

H11197

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey MULTIBEAM

Field No. C

Registry No. H11197

LOCALITY

State New Jersey

General Locality Atlantic Ocean

Great Egg Harbor Inlet to
Locality Townsend's Inlet

2003

CHIEF OF PARTY
GARY R. DAVIS

Science Applications International Corporation

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DATE _____

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NO. H11197
HYDROGRAPHIC TITLE SHEET		FIELD NO. C
<p>INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.</p> <p>State <u>New Jersey</u></p> <p>General locality <u>Atlantic Ocean</u></p> <p>Locality <u>Great Egg Harbor Inlet to Townsends Inlet</u></p> <p>Scale <u>1:20,000</u> Date of survey <u>22 May 2003 – 23 November 2003</u></p> <p>Instructions Dated <u>24 January 2003 & 24 July 2003</u> Project No. <u>OPR-C303-KR-03</u></p> <p>Vessel <u>R/V OceanExplorer US905425</u></p> <p>Chief of Party <u>GARY R. DAVIS</u></p> <p>Surveyed by <u>Pam Clark, Gary R. Davis, Paul Donaldson, Karen Hart, Jason Infantino, Chuck Key, Sheila Kosbab, Steve Lemke, Elizabeth Lobecker, Gary Parker, Rebecca Quintal, Walter Simmons, & Deb Smith</u></p> <p>Soundings taken by <u>(echo sounder)</u> hand lead, pole <u>MULTIBEAM RESON SEABAT 8101</u></p> <p>Graphic record scaled by _____</p> <p>Graphic record checked by _____</p> <p>Protracted by _____ Automated plot by <u>HP1055CM</u></p> <p>Verification by <u>Atlantic Hydrographic Branch Personnel</u></p> <p>Soundings in fathoms, <u>(feet)</u> meters at MLW, <u>(MLLW)</u></p>		
<p>REMARKS: <u>Contract DG133C-03-CQ-0014</u></p> <p><u>Contractor: Science Applications International Corp., 221 Third Street; Newport, RI 02840</u></p> <p><u>Times: All times are recorded in UTC</u></p> <p><u>Purpose: To provide NOAA with modern, accurate hydrographic survey data with which to update the nautical charts of the assigned area: Sheet C (H11197) in Mid -Atlantic Corridor, Coast of New Jersey.</u></p> <p><u><i>Bold, italic, red notes in the descriptive report were made during office processing.</i></u></p>		

Science Applications International Corporation (SAIC) warrants only that the survey data acquired by SAIC and delivered to NOAA under Contract DG133C-03-CQ-0014 reflects the state of the sea floor in existence on the day and at the time the survey was conducted.

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**Data filed with original field records.*

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****Data filed with original field records.***

**Descriptive Report to Accompany
 Hydrographic Survey H11197
 Scale 1:20,000, Surveyed 2003
 R/V OceanExplorer
 Science Applications International Corporation (SAIC)
 Gary R. Davis, Hydrographer**

PROJECT

Project Number: OPR-C303-KR-03

Dates of Instructions: 24 January 2003

Original: OPR-C303-KR-03

Task Order#: T0001

Dates of Supplemental Instructions: 22 July 2003, 24 July 2003 24 February 1004, and
16 March 2004

Sheet Letter: C

Registry Number: H11197

Purpose: To provide NOAA with modern, accurate hydrographic survey data with which to update the nautical charts of the assigned area.

A. AREA SURVEYED

The area surveyed was a section of the Atlantic Ocean extending from Great Egg Harbor Inlet to Townsends Inlet. The area was surveyed with multibeam sonar and towed side scan sonar. The depth range encountered in this area was from 12 to 77 feet.

The following vertices (NAD83) define the survey area:

<u>Latitude</u>	<u>Longitude</u>
39° 16' 55.69"W	74° 31' 20.05"W
39° 13' 12.27"W	74° 25' 11.25"W
39° 03' 29.25"W	74° 35' 45.36"W
39° 06' 40.30"W	74° 40' 58.97"W
Thence, following the 8-meter curve to:	
39° 16' 55.69"W	74° 31' 20.05"W

The specified area was expanded to accommodate full investigation of one of the assigned six full investigation AWOIS items.

Table A-1. Dates of multibeam data acquisition in calendar and Julian days

Calendar Date	Julian Day	Calendar Date	Julian Day
22 May 2003	142	13 July 2003	194
23 May 2003	143	14 July 2003	195
24 May 2003	144	15 July 2003	196
25 May 2003	145	17 July 2003	198
27 May 2003	147	19 July 2003	200
28 May 2003	148	20 July 2003	201
29 May 2003	149	21 July 2003	202
30 May 2003	150	25 July 2003	206
3 June 2003	154	26 July 2003	207
5 June 2003	156	27 July 2003	208
8 June 2003	159	28 July 2003	209
9 June 2003	160	29 July 2003	210
10 June 2003	161	31 July 2003	212
11 June 2003	162	1 August 2003	213
12 June 2003	163	6 August 2003	218
13 June 2003	164	7 August 2003	219
14 June 2003	165	9 August 2003	221
15 June 2003	166	11 August 2003	223
19 June 2003	170	12 August 2003	224
20 June 2003	171	13 August 2003	225
21 June 2003	172	14 August 2003	226
22 June 2003	173	16 August 2003	228
23 June 2003	174	17 August 2003	229
24 June 2003	175	18 August 2003	230
25 June 2003	176	20 August 2003	232
26 June 2003	177	22 August 2003	234
27 June 2003	178	23 August 2003	235
29 June 2003	180	24 August 2003	236
30 June 2003	181	25 October 2003	298
1 July 2003	182	27 October 2003	300
2 July 2003	183	28 October 2003	301
7 July 2003	188	29 October 2003	302
8 July 2003	189	30 October 2003	303
9 July 2003	190	23 November 2003	327
12 July 2003	193		

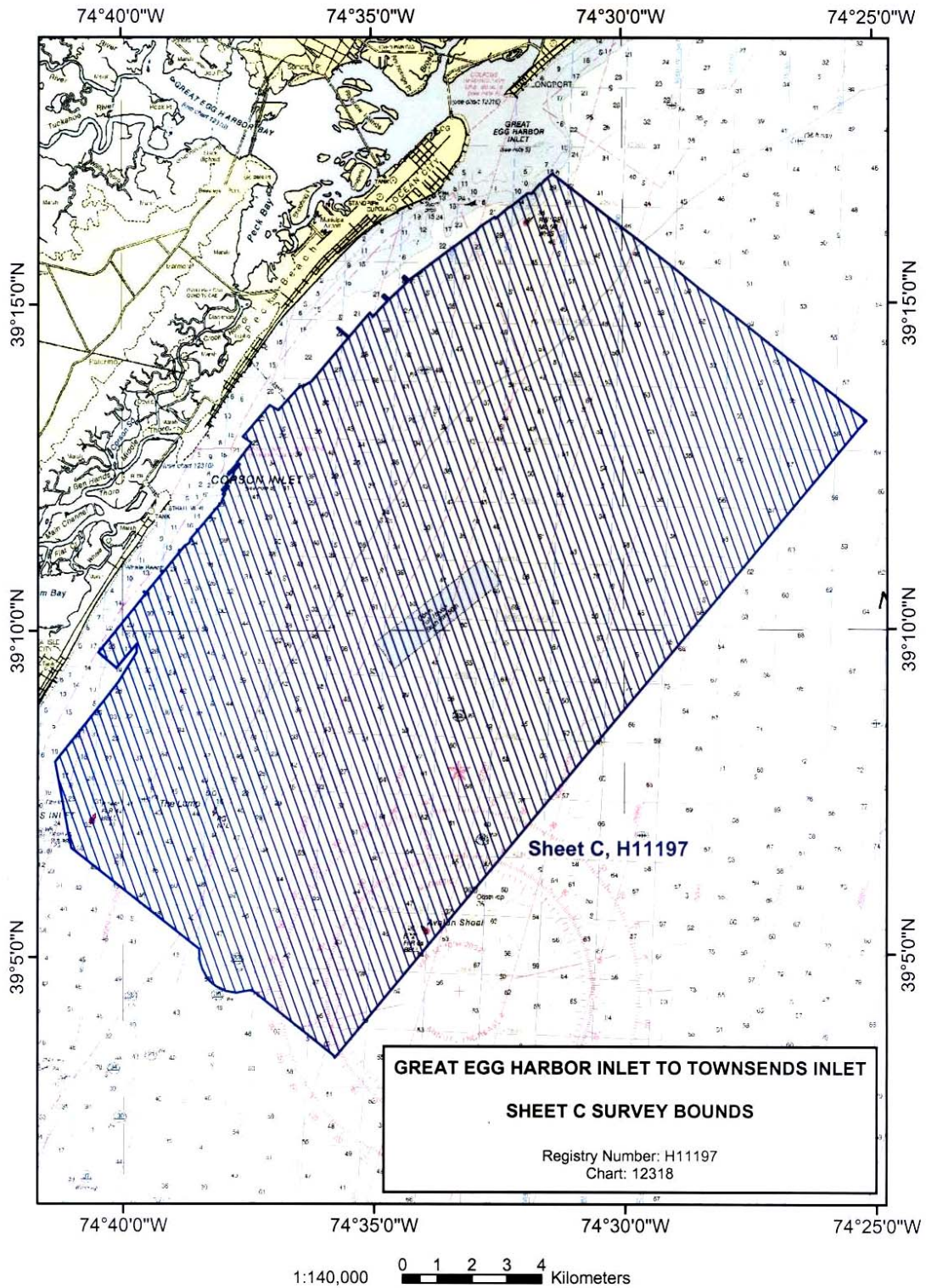


Figure A-1 H11197 Survey Bounds

B. DATA ACQUISITION AND PROCESSING *See also the evaluation report.***B.1 EQUIPMENT**

A detailed description of the systems used to acquire and process these data has been included in the separate Data Acquisition and Processing Report* for OPR-C303-KR-03 delivered 31 March 2004. There were no variations from the configuration described therein. The information in Table B-1 below summarizes the information in the report.

**Data filed at the Atlantic Hydrographic Branch (AHB).*

Table B-1 Major Systems by Manufacturer and Model Number

	Manufacturer / Model Number	Subsystem
Multibeam Sonar	RESON SeaBat 8101	Transducer 8101 Processor
Side Scan Sonar	Klein 2000 Towfish	K-Wing Depressor, Transceiver/Processing Unit (TPU)
Vessel Attitude System	TSS POS/MV Inertial Navigation System	
Positioning System	TSS POS/MV	
	Trimble 7400 GPS Receiver	
	Trimble Probeacon Differential Beacon Receiver	
	Leica MX41R Differential Beacon Receiver	
Sound Velocity System	Brooke Ocean Technology Ltd., Moving Vessel Profiler-30	Applied Microsystems Ltd. Smart SV and Pressure Sensor
	Sea-Bird Electronics, Inc. CTD Profiler	

Survey Vessel

The *R/V OceanExplorer* was the platform for multibeam sonar, side scan sonar and sound velocity data collection. The main cabin of the vessel was used as the data collection center. All data were shipped to the Data Processing Center in the SAIC Newport, RI office for data processing. The POS/MV IMU was mounted on the vessel, centerline just forward and above the RESON 8101 transducer, below the main deck. The multibeam sounder transducer was mounted on the keel. Table B-2 is a list of vessel characteristics for the *R/V OceanExplorer*.

Table B-2 Survey Vessel Characteristics

Vessel Name	LOA	Beam	Draft	Max Speed	Gross Tonnage	Power (Hp)	Registration Number
<i>R/V OceanExplorer</i>	60'	16'4"	6'	17 kn	56	1100	US905425

Major Systems

SAIC used their Integrated Survey System (**ISS2000**) software on a windows 2000 platform to acquire these survey data. Survey planning and data analysis was conducted using SAIC's **SABER** software on Linux platforms. Side scan data were collected and reviewed on a WindowsNT platform using Triton-Elics' **ISIS** software, while coverage mosaics were produced using **SABER** on a Linux platform.

B.2 QUALITY CONTROL

There were approximately 200 linear nautical miles of cross lines surveyed and approximately 4000 linear nautical miles of main scheme lines surveyed resulting in 5 percent coverage by cross lines. The cross lines were oriented at 130°/310° and were spaced approximately 775 meters apart, while the main scheme lines line were oriented at 40°/220° and were spaced 40 meters apart. The range scale was set to 50 meters for the side scan acquisition, while the swath width for the multibeam varied with depth. The following histograms represent the distribution of selected soundings by beam number. Figure B-1 illustrates the number of selected soundings versus beam number while Figure B-2 illustrates the percentage of selected soundings versus beam number.

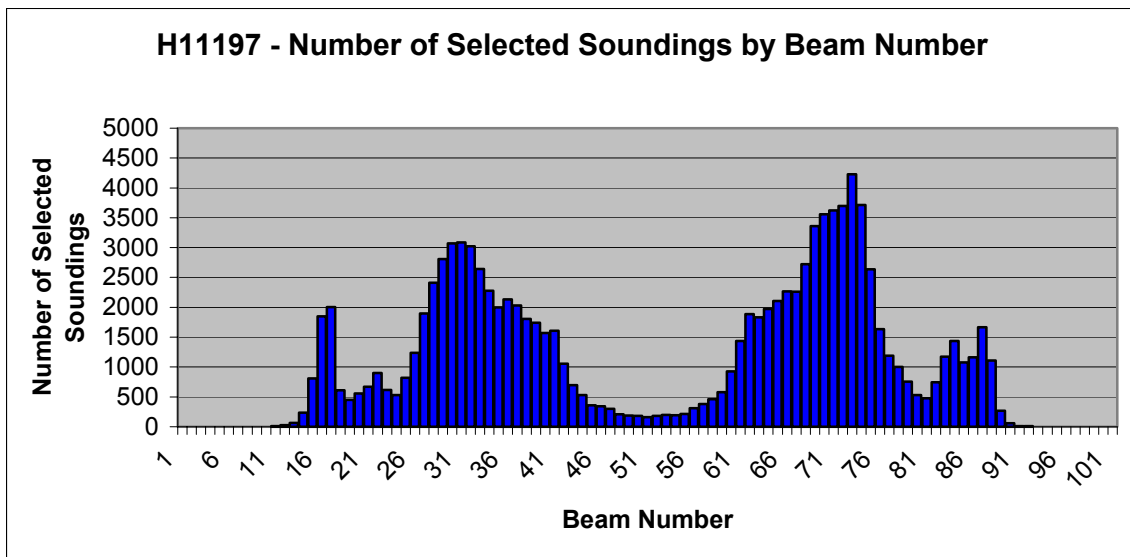


Figure B-1 Histogram of Selected Soundings by Beam Number – H11197

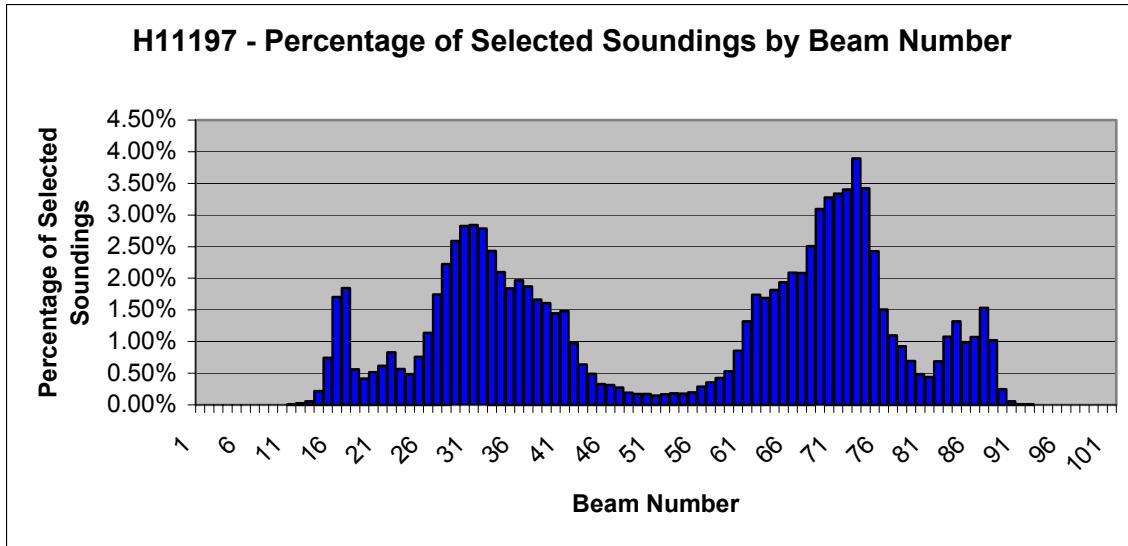


Figure B-2 Histogram of Percentage of Selected Soundings by Beam Number - H11197

Comparisons of all crossing data in H11197 show that 95.14% of comparisons are within 20 centimeters and 99.98% of comparisons are within 50 centimeters. The comparisons larger than 30 centimeters are accounted for by the normal small DGPS position scatter in areas of slopes, wrecks and sand waves. Table B-3 shows the comparisons using all crossings in H11197.

Table B-3 Junction Analysis All Main Scheme vs. Cross Lines Near Nadir, H11197

Depth Difference Range	All		Positive		Negative		Zero	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
0cm to 5cm	56011	44.58	28115	35.74	22284	53.87	5612	4.47
5cm to 10cm	35959	73.20	23839	66.04	12120	83.17		
10cm to 15cm	17237	86.92	12858	82.39	4379	93.75		
15cm to 20cm	10337	95.14	8452	93.13	1885	98.31		
20cm to 25cm	3953	98.29	3419	97.48	534	99.60		
25cm to 30cm	1539	99.51	1404	99.26	135	99.93		
30cm to 35cm	387	99.82	366	99.73	21	99.98		
35cm to 40cm	115	99.91	108	99.87	7	100.00		
40cm to 45cm	62	99.96	61	99.94	1	100.00		
45cm to 50cm	18	99.98	18	99.97	0	100.00		
50cm to 60cm	16	99.99	15	99.98	1	100.00		
60cm to 70cm	2	99.99	2	99.99	0	100.00		
70cm to 80cm	2	99.99	2	99.99	0	100.00		
80cm to 90cm	1	99.99	1	99.99	0	100.00		
90cm to 100cm	1	100.00	1	99.99	0	100.00		
> 100cm	6	100.00	6	100.00	0	100.00		
Totals	125646	100.00	78667	62.61	41367	32.92	5612	4.47

Details of 100 selected nadir or near-nadir crossings in different areas of H11197 are listed in the Separates* to this report. The detailed comparisons, comprising more than 1% of the crossings in the survey, were randomly selected for spatial and temporal distribution over the entire survey area. ***Data filed with original field records.**

Table B-4 depicts the junction analysis using all comparisons in the common area between H11197 and H11119 (surveyed in 2002). These comparisons show 97.91% were within 30 centimeters and 99.90% were within 50 centimeters. The comparisons larger than 30 centimeters are accounted for by the normal small DGPS position scatter in areas of slopes, wrecks and sand waves.

Table B-4 Junction Analysis, H11119 vs. H11197 (all comparisons)

Depth Difference Range	All		Positive		Negative		Zero	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
0cm to 5cm	25995	27.54	15192	19.97	8570	53.26	2233	2.37
5cm to 10cm	23047	51.95	18728	44.58	4319	80.1		
10cm to 15cm	15877	68.77	14137	63.17	1740	90.91		
15cm to 20cm	14403	84.02	13435	80.82	968	96.92		
20cm to 25cm	8348	92.86	8065	91.42	283	98.68		
25cm to 30cm	4762	97.91	4627	97.51	135	99.52		
30cm to 35cm	1335	99.32	1295	99.21	40	99.77		
35cm to 40cm	329	99.67	315	99.62	14	99.86		
40cm to 45cm	157	99.84	146	99.81	11	99.93		
45cm to 50cm	54	99.90	50	99.88	4	99.95		
50cm to 60cm	49	99.95	48	99.94	1	99.96		
60cm to 70cm	14	99.96	12	99.96	2	99.97		
70cm to 80cm	12	99.97	12	99.98	0	99.97		
80cm to 90cm	4	99.98	4	99.98	0	99.97		
90cm to 100cm	12	99.99	9	99.99	3	99.99		
> 100cm	8	100.00	6	100.00	2	100.00		
Totals	94406	100.00	76081	80.58	16092	17.05	2233	2.37

B.3 CORRECTIONS TO ECHO SOUNDINGS

Please refer to the Data Acquisition and Processing Report** for a description of all corrections applied to echo soundings. There were no deviations from the corrections described therein. ****Data filed at the Atlantic Hydrographic Branch (AHB).**

C. VERTICAL AND HORIZONTAL CONTROL **See also the evaluation report.**

NOAA tide station 8534720 Atlantic City, NJ was the source of verified water level heights for determining correctors to soundings. The primary means for analyzing the adequacy of zoning was observing zone boundary crossings in the navigated swath editor, SAIC's **Multi View Editor (MVE)**. In addition the sun illuminated coverage plots were examined on screen for adequacy of zoning. Cross line comparisons were used to

analyze zoning for the influence of wind and weather. The analysis indicated that the NOAA zoning for this sheet was adequate. Therefore, the NOAA zoning parameters were used to develop the water level correctors for soundings on sheet H11197. The zoning parameters applied on sheet H11197 are presented in Table C-1. ***Approved tides and zones were applied during field processing.***

Table C-1 Water Level Zoning Parameters Applied on Sheet H11197

Zone	Time Corrector (mins)	Range Ratio	Reference Station
SA17	0	1.00	8534720
SA19	+12	0.99	8534720
SA20	+12	1.00	8534720
SA21	0	0.95	8534720

The survey data for sheet H11197 were collected in horizontal datum NAD-83, using the UTM Zone 18 projection. The following equipment was used for positioning on the *R/V OceanExplorer*:

- TSS POS/MV, Serial Number 314
- Trimble 7400 DSi GPS Receiver, Serial Number 3815A22469

Differential correctors were from the U.S. Coast Guard Stations at Moriches, NY and Sandy Hook, NJ. Daily position confidence checks were established using a Trimble DGPS. A real-time monitor raised an alarm when the two DGPS positions differed by more than 10 meters horizontally. Positioning confidence checks were well within an inverse distance of 5 meters.

Please refer to the Vertical and Horizontal Control Report* OPR-C303-KR-03 for detailed descriptions of the procedures and systems used to attain hydrographic positioning. There were no variations from the procedures described therein.

****Data filed with original field records.***

D. RESULTS AND RECOMMENDATIONS *See also the evaluation report.*

D.1 CHART COMPARISON

H11197 was compared to:

- Chart 13003, 47th Edition, 1 June 2003, at scale 1:1,200,000; Corrected through 28 February 2004 from Notice to Mariners and the NOAA Critical Corrections; Corrected through LNM 2 March 2004.
- Chart 12200, 47th Edition, 1 August 2002, at scale 1:419,706; Corrected through 28 February 2004 from Notice to Mariners and the NOAA Critical Corrections; Corrected through LNM 2 March 2004.

- Chart 12300, 43rd Edition, 1 March 2003, at scale 1:400,000; Corrected through 28 February 2004 from Notice to Mariners and the NOAA Critical Corrections; Corrected through LNM 2 March 2004.
- Chart 12318, 41st Edition, 1 December 2002, at scales 1:80,000 & 1:20,000; Corrected through 28 February 2004 from Notice to Mariners and the NOAA Critical Corrections; Corrected through LNM 2 March 2004.
- Chart 12316, 29th Edition, 1 November 2003, at scale 1:40,000 & 1:20,000; Corrected through LNM 2 March 2004.

Recommend reconstruction of the common areas of all charts using data from this survey.

Concur.

The following discrepancies and recommendations were noted during chart comparisons:

Chart 13003

The 10-fathom curve at approximately 39° 10' 32"N 074° 29' 52"W (NAD83) should extend to the West and South to approximately 39° 08' 53"N 074° 33' 00"W (NAD83) based on the results of this survey. **Concur.**

Chart 12200

No changes to chart 12200 are recommended based on the results of this survey.

Concur.

Chart 12300 (See Chartlet 1 in Separates*)

The charted dangerous wreck at approximately 39° 05' 13"N 074° 37' 37"W (NAD83) cleared to 5½ fathoms (MLLW) was located. Recommend removal of the cleared to 5½ fathom sounding and charting a ~~6½~~ 6¾ fathom (MLLW) sounding and label Wk at 39 05' 01.00"N 074° 37' 45.30"W (NAD83). **Concur. Chart 6¾ Wk.** See AWOIS #1262 page 14.

The charted dangerous wreck at approximately 39° 07' 23"N 074° 39' 37"W (NAD83) was not located during the survey. Recommend removal of the dangerous wreck symbol and label PA. **Concur.** See AWOIS #11652, page 16.

Depths greater than 10 fathoms (MLLW) were surveyed in the area bounded by approximately 39° 06' 46"N to 39° 08' 35"N and 074° 35' 37"W to 074° 33' 17"W (NAD83). Recommend adding a 10-fathom curve around this area and removing the blue tint inside the curve where depths are greater than 10 fathoms (MLLW). **Concur.**

The charted dangerous wreck at approximately 39° 07' 02"N 074° 32' 45"W (NAD83) cleared to 7¼ fathoms (MLLW) was located. Recommend removal of the 7¼ fathom (MLLW) sounding and charting an ~~8¼~~ 8 fathom (MLLW) sounding and dangerous wreck symbol at 39° 06' 47.46.84"N 074° 32' 51.50.92"W (NAD83). **Concur. Chart 8 Wk.** See AWOIS #1265, page 15.

*** Data filed with original field records.**

The charted dangerous wreck at approximately 39° 08' 50"N 074° 33' 18"W (NAD83) cleared to ~~7¼~~ **7½** fathoms (MLLW) was located. Recommend removal of the ~~7¼~~ **7½** fathom (MLLW) sounding and charting an 8 fathom sounding and dangerous wreck symbol at 39° 08' ~~43~~**42.86**"N 074° 33' ~~15~~**14.81**"W (NAD83). **Concur. Chart 8 WK.** See AWOIS #1275, page 15.

The charted depth of 6¼ fathoms (MLLW) at approximately 39° 13' 36"N 074° 32' 37"W (NAD83) is in depths of 8 fathoms (MLLW). **Concur.**

The charted dangerous wreck symbol at approximately 39° 14' 06"N 074° 34' 04"W (NAD83) was not located during the survey. Recommend removal of the dangerous wreck symbol and label PA. **Concur.** See AWOIS #11176 page 16

An uncharted wreck (Feature 45) was located at approximately 39° 13' 52"N 074° 32' 04"W (NAD83) with a least depth of 8¼ fathoms (MLLW). Recommend charting a dangerous wreck symbol and ~~8¼~~ **8** fathom sounding at this position. **Concur. Chart 8 Wk.**

The survey showed depths of 3¾ to 5½ fathoms (MLLW) inside the 3-fathom curve from approximately 39° 07' 41"N 074° 41' 20"W (NAD83) to approximately 39° 08' 34"N 074° 40' 20"W (NAD83). Recommend updating the 3-fathom curve in this area based on the results of this survey. **Concur.**

Chart 12318 (See Chartlet 2 in Separates*)

The charted depth of 26 feet (MLLW) and 30 foot curve at approximately 39° 05' 25.76"N 074° 34' 15.74"W (NAD83) defining the southern extent of Avalon Shoal. Should be charted approximately 210 meters to the southwest based on the results of this survey. **Present survey depths are 27 feet in the vicinity of Avalon Shoal.**

The charted dangerous wreck at approximately 39° 04' 59.57"N 074° 37' 43.73"W (NAD83) cleared to 33 feet (MLLW) was located. **Concur.** See AWOIS #1262 page 14.

The charted depth of 38 feet (MLLW) at approximately 39° 06' 33.15"N 074° 40' 04.63"W (NAD83) is in depths of 45 feet (MLLW). **Concur.**

The charted dangerous wreck at approximately 39° 07' 24.95"N 074° 39' 33.94"W (NAD83) was not located during the survey. **Concur.** See AWOIS #11652 page 16.

The charted depth of 16 feet (MLLW), 18-foot curve, and 30-foot curve at approximately 39° 07' 23.05"N 074° 38' 04.01"W (NAD83) defining the southern extent of The Lump should be charted approximately 220 meters to the south based on the results of this survey. **Concur.**

The charted dangerous wreck at approximately 39° 06' 48.89"N 074° 32' 49.65"W (NAD83) cleared to 43 feet (MLLW) was located. **Concur.** See AWOIS #1265 page 15.

***Data filed with original field records.**

Depths greater than 60 feet (MLLW) were found at approximately 39° 07' 41.69"N 074° 32' 16.81"W (NAD83). Recommend adding a 60-foot curve around the soundings in this area based on the results of this survey. **Do not concur. Charting the few soundings greater than sixty-feet in this area would clutter the chart with unnecessary information.**

Depths greater than 60 feet (MLLW) were found in an area from approximately 39° 06' 54.79"N 074° 35' 24.34"W (NAD83) to 39° 08' 34.32"N 074° 33' 13.39"W (NAD83). Recommend adding a 60-foot curve around the soundings in this area based on the results of this survey. **Concur.**

The charted dangerous wreck at approximately 39° 08' 42.43"N 074° 33' 17.27"W (NAD83) cleared to 45 feet (MLLW) was located. **Concur.** See AWOIS #1275 page 15.

The charted depth of 36 feet (MLLW) at approximately 39° 08' 45.13"N 074° 39' 07.36"W (NAD83) is in depths of 40 feet (MLLW). **Concur.**

The charted depth of 17 feet (MLLW) at approximately 39° 07' 47.73"N 074° 41' 08.03"W (NAD83) and enclosed 18-foot curve are in depths of 22 feet (MLLW). Recommend updating the soundings, removal of the 18-foot curve and replacing the blue tint with a light blue tint. **Concur.**

The charted depth of 18 feet (MLLW) at approximately 39° 08' 04.67"N 074° 40' 46.97"W (NAD83) and enclosed 18-foot curve are in depths of 28 feet (MLLW). Recommend updating the soundings, removal of the 18-foot curve and replacing the blue tint with a light blue tint. **Concur.**

The 30 foot curve at approximately 39° 08' 12.18"N 074° 40' 45.57"W (NAD83) should be extended south approximately 630 meters to approximately 39° 07' 53.71"N 074° 40' 56.26"W (NAD83) and removal of the blue tint where depths are greater than 30 feet (MLLW). **Concur.**

The charted depth of 18 feet at approximately 39° 09' 43.84"N 074° 39' 53.63"W (NAD83) is in 24 feet (MLLW) and the charted depth of 17 feet at approximately 39° 09' 56.11"N 074° 39' 30.14"W (NAD83) is in 21 feet (MLLW). Recommend removal of the 18-foot curve that extends around these soundings and replace the blue tint with a light blue tint. **Concur.**

The charted depth of 20 feet (MLLW) at approximately 39° 10' 06.65"N 074° 39' 49.26"W (NAD83) is in depths of 28 feet (MLLW). **Concur.**

The 30 foot curve at approximately 39° 10' 20.14"N 074° 39' 14.21"W (NAD83) should be extended approximately 970 meters to the southwest to approximately 39° 10' 00.77"N 074° 39' 48.41"W (NAD83) and removal of the blue tint where depths are greater than 30 feet (MLLW). **Concur.**

The charted depth of 30 feet (MLLW) at approximately 39° 10' 18.80"N 074° 37' 59.76"W (NAD83) is in depths of 32 feet (MLLW) recommend removal of the 30-foot curve and blue tint around sounding. **Concur.**

The charted depth of 38 feet (MLLW) at approximately 39° 11' 19.32"N 074° 35' 12.53"W (NAD83) is in depths of 47 feet (MLLW). **Concur.**

Recommend extending the 60-foot curve through the fish haven (AWOIS 11647) based on the results of the survey. See AWOIS #11647 page 16. **Do not concur. The sixty-foot depth curve is deeper than the authorized minimum depth in this Fish Havens.**

Recommend adding a 60-foot curve around the soundings at approximately 39° 13' 22.03"N 074° 31' 37.79"W (NAD83) and 39° 13' 31.13"N 074° 30' 38.98"W (NAD83) based on the results of the survey. **Do not concur. Charting the few soundings greater than sixty-feet in this area would clutter the chart with unnecessary information.**

The charted depth of 37 feet (MLLW) at approximately 39° 13' 26.84"N 074° 32' 41.71"W (NAD83) is in depths of 47 feet (MLLW). **Concur.**

The full length of the charted sewer pipe (AWOIS 11648) at approximately 39° 13' 26.84"N 074° 36' 36.31"W (NAD83) is not charted. **Concur.** See AWOIS #11648 page 16 and Appendix V*. SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCE

The charted dangerous wreck at approximately ~~39° 13' 59.84"N 074° 33' 57.18"W~~ **39° 14' 00.42"N, 074° 33' 58.56"W** (NAD83) was not located during the survey. **Concur.** See AWOIS #11176 page 16.

The charted depth of 38 feet (MLLW) at approximately 39° 14' 51.69"N 074° 29' 13.77"W (NAD83) is in depths of 49 feet (MLLW). **Concur.**

The charted depths of 4 feet (MLLW) at approximately 39° 16' 33.32"N 074° 31' 59.05"W (NAD83) and 39° 16' 41.90"N 074° 31' 46.22"W (NAD83) are in depths of 12 and 15 feet (MLLW). Recommend removal of the 6-foot curve around these depths and re-charting the 12 and 18-foot curves based on the results of the survey. **Concur.**

Chart 12316 (See Chartlet 3 in Separates*)

The charted depth of 38 feet (MLLW) at approximately 39° 06' 36.86"N 074° 40' 01.52"W (NAD83) is in depths of 45 feet (MLLW). **Concur.**

The charted dangerous wreck at approximately 39° 07' 26.47"N 074° 39' 34.68"W (NAD83) was not located during the survey. **Concur.** See AWOIS #11652 page 16.

***Data filed with original field records**

The charted depth of 16 feet (MLLW), 18-foot curve, and 30-foot curve at approximately 39° 07' 24.34"N 074° 38' 05.69"W (NAD83) defining the southern extent of The Lump should be charted approximately 220 meters to the southwest based on the results of this survey. **Concur.**

The charted depth of 18 feet (MLLW) at approximately 39° 07' 50.12"N 074° 41' 07.08"W (NAD83) and enclosed 18-foot curve are in depths of 27 feet (MLLW). Recommend updating the soundings and removal of the 18-foot curve. **Concur.**

The charted depth of 18 feet (MLLW) at approximately 39° 08' 05.17"N 074° 40' 49.45"W (NAD83) and enclosed 18-foot curve is in depths of 28 feet (MLLW). Recommend updating the soundings and removal of the 18-foot curve. **Concur.**

The charted depth of 29 feet (MLLW) at approximately 39° 09' 01.69"N 074° 39' 08.47"W (NAD83) is in depths of 35 feet (MLLW). The 30-foot curve charted to the east of this sounding should be west of the sounding. **Concur.**

The charted depth of 30 feet (MLLW) at approximately 39° 10' 19.08"N 074° 38' 01.16"W (NAD83) is in depths of 34 feet (MLLW) recommend removing 30-foot curve around sounding. **Concur.**

The charted depth of 18 feet at approximately 39° 09' 43.72"N 074° 39' 53.18"W (NAD83) is in 27 feet (MLLW) and the charted depth of 17 feet at approximately 39° 09' 56.54"N 074° 39' 30.58"W (NAD83) are in 23 feet (MLLW). Recommend updating the soundings and removing the 18-foot curve that extends around these soundings. **Concur.**

The 30 foot curve at approximately 39° 10' 22.11"N 074° 39' 15.84"W (NAD83) should be charted approximately 1050 meters to the southwest to approximately 39° 10' 00.77"N 074° 39' 48.41"W (NAD83). **Concur.**

The charted dangerous wreck at approximately 39° 14' 00.61"N 074° 33' 58.27"W (NAD83) was not located during the survey. **Concur.** See AWOIS #11176 page 16.

The charted depth of 34 feet (MLLW) at approximately 39° 16' 24.89"N 074° 31' 36.10"W (NAD83) is in depths of 28 feet (MLLW). **Concur.**

The charted depth of 28 feet (MLLW) at approximately 39° 16' 26.50"N 074° 31' 54.12"W (NAD83) is in depths of 22 feet (MLLW). **Concur.**

The charted depth of 23 feet (MLLW) at approximately 39° 16' 28.84"N 074° 32' 12.17"W (NAD83) is in depths of 16 feet (MLLW). **Concur.**

The charted depths of 4 feet (MLLW) at approximately 39° 16' 39.41"N 074° 31' 45.92"W (NAD83) and 39° 16' 32.98"N 074° 31' 57.37"W (NAD83) are in depths of 16

and 17 feet (MLLW) respectively. Recommend removal of the 6-foot curve around these depths and re-charting the 12 and 18-foot curves based on the results of the survey. **Concur.**

The charted sewer pipe (AWOIS 11648) at approximately 39° 13' 26.84"N 074° 36' 36.31"W (NAD83) is charted correctly. **Concur.** See AWOIS #11648 page 16 and Appendix V*. SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCE

Navigational Aids

The following table lists the aids to navigation in H11197. The USCG Light List, Volume II, Atlantic Coast, Shrewsbury River, New Jersey to Little River, South Carolina was compared to the buoys identified in H11197. These aids adequately serve their intended purpose. **Concur.**

Table D-1 Aids to Navigation

BUOY NAME	APPROXIMATE POSITION (NAD83)		MB FILE NAME	CONFIRMED POSITION (NAD83) FROM MB/SS	
	LAT (N)	LON (W)		LAT (N)	LON (W)
R "2" FL R 6S BELL	39° 05' 22.80"	074° 33' 56.40"	oemba03161.d07	39° 05' 23.25"	074° 33' 56.93"
RW "GE" Mo (A) WHIS	39° 16' 13.20"	074° 31' 56.71"	oemba03143.d04	39° 16' 13.26"	074° 31' 56.84"
RGN "L"	39° 07' 16.43"	074° 38' 08.19"	oemba03148.d06	39° 07' 21.42"	074° 38' 07.16"
R "4A" FL R 4S BELL	39° 07' 05.28"	074° 40' 38.74"	oemba03171.d09	39° 07' 05.41"	074° 40' 37.77"

AWOIS Items, Wrecks and Obstructions

AWOIS #1262 (See Chartlets 1 and 2 in Separates)*

A full survey of the 1000-meter search radius with 200% side scan coverage and resulting multibeam sonar coverage was completed. A wreck was located, feature #52*, at 39° 05' 01.00"N 074° 37' 45.30"W (NAD83) with a least depth of 41 feet (MLLW). Recommend removal of the charted wreck cleared to 33 feet, danger curve and blue tint at approximately 39° 05' 00.41"N 074° 37' 44.56"W (NAD83), and recommend charting a wreck with a least depth of 41 feet (MLLW) at 39° 05' 01.00"N 074° 37' 45.30"W (NAD83). **Concur. Chart 41 Wk.**

AWOIS #1263 (See Chartlets 1 and 2 in Separates) **39°06'12.66"N, 074°35'40.66"W***

A full survey of the 2000-meter search radius with 200% side scan coverage and resulting multibeam sonar coverage was completed. No obstructions located in the area surveyed. **Concur with clarification – AWOIS#1263 is not currently charted. Recommend charting soundings from present survey.**

***Data filed with original field records.**

AWOIS #1265 (See Chartlets 1 and 2 in Separates)*

A full survey of the 500-meter search radius with 200% side scan coverage and resulting multibeam sonar coverage was completed. A wreck was located, feature #46* at 39° 06' 46.84"N 074° 32' 50.92"W (NAD83) with a least depth of 50 feet (MLLW). Recommend removal of the charted wreck cleared to 43 feet, danger curve and blue tint at 39° 06' 48.41"N 074° 32' 49.55"W (NAD83), and recommend charting a wreck with a least depth of 50 feet (MLLW) at 39° 06' 46.84"N 074° 32' 50.92"W (NAD83). **Concur. Chart 50 Wk.**

AWOIS #1267 (See Chartlets 2 and 3 in Separates) 39°07'00.41"N, 074°40'48.57"W*

A partial survey of approximately the northeast half of the 2000-meter search radius with 200% side scan and resulting multibeam sonar coverage was completed. No wreck or obstruction located in the area covered. **Concur. No change in charting recommended.**

AWOIS #1273 (See Chartlets 1 and 2 in Separates) 39°08'22.81"N, 074°35'26.81"W*

A full survey of the 2000-meter search radius with 200% side scan and resulting multibeam sonar coverage was completed. No wreck or obstructions were located near the recorded location. **Concur.** Two obstructions and one wreck were located within the 2000-meter search radius. Feature #41, an obstruction, was located approximately 1100 meters northeast of the recorded position. Feature #68, an obstruction, was located approximately 1600 meters southeast of the recorded position. Feature #68 **85**, a wreck, was located approximately 1700 meters southeast of the recorded position. **Concur with clarification – See Table D-2 of this report for charting recommendations for features #41 and #85. Feature #68 is considered insignificant.**

AWOIS #1275 (See Chartlets 1 and 2 in Separates)*

A full survey of the 1500-meter search radius with 200% side scan and resulting multibeam sonar coverage was completed. A wreck was located, feature #66* at 39° 08' 42.86"N 074° 33' 14.81"W (NAD83) with a least depth of 48 feet (MLLW). Recommend removal of the charted wreck cleared to 45 feet, danger curve and blue tint at 39° 08' 42.41"N 074° 33' 17.55"W (NAD83), and recommend charting a wreck with a least depth of 48 feet (MLLW) at 39° 08' 42.86"N 074° 33' 14.81"W (NAD83). **Concur. Chart 48 Wk.**

AWOIS #1287(See Chartlets 1 and 2 in Separates) 39°11'48.41"N, 074°30'58.55"W*

A full survey of the 2000-meter search radius with 200% side scan and resulting multibeam sonar coverage was completed. No wreck was located in the area surveyed. One obstruction was located within the 2000-meter search radius. Feature #30*, an obstruction with a least depth of 49 feet (MLLW) was located approximately 1800 meters west of the recorded position. **Concur with clarification – AWOIS#1287 is considered disproved and should remain uncharted. See Table D-2 of this report for a charting recommendation of feature#30.**

***Data filed with original field records.**

AWOIS #11176 (See Chartlets 1, 2 and 3 in Separates)*

A full survey of the 2000-meter search radius with 200% side scan and resulting multibeam sonar coverage was completed. No wreck or obstructions were located in the area surveyed. Recommend removal of the charted dangerous wreck symbol, danger curve, and blue tint at approximately 39° 14' 00.42"N 074° 33' 58.56"W (NAD83). **Concur. Delete dangerous wreck, depth unknown, PA.**

AWOIS #11647 (See Chartlets 1 and 2 in Separates) 39°10'18.04"N, 074°33'38.65"W*

A full survey of the fish haven and more than 100 meters beyond its limits with 200% side scan coverage and resulting multibeam sonar coverage was completed. All depths within the fish haven are greater than the authorized minimum of 50 feet. **Concur.** There are numerous obstructions within the area. **Concur.** Recommend charting selected depths, 60-foot curve, and obstructions from this survey, and recommend changing the label to "Obstn Fish Haven (auth min 50 ft, depths from survey of 2003)". **Do not concur. Retain Fish Haven as charted. See Table D-2 of this report for charting recommendations of obstructions located within the charted Fish Haven.**

AWOIS #11648 (See Chartlets 2 and 3 in Separates)*

A partial survey of the eastern section of the sewer outfall area with 200% side scan coverage and resulting multibeam sonar coverage was completed. Additional multibeam coverage was run to define the alignment and depth of the outfall risers beyond the shoreward point where the pipe becomes buried. This outfall is approximately 200 meters long, and has a least depth of 23 feet (MLLW) in depths of 28 to 30 feet (MLLW). Charted depths are 26 feet (MLLW) at this location on chart 12316 and between 28 and 30 feet (MLLW) on chart 12318. Recommend removal of the charted 26 feet at approximately 39° 13' 18.94"N 074° 36' 37.24"W (NAD83) on chart 12316, and recommend charting a submerged sewer outfall from 39° 13' 23.90"N 074° 36' 33.97"W (NAD83) to 39° 13' 17.84"N 074° 36' 33.97"W (NAD83) with a 23 foot sounding centered on the outfall on both charts 12316 and 12318. A Danger to Navigation Report was forwarded to NOAA when the outfall was first detected, and a Chart Correction Letter was sent to the NOAA Nautical Data Branch after full investigation and review were completed (see Appendix V* . SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCE.). **Concur. Chart Outfall and 23 foot least depth as shown on present survey.**

AWOIS #11652 (See Chartlets 2 and 3 in Separates)*

A full search of the 2000-meter radius with 200% side scan and resulting multibeam sonar coverage was completed. No wreck or obstructions were located in the area surveyed. Recommend removal of the charted dangerous wreck symbol, PA label, danger curve, and blue tint at 39° 07' 26.27"N 074° 39' 34.80"W (NAD83). **Concur. Delete dangerous wreck, depth unknown, PA.**

***Data filed with original field records.**

Uncharted Wrecks and Obstructions

Table D-2 lists uncharted wrecks and obstructions found in H11197 that are recommended for charting.

Table D-2 Uncharted Wrecks and Obstructions

Feature Number	Feature Position (NAD83)		Least Depth (Feet)	Charting Recommendations <i>¹See D.1.1. of the evaluation report. ²See D.1.2. of the evaluation report. ³Concur.</i>
	Latitude (N)	Longitude (W)		
1	39° 05' 22.97"	74° 33' 54.82"	34.84	OBSTR, chart sounding and label "Obstn" ¹
2	39° 12' 21.14"	74° 35' 24.04"	38.78	OBSTR, chart sounding and label "Obstn" ¹
4	39° 06' 46.24"	74° 38' 31.86"	47.77	OBSTR, chart sounding and label "Obstn" ¹
5	39° 10' 35.95"	74° 32' 53.83"	59.12	OBSTR, chart sounding and label "Obstn" ²
6	39° 10' 40.92"	74° 33' 01.88"	58.83	OBSTR, chart sounding and label "Obstn" ²
7	39° 10' 46.19"	74° 33' 08.77"	56.40	OBSTR, chart sounding and label "Obstn" ²
8	39° 10' 26.38"	74° 33' 28.70"	61.75	OBSTR, chart sounding and label "Obstn" ²
9	39° 09' 43.00"	74° 34' 31.97"	50.89	OBSTR, chart sounding and label "Obstn" ²
10	39° 09' 41.47"	74° 34' 27.89"	52.46	OBSTR, chart sounding and label "Obstn" ²
11	39° 10' 13.36"	74° 33' 53.04"	60.53	OBSTR, chart sounding and label "Obstn" ²
12	39° 10' 31.52"	74° 33' 34.34"	58.23	OBSTR, chart sounding and label "Obstn" ²
13	39° 10' 39.38"	74° 33' 18.09"	58.04	OBSTR, chart sounding and label "Obstn" ²
14	39° 10' 21.68"	74° 33' 36.60"	55.15	OBSTR, chart sounding and label "Obstn" ²
15	39° 10' 19.79"	74° 33' 40.16"	59.38	OBSTR, chart sounding and label "Obstn" ²
16	39° 10' 1.63"	74° 33' 59.51"	61.94	OBSTR, chart sounding and label "Obstn" ²
17	39° 09' 42.67"	74° 34' 20.82"	54.36	OBSTR, chart sounding and label "Obstn" ²
18	39° 09' 39.40"	74° 34' 22.64"	59.48	OBSTR, chart sounding and label "Obstn" ²
19	39° 10' 43.07"	74° 33' 08.59"	57.84	OBSTR, chart sounding and label "Obstn" ²
20	39° 10' 50.71"	74° 32' 51.91"	57.38	OBSTR, chart sounding and label "Obstn" ²
21	39° 10' 30.64"	74° 33' 15.44"	59.28	OBSTR, chart sounding and label "Obstn" ²
22	39° 10' 18.50"	74° 33' 27.28"	58.04	OBSTR, chart sounding and label "Obstn" ²
23	39° 10' 13.61"	74° 33' 33.07"	57.45	OBSTR, chart sounding and label "Obstn" ²
24	39° 10' 02.03"	74° 33' 45.98"	56.89	OBSTR, chart sounding and label "Obstn" ²
25	39° 10' 18.64"	74° 33' 20.05"	52.30	OBSTR, chart sounding and label "Obstn" ²
27	39° 10' 05.47"	74° 34' 03.21"	60.66	OBSTR, chart sounding and label "Obstn" ²
28	39° 09' 52.05"	74° 34' 23.96"	56.79	OBSTR, chart sounding and label "Obstn" ²
30	39° 12' 00.35"	74° 32' 12.73"	49.25	OBSTR, chart sounding and label "Obstn" ¹
31	39° 09' 48.91"	74° 34' 35.12"	54.17	OBSTR, chart sounding and label "Obstn" ²
32	39° 09' 45.47"	74° 34' 34.76"	52.79	OBSTR, chart sounding and label "Obstn" ²
34	39° 10' 31.87"	74° 33' 30.05"	58.66	OBSTR, chart sounding and label "Obstn" ²
36	39° 10' 16.12"	74° 33' 40.63"	58.37	OBSTR, chart sounding and label "Obstn" ²
37	39° 12' 51.52"	74° 30' 51.45"	51.41	WRECK, chart sounding and label "Wk" ³
38	39° 10' 45.10"	74° 33' 04.03"	57.45	OBSTR, chart sounding and label "Obstn" ²
39	39° 10' 31.60"	74° 33' 11.90"	58.83	OBSTR, chart sounding and label "Obstn" ²
40	39° 10' 48.46"	74° 32' 45.11"	50.00	OBSTR, chart sounding and label "Obstn" ²
41	39° 08' 51.23"	74° 34' 54.97"	51.54	OBSTR, Plot sounding and label "Obstn" ¹
42	39° 10' 00.11"	74° 33' 51.81"	54.95	OBSTR, chart sounding and label "Obstn" ²
43	39° 10' 36.82"	74° 32' 39.78"	63.42	OBSTR, chart sounding and label "Obstn" ²
45	39° 13' 51.99"	74° 32' 04.44"	49.54	WRECK, chart sounding and label "Wk" ³

Feature Number	Feature Position (NAD83)		Least Depth (Feet)	Charting Recommendations ¹ See D.1.1. of the evaluation report. ² See D.1.2. of the evaluation report. ³ Concur.
	Latitude (N)	Longitude (W)		
47	39° 05' 29.90"	74° 34' 39.06"	32.84	OBSTR, chart sounding and label "Obstn" ³
54	39° 13' 29.33"	74° 26' 27.73"	56.66	WRECK, chart sounding and label "Wk" ³
55	39° 12' 21.35"	74° 29' 42.97"	52.95	WRECK, chart sounding and label "Wk" ³
64	39° 10' 01.16"	74° 31' 29.65"	66.70	OBSTR, chart sounding and label "Obstn" ¹
67	39° 06' 48.86"	74° 36' 03.14"	59.58	WRECK, chart sounding and label "Wk" ³
71	39° 10' 20.18"	74° 33' 34.52"	54.53	OBSTR, chart sounding and label "Obstn" ²
72	39° 10' 21.76"	74° 33' 32.29"	56.63	OBSTR, chart sounding and label "Obstn" ²
73	39° 10' 28.21"	74° 33' 19.02"	59.25	OBSTR, chart sounding and label "Obstn" ²
74	39° 10' 22.67"	74° 33' 26.04"	60.14	OBSTR, chart sounding and label "Obstn" ²
75	39° 10' 07.24"	74° 33' 42.55"	59.51	OBSTR, chart sounding and label "Obstn" ²
76	39° 10' 38.90"	74° 33' 00.44"	58.27	OBSTR, chart sounding and label "Obstn" ²
77	39° 10' 41.76"	74° 32' 56.75"	57.41	OBSTR, chart sounding and label "Obstn" ²
83	39° 10' 34.19"	74° 34' 11.85"	51.61	OBSTR, chart sounding and label "Obstn" ²
84	39° 06' 46.84"	74° 36' 39.55"	48.95	OBSTR, chart sounding and label "Obstn" ¹
85	39° 07' 31.67"	74° 35' 00.65"	63.09	WRECK, chart sounding and label "Wk" ³
88	39° 07' 20.77"	74° 38' 03.27"	21.1	OBSTR, chart sounding and label "Obstn" ¹
89	39° 07' 21.18"	74° 38' 08.78"	18.93	OBSTR, chart sounding and label "Obstn" ¹

Bottom Composition

There were 37 ⁴¹ bottom samples taken to verify the bottom types charted for H11197. Table D-3 compares information for each sample collected to the charted bottom type.

Table D-3 H11197 Bottom Sample Characteristics

Bottom Sample Position (NAD83)		Depth of Bottom Sample (ft)	Observed Bottom Type	Charted Bottom Type	Chart 12316	Chart 12318
Latitude (N)	Longitude (W)					
39° 15' 42.0"	074° 31' 16.8"	45.21	Si, S	S	X	X
39° 15' 10.2"	074° 32' 14.4"	45.01	fne S	S	X	X
39° 15' 22.2"	074° 34' 15.0"	23.88	fne S	S Sh	X	X
39° 15' 09.6"	074° 33' 51.6"	29.17	fne S	S		X
39° 14' 01.8"	074° 34' 35.4"	37.01	fne S	S	X	X
39° 13' 58.8"	074° 32' 16.2"	55.18	fne S	S	X	X
39° 13' 07.2"	074° 32' 25.2"	52.30	S	S		X
39° 13' 19.2"	074° 33' 44.4"	41.80	fne S	S	X	X
39° 12' 16.2"	074° 34' 32.4"	50.07	fne S	S		X
39° 12' 09.6"	074° 32' 43.2"	56.73	fne S	S		X
39° 13' 22.8"	074° 30' 46.8"	50.26	fne S	S		X
39° 14' 56.4"	074° 30' 45.0"	49.74	fne S	S		X
39° 15' 10.8"	074° 29' 16.8"	15.57	fne S	S		X
39° 13' 47.4"	074° 27' 15.6"	54.46	fne S	S		X
39° 12' 16.8"	074° 30' 22.8"	55.18	S, Sh	S		X
39° 10' 28.8"	074° 28' 22.2"	64.30	P	S		X

Bottom Sample Position (NAD83)		Depth of Bottom Sample (ft)	Observed Bottom Type	Charted Bottom Type	Chart 12316	Chart 12318
Latitude (N)	Longitude (W)					
39° 09' 05.4"	074° 31' 31.2"	69.62	crs S	S		X
39° 08' 04.8"	074° 34' 05.4"	63.78	fne S	S sy		X
39° 08' 30.6"	074° 35' 28.2"	46.23	S	S		X
39° 08' 12.0"	074° 37' 20.4"	41.67	S	S	X	X
39° 07' 31.2"	074° 38' 13.2"	31.43	S	RG S G	X	X
39° 06' 38.4"	074° 38' 33.6"	50.95	Si, fne S, Sh	S		X
39° 06' 29.4"	074° 40' 06.6"	45.62	Si, fne S	sy	X	X
39° 07' 35.4"	074° 39' 24.6"	41.01	S	S	X	X
39° 08' 49.8"	074° 38' 48.6"	43.11	S	S		X
39° 08' 54.6"	074° 38' 12.0"	44.39	S	S	X	X
39° 08' 57.0"	074° 36' 30.0"	43.04	S	S		X
39° 09' 36.6"	074° 37' 58.2"	38.62	fne S	S	X	X
39° 09' 48.6"	074° 36' 41.4"	34.55	fne S	rky	X	X
39° 10' 12.0"	074° 36' 18.6"	48.43	Si, M fne S	S	X	X
39° 10' 48.6"	074° 36' 45.6"	50.43	fne S Silt	S	X	X
39° 11' 19.8"	074° 35' 45.0"	42.76	fne S	S	X	X
39° 10' 55.8"	074° 34' 48.6"	48.49	fne S	S		X
39° 11' 40.8"	074° 34' 44.4"	40.78	fne S	S Sh		X
39° 11' 56.4"	074° 36' 37.8"	68.86	fne S	S	X	X
39° 10' 41.4"	074° 30' 11.4"	26.15	fne S, Sh	S		X
*39°05' 42.0"	074° 46' 30.0"	28.02	crs S, G	S	X	X
39° 10' 36.0"	074° 38' 30.0"	32.05	S, G, S crs S G	S	X	X
39° 09' 54.0"	074° 39' 48.0"	22.80	fne S S G Sh	S G	X	X
39° 08' 18.0"	074° 40' 54.0"	25.33	S, Sh fne S	h	X	X
39° 07' 36.0"	074° 41' 00.0"	45.21	Si, S S Sh	S		X

**Geographic position does not fall within the limits of survey H11197.*

It is recommended that the bottom type charted be updated where necessary based on the information collected during the latest survey. **Concur.**

D.2 ADDITIONAL RESULTS

Shoreline verification was not required for this survey. Comparison with prior surveys was not required under this contract. See Section D.1 Chart Comparison for comparison to the nautical charts. **Concur.**

Aids to Navigation

U.S. Coast Guard aids to navigation were found on station as charted and serve their intended purpose. **Concur.**

E. APPROVAL SHEET

31 March 2004

LETTER OF APPROVAL

REGISTRY NUMBER H11197

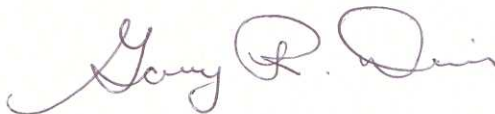
This report and the accompanying smooth sheet and digital data are respectfully submitted.

Field operations contributing to the accomplishment of survey H11197 were conducted under my direct supervision with frequent personal checks of progress and adequacy. This report and smooth sheet have been closely reviewed and are considered complete and adequate as per the Statement of Work.

Reports concurrently submitted to NOAA for this project include:

<u>Report</u>	<u>Submission Date</u>
Data Acquisition and Processing Report	03/31/04
Descriptive Report for Sheet D, H11198	03/31/04

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION



Gary R. Davis
Hydrographer
Science Applications International Corp.
Wednesday, 31 March 2004

APPENDIX I. DANGER TO NAVIGATION REPORTS

A Danger to Navigation Report was submitted on 21 July 2003 presenting preliminary survey data covering the sewer outfall risers (AWOIS 11648) at approximately 39° 13' 18.4"N 074° 36' 33.9"W (NAD83). See Appendix V*. SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCE for the NOAA determination on this Danger to Navigation Report.

After completion of the survey and item investigations SAIC submitted a Chart Correction Letter to the NOAA Nautical Data Branch documenting the results of this survey and recommendations for updating the sewer outfall and soundings on charts 12316 and 12318. This letter is included in Appendix V*. SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCE.

**Data filed with original field records.*

Danger to Navigation Report

Hydrographic Survey Registry Number: H11197

State: New Jersey

Locality: Atlantic Ocean

Sublocality: Great Egg Harbor Inlet to Townsends Inlet

Project Number: OPR_C303-KR-03

Survey Date: May 22, 2003 and on going

Depths are reduced to Mean Lower Low Water using *predicted* tides based on preliminary zoning. Positions are based on NAD-83. Positions were obtained using DGPS from a US Coast Guard Station.

Charts affected:

- 12300_1 43rd Edition Mar. 2003 1:400,000 scale; Corrected through NM Mar. 1/03; Corrected through LNM Feb. 11/03
- 12316_4 29th Edition Nov. 2002 1:40,000 scale; Corrected through NM Nov. 9/02; Corrected through LNM Oct. 29/02
- 12318_1 41st Edition Dec. 2002 1:80,000 scale, Corrected through NM Dec. 7/02; Corrected through LNM Nov. 26/02
- 13003_1 46th Edition Jan. 2003 1:1,200,000 scale Corrected through NM Dec. 21/02; Corrected through LNM Nov. 26/02

The following item was found during hydrographic survey operations:

<u>FEATURE</u>	<u>DEPTH (FT)</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
1. Obstruction	23	39° 13.30737 N	074° 36.56505 W

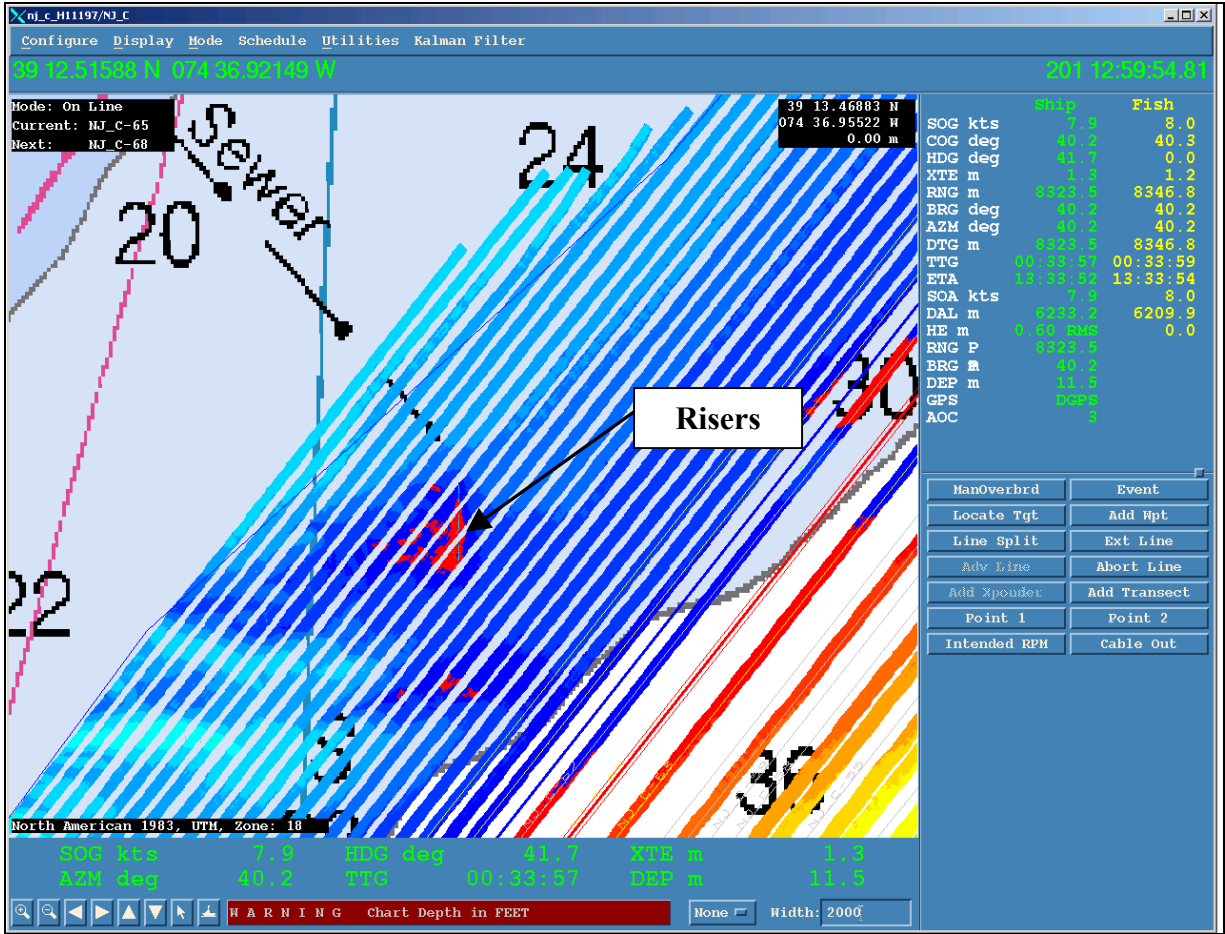


Figure 1. Chart 12318 Showing Area Covered by This Report With Real-time Multibeam Coverage Grid, H11197.

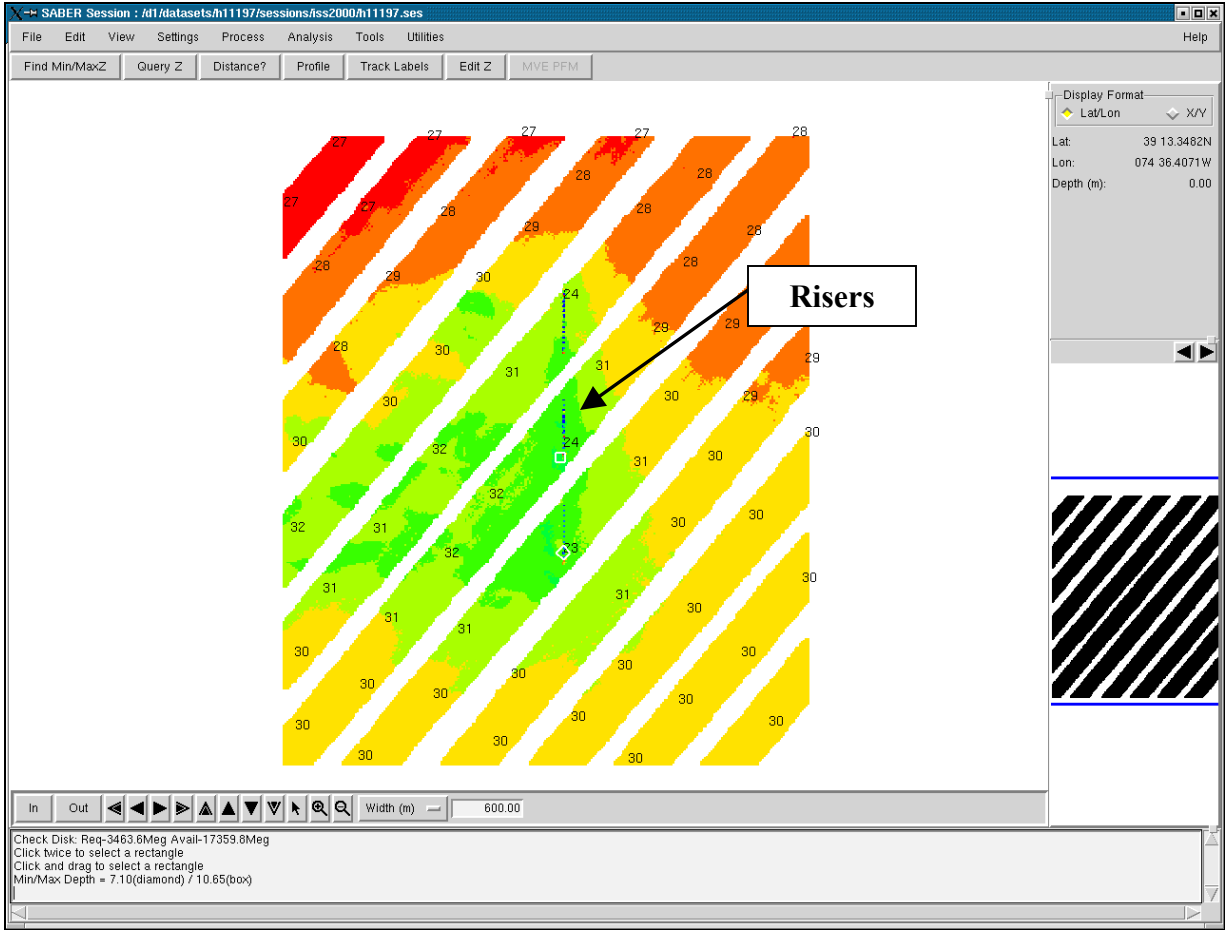


Figure 2. Color Coded Depth Grid and Selected Soundings Showing Risings, H11197

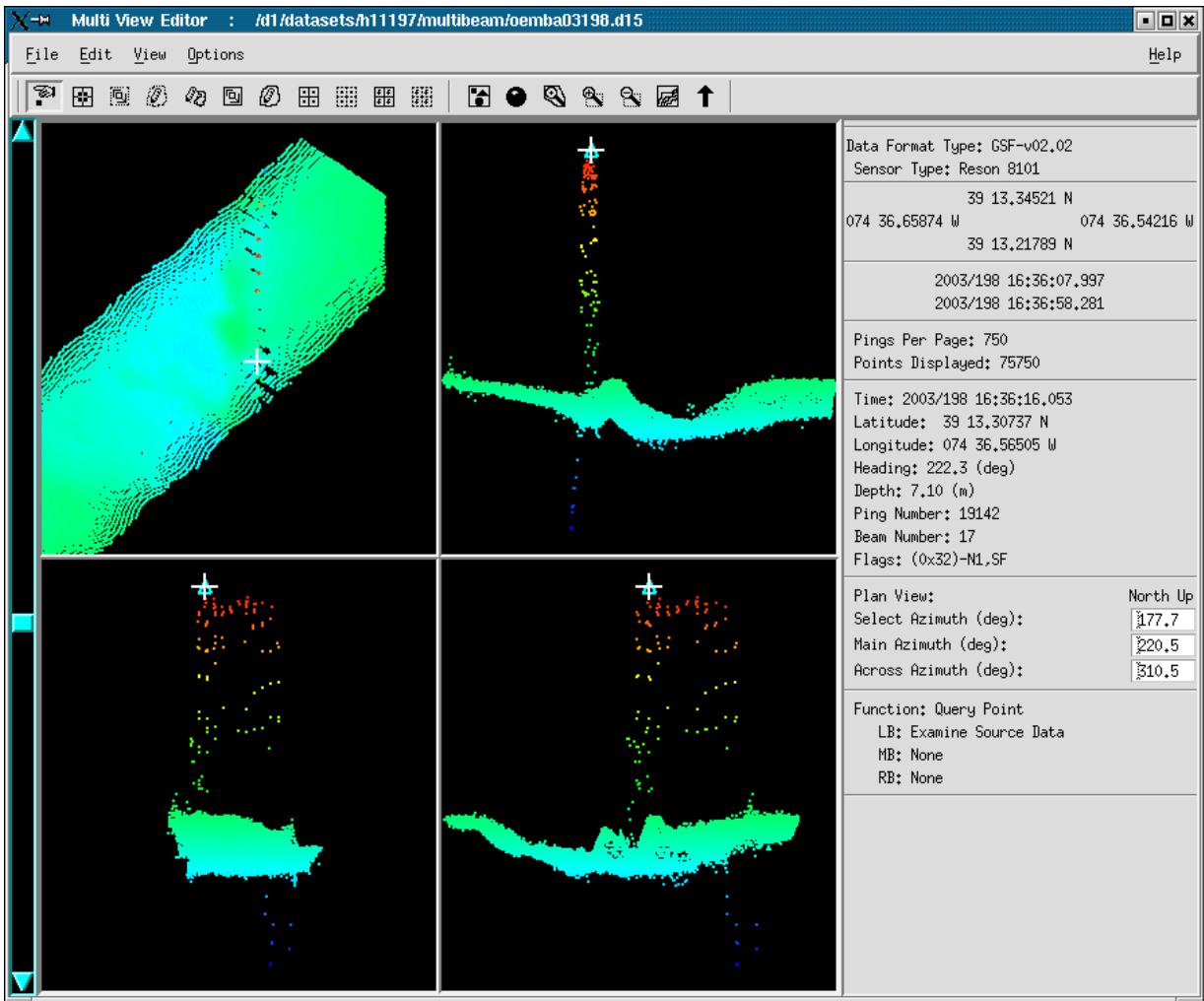


Figure 3. Multibeam File Showing Sewer Risers located within H11197

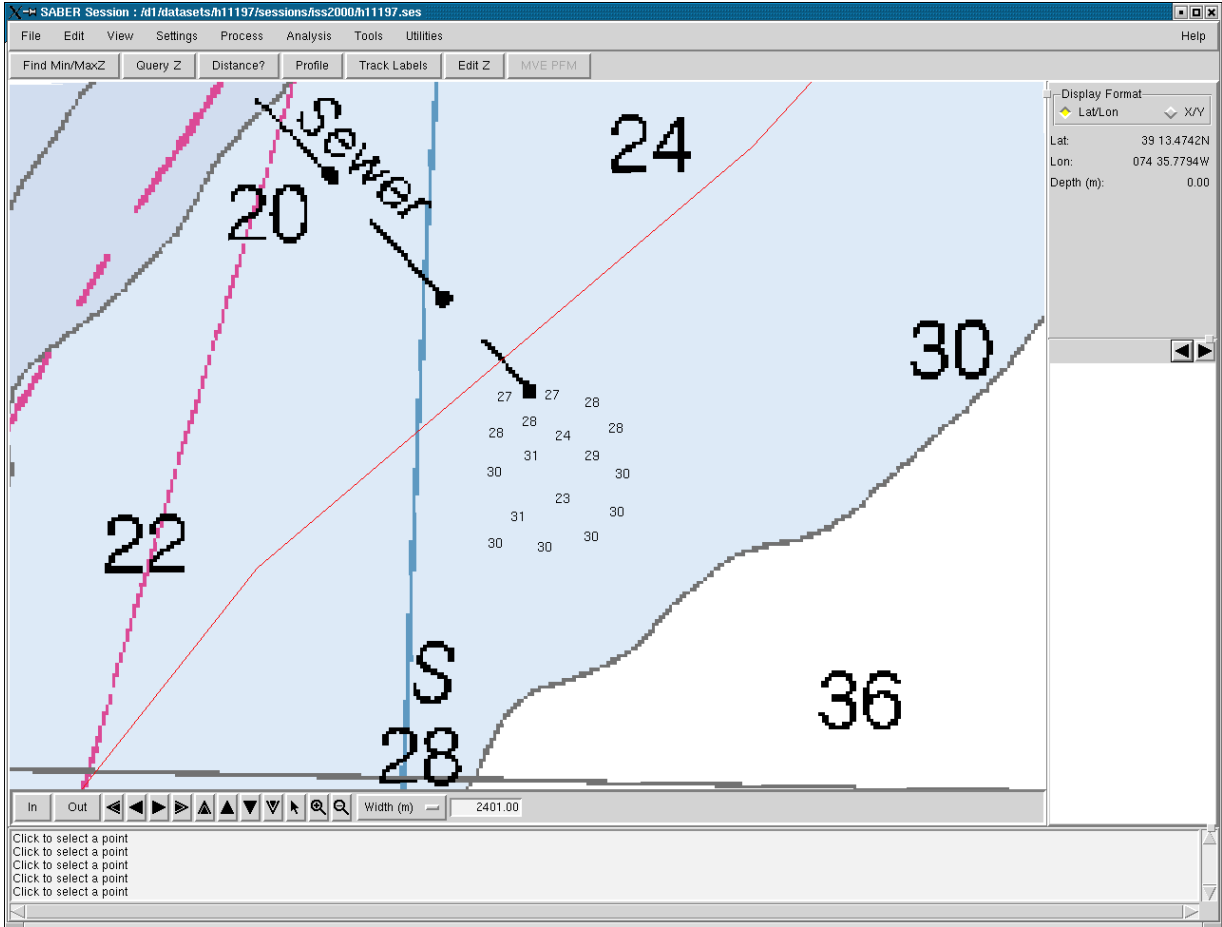


Figure 4. Chart 12318 Showing Riser and Selected Soundings within H11197

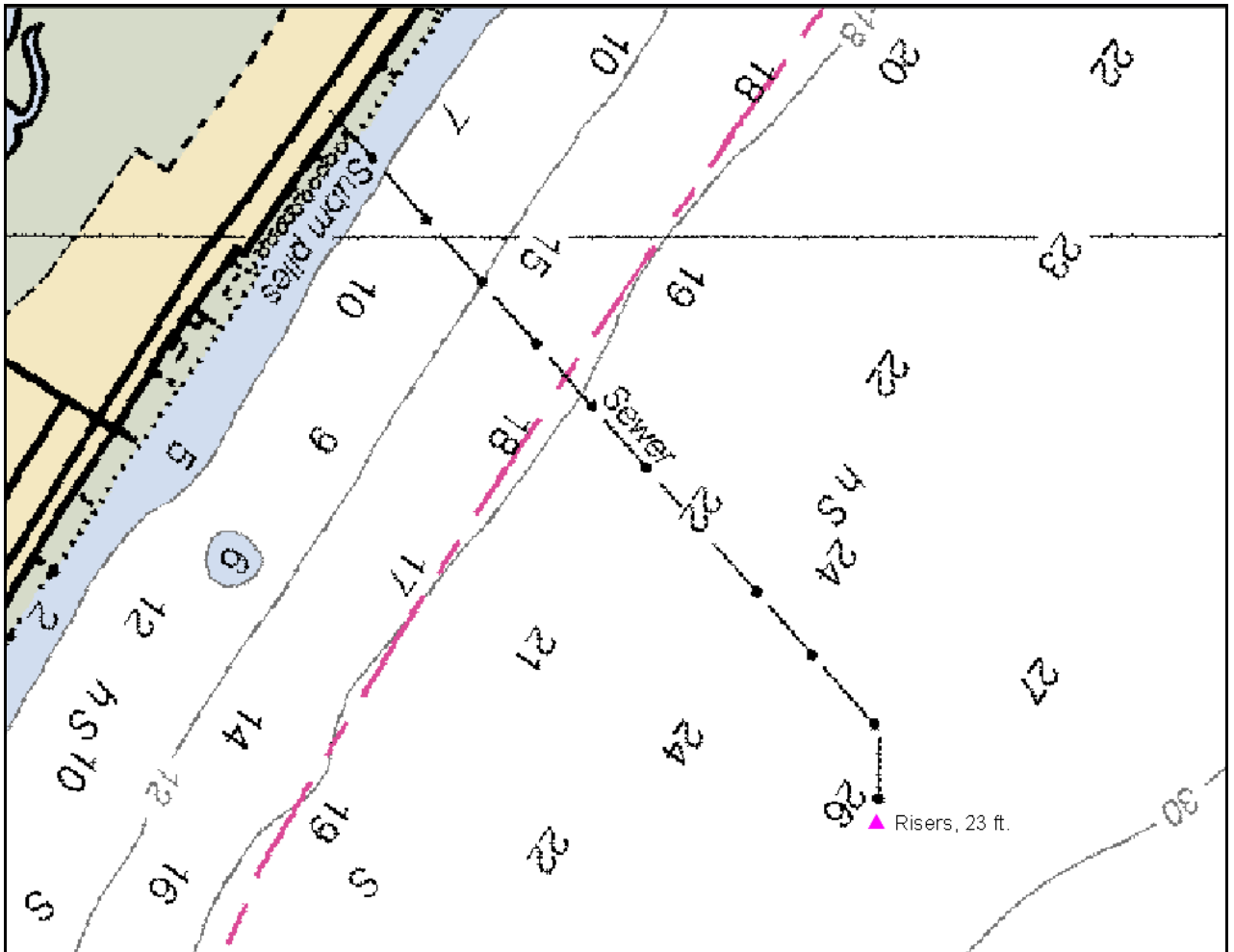


Figure 5. Chart 12316 Showing Risers and Recommended Sounding Position.

Recommend Charting with 23 feet sounding and symbol showing a row of submerged sewer risers from 39° 13.3036 N / 074° 36.5656 W to 39° 13.3910 N / 074° 36.5647 W.

LETTER TRANSMITTING DATA

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

ORDINARY MAIL AIR MAIL

REGISTERED MAIL EXPRESS

GBL (Give number) _____

DATE FORWARDED 09/09/2004

NUMBER OF PACKAGES 1

TO:

CHIEF, DATA ACQUISITION & CONTROL BRANCH
NOAA / NOS/OCS/HSD
1315 EAST-WEST HIGHWAY, STA:6704
SILVER SPRING, MARYLAND 20910-3282

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

H11197

New Jersey - Atlantic Ocean - Great Egg Harbor Inlet to Townsends Inlet

ONE TUBE CONTAINING THE FOLLOWING:

- 1 CONTRACTOR'S SMOOTH SHEET FOR SURVEY H11197
- 1 RECORD OF APPLICATION TO CHARTS FORM (NOAA FORM #75-96)
- 2 H-DRAWINGS ON MYLAR FOR NOS CHART 12316 - Kapp:674 - 677
- 1 H-DRAWING ON MYLAR FOR NOS CHART 12318 - Kapp:680
- 1 DESCRIPTIVE REPORT FOR H11197

FROM: (Signature)

Richard Blum

RECEIVED THE ABOVE

(Name, Division, Date)

Return receipted copy to:

NOAA \ NATIONAL OCEAN SERVICE
ATLANTIC HYDROGRAPHIC BRANCH N/CS33
439 WEST YORK STREET
NORFOLK, VA. 23510-1114

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11197 (2003)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report and required revisions on the contractor Preliminary Smooth Sheet (PSS). Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

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

AutoCAD, release 14
CARIS HIPS/SIPS version 5.3
MapInfo, version 6.5
Microstation J, version 07.01.04.16
I/RAS B, version 07.01.000.18

The Preliminary Smooth Sheet was plotted by the contractor. No revisions were made to Preliminary Smooth Sheet during office processing.

C. VERTICAL AND HORIZONTAL CONTROL

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). Office processing of this survey is based on these values.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

<u>12316 30th Edition, Nov 01/03</u>
<u>Corrected through NM Nov 15/03</u>
<u>Corrected through LNM Nov 04/03</u>
<u>12318 42st Edition, May/04</u>
<u>Corrected through NM May 29/04</u>
<u>Corrected through LNM May 18/04</u>
<u>13003 47th Edition, Jun 01/03</u>
<u>Corrected through NM Feb 28/04</u>
<u>Corrected through LNM Mar 02/04</u>
<u>12300 43rd Edition, Mar 01/03</u>
<u>Corrected through NM Feb 28/04</u>
<u>Corrected through LNM Mar 02/04</u>
<u>12200 47th Edition, Aug 01/02</u>
<u>Corrected through NM Feb 28/04</u>
<u>Corrected through LNM Mar 02/04</u>

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Section D of the Descriptive Report. Attention is directed to the following:

1. Features annotated with "1" in Table D-2 of the Descriptive Report are considered insignificant. These features are shown on the present survey. These features are not charted.

2. Features annotated with "2" in Table D-2 of the Descriptive Report are within the limits of a charted fish haven, in the vicinity of Latitude 39°10'18.04"N, Longitude 074°33'38.65"W. These features are shown on the present survey and are deeper than the authorized minimum depth. These features are not charted.

Danger To Navigation

One Danger to Navigation Report was submitted by the hydrographer to the Marine Chart Division, N/CS3x1, Silver Spring, Maryland. A copy of the report is appended to the Descriptive Report.

The present survey is adequate to supersede the charted hydrography in the common area, except as noted in this report.

JUNCTIONS

H11198 (2003) to the northeast
H11019 (2002) to the southwest

A standard junction was effected between the present survey and surveys H11198 (2003) and H11019 (2002). There are no contemporary surveys to the southeast or northeast of the present survey. Present survey depths are in harmony with the charted hydrography.

ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted hydrography within the common area. No additional field work is required.

MISCELLANEOUS

Chart compilation using the present survey data was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compiled data will be forwarded to Marine Chart Division, Silver Spring, Maryland. The following NOS charts were used for compilation of the present survey:

12316 30th Edition, Nov 01/03
Corrected through NM Nov 15/03
Corrected through LNM Nov 04/03
12318 42st Edition, May/04
Corrected through NM May 29/04
Corrected through LNM May 18/04

A handwritten signature in blue ink, reading "Richard W. Blevins". The signature is written in a cursive style with a horizontal line underneath.

Richard W. Blevins
Cartographer
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET

H11197

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval of charted data. All revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Richard W. Blevins

Richard W. Blevins
Cartographer,
Atlantic Hydrographic Branch

Date: MAY 21, 2004

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.

Approved:

P. Tod Schattgen

P. Tod Schattgen
Lieutenant Commander, NOAA
Chief, Atlantic Hydrographic Branch

Date: SEPT 9, 2004

