 1993. The more significant obstructions are detailed on **attachment number 1,** provided to us by NOAA's Captain David MacFarland of the Marine Chart Division.

Item A: Submerged cylinder - Item was floated to the surface with air bags, lifted from the water by crane, and trucked to the local dump in late 1993. We have been unsuccessfully, as of this writing, in obtaining the photos the salvage company is reported to have in their possession. The V.I. Port Authority records of the removal were apparently destroyed in Hurricane Marilyn. CONCUR. DELETE FROM THE CHART. SEE ALSO ITEM A12, PG 65 OF THE D.R. FOR H-10505.

TELEPHONE NOS. (809) 774-1298 - 774-1314

CABLE ADDRESS: VIPORT

CL 1514(95)

Also, next to the tank was a forty five foot (45') long, farrow cement, wrecked sailing vessel, sunk in 1989. This was removed in 1995 - Documentation is attached as a completed invoice with the stub of the payment check. This is included as **attachment number 2**. NOT CHARTED NO CHADGE IN CHARTING.

Please remove these items from Chart #25649 at approximately Latitude 18° -20' 17.099" N Longitude 64° -56' 21.258" W.

Item B: No action taken. ITEM A14 PAGE 67 (H-10505)

Item C: No action taken. ITEM A-18 PAGE 71 (H-10505)

Item D: Item was removed and trucked to the local dump. Verification is on **video tape number I** (enclosed). Please remove this item from Chart #25649 at Latitude 18° -19' 30.587" N Longitude 64° -55' 42.798" W. CONCUR, ITEM A19 PAGE 72 (H-10505

Item E: No action taken. ITEM A-20 PAGE 73 (H-10505)

Item F: Pipes were removed and trucked to the local dump. CONCUR. DELETE. Verification is on **video tape number I** (enclosed). Please remove this item from (ITEM A-21 Chart #25649 at Latitude 18° -19' 59.939" N Longitude 64° -56' 42.722" W. PG 74 H-10505)

Item G: This item was floated with air bags and towed to the Crown Bay Dock where it was lifted to shore and placed on a flat bed truck and transported to the local dump. Verification is on **video tapes I and II** (enclosed). Please remove this item from Chart #25649 at Latitude 18° -19' 55.753" N CONCUR. DELETE FROM CHART Longitude 64° - 56' 53.849" W. ITEM B-14, PG 54 (H-10506)

Item H1 through **H4**: No action taken. ITEM B6 PAGES 45-46 (H-10506)

Item I: No action taken. ITEM A3, PG 56 (H-10505)

Item J: No action taken. ITEM A6 PG 59 (H-10505)

Item K: No action taken. } SEE SECTION N.1, AND 2. OF THE EVALUATION

Item L: No action taken. } REPORT FOR H-10505. ITEMS A7 AND A8

Additionally, there are two obstructions showing on Chart 25649 that do not exists. I believe these facts were substantiated in Mt. Mitchell's report H-1505. They are: Delete obstruction "MAST PA" at approximate Latitude 18° -20' 00.9" N Longitude 64° -55' 38.9" W on Chart 25649 - This vessel was removed many years ago. Additionally, please delete "Obstruction PA" on Chart 25649 at approximate Latitude 18° -19' 58.8" N Longitude 64° -55' 51.5" W. This was reported as a lost anchor in the 1960's. The obstruction was never located or substantiated.

CONCUR. DELETE FROM CHART. SEE D.R. FOR H-10505
AWOIS ITEM 8546, PG 34.

CL 1514(95)

2. ITEMS OF IMPORTANCE THAT ARE NON OBSTRUCTIVE IN NATURE

I. DEPTHS:

As a result of Hurricane Marilyn on September 15, 1995 the Army Corps of Engineers, immediately after the storm, caused an extensive hydrographic survey to be conducted of all three (3) ship channels depicted on Chart 25649. This was undertaken in order that Military Sealift Command ships could commence landing troops and equipment for the relief effort. New obstructions, hydrographic contour change data, and obstruction removal data were recorded. The results are on file at the Jacksonville Florida Engineering District and are entitled: "St. Thomas Harbor Post - Hurricane Survey - Hurricane Marilyn Recovery" Plot File: "survey.aml." Plot device: "calcomp 5436lJ," and Plot File: "sunk.aml."

This material may serve as a valuable adjunct to the comprehensive data that Mt. Mitchell compiled in 1993.

II. PRIVATE AIDS TO NAVIGATION: CONCUR. DELETE FROM CHART, SEE ALSO SECTION O. PAGE 78 OF THE D.R. FOR H-10505.

Please delete two charted mooring buoys in Long Bay and six charted yellow special purpose nun buoys delineating small boat anchorages "E" & "C". These buoys were discontinued in the late 1980's and formal permission for discontinuance by the Coast Guard was recently granted. See **attachment number 3**.

Specifically, please delete buoy Y SP "B" at approximate Latitude 18° -20' 16" N Longitude 64° -55' 51" W through and including Y SP "G" at Latitude 18° -20' 06" N Longitude 64° -55' 19.5 W on chart 25649 - (6 total). CONCUR

Please delete two mooring buoy symbols at approximately Latitude 18° -20' 05" N Longitude 64° -55' 19" W and Latitude 18° -20' 09" N Longitude 64° -55' 21" W on Chart 25649 - (2 total). CONCUR.

III. SHORELINE AND LANDMARK CONCERNS:

Of prime importance to us is the charting of two significant landmarks. These landmarks are of major importance in positioning ships, and specifically setting their anchors in "Alpha" anchorage. With the increased size of ships now entering St. Thomas the parameters for anchoring vessels must be tightened considerably. With the capability to anchor a vessel with finite precision in "Alpha" anchorage *the safe movement* of inbound and in an emergency the movement of an outbound ship will be greatly enhanced.

Currently, we use a visual range that can only be approximated on the chart. Vessel Masters are uncomfortable at times when they cannot locate the "marks" on the chart. They believe they cannot accurately ascertain their anchored position and calculate cable length and resultant swing radius. With a gently sloping shoreline radar ranging is of limited use even if tangents are used. Mt. Mitchell was sympathetic to our needs and the increasing demands placed upon us for precision positioning. They were kind enough to ascertain differential GPS positions for us of the "range" we currently use. (see page 16, NOAA Ship Mt. Mitchell Survey H-10505).

The lower range object is a prominent point on the roof of St. Thomas Hospital. The hospital is located in an area of the chart now occupied by a compass rose. The compass rose should be moved to the northwest while still maintaining the height contours of BLUEBEARD HILL and its conspicuous landmarks. Also, the "Square Tower" and the eight hundred and ten foot (810ft.) contour at LOUISENHOJ must be maintained. This will allow the proper charting of the hospital while maintaining two other significant landmarks.

The back portion of the range (not specifically mentioned in MT. Mitchell's report) is the prominent point on the nine hundred and seventy-seven foot (977ft.) WINTBERG PEAK.

The coordinates of the two points we strongly desire to have charted are those supplied to us by the Mt. Mitchell. They are:

Hospital - prominent point (approximately center of building): CONCUR.
Latitude 18° -20' 25.9999" N Longitude 64° -54' 52.4348" W. "ST. THOMAS HOSPITAL VENTILATOR

Wintberg Peak landmark; Latitude 18° -20' 42.9395" N
Longitude 64° -54' 24.0637" W "WINTBERG PEAK FLAGPOLE"
CONCUR. RECOMMEND THESE FEATURES BE CHARTED

We are deeply troubled and hope that the errors noted in the shoreline configuration, and the discrepancies noted in the positioning of charted landmarks will be addressed and corrected in the 18th edition.

In 1993, a small quay located at the northeasterly end of the West Indian Dock was removed. This is significant in that it allows more usable space at this dock. We have included documentation of this removal as **attachment number 4**. CONCUR.

3. HYDROGRAPHIC CONCERNS

We trust that all sounding and hydrographic data obtained by Mt. Mitchell will be included in the 18th edition of Chart 25649.

Of critical importance to us are items Z1 through Z12 as depicted on **attachment number 5**. The source of this data was the preliminary sounding sheets of Mt. Mitchell that were viewed by us during the survey.

coe evaluation based on preliminary NOS hydro survey

Z1 - This item depicts the new and significant
officially reported and charted. CHART 30' SOUNDIN

Z2 - An area of significant shoaling noted by N
incorporated on the latest chart to facilitate safe navig

Z3 - NOAA pinpointed this "position approx." w
meters ~~southeast~~ NORWEST of its charted position. Also, it is in ~~--~~ feet of water, not 35. This should be charted accurately. CONCUR. SEE ANOIS #8544, PG 32 OF H-10505

Z4 - The significant shoaling along the face of the West Indian Company dock should be shown. We are constantly under pressure to berth vessels of drafts that are not compatible with actual depths as opposed to the charted depths. This is a serious legal concern for Pilots. CHART PRESENT SURVEY DEPTHS,

Z5 - This small quay has been removed. See **attachment number 4**. (redundant item). CONCUR. DELETE FROM CHART.

Z6 - The chart reports the depth in this area to be 27 feet. This is dramatically incorrect since the preliminary survey depths were recorded at 18 feet or less. CHART SURVEY DEPTHS

Z7 - New shoaling in our maneuvering area. PRES. SURVEY SHOWS 32-34 FT.

Z8 - An area of altered depths where smaller ships are sometimes placed if larger ships are in the deep water portion of "Alpha" anchorage. CHART PRESENT DEPTHS. 19-32 FT.

Z9 - Important shoaling or an obstruction of 10 feet in an area of reported depths of 16 to 20 feet. This area is an area we normally anchor large yachts or small freight vessels with drafts of 8 to 15 feet. PRES. SURVEY SHOWS NO SHOALING.

Z10 - An area of shallower depths where smaller inter island cargo vessels are assigned to berth. PRES. SURVEY SHOWS 11-12 FT.

Z11 - An important area of considerable depth change. This section presents a reverse problem for the Pilots because most of the area is somewhat deeper than what is charted. While that may not appear to be a problem, in actually it presents a unique problem. If we convince a Captain that it is safe to berth in an area that is charted to a depth much less than his vessel's draft, it usually will work out all right. But we have experienced situations where a small vessel has accidentally sunk in a ship berth during the night with no report to the Port Authority. If this were the case in this berth, after assuring the Captain he has adequate depth of water, we would be totally responsible and libel. If we adhere to the charted depths, then marine commerce is needlessly curtailed. In fact this berth is specialized; designed for small tank ships and suction discharge bulk cement vessels that cannot discharge elsewhere. PRESENT SURVEY DEPTHS ARE 23-33 FT.

Z12 - This is an area of significantly altered depth that heavily impacts our operations in Crown Bay. Both naval and commercial traffic are affected. The new survey depth restricts the draft of vessels that would normally leave the port via East Gregerie Channel. DEPTHS 29-36 FT

NOTE: Z1 TO Z10: REFER TO H-10505
Z11 TO Z12: REFER TO H-10506

Without the proper depth recorded on the chart, it is difficult at times to convince a Captain that he may not use the East channel. Not using the East channel requires the vessel to turn at the berth and exit via West Gregerie channel. This maneuver is far from routine with ships over 450 feet. There are a large amount of small craft that anchor or moor in the area, a strong current is usually present also.

4. ADDITIONAL SIGNIFICANT OBSTRUCTION

In Mt. Mitchell's "Descriptive Report To Accompany Survey H-10506 OPR-I173-MI-93", **items B17** and **B23** have become recently significant.

B23 was never moved as planned. B23 broke free and sank in West Gregerie Channel as a result of hurricane Marilyn. This obstruction, because of its location and size, is considered extremely serious. Pending federal litigation and hazard mitigation proceedings with West Indian Transport appear to be slowing the immediate removal of this obstruction. The Army Corps of Engineers have assured us that this submerged wreck will be removed as a priority. As of this date the obstruction remains - see U.S. Coast Guard, Seventh District, Local Notice To Mariners #43-95 for details and placement of "temporary" lighted Aid to Navigation "WR3A."

TWO SEPARATE PARTS OF WR "WITCONCRETE". CHART AS SHOWN UNLESS OTHER INFORMATION INDICATES OTHER WISE.

We sincerely hope that the information contained in this document, along with Mt. Mitchell survey data (updated by the recent Army Corps of Engineer's survey), will produce an 18th edition of chart number 25649 that will be both timely, and of unparalleled accuracy.

Sincerely,

W. Donald Jeffrey

William Donald Jeffrey, Senior Pilot
VIRGIN ISLANDS PORT AUTHORITY

Attest:

Maria Walters

Maria D. Walters, Manager
Marine Division
VIRGIN ISLANDS PORT AUTHORITY

pc: Executive Director
Director of Engineering

WDJ/kl

ATTACHMENT 1

CHARLOTTE AMA HARBOR OBSTRUCTIONS
LOCATED BY NOAA SHIP MT MITCHELL: MAY 1993

CHARTLET CODE	LOCATION OF OBSTRUCTION	DESCRIPTION OF OBSTRUCTION	LEAST DEPTH OF OBSTRUCTION	PREVIOUSLY CHARTED DEPTH (16th Ed., 25649)
A ITEM A-12	18° 20' 17.099" N 64° 56' 21.258" W	Submerged cylindrical tank, 35' by 6'	11.84 feet	15 feet
B ITEM A14	18° 19' 59.929" N 64° 56' 41.353" W	Mooring anchor with 11' square base, tapering to 6' square top. Rises 3.4' above the sea floor.	30.1 feet	32 feet
C ITEM A18	18° 20' 00.851" N 64° 55' 58.287" W	Wreck, metal hull, length 32'. Rises 5' above the sea floor.	32.15 feet	36 feet
D ITEM A19	18° 19' 30.587" N 64° 55' 42.798" W	Fiberglass bow, starboard side partially buried in sand, length 16'. Rises 6' above the sea floor.	32.4 feet	34 feet
E ITEM A20	18° 19' 47.036" N 64° 56' 28.460" W	Two concrete blocks side by side, length of obstruction 8.3 '. Rises 3.8' above the sea floor.	39 feet	41 feet
F ITEM A21	18° 19' 59.939" N 64° 56' 42.722" W	Two pipes, one lying across the other and rising 3.3 feet above the sea floor.	26.9 feet	33 feet
G ITEM B14	18° 19' 55.753" N 64° 56' 53.849" W	Large spherical boulder, diameter 4.3'.	29.8 feet	33 feet

H1	18° 19' 33.984" N 64° 57' 15.547" W		43.96 feet	51 to 59 feet
H2	18° 19' 34.699" N 64° 57' 15.748" W	At each position, a large pile of small rocks. Each pile is about 16' long and extends about 10' above the sea floor.	42.97 feet	
H3	18° 19' 35.213" N 64° 57' 16.003" W		41.0 feet	
H4	18° 19' 37.562" N 64° 57' 15.816" W		54.46 feet	
I ITEM A-3	18° 19' 46.956" N 64° 56' 04.803" W	Fiberglass hull, length 35', beam 11.7'.	0.9 feet	6 feet
J ITEM AC	18° 19' 48.557" N 64° 56' 05.083" W	Metal conning tower, 8' long, one leg extending more than 3.3' off the sea floor.	5.9 feet	6 feet
K ITEM AJ	18° 19' 51.744" N 64° 56' 01.734" W	Remains of wooden sailboat, length 42', beam 12'.	18.3 feet	between 18- and 30-foot contours
L ITEM AB	18° 19' 52.427" N 64° 56' 01.261" W	Remains of fiberglass sailboat, stern section only, 16' long, 9.1' wide.	26.2 feet	30 feet

IMMEL'S MARINE, INC.
P.O. BOX 878
ST. THOMAS, U.S.V.I. 00804
(809) 774-3541

STATEMENT

DATE: Aug. 16, 1995
NUMBER: 9233

ATTACHMENT 2

V.I. Port Authority
Marine Manager
P.O. Box 2216
St. Thomas, VI 00803

TERMS:

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE $ _____

DATE	CHARGES AND CREDITS	BALANCE
	BALANCE FORWARD	
	Services rendered August 15, 1995 Removal of the sunken sailing vessel laying perpendicular to the bulkhead adjacent to the St. Thomas seaplane ramp.	15,800.00

VIRGIN ISLANDS PORT AUTHORITY

403

OUR REF. NUMBER	YOUR INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AM
SM3174	9233	08/16/95	15800.00	15800.00	0.00	15800.(

Certified Copy
Dana Waites
Marine Manager

epartment
nsportation
ed States
st Guard

Commander
Seventh Coast Guard
District

Brickell Plaza Federal Bldg.
909 S.E. First Avenue
Miami, FL 33131
Staff Symbol: (oan)
Ph: (305)536-5621

TTACHMENT 3.

16518/109
Serial: 0289

03 APR 1995

Ms. Maria Walters
Virgin Islands Port Authority
Marine Division
P.O. Box 302216
St. Thomas, VI 00803

Dear Ms. Walters:

This letter authorizes the discontinuance of St. Thomas Harbor Area Boundary Buoys B, C, D, E, F, and G, VISS Channel Buoys 1S, 2S, and VISS Channel Exclusion Buoy, and Cruz Bay Buoy 4, effective immediately.

Please remove the private aids by May 1, 1995. When you have done so, please contact Lieutenant (Junior Grade) D. Marston at (305) 536-5621.

Sincerely,

B. W. HADLER
Captain, U.S. Coast Guard
Chief, Aids to Navigation and
Waterways Management Branch
Seventh Coast Guard District
By direction of the District Commander

Copy: Commander, Coast Guard Greater Antilles Section

Notification Completed 5/18/95 11:55 wD
[illegible] out & lunch - [illegible] & P.D. on duty.

ATTACHMENT 4

The West Indian Company Limited

DOCK OPERATIONS DEPARTMENT

P.O. Box 7660
Charlotte Amalie
St. Thomas
U.S. Virgin Islands 00801
FAX: (809) 775-4008
Telex: 3472313
Telephone: (809) 774-1780

November 24th, 1995

Captain Donald Jeffrey
Harbor Pilot
Virgin Islands Port Authority
St. Thomas, USVI 00801

Dear Captain Jeffrey;

The small cargo dock projecting into WICO berth four was deemed unnecessary by WICO in 1993. During October of 1993 the dock was removed.

On behalf of The West Indian Company Limited, I would appreciate the removal of this pier on the current chart and any future publications.

Regards,
THE WEST INDIAN COMPANY LIMITED

Mike McFadden
Director of Operations

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

March 26, 1996

MEMORANDUM FOR: Captain Andrew A. Armstrong, NOAA
Chief, Hydrographic Surveys Division

FROM: Commander Nicholas E. Perugini, NOAA
Chief, Atlantic Hydrographic Branch

SUBJECT: Compilation of chart 25649, U.S. Virgin Islands
Hydrographic Surveys H-10505, H-10506

This report is presented to describe compilation work performed by the Atlantic Hydrographic Branch (AHB) on U.S. Virgin Islands Chart 25649. Two H-Drawings were constructed to reflect data from MT MITCHELL surveys H-10505 and H-10506. Since the time that these surveys were conducted in 1993, AHB received supplemental information that subsequently affected chart compilation. This supplemental information is explained in detail in this report and is reflected on the accompanying H-Drawings.

Captain Jeffrey, U.S. Virgin Islands Port Authority, Senior Pilot
During the compilation process, AHB maintained communication with Captain William Donald Jeffrey, U.S. Virgin Island Pilot. Captain Jeffrey provided AHB with written correspondence and video information regarding changes to the survey area after the departure of the MT MITCHELL. The initial correspondence by Captain Jeffrey provided sufficient documentation to delete many of the features that are found on the MT MITCHELL survey. This letter was registered with Marine Chart Division as Chart Letter 1514/95. Written correspondence to and from Captain Jeffrey are appended to this report.

During the compilation process, Captain Jeffrey was furnished preliminary copies of the proposed chart compilation. He made many constructive suggestions about how to improve the preliminary compilation. AHB incorporated these suggestions into the final product. **If subsequent changes are made to AHB compilation, I would strongly recommend that a preliminary copy of the chart be forwarded to Captain Jeffrey for his review.**

SHORELINE AND LANDMARKS
AHB compiled hydrographic data seaward of the high water line. It was agreed that MCD cartographers would compile the most recent shoreline data collected and compiled by NGS Photogrammetry Branch, Coastal Surveys Unit. Photogrammetric

data acquisition for project OPR-I173-MI-93 was done concurrently with the MT MITCHELL's hydrographic survey work. This most recent survey is displayed on both smooth sheets. However, it is not compiled on H-Drawings for H-10505 and H-10506.

In numerous conversations, Captain Jeffrey repeatedly emphasized the problems that many large cruise ships were having with obtaining accurate positions when using radar ranges and lines of position to charted landmarks. In particular, Captain Jeffrey noted specific problems in determining good positions in the vicinity of the West Indian Company Dock. After making a cursory comparison between the currently charted shoreline and the new shoreline, there does appear to be some discrepancies in the vicinity of the West Indian Dock.

In addition, Captain Jeffrey was insistent that several new important landmarks be added to the chart. MT MITCHELL and NGS's Coastal Survey Unit worked closely with Captain Jeffrey to ensure that most of the currently charted and fixed aids to navigation be located to third order standards. It is recommended that special attention be paid to the recommendations made on the attached Virgin Islands Landmark Review. Updated positions for landmarks were extracted from the "Coastal Surveys Unit, Horizontal Control Report, Project OPR-I173-MI-93, Saint Thomas Harbor." Recommendations concerning new landmarks were compiled from correspondence between Captain Jeffrey and AHB. Positions should be extracted from the Coastal Surveys Unit Report for chart compilation purposes.

Captain Jeffrey noted that topographic contours are valuable features on this chart and he recommends that they be retained on the next edition.

CORPS OF ENGINEERS CONTRACT SURVEY

Personnel from Marine Chart Division's Source Data Unit provided AHB with digital data for 13 blueprint survey sheets. These data were collected by a Corps of Engineers contractor in September, 1995. The surveys were conducted after Hurricane Marilyn passed through the Virgin Islands and caused considerable damage. No report was supplied with this information, therefore, an evaluation could not be made as to the quality of the data. Blueprints from these data were registered with MCD as BP # 157065 through 157077.

On BP # 157067, an uncharted wreck was noted in West Gregerie Channel. This wreck has been temporarily buoyed by the Coast Guard. AHB personnel contacted the Jacksonville Army Corps of Engineers concerning this wreck. They informed AHB that the wreck was surveyed thoroughly by a shallow water multibeam system and positioned by DGPS. The precise position and least depth of the wreck follow:

18° 19' 26.065" W 64° 57' 31.697" W	15.7 ft.

The wreck is portrayed on the H-Drawing as a wreck with a depth of 15 feet. Unless further information is heard concerning this wreck, it is recommended that it be charted.

On March 26, 1996, AHB personnel contacted Mr. Fran Woodward, Jacksonville Corps of Engineers concerning the disposition of this wreck. Mr Woodward stated that a contract was being let within two weeks for the wreck to be removed. **It is recommended that Mr. Woodward be contacted concerning the wreck's status before the chart goes to final print.** His telephone number is (904) 232 1132.

MISCELLANEOUS ISSUES

- In a telephone conversation, Captain Jeffrey noted that the Airport runway is completely mischarted. It is recommended that this situation be reviewed during shoreline compilation.

- The G "WR1" buoy is charted marking a wreck in the following position:

18° 18 38.1 N
64° 56 04.2 W

This position of the wreck is approximately 200 meters NW of the charted position of the buoy. AHB personnel discussed this discrepancy with the St Thomas Coast Guard on March 26, 1996. They intend to dive on the wreck, and relocate the buoy. It is recommended that this situation be monitored closely before chart printing.

RECOMMENDATION

Captain Jeffrey is very open to reviewing the preliminary chart before it goes to final print. AHB has experienced a very quick turnaround time in receiving comments from Captain Jeffrey. It is strongly recommended that Captain Jeffrey be asked to review the chart before it goes to final print.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

March 27, 1996

MEMORANDUM FOR: The Record

FROM: Commander Nicholas E. Perugini, NOAA
Chief, Atlantic Hydrographic Branch

SUBJECT: Comments on USVI CL 1514/95 in Reference to Compilation of Chart 25649

The following information addresses specific charting recommendations made by Captain William Donald Jeffrey, Senior Pilot, U.S. Virgin Island Port Authority. In a letter to CDR Perugini dated December 7, 1995, Captain Jeffrey provided information that was used during chart compilation to supplement, and in some cases, supersede information that was shown on the 1993 MT MITCHELL surveys (H-10505 and H-10506). Items in this report reference specific items that were noted in Captain Jeffrey's original letter. Captain Jeffrey's letter was registered with Marine Chart Division as CL 1514/95

The following comments were compiled by AHB cartographer Rick Whitfield, who performed compilation for the entire chart.

Deletions:
Item A - The cartographer concurs that the submerged cylinder should be removed from the chart. The other item mentioned is a forty five foot wrecked sailing vessel. This wreck does not appear on the chart. No change in charting is recommended.

Items B and C - Items to be retained on the chart.

Item D - The cartographer concurs and agrees that this should be deleted from the chart.

Item E - Item to be retained on the chart.

Items F and G - The cartographer concurs and agrees that these should be deleted from the chart.

Items H1 through H4, I, J - Items to be retained on the chart with updated positions.

Items K and L - Items to be charted with updated positions and depths, with additional revised obstructions and depths.

Additional items - Two obstructions. The cartographer concurs and agrees that these items should be deleted from the chart.

Depths:
Army Corps of Engineers data is routinely incorporated into NOAA nautical products. The information to which you refer should be no exception.

Private Aids to Navigation:
Cartographer concurs and agrees that these aids should be deleted from the chart.

Shoreline and Landmarks:
The cartographer concurs that the St. Thomas Hospital and the Wintberg Peak Flagpole should be included on the chart. The positions will be those obtained by MT. MITCHELL personnel.

Hydrographic Concerns:
Item Z1 - The cartographer concurs as hydrographic survey H-10505 depicts the discussed area of 30 foot depths.

Item Z2 - The cartographer concurs as hydrographic survey H-10505 shows the shoaling you reference in your letter.

Item Z3 - The cartographer concurs as hydrographic survey H-10505 depicts the wreck **northwest** of the currently charted position. The object lies in 60 feet of water. The charted position will be updated.

Item Z4 - The cartographer concurs. Hydrographic survey H-10505 data will be used in this area.

Item Z5 - The cartographer concurs with the removal of the small quay.

Item Z6, Z7, Z8 - This chart area will have soundings updated from the latest hydrographic survey.

Item Z9 - This chart area will have soundings updated from the latest hydrographic survey. No shoaling was indicated.

Item Z10 - This chart area will have soundings updated from the latest hydrographic survey.

Item Z11 - This chart area will have soundings updated from the latest hydrographic survey.

Additional Significant Obstructions:
B17 and B23 - Information from COE blueprint #157076, already registered with MCD, shows the position if the wreck. This wreck is scheduled to be removed, however, it is shown on the current H-drawing.

Virgin Islands Landmark Review - Chart 25649

Most charted landmarks and fixed aids to navigation were located to third order standards during the MT MITCHELL survey. This report summarizes the recommended updates to position and description of these features. This information has been compiled from the following sources:

- MT MITCHELL Descriptive Report , H-10505, H-10506, OPR-I173-MI-93, form 76-40
- NGS Coastal Survey Unit Report for Project OPR-I173- MI-93
- Correspondence from Captain Jeffrey, Senior Pilot, VI Port Authority

The positions mentioned below are for reference purposes only. The precise positions should be obtained from the appropriate source report. Special attention should be paid to those items marked with an asterisk (*). These are changes requested by Captain Jeffrey.

* Items mentioned in CL1514/95 (Capt. Jeffrey, Senior Pilot, VI Port Authority)

Section 1 - Updated Landmark and Fixed Aids to Navigation Positions
The following landmarks and fixed aids to navigation are currently charted. Their precise positions should be updated.

Chart Name	Description	Lat (N), Long (W)	Comments
Range Light	St Thomas Harbor Rear Range Light	18/20/40.41418, 64/56/00.56456	Range - 344° 10', 164° 10'
Range Light	St Thomas Harbor Front Range Light	18/20/36.79384, 64/55/59.48988	
Tower	Careen Hill WSTA Radio Tower	18/20/04.17699, 64/56/38.55181	
Light	West Gregerie Channel Light #6	18/19/51.74987, 64/56/52.10693	
Tower	Water Island Box Tower	18/19/11.17103, 64/57/11.99313	
Tower	Nisky Mission ABC NBC Tower	18/20/03.41025, 64/57/16.04152	
Tower	Hawk Hill MicroTower Strobe	18/21/11.00907, 64/58/32.85438	

Light	St. Thomas Airport Beacon 18/19/38.85587, 64/57/50.43670

Section 2 - Updated Landmark Names and Positions. The following charted landmarks were precisely located. It is recommended that their charted names be changed in accordance with Captain Jeffrey's recommendations.

Current Charted name	Recommened Chart Name	Description Lat (N) Long (W)
Tower	Flagpole	Bluebeard Castle Flagpole* 18/20/25.09700, 64/55/26.67922
Tower	Flagpole	Blackbeard Castle Flagpole 18/20/37.85066, 64/55/46.55832
Signal Station	Mast	Cowell Battery Signal Mast* 18/19/32.41747, 64/55/57.45288 Captain Jeffrey notes that foreign ships mistakenly try to signal the "signal station."
W Bn	Sq. Dayshape	Rupert Rock Daybeacon 18/19/41.34717, 64/55/35.85177

Section 3 - New Landmark Names and Positions

Recommended Name	Description Lat (N), Long(W)	Comments
Tower	Signal Hill Cellular One Tower 18/21/16.03282, 64/56/41.36858	
Flagpole	Loiusenhoj Flagpole* 18/21/03.73180, 64/55/29.01494	Captain Jeffrey Recommendation Chart in lieu of "square tower"
Tower	Mafolie Micro Tower 18/21/05.44734, 64/55/41.08882	
Tower	Flag Hill Radio Tower 18/19/47.55129, 64/54/39.53587	

Hospital Ventilator	St. Thomas Hospital Ventilator* 18/20/25.99994, 64/54/52.43477	Captain Jeffrey Recommendation
Flagpole	Wintenberg Peak Flagpole* 18/20/42.93952,64/54/24.06367	Captain Jeffrey Recommendation
Light	West Indian Company Pier Light 18/19/49.81481,64/55/34.14858	

Section 4 - Landmark Names and Positions recommended for deletion

Square Tower	Delete Louisenhoj Square Tower 18/21.14,64/55.46	Delete

Section 5 - Other Features

CL1514/95 specifically requests that the elevation contours be maintained for Bluebeard Hill and the 810 foot contour for Wintberg Peak.

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10505

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
25649	2/5/96	R.H. Whitfield	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. SHORELINE NOT APPLIED
25641	9/12/96	Roger Johnson	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 33 Applied through 25649
25640	9/25/96	Roger Johnson	
			Full ~~Part Before~~ After Marine Center Approval Signed Via
25650	9/30/96	Roger Johnson	Drawing No. ~~BP158311~~
			Applied through ~~2565~~ 25641
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.