9514

Diag. Cht. No. 905

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey HYDROGRAPHIC

Field No. WH-10-2-75

Office No. H-9514

LOCALITY

State U.S. VIRGIN ISLANDS

General Locality NORTH COAST OF ST. THOMAS ISLAND

Locality OUTER BRASS ISLAND TO THATCH CAY

1975

CHIEF OF PARTY
Robert A. Trauschke

LIBRARY & ARCHIVES

DATE June 9, 1978

☆ U.S. GOV. PRINTING OFFICE: 1976—669-441

9514

Area 3

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-9514

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. WH-10-2-75

State U.S. Virgin Islands.

General locality North Coast of St. Thomas, Island ~~Virgin Islands~~

Locality Outer Brass Island to Thatch Cay

Scale 1:10,000 Date of survey JD 071 119 March 12 - April 29, 1975

Instructions dated Oct. 30, 1974 (See Remarks) Project No. OPR-423-WH-75

Vessel Whiting Launches Launch WH-1 (2931) and Launch WH-2 (2932)

Chief of party Cdr. Robert A. Trauschke

Surveyed by Cdr. R.A. Trauschke, LCDR. W. Daniels, Lt. A. Theberge, Lt. Meyers, Lt. (jg) K.W. Perrin, Lt. (jg) D.M. Kuhl, Ens. J.H. Bennett, and Ens. D. Terry

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by Ship personnel

Graphic record checked by Ship personnel

Protracted by N/A Automated plot by Calcomp 618 (AMC) ~~WHITING system~~

Verification by J.S. Bradford may 1, 1978

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS: Time meridian of survey was 0°. Project instructions dated 30 October, 1974 are supplemented by Change No. 1 to project instructions, dated January 10, 1975 and ~~Change No. 4 to project instructions, dated January 24, 1975.~~

Applied to stds 12/18/78

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

☆ U.S. GPO: 1974-0-768-081/1207

A. PROJECT:

This hydrographic survey was conducted by the NOAA SHIP WHITING in accordance with Project Instruction for OPR-423-WH-75 dated October 30, 1974 and supplemented by Change No. 1 to Project Instruction dated January 10, 1975 ~~and Change No. 2 dated January 24, 1975.~~

B. AREA SURVEYED:

Hydrography on this survey began March 12, 1975 (Julian Day 071), and ended on April 29, 1975 (Julian Day 119). The survey is bound by the following limits:

NUMBER	LATITUDE (NORTH)	LONGITUDE (WEST)
1	18° 24' 48''	64° 58' 30''
2	18° 24' 48''	64° 51' 30''
3	18° 20' 30''	64° 51' 30''
4	18° 21' 38''	64° 55' 30''
5	18° 22' 30''	64° 57' 48''
6	18° 23' 18''	64° 58' 24''

The area surveyed is north off the coast of St. Thomas, Virgin Islands. It junctions with photogrammetery along the shore line of St. Thomas to the south and with contemporary survey WH-10-1-75 (H-9507) to the east and with shore line of Inner and Outer Brass Island to the west.

Sounding line spacing was 180 meters except in areas of anchorages or shoals, spacing was 90 meters.

C. SOUNDING VESSEL:

Hydrography on the survey was done by WHITING Launch WH-I, Hull #1206, (2931) and WHITING Launch WH-II, Hull #1208, (2932).

VESSEL	JULIAN DAYS	POSITION NUMBERS USED
Launch 1206 (2931)	071, 072, 078, 080-081, 083-086 093, & 094	4000-4410
Launch 1208 (2932)	071, 072, 077-079, 083-086, 091-097, 099, 100, 113, & 119	1-2180, 8001-8012, and 8021-8037

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS:

WHITING Launch WH-I (2931) used a Raytheon DE-723-b serial 37018. WHITING Launch WH-II (2932) used a Ross Fathometer model 5000, serial No. 1049. Fathometer operators performed frequent initial settings, stylus arm lenght, AF and phase checks.

Velocity corrections to depth soundings were accomplished by using RK 530 using the curve fit option and input obtained from a TDC cast on Julian Day 092 located 18° 23' N. and 64° 56' W. leadline corrections were taken to validate the TDC velocity corrections.

The program input are depth from surface, temperature and conductivity. The program computes its velocity of sound at various layers and outputs are the velocity correction table giving true depth, transducer depth, and the corresponding velocity corrector to be applied. The transducer depth and velocity correctors are rounded to tenths and these values within the range of the survey are put on the velocity tape and applied to the smooth plot.

Table I applies to bothWH-I (2931) and WH-II (2932). See "Abstracts of Corrections to Echo Soundings" at the end of this report. Corrections for transducer depth settlement and squat were applied off line when plotting.

A copy of the Sounding Correction Abstract, the velocity tape listings and the TC/TI tape listings are included in the "Abstract of Corrections to Echo Soundings" in this report.

The leadline comparisons, RK 530 input and output data, TDC observer data, will be forwarded under a separate cover, "Sounding Correction Data".

E. HYDROGRAPHIC SHEETS:

The field sheet discussed in this report was plotted on the WHITING Complot Roll Bed Plotter. The boatsheet consists of two sheets of main scheme hydrography WH-10-2N-75 and WH-10-2S-75 and an overlay for both sheets consisting of developments and bottom samples and range azimuth.

The field sheets have TRA correctors and velocity correctors applied. Since it was determined that there were no position correctors throughout the survey, a position correction of zero was applied.

The sheets and all data will be sent to the Atlantic Marine Center, Norfolk, Virginia for smooth plotting and verification.

F. CONTROL STATIONS:

The method of control for WH-I (2931) was Del Norte in the Range-Range mode. The stations used in this mode were:

STATION	ELECTRONIC CONTROL II	LOCALITY	LATITUDE (N)	LONGITUDE (W)
CAN	119	West End of Congo Cay	18° 22' 08.171''	64° 48' 30.607''
LEE	118	East End of Hans Lollik I.	18° 23' 41.277"	64° 53' 59.430"
WEST 1918	121	West End of Thatch Cay	18° 21' 45.811''	64° 52' 35.298"
WEST OFFSET	122	West End of Thatch Cay	18° 21' 45. 438"	64° 52' 34.453"
HANS 1926	123	South End of Hans Lollik	18° 23' 21.358"	64° 54' 25.256"
COKI 1918	100	West Coast of St. Thomas	18° 21' 04.820"	64° 51' 47.070"
EVA	103	South Point of Thatch Cay	18° 21' 25.574"	64° 51' 07.097"
PIC 1918	124	Picara Pt. St. Thomas	18° 23' 05.911"	64° 56' 29.374"
MAG OFFSET I	126	West Side of Magens Bay St. Thomas	18° 22' 43.796"	64° 57' 10.728"
MICRO OFFSET II	128	East Side Magens Bay St Thomas	18° 22' 34.177"	64° 55' 43.104"

The method of control for WH-II (2932) was Del Norte in the Range-Range mode and range-azmiuth mode. The stations used in these modes were:

STATION	ELECTRONIC CONTROL #	LOCALITY	LATITUDE (N)	LONGITUDE (W)
LEE	118	East End of Hans Lollik Island	18° 23' 41.277"	64° 53' 59.430"
CAN	119	West End of Congo Cay	18° 22' 08.171"	64° 48' 30.607"
WEST	121	West End of Thatch Cay	18° 21' 45.811"	64° 52' 35.298"
EVA	103	South Point of Thatch Cay	18° 21' 25.574"	64° 51' 07.097"
WEST OFFSET	122	West End of Thatch Cay	18° 21' 45.438"	64° 52' 34.453"
HANS 1926	123	South West End of Hans Lollik Is.	18° 23' 21.358"	64° 54' 25.256"
MICRO	115	East Side Magens Bay St. Thomas	18° 22' 34.096"	64° 55' 43.099"
PIC 1918	124	Picara Pt. North St. Thomas	18° 23' 05.911"	64° 56' 29.374"
MICRO OFFSET 2	128	East Side Magens Bay, St. Thomas	18° 22' 34.177"	64° 55' 43.104"
MAG OFFSET 1	126	West Side Magens Bay St. Thomas	18° 22' 43.796"	64° 57' 10.728"
COKI 1918	100	West Coast St. Thomas	18° 21' 04.820"	64° 51' 47.070"
Thatch, 1918-1975	108	East Side, Thatch Cay	18° 21' 38.448"	64° 51' 04.917"
COKI OFFSET, 1975	135	COKI PT	18° 21.08'	64° 51.78'

PELICAN 1972	130	Pelican Cay North Little Hans Lollik Island	18° 24' 59.403	64° 54' 33.940"
DRAKES SEAT	~~129~~	North Side St. Thomas	18° 21' 18.009	64° 55' 38.923
~~MAG 1918~~	125 Not used as signal	West Side of Magen's Bay, St. Thomas	18° 22' 43.190"	64° 57' 10.680"
MAG 02	132	West Side of Magen's Bay, St. Thomas	18° 22' 43.233"	64° 57' 10.602"
TWO BROTHERS	104 off limits of smooth sheet	Pilsbury Sound, St. Thomas	18° 20' 41.471"	64° 49' 03.672"

The stations in this survey were located as follows: MAG, PIC, COKI, and WEST, were located in 1918 using third order survey methods and are recoverable. PELICAN was located in 1972 and is recoverable. LEE, CAN, and EVA, ~~were~~ located by Photo Party 62 and are not recoverable. MICRO, and TWO BROTHERS were located by Photo Party 62 and are ~~recovable~~ recoverable. HANS was located in 1926 and recoverable. WEST OFFSET, MICRO OFFSET 2, MAG OFFSET 1, DRAKES SEAT, AND MAG 02 were located by WHITING Personnel and are not recoverable. WEST OFFSET, MICRO OFFSET 2, MAG OFFSET 1, DRAKES SEAT ~~positions were determined by~~ a hyon range/distance method with a known G.P. as shown in the following sketch. MAG OFFSET 1 and MAG 02 positions were determined by measuring the distance between known G.P. and measuring the angle between the new position and a previously known G.P. as shown in the following sketch. Sextant fixes were taken in the survey area for calibration checks against Del Norte.

G. HYDROGRAPHIC POSITION CONTROL:

WHITING Launch WH-I (2931) ran main scheme hydrography in range-range operation in areas extending from station LEE. Crosslines were run on Station LEE and CAN. Other main scheme hydrography in range-range was in areas extending from MICRO OFFSET II.

The WHITING Launch WH-II (2932) ran main scheme hydrography on courses 000° and 180° in the majority of the survey, and on courses 090° and 270° in the North West area of the survey and on course 040° and 220° in Magen s Bay. Crosslines were generally run on perpendicular courses.

All station configurations were chosen to give intersecting angles of 30° or greater.

The Del Norte Trisponder Electronic Positioning System was used as the control for this survey. The system was used with the master transponder (masters) and the distance measuring units (DMU's) on Launch WH-I (2931) and the Launch WH-II (2932). The remotes were placed at known shore locations.

Corrections to the Del Norte readings were obtained by calibrating each Distance Measuring Unit (DMU) with each remote over a baseline of known distance. The baseline distance was determined by measuring over a level surface with a 300' steel tape or measuring between two points with a electronic measuring unit. Calibrations of equipment were conducted in accordance with methods described in the Del Norte manual.

Overall the Del Norte was quite stable. Equipment malfunction was limited to the Del Norte remotes, possibly due to the rougher handling that they received in being carried to and from various stations.

At times during a survey day, signal strength and quality would become so poor that hydrography was curtailed for short periods of time. The only explanation for this occurence was atmospheric interference. Usually moving to a different area or waiting for a period of time restored signal strength.

The quality of position control using Del Norte was quite good since zero was used for position corrector for the entire survey. See "ELECTRONIC CORRECTOR ABSTRACT" at the end of this report for specific information.

H. SHORELINE:

Shoreline on this survey were obtained from the Photogrametric Bathymetry Sheets: Virgin Islands, St. Thomas Island, Hans Lollick Island, T-12938, 12939, 12942, 12943 (2), 12944 (2), 1:10, 000. All Topographic details were in agreement with the manuscript.

* See appended letter dated Aug 3, 1976 from C3421, subject: Instruction - Photogrammetric Bathymetry.

I. CROSSLINES:

Crosslines amounted to 08.8% of the total hydrography on this survey. There were no significant discrepencies at the junctions. All crosslines were run with the same vessel that ran the main scheme hydrography.

J. JUNCTIONS:

H-9514 (1975)

The sheet WH-10-2-75 junctioned with two of the WHITINGS contemporary surveys. The southern limit of this survey junctioned with the shoreline of St. Thomas.

The sheet extended eastward to junction with WHITING contemporary Survey WH-10-1-75, H-9507, and soundings are in red ink on boatsheet. Junction soundings were very good; there were little or no difference.

H-9514 (1975)

The northern limit of WH-10-2-75 junctioned with WH-10-3-75 (H-9515) ~~and soundings are in green ink~~ on boat sheet. Junction soundings were very good, differences averaged one to three feet but this discrepancy may be caused by the fact that the two surveys were ran on different days with different sea conditions.

The sheet extended westward to 064° 58' 30" W. No junction soundings were available for this area. H-9601 joins to the west

K. COMPARISON WITH PRIOR SURVEYS:

H-9514 (1975)

One prior survey covers the area that WH-10-2-75 covers. It is USC&GS Reg. No. 4561a, 1:20,000 surveyed from September 12, 1923-March 11, 1926. Soundings on the two surveys agree averaging one to three feet difference. This is a very good agreement considering the date and methods of surveying at the time.

Photogrammetric Bathymetry for this survey was obtained from Photogrammetric Bathymetry Sheet: St. Thomas, Virgin Island T-12938, T-12939, T-12942, T-12943 (2), T-12944 (2); 1:10,000. The two surveys agreed with the photobathymetry. The only discrepancies existing were in areas where the photobathymetry extended past the 12 foot curve where differences ranged from two to ten feet.

L. COMPARISON WITH THE CHART:

This survey was compared with chart C&GS 905, 1:100,000, Virgin Islands, 12th Ed., May 18, 1974, and with chart (C&GS 938) NOS No. 25647, 1:15,000, Pillsbury Sound, Virgin Island, 5th Ed., September 7, 1974.

In the offshore portions of the survey, depths vary from two to sixteen feet.

Comparisons were made between areas of shoaler depths. Location, depth on chart and survey depth are as follows:

Latitude (N)	Longitude (W)	Depth on Chart	Survey Depth
18°21'17"	64°51'39"	60 feet	62 feet PSI
18°21'21"	64°52'12"	23 feet	22.8 feet PSI
18°22'00"	64°52'32"	47 feet	54 feet PSI
10°22'07"	64°52'42"	62 feet	62 feet ~0.6 PSI
18°21'51"	64°53'15"	23 feet	26 feet PSI RP
18°22'12"	64°53'54"	39 feet	42 feet PSI
18°22'09"	64°54'09"	38 feet	41 feet PSI
18°23'24"	64°52'33"	120 feet	136 feet
18°24'18"	64°53'24"	114 feet	~~113~~ 141 feet ?
18°23'32"	64°56'02"	54 feet ?	58 feet PSI
18°24'18"	64°56'02"	60 feet 65 Fee	63 feet ok
18°24'18"	64°56'24"	60 feet	65 feet ok
* 18°23'24"	64°57'00"	6 feet	10 feet GREEN ROCK
18°22'48"	64°56'36"	39 feet	43 feet

Over all the chart was in agreement with the survey. ✓

* The 6-ft sounding charted at lat 18°23'24", long. 64°57' should be retained.

R. AUTOMATED DATA PROCESSING:

Data gathered by Launch WH-I (2931) was logged on board the launch by a Digital Control Unit (DCU). Range-range data was reformated by program RK 337 "UNSCRAMBLER", version 8/8/74. The data was then plotted by RK 211 "RANGE-RANGE NON REAL TIME PLOT", version 8/16/74.

Data gathered by the Launch WH-II (2932) was aquired by RK 111 "RANGE-RANGE REAL TIME PLOT", version 8/7/74. The data was plotted using RK211 "RANGE-RANGE REAL TIME PLOT", version 8/16/74. Range-Azimuth data was manually logged by using AM602 "EXTENDED LINE ORIENTED EDITOR", version 3/10/72. The data was plotted using RK212 "VISUAL STATION TABLE LOAD & PLOT", version 4/1/74 and RK 216 "RANGE-AZIMUTH POSITION & SOUNDING PLOT", version 2/19/65.

Boat sheets for both WH-I (2931) and WH-II (2932) were constructed using RK 201 "GRID & LATTICE PLOT", version 2/19/75.

S. REFERENCES TO REPORTS:

All records, reports, and forms pertinent to this survey are included in this report, except for "FIELD RECORDS FOR THE DETERMINATION OF CORRECTIONS TO ECHO SOUNDINGS". This will accompany the hydrographic sheets and descriptive report under a separate cover.

National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C3421

To: Rudie Sonacki
CAM 3 X 1

August 3, 1976

TO: Chief, Photogrammetric Branch

FROM: James Collins
Chief, Coastal Mapping Division

SUBJECT: Instructions - OFFICE - Job Disposition, CM-7304, Photogrammetric Bathymetry, St. Thomas and St. John Islands, Virgin Islands

Background

This job encompasses sixteen photogrammetric bathymetric maps. Thirteen maps have been compiled and furnished for hydro support. Only photobathymetry has been compiled on these maps. Shoreline maps, compiled in Job PH-6504, were used for horizontal control. Vertical control was furnished by field methods and tide-coordinated photography. All usable photobathymetry will be transferred onto the hydrographic smooth sheets during hydro-verification. An appropriate note identifying the photobathymetry will be carried on the smooth sheets and a reference will be made in the hydrographic Descriptive Reports.

Disposition

Descriptive Reports will not be written, nor will the maps be registered. A Project Completion Report will be written. All maps will be destroyed by the Marine Surveys Division after the smooth sheets are registered. Photobathymetry data used by the hydrographer will be made a permanent part of the hydrographic survey records.

ALL 2nd EDITIONS ON CM-7304
CANCELED IN RECORDS
8-5-76
JC

15

Received 1:15 may 22, 1978

* APPROVAL SHEET *

Submitted by

Kenneth W. Perrin
LTJG NOAA
Kenneth W. Perrin
LTJG, NOAA

Supervision of field and office work on this hydrographic survey was continuous on a day to day basis to ensure completeness of the survey and that all work was done in accordance with the instructions.

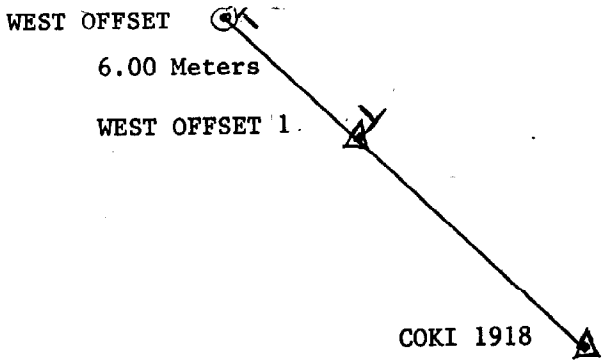
Approved/Forwarded:

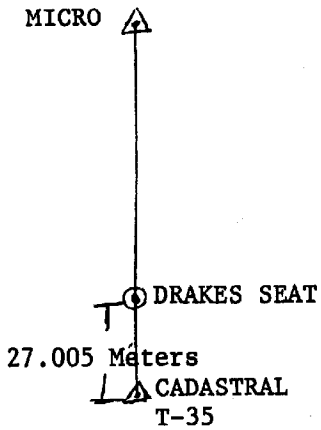
Robert A. Trauschke
CDR, NOAA
Commanding Officer, NOAA SHIP WHITING

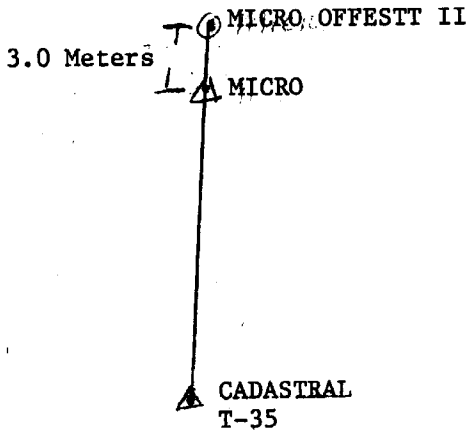
LIST OF STATIONS

STA	0	LATITUDE (N)	LONGITUDE (W)	CRT	ELEV	F. KHZ	TYPE/NAME
100	0	18 21 04820	064 51 47070	250	0000	000000	COKI 1918
103	0	18 21 25574	064 51 07097	253	0003	000000	EVA
104	0	18 20 41471	064 49 03672	139	0000	000000	TWO BROTHERS
115	0	18 22 34096	064 55 43099	250	0100	000000	MICRO
118	0	18 23 41277	064 53 59430	250	0025	000000	LEE
119	0	18 22 08171	064 48 58507	250	0005	000000	CAN
121	0	18 21 45811	064 52 35298	250	0005	000000	WEST 1918
122	0	18 21 45438	064 52 34453	250	0010	000000	WEST OFFSET
123	0	18 23 21358	064 54 25256	243	0005	000000	HANS 1926
124	0	18 23 05911	064 56 29374	139	0000	000000	PIC 1918
125	0	18 22 43900	064 57 10680	139	0000	000000	MAG 1918
126	0	18 22 43796	064 57 10728	250	0100	000000	MAG OFFSET 1
128	0	18 22 34177	064 55 43104	250	0100	000000	MICRO OFFSET 2
129	0	18 21 18009	064 55 38923	250	0044	000000	DRAKES SEAT
130	0	18 24 59403	064 54 33940	250	0005	000000	PELICAN 1972
132	0	18 22 43233	064 57 10602	250	0000	000000	MAG 02

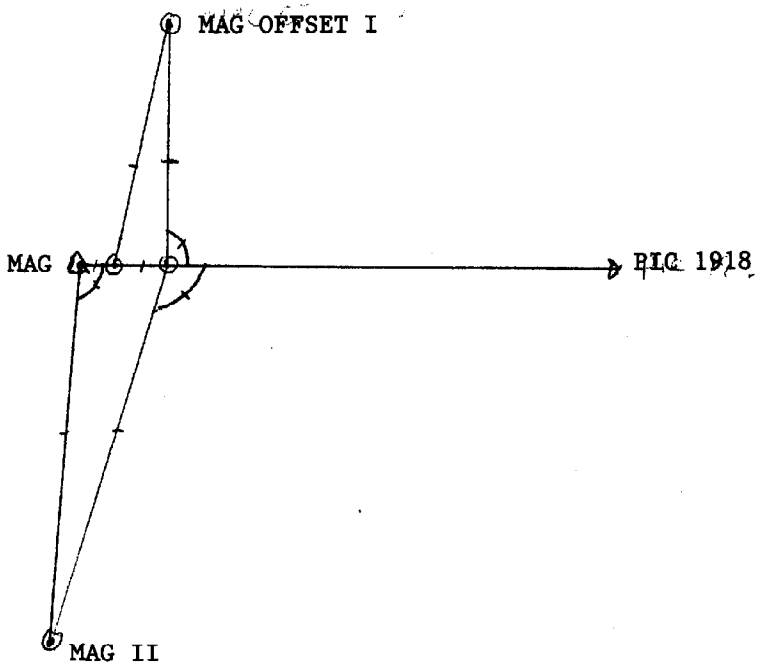
The G.P. was computed by RK 409 "GEODETIC UTILITY PACKAGE", version 9/7/73.







The G.P. was computed by RK 409 "GEODETIC UTILITY PACKAGE", version 9/5/73.



VELOCITY TAPE LISTING

WH-10-2-75

000071 0 0004 0001 000 293132 010275

000102 0 0005

000133 0 0007

000163 0 0009

000195 0 0011

000226 0 0012

000257 0 0014

000288 0 0016

000350 0 0018

000413 0 0023

000475 0 0026

000537 0 0030

000599 0 0033

000661 0 0036

000723 0 0040

000786 0 0043

000848 0 0047

000910 0 0050

000972 0 0054

001065 0 0059

001169 0 0069

001 252 0 0069

001345 0 0075

001438 0 0080

001531 0 0085

001624 0 0090001

001718 0 0096

001811 0 0101

999999 0 0103

CAM3-12
3-7-74

OPR 423

TRA CORRECTION ABSTRACT

VESSEL (2932) WH-II SHEET WH-10-2-75 REGISTRY NO. H-9514

Vol.	Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Initial Corr.	S&S Corr.	TRA Corr. ft/fms	Remarks
	097	124818	143723		1.7		0.7	2.4	
	097	153450	154001		1.7		0.3	2.0	
	097	154016	165001		1.7		0.7	2.4	
	099	130300	141617		1.7		0.3	2.0	
	099	142035	151706		1.7		0.7	2.4	
	099	152028	153821		1.7		0.3	2.0	
	099	162500	171645		1.7		0.7	2.4	
	100	130509	180400		1.7		0.7	2.4	
	100	182914	192801		1.7		0.7	2.4	
	100	192816	192931		1.7		0.3	2.0	
	100	192946	193741		1.7		0.7	2.4	
	100	193756	193911		1.7		0.3	2.0	
	100	193926	204711		1.7		0.7	2.4	
	113	161434	182856		1.7		0.7	2.4	
	113	183036	184649		1.7		0.3	2.0	
	119	190600	201000		1.7		0.3	2.4	

CAM3-12
3-7-74

OPR 423

TRA CORRECTION ABSTRACT

VESSEL (2932) WH-II SHEET WH-10-2-75 REGISTRY NO. H-9514

Vol.	Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Initial Corr.	S&S Corr.	TRA Corr. ft/fms	Remarks
	071	174015	183911		1.7		0.7	2.4	
	072	114940	172743		1.7		0.7	2.4	
	077	141732	185322		1.7		0.7	2.4	
	078	114847	172400		1.7		0.7	2.4	
	079	114154	122131		1.7		0.7	2.4	
	079	122958	131416		1.7		0.3	2.0	
	079	155314	180233		1.7		0.7	2.4	
	083	120558	142119		1.7		0.7	2.4	
	083	164019	164427		1.7		0.3	2.0	
	083	165706	170838		1.7		0.7	2.4	
	083	172338	180225		1.7		0.3	2.0	
	083	182159	182546		1.7		0.7	2.4	
	084	123101	130943		1.7		0.3	2.0	
	084	141250	142929		1.7		0.7	2.4	
	084	164600	173430		1.7		0.3	2.0	
	084	175348	181046		1.7		0.7	2.4	
	085	114952	143917		1.7		0.7	2.4	

CAM3-12
3-7-74

OPR 423

TRA CORRECTION ABSTRACT

VESSEL (2932) WH-II SHEET WH-10-2-75 REGISTRY NO. H-9514

Vol.	Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Initial Corr.	S&S Corr.	TRA Corr. ft/fms	Remarks
	085	144332	150122		1.7		0.3	2.0	
	085	151345	163548		1.7		0.7	2.4	
	085	164205	164530		1.7		0.3	2.0	
	085	165920	183517		1.7		0.7	2.4	
	086	124854	141115		1.7		0.7	2.4	
	086	155200	160710		1.7		0.3	2.0	
	086	162308	180122		1.7		0.7	2.4	
	086	180411	181914		1.7		0.3	2.0	
	091	155619	161019		1.7		0.3	2.0	
	091	161740	175533		1.7		0.7	2.4	
	092	120446	174555		1.7		0.7	2.4	
	093	120357	180523		1.7		0.7	2.4	
	094	115419	121012		1.7		0.7	2.4	
	095	112402	181419		1.7		0.7	2.4	
	095	181659	183541		1.7		0.3	2.0	
	096	124518	133312		1.7		0.7	2.4	
	096	150500	175920		1.7		0.3	2.0	

CAM3-12
3-7-74

OPR 423

TRA CORRECTION ABSTRACT

VESSEL (2931) WH-I SHEET WH-10-2-75 REGISTRY NO. H-9514

Vol.	Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Initial Corr.	S&S Corr.	TRA Corr. ft/fms	Remarks
	071	164820	180800		1.7		0.7	2.4	
	072	123340	173120		1.7		0.7	2.4	
	078	122440	130500		1.7		0.7	2.4	
	080	180820	183040		1.7		0.7	2.4	
	081	120247	121411		1.7		0.3	2.0	
	081	122020	122940		1.7		0.7	2.4	
	081	123953	183252		1.7		0.3	2.0	
	083	161340	162320		1.7		0.7	2.4	
	083	162920	164000		1.7		0.3	2.0	
	084	130620	173020		1.7		0.7	2.4	
	085	121820	185353		1.7		0.7	2.4	
	NOTE 1: All hydrography with the exception of bottom samples and D.P.'s was done at either								
	standard speed, 0.7 feet S&S corrector, or reduced speed, 0.3 feet S&S corrector.								
	The TRA corrector is not applicalbe in the computer processing for bottom samples								
	and D.P.'s.								
	NOTE 2: Initial correctors are all 0.0 feet as the analog record was adjusted to the digital while								
	scanning the fathograms. NOTE 3: All correctors are in units of feet.								

FIELD TIDE NOTE

There were no field tide reductions of soundings applied to the boatsheets. Reduction of soundings will be applied from tidal data obtained in the field after verification by Tides Branch, C-331. All the times of the recorded tides were local mean time (60° west meridian).

There were 6 tide stations used in the project area. Locations and period of operation are as follows.

SITE	LOCATION	PERIOD
WATER BAY, ST. THOMAS	18°21.0'N 64°52.0'N	1/29/75 - 4/9/75 (70 days)
CONGO CAY, V.I.	18°22.1'N 64°48.38'W	2/20/75 - 4/1/75 (40 days)
HANS LOLLIK ISLAND	18°23.64'N 64°54.28'W	2/27/75 - 4/1/75 (56 days)
INNER BRASS ISLAND, V.I.	18°22.9'N 64°58.2'W	3/21/75 - 4/29/75 (36 days)
MAGENS BAY, ST. THOMAS	18°22.1'N 64°55.35'W	3/19/75 - 4/29/75 (38 days)
LITTLE HANS LOLLIK ISLAND	18°24.55'N 64°54.48'W	4/2/75 - 4/24/75 (21 days)

WATER BAY:

Gage: ADR 1550, S/N: 7012A3738M2 was installed 29 Jan. by Tides Party, AMC and operated and maintained by a contract observer. The staff was leveled 6 Feb. All records were sent to Tides Branch, C-331.

CONGO CAY:

Gage (Bubbler), S/N: 71A-13315 was installed and began operation 20 Feb. The staff was installed and leveled 20 Feb. Very good records were obtained for 40 days. There were 4 hours lost from 0500 hours to 0900 hours on 18 March and 3 days lost from 1000 hours 25 March to 0700 hours 28 March due to the reel disengaged from the latch on the take up reel. The Marigram reads even with the Tide Staff.

HANS LOLLIK ISLAND:

Gage (Bubbler); S/N: 71A-13313 was installed and began operation 27 Feb. The staff installed and leveled 27 Feb. Very good records were obtained for 56 days. Due to the takeup reel not working properly, there were 1.5 days lost from 2300 hours 2 March to 1000 hours 4 March and 1 day lost 1500 hours 12 March to 1200 hours 13 March. The Marigram reads even with the Tide Staff.

INNER BRASS ISLAND:

Gage (Bubbler); S/N: 74A-16399 was installed and began operation 21 March. The staff was installed and leveled 21 March. Very good records were obtained for 36 days. There was one day lost from 1400 hours 10 April to 0800 hours 11 April due to staff being knocked out. The staff was replaced 0730 hours 11 April. The Marigram reads even with the Tide Staff up until 10 April. After staff was reinstalled on 11 April the Marigram reads 1.5 foot higher than the Tide Staff.

MAGENS BAY:

Gage (Bubbler); S/N: 71A-13314 was installed and began operation 19 March. The staff was installed and leveled 19 March. Very good records were obtained for 38 days. There were 3.5 days lost from 0100 hours 29 March to 1100 hours 1 April due to pen malfunctioning. The Marigram reads even with the Tide Staff.

LITTLE HANS LOLLIK ISLAND:

Gage (Bubbler); S/N: 71A-13315 was installed and began operation 2 April. The staff was installed and leveled 2 April. Good records were obtained for 21 days. There were 3.5 days lost from 0100 hours 13 April to 1200 hours 16 April and 3 days lost from 1200 hours 19 April to 1600 hours 22 April due to Tide Staff being knocked out during those periods. The Marigram reads even with the Tide Staff.

LEVELS:

In a comparison of level records the greatest observed difference at a station was: 0.006 foor rise in the WATER BAY STAFF; 0.023 foot rise in the CONGO CAY Staff; 0.016 foot rise in the HANS LOLLIK Staff; 0.919 foot rise in the INNER BRASS Staff; 0.132 foot drop in the MAGENS BAY Staff; 1.500 foot drop in the LITTLE HANS LOLLIK Staff.

TIDE DATA:

All Marigrams were scanned for hourly heights by WHITING personnel and sent to C-331. Tides Branch, C-331 will furnish AMC MLW values, hourly heights and Tidal Zoning of the area.

2/18/76

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): San Juan, P.R. Boca de Cangrejos, P.R.

Period: March 12 - April 29, 1975

HYDROGRAPHIC SHEET: H-9514

OPR: 423

Locality: off the northern coast of St. Thomas, V.I.

Plane of reference (mean low water): 3.36 ft. San Juan
2.4 ft. Boca de Cangrejos

Height of Mean High Water above Plane of Reference:
1.0 ft.

Remarks: Recommended zoning:

Apply the following corrections to San Juan.

	Time Correction	Range Ratio
(1) Inside Magens Bay	-10 min.	x0.91
(2) Outside Magens Bay	-10 min.	x0.82

When San Juan tides are not available (after April 12) apply the following corrections to Boca de Cangrejos.

(1) Inside Magens Bay	-40 min.	x1.11
(2) Outside Magens Bay	-40 min.	x1.00

James R Hubbard
for Chief, Tides Branch

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-9514

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	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	
BOULDER POINT										1
BRASS CHANNEL										2
BULL POINT										3
COCONUT BAY										4
COKI BAY										5
COKI POINT										6
DOROTHEA BAY										7
DOROTHEA POINT										8
EVA BAY										9
EVA POINT										10
FISH POINT										11
FOOTER POINT										12
GROUPER POINT										13
HANS LOLLICK ISLAND										14
HANS LOLLICK ROCK										15
HULL BAY										16
INNER BRASS ISLAND										17
LEE POINT										18
LEEWARD PASSAGE										19
LERKENLUND BAY										20
LITTLE HANS LOLLICK ISLAND						APPROVED				21
LOVENLUND BAY						Chas. E. Harrington				22
MAGENS BAY						CHIEF GEOGRAPHER -			C3x8	23
MANDAL BAY						28 AUG. 1978				24
MANDAL POINT										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

☆ U.S. G.P.O. 1972-769-565/516 REG. #6

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-9514

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	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	
MOTHER EAST POINT										1
ORNEN ROCK										2
OUTER BRASS ISLAND										3
PELICAN CAY										4
PICARA POINT										5
RESEAU BAY										6
ROUGH POINT										7
RUY POINT										8
ST. THOMAS										9
SMITH BAY										10
SPRING BAY										11
SPRING POINT										12
SUNSI BAY										13
SUNSI POINT										14
THATCH CAY										15
TROPACO POINT										16
TURTLEBACK ROCK										17
TUTU BAY										18
WATER BAY										19
WHITE HORSEFACE REEF										20
						APPROVED				21
						Chas. E. Harrington				22
						CHIEF GEOGRAPHER-C3x8				23
						28 Aug 1978				24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

☆ U.S. G.P.O. 1972-769-565/516 REG.#6

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APPROVAL SHEET
FOR
SURVEY H-9514

A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 5-19-78

Signed: [signature]

Title: for Chief, Verification Branch

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-9514

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	24
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	3

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	X					1-tides & misc.data
CAHIERS	2		1			
VOLUMES	1(lost)	1				
BOXES			1-smooth			

T-SHEET PRINTS (List) T-12937-39, T-12942-44

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			2630
POSITIONS CHECKED	275	342	
POSITIONS REVISED		165	
SOUNDINGS REVISED		106	
SOUNDINGS ERRONEOUSLY SPACED		10	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED			
	TIME – HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL	15	18	
VERIFICATION OF POSITIONS	23	159	
VERIFICATION OF SOUNDINGS	21	145	
COMPILATION OF SMOOTH SHEET		45	
APPLICATION OF TOPOGRAPHY		15	
APPLICATION OF PHOTOBATHYMETRY		10	
JUNCTIONS		20	
COMPARISON WITH PRIOR SURVEYS & CHARTS		40	
VERIFIER'S REPORT		90	
OTHER			
TOTALS	59	587	646

Pre-Verification by M. B. Hickson, H. R. Smith	*Beginning Date* 05/30/75	*Ending Date* 11/15/77
Verification by J. S. Bradford	*Beginning Date* 02/10/78	*Ending Date* 05/17/78
Verification Check by B. J. Stephenson	*Time (Hours)* 5	*Date* 05/18/78
Marine Center Inspection by Hydrographic Inspection Team (AMC)	*Time (Hours)* 25	*Date* 05/21/78
Quality Control Inspection by D.K. Myers	*Time (Hours)* 59	*Date* 8/29/78
Requirements Evaluation by D.L. Hill	*Time (Hours)* 4	*Date* 10/13/78

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REGISTRY NO. H-9514

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey, the following shall be completed:

CARDS CORRECTED

DATE_____ TIME REQUIRED_____ INITIALS_____

REMARKS:

REGISTRY NO. _____

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE_____ TIME REQUIRED_____ INITIALS_____

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9514 FIELD NO. WH-10-2-75

U. S. Virgin Islands, North Coast of St. Thomas, Virgin Island; Outer Brass Island to Thatch Cay

SURVEYED: March 12 through April 29, 1975

PHOTOBATHYMETRY: February 1974

SCALE: 1:10,000 PROJECT NO.: OPR-423

SOUNDINGS: Raytheon DE-723B
Ross Model 5,000

CONTROL: Del-Norte
(Range-Range & Range-Azimuth)

Chief of Party ..... R. Trauschke
Surveyed by ..... W. Daniels
..... A. Theberge
..... B. Meyers
..... K. Perrin
..... D. Kuhl
..... J. Bennett
..... D. Terry
Automated Plot by ..... CALCOMP-618 Plotter (AMC)
Verified and Inked by ..... J. Bradford 9SB
May 1, 1978

1. Introduction

a. In the verification of H-9514 problems arose in the area of Magen's Bay. Portions of the hydrography have been adjusted to agree with the photobathymetry (1974) and the prior survey, H-4651 (1923-26). The major problem in this area was the unfamiliarity of the capabilities of Del-Norte by the field. Poor control intersection, stations too high for accurate inshore hydrography, directional antennas pointed in the wrong direction, and insufficient notation in the field records, printouts, fathograms, etc. contributed to the lack of validity of the positions in this area.

b. Hydrography north of Coki Point extending to the south shore of Thatch Cay also reveals doubt as to the accuracy of positions in this area. Stations West, West Offset, and West Offset I (mentioned only in the Descriptive Report) add to the confusion of what station was actually used at the time of hydrography. Some adjustment in this area was done also in order to tie in photobathy 1974, the prior survey, and the present survey.

c. The red corrections in the Descriptive Report were made by the verifier. The projection parameters have been revised and inserted in the Descriptive Report.

2. Control and Shoreline

a. The origin of the control is adequately described in Section F of the Descriptive Report.

b. The foreshore features compiled on the photobathymetry sheets should be given more credibility when compared with the shoreline manuscripts because: first, the photobathymetric photography was taken later chronologically (February 1974 for photobathymetry, November 1971 for T-sheets); secondly, the 1974 photobathymetry was taken at a larger scale (1:12,000 in 1974 and 1:30,000 in 1971 for shoreline manuscripts), thereby showing more finite detail. See OC critique

3. Hydrography

a. Depths at crossings are in adequate agreement.

b. The standard depth curves are adequately delineated, with the inclusion of several brown curves to delineate certain features. Whenever possible the depth curves from photobathymetry were transferred.

c. With the exception of Ornen Rock very little development was accomplished by the field. Adequate time was not allowed by the hydrographer to obtain least depths or better delineate features. The 100 meter line spacing on the present survey shows an indication that features do exist but were not sufficiently investigated; for this reason some soundings have been retained from the prior survey. See Section 6 (Comparison With Prior Surveys) of this report.

4. Condition of Survey

The descriptive Report and smooth field sheet are adequate to conform to the Hydrographic Manual. Few deficiencies in field data and field procedures were noted:

a. Fathogram scanning errors - Approximately 250 soundings were inserted and changed before sheet was processed.

b. Smooth printouts were void of any annotation. The original printouts were sparsely annotated and in many cases the writing is difficult to read and understand.

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c. Signals were not plotted on the smooth field sheet and signal number 135, Coki Offset, was not on signal list.

5. Junctions

Adequate junctions have been effected with the following surveys:

H-9601 (1976) on the west
H-9607 (1976) on the east
H-9515 (1975) on the north

Soundings in red were determined by photobathymetric means utilizing 1974 photography. These soundings supplement the present hydrography in the common area.

6. Comparison With Prior Surveys

a. H-4651a (1923-26) 1:20,000
H-4743a (1923-24) 1:20,000

See OC critique

A comparison between the prior surveys and the present survey reveals a variable pattern of differences, three feet shoaler to four feet deeper; however, there are scattered indications of consistent depths. These differences are attributed to survey methods and equipment; not to natural change.

The least depth obtained on Ornen Rock on the present survey is eleven feet; prior survey shows this rock to be six feet. This feature was well investigated more than once by the hydrographer. A pattern of very close spaced lines were run over this rock. The hydrographer states that the visibility of water was so clear that assurance of the eleven foot sounding is valid.

* The 6-foot sounding from H-4651a was carried forward during G.C.

Four soundings were brought forward from prior survey H-4743a southeast of Coki Point. Prior survey indicates that these least depths were obtained from a close-spaced development. The present survey does show indication of an irregular bottom and it is recommended that these shoal soundings be retained:

The 27-ft. sdg charted at lat 18°20.93', long. 64°51.78' from H-4743a is plotted in error on the prior survey and should be disregarded.

Sounding from Prior Survey H-4743a	Location from Prior Survey
41 feet	Φ 18° 21' 02.5"
	λ 64° 51' 40"
~~31 feet~~ The 31-ft sdg located at lat. 18°20.56', long 64°51'44" from H-4743a should be disregarded	~~Φ 18° 20' 57"~~
	~~λ 64° 51' 44"~~
~~24 feet~~ The 24-ft sdg. charted at lat. 18°20.86', long 64°51.6' from H-4743a should be disregarded.	~~Φ 18° 20' 52"~~
	~~λ 64° 51' 36"~~
34 feet	Φ 18° 20' 56"
	λ 64° 51' 29"

Edge of sounding plotted in error on prior survey.

The 19 fms charted at lat. 18°24.2', long 64°53.5' from H-4743a falls in present depths of 142 feet. The 19 is considered to have been recorded in error and should be disregarded. 56

* The 11-ft depth obtained by echo sounding is considered doubtful. Inasmuch as a +2 ft settlement and squat correction were inadvertently included in determining this depth at a detached position.

The present survey, supplemented by photobathymetry and depths carried forward from H-4651a and H-4743a, is considered adequate to supersede the above prior surveys within the common areas.

b. H-4651b (1924-27) 1:20,000
H-4743b (1923-26) 1:20,000

These wire drag surveys cover the area of the present survey. Eight soundings from these wire drag surveys were carried forward to supplement the present survey. The present survey confirms the existence of most of these depths; however, more extensive development would have been necessary to obtain a least depth; therefore, it is recommended that these depths be retained:

Wire Drag Depths Carried Forward	Latitude	Longitude
33 feet	18° 23' 22.5"	64° 58' 03"
* ~~18 feet~~	~~18° 23' 02.5"~~	~~64° 57' 50"~~ - Disregard
39 feet	18° 22' 46.5"	64° 56' 34"
86 feet	18° 23' 02.5"	64° 55' 09"
86 feet	18° 23' 16"	64° 54' 58"
38 feet	18° 22' 09"	64° 54' 08" overlap
39 feet	18° 22' 12.5"	64° 53' 55"
23 feet	18° 21' 51"	64° 53' 15"

* The 18-ft sdg charted at lat. 18°23'02.5", long 64°57'50" from HH6516WD is plotted

Presurvey Review, project OPR-423 dated December 18, 1961 states, in "Soundings obtained by wire drag are marked by dashed circles." ~~Wire drag survey H-4651b has no indication of a 9-fathom (54-foot) shoal located at latitude 18° 23' 22", longitude 64° 55' 55".~~ These 9-fathom soundings are believed to be taken from prior survey H-4651a.

No other conflicts between the present survey depths and wire drag were noted.

7. Comparison With Chart 905 (12th Edition, May 18, 1974)

a. Hydrography

See QC cartogram

The charted hydrography originates with the prior surveys previously discussed and requires no further consideration.

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

b. Aids to Navigation

There are no charted aids to navigation in the area of the present survey.

3/1

8. Compliance With Instructions

The present survey adequately complies with the Project Instructions, with the exception of those items mentioned under "Condition of Survey".

9. Additional Field Work

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

Inspection Report
H-9514

Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the survey have been incorporated within the Verifier's Report.

Examined and Approved:
Hydrographic Inspection Team
Date:

Robert A. Trauschke, CDR, NOAA
Chief, Processing Division

Charles H. Nixon, CAPT, NOAA
Chief, Operations Division

R. D. Sanocki
Technical Assistant
Processing Division

C. Douglas Mason, LT, NOAA
Chief, Electronic Data
Processing Branch

Billy J. Stephenson
Team Leader
Verification Branch

Approved/Forwarded

Robert C. Munson
RADM, NOAA
Director, Atlantic Marine Center

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C352/GKM

August 29, 1978

TO: A. J. Patrick
Chief, Marine Surveys Division

FROM: G. K. Myers
Chief, Quality Control Branch

SUBJECT: Quality Control Report for H-9514 (1975), U. S. Virgin Islands, North Coast of St. Thomas, Outer Brass Island to Thatch Cay

A quality control inspection of H-9514 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigation hazards, junctions and shoreline transfer, sounding line crossings, smooth plotting, decisions and actions taken by the verifier, and cartographic presentation of data. In general, it was found to conform to the National Ocean Survey standards and requirements except as stated in the report by the verifier and Hydrographic Inspection Team and as follows:

1. Some additional soundings, bottom characteristics and rocks were carried forward from prior hydrographic and topographic surveys in order to portray the bottom configuration in greater detail in sparsely developed areas on the present survey.

2. Features that appear to be valid on the chart and originate from prior surveys that cover the common area of the present survey should be specifically evaluated and disposed of during verification. Most of the charted rocks awash have been identified from hydrographic or topographic surveys. Copies of these will be available to the Marine Center at their request.

3. The low water line from photobathymetric manuscripts which fall in the area of ledges extending from shore on the smooth sheet should not have been shown on the present survey. The ledges represent the zero depth curve and therefore, are adequate to delineate the low water line.

4. The triangulation station symbol charted at lat. 18°21.08', long. 64°51.79' is not a standard charting symbol and should be expunged from Chart 25647.

5. Photogrammetric manuscripts which cover the common area of the present survey were not mentioned in the Verifier's Report. The shoreline

originates with final reviewed photogrammetric manuscripts T-12938 (1971-75), T-12939 (1971-75), T-12942 (1971-74; 1975), T-12943 (1971-72-74; 1975) and T-12944 (1971-72-74; 1975). The explanation regarding the latest chronological data pertaining to the shoreline manuscripts is in error in the Verifier's Report.

6. Annotations of many soundings brought forward from the prior surveys under the heading, Comparison with Prior Surveys, in the Verifier's Report need not be made. The comment that many prior soundings were carried forward to the present survey is sufficient. Some additional soundings from prior surveys were shown on the smooth sheet during quality control as mentioned in para. 1 of this critique.

7. Some sunken rocks shown on T-12939 and T-12942 were revised to soundings accompanied by "RK" from the photobathymetry and additional photobathymetric soundings were transferred to the present survey.

8. In some instances, depth curves in areas of overlap between the present survey and adjoining surveys were drawn in conformance to only bathymetric soundings without considering depths plotted from hydrography.

9. The rock awash charted at lat. 18°23.41', long. 64°54.15' from H-4651a falls in present photobathymetric depths of 5 feet. The position of this feature apparently identified from notations of breakers on T-3771 (1918) located in close proximity to a ledge on the present survey is considered unreliable. The area should be charted in accordance with present hydrography.

10. A comparison with the largest scale chart which covers a portion of the present survey is not discussed in the Verifier's Report. Chart 25647 (latest print date, September 7, 1974) was considered during quality evaluation. The present survey is adequate to supersede the charted hydrography.

cc:
C351

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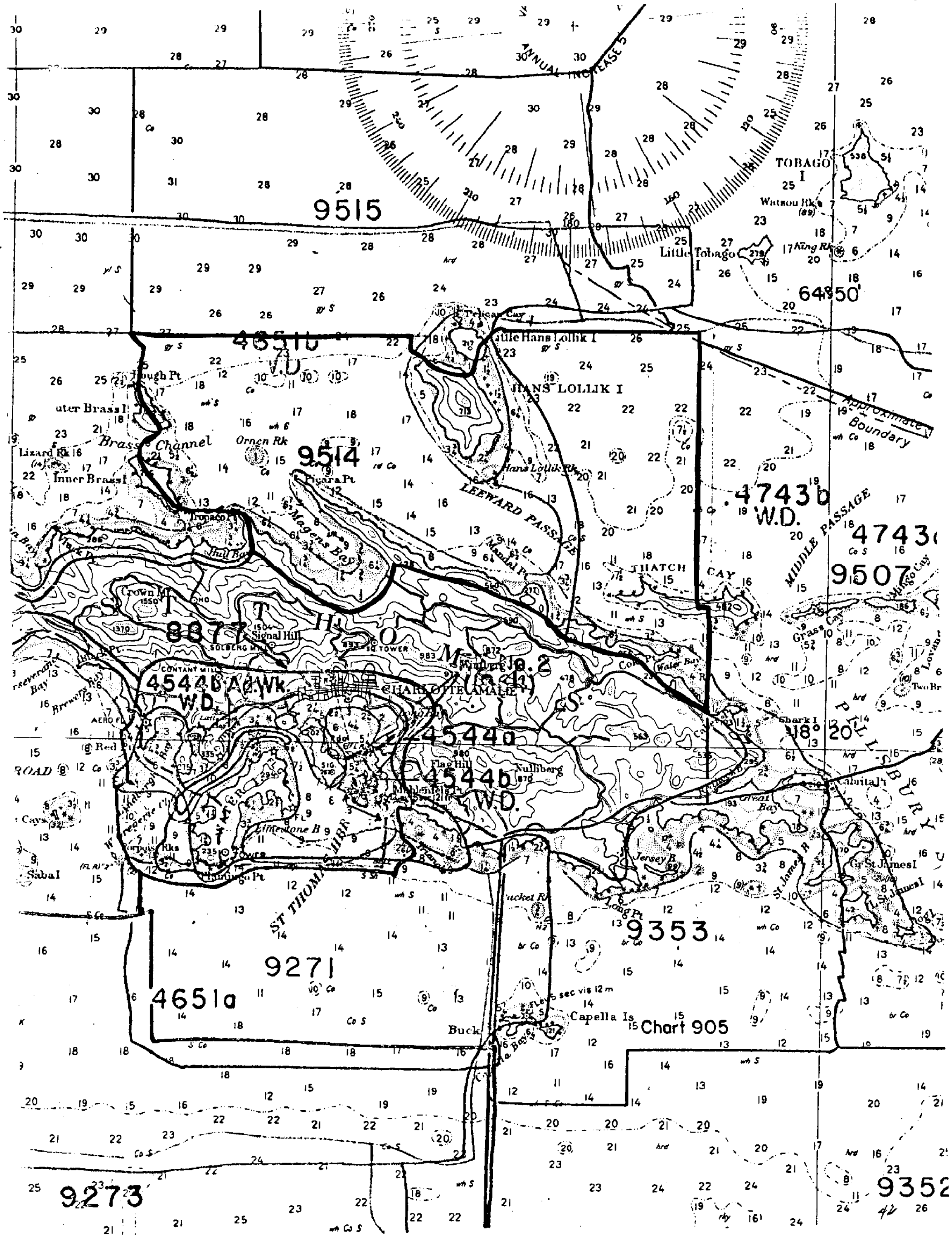
9515
ANNUAL INCREASE 5'
TOBAGO I
Little Tobago I
Watson Rks
King Rk
64°50'
4651b
Pelican Cay
Little Hans Lollik I
HANS LOLLIK I
Hans Lollik Rk
LEEWARD PASSAGE
Approximate Boundary
Outer Brass I
Lizard Rk
Brass Channel
Inner Brass I
Ornen Rk
9514
Pictara Pt
Magens Bay
Hull Bay
Mandal Pt
4743b
W.D.
4743c
MIDDLE PASSAGE
THATCH CAY
9507
Grass Cay
Crown Mt
Signal Hill
8877
4544b Ad.Wk.
W.D.
CHARLOTTE AMALIE
Water Bay
Shark I
18°20'
4544a
Flag Hill
Nullberg
4544b
W.D.
Great Bay
Jersey B
Gr St James I
Long Pt
ST THOMAS HBR
Sabal I
9353
9271
4651a
Capella Is
Chart 905
Buck
9273
9352

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 9514

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
25647	24 Jan. 79	Alex. Radichevich	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. Q.C.
3/1/79	25641	E Bodoumas*	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No. QC - fully applied outside
			fully common area of 25647
25641	4 Nov. 80	Alex. Radichevich*	~~Full Part Before~~ After Verification Review Inspection Signed Via
	1		Drawing No. 28 Fully applied inside (overlapping
			area with ch. 25647) New publication of ch. 25647 (Q.C)
25641	30 Mar 81	Fred Kobb	~~Full Part Before After Verification Review Inspection Signed~~ Via
			~~Drawing No. 28 outside limits of ch # 25641~~
*This	Hydro sheet has been fully applied to Chart 25641 TBP 4/23/81		
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
25640	2 Aug 82	R. Richter	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 33 Q.C.
25650	3-8-83	E Bodoumas	
			Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 31 QC
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63