

9780

Diag. Cht. No. 1220-2

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-20-2-78  
Office No. .... H-9780

LOCALITY

State ..... Maryland  
General Locality ..... Atlantic Coast  
Locality ..... North Portion of  
Assateague Island

1978

CHIEF OF PARTY  
K. W. Kieninger

LIBRARY & ARCHIVES

DATE ..... 2/12/80

9780  
0826

AREA-2

(2)

12211

12200

13003

**HYDROGRAPHIC TITLE SHEET**

H-9780

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-20-2-78

State Maryland

General locality Atlantic Coast

Locality North Portion of Assateague Island

Scale 1:20,000 Date of survey 6 July - 6 Sept. 78

Instructions dated 8 December 1977 Project No. OPR-D103 (516)-MI, WH-78

Vessel NOAA Ship Whiting Launches 1015 (2931) and 1014 (2932)

Chief of party CDR Karl Wm. Kieninger

Surveyed by Dennis M. Kuhl, Nicholas E. Perugini, Douglas Schultz

Soundings taken by echo sounder, hand lead, pole Ross 5000 Echo Sounder

Graphic record scaled by Whiting Personnel

Graphic record checked by NEP, DRT, KWK

Protracted by \_\_\_\_\_ Automated plot by Xynetics 1201  
Hydroplot

Soundings penciled by \_\_\_\_\_

Soundings in fathoms feet at MLW MLLW

REMARKS: GMT  
All times are Coordinated Universal Time

The following data are filed with the field records:

Projection Parameters Form

Parameter Tape Printouts

TCTI Tape Printouts

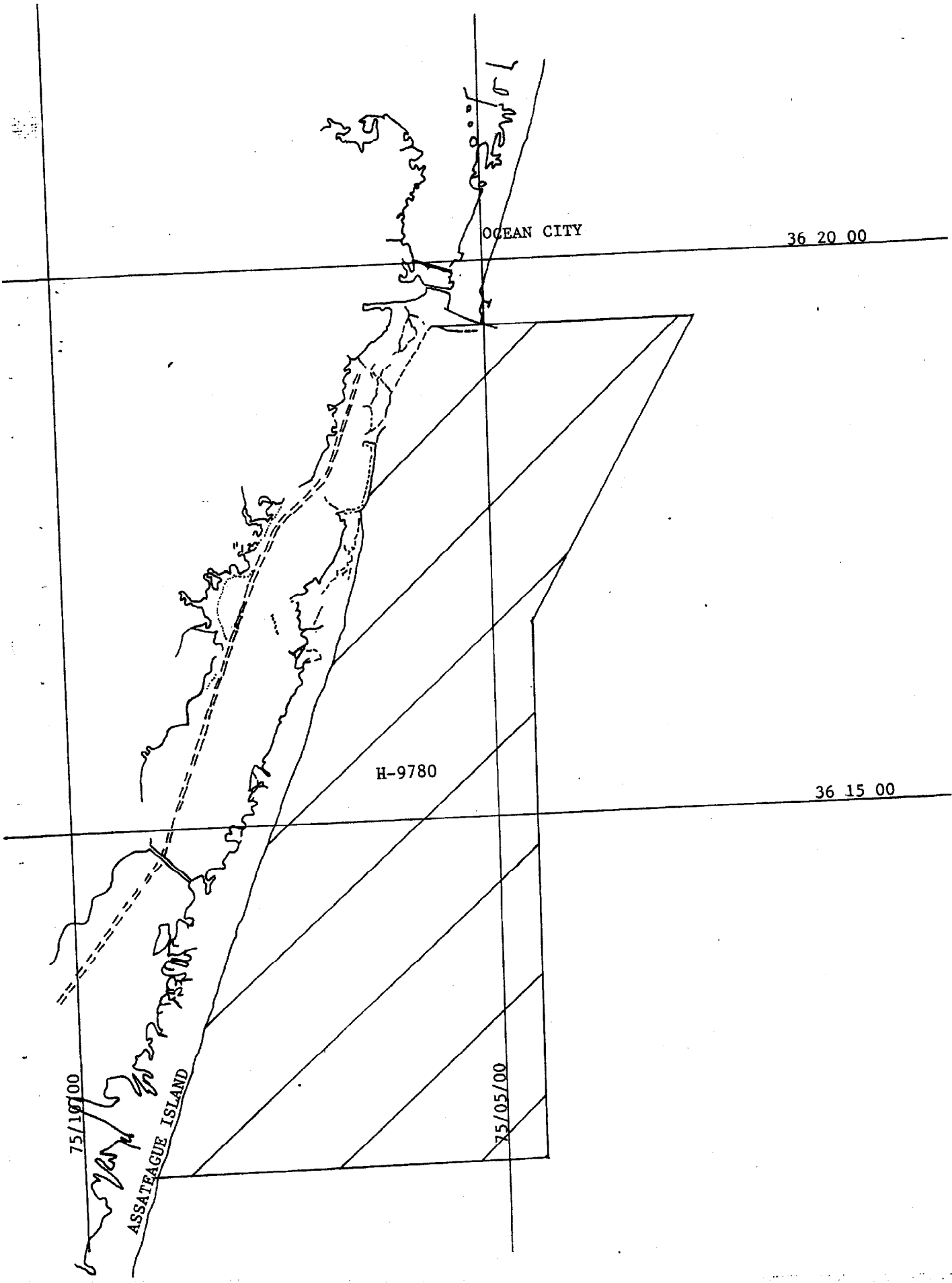
TRA Correction Abstracts

Electronic Control Correctors Abstracts

Position Abstracts & Position Data Sheets

Bottom Sediment Data

RWH 10/6/92



OCEAN CITY

36 20 00

H-9780

36 15 00

75/10/00

ASSATEAGUE ISLAND

75/05/00

*[Handwritten signature]*



CORRECTIONS IN FEET, FATHOMS

NOAA FORM 75-21  
 (10-72)

U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEAN SURVEY

**VELOCITY CORRECTIONS**

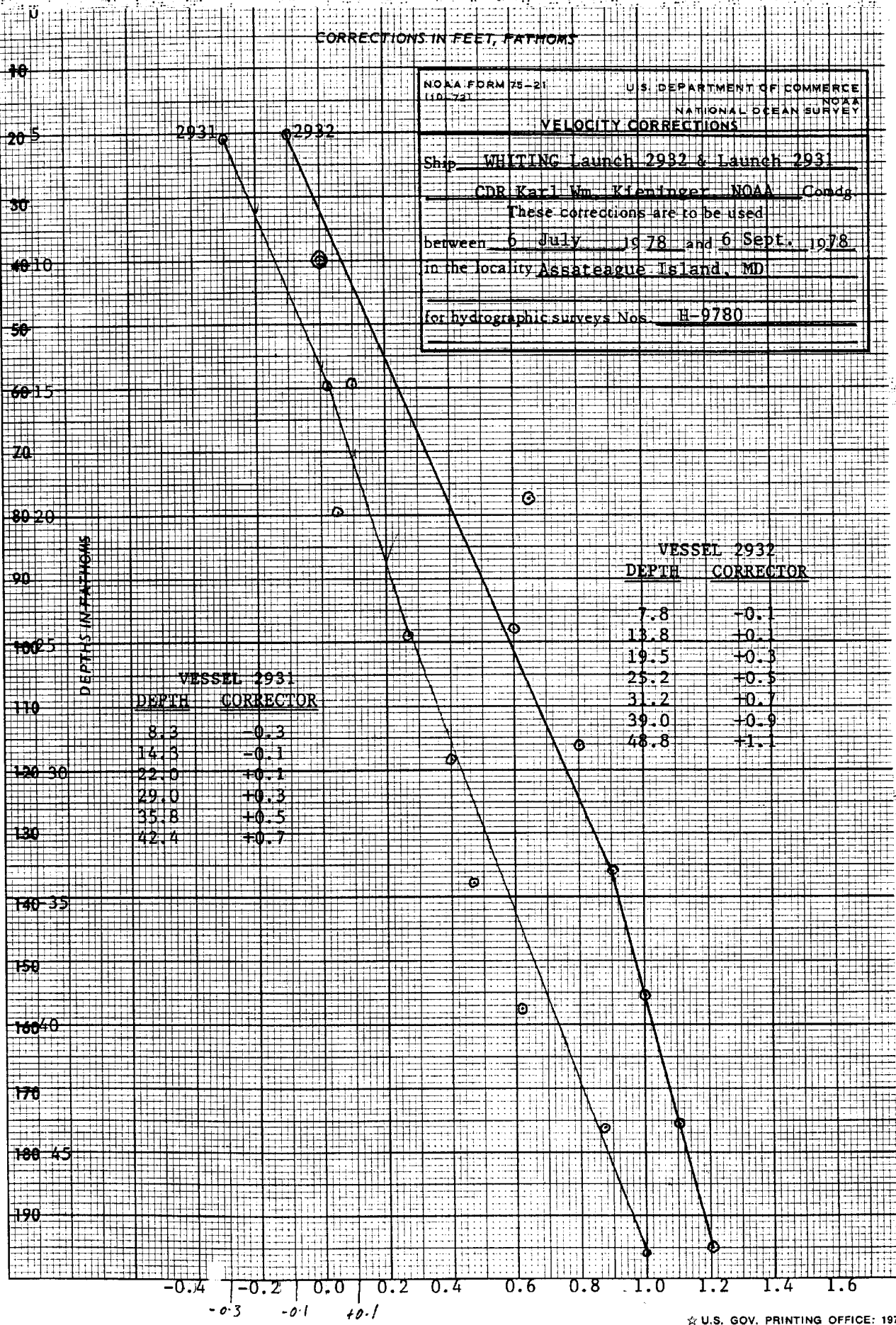
Ship WHITING Launch 2932 & Launch 2931

CDR Karl Wm. Kieninger NOAA Comdg

These corrections are to be used  
 between 6 July 1978 and 6 Sept. 1978  
 in the locality Assateague Island, MD

for hydrographic surveys Nos H-9780

(For deep water add a 0 to these figures)



VESSEL 2931

DEPTH	CORRECTOR
8.3	-0.3
14.3	-0.1
22.0	+0.1
29.0	+0.3
35.8	+0.5
42.4	+0.7

VESSEL 2932

DEPTH	CORRECTOR
7.8	-0.1
13.8	+0.1
19.5	+0.3
25.2	+0.5
31.2	+0.7
39.0	+0.9
48.8	+1.1

46 1240

20 X 26 TO THE INCH 7 X 10 INCHES  
 K&E KEUFFEL & ESSER CO. MADE IN U.S.A.



RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
1. Objects inspected from seaward	Alan W. Hickey, AST--NOAA Ship Whiting
2. Positions determined and/or verified	Position located by Operations Division, Atlantic
	Marine Center using third order traverse methods.
3. Forms originated by Quality Control and Review Group and final review activities	FIELD INSPECTOR
	FIELD EDITOR
	COMPILER
	REVIEWER
	QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

**INSTRUCTIONS FOR 'METHOD AND DATE OF LOCATION' SECTION**

**NOTE:** 'Photogrammetric Positions' are dependent entirely, or in part, upon control established by photogrammetric methods. 'Field Positions' are determined by field observations based entirely upon ground control.

**COLUMN TITLE**

**COMPILATION**

Applicable to office identified and located objects only. Enter the number and date of the photograph used to identify the object.

**FIELD INSPECTION AND FIELD EDIT**

1. New Position Determined--Enter the applicable data by symbols as indicated below:

- F - Field**
1. Triangulation
  2. Traverse
  3. Intersection
  4. Resection
    - a. Theodolite
    - b. Planetable
    - c. Sextant

- P - Photogrammetric**
1. Field identified
  2. Theodolite
  3. Planetable
  4. Sextant

**EXAMPLES:**  
F. 3.c  
P. 2

Immediately beneath the data described above, enter the following:

- a. For 'Field Positions' enter the date of location.
- b. For 'Photogrammetric Positions' enter the date of field work; and, if a photograph was used in locating the object or the object was identified on a photograph, enter the number of the photograph used.

2. Triangulation Station Recovered - Enter 'Triang. Rec. mo/day/yr.'

DESCRIPTIVE REPORT  
TO ACCOMPANY SURVEY

H-9780

WH-20-2-78

A. PROJECT

Hydrographic survey WH-20-2-78, H-9780, was performed in accordance with project instructions for OPR-D103-(516)-MI, WH-78, Atlantic Seaboard Area Project (ASAP), Delmarvanc Phase, dated 8 December 1977. The following changes have amended the original project instructions:

<u>CHANGE NO.</u>	<u>DATE</u>
1	16 Dec. 1977
2	21 Dec. 1977
3	7 Feb. 1978
4	6 Mar. 1978
5	9 Mar. 1978
6	16 Mar. 1978
7	10 Apr. 1978
8	27 Apr. 1978
9	22 May 1978
10	30 May 1978

B. AREA SURVEYED

WH-20-2-78 was performed from Julian Days 187 to 249, 1978. The survey area extends from Ocean City Inlet, the northern limit, to 7½ miles south of Ocean City Inlet. The western limit is bounded by Assateague Island. The eastern limit extends 2 miles offshore in the northern section of the survey and extends to 3½ miles offshore in the southern section.

Traffic in the survey area is generally limited to fishing vessels and pleasure craft. The bottom is sandy and smoothly sloping. Due to shoaling just southeast of Ocean City Inlet, breakers are common. Since this area lies off a rock jetty leading into the inlet, mariners must exercise caution. Continuous surf action occurs along the coast of Assateague Island. The most prominent shoal in the survey area is located 2 miles off Assateague Island.



C. SOUNDING VESSELS

WHITING launches 1015 and 1014 performed all range-range and range-azimuth survey work. EDP's<sup>1</sup> For the launches are 2931 and 2932 respectively. Both launches were equipped with the PDP-8E Hydroplot System in conjunction with the Ross Model 5000 echo sounders. No major mechanical problems were encountered with the "Type 1" survey launches.

D. SOUNDING EQUIPMENT

Echo sounders used on WH-20-2-78 were Ross Model 5000. Serial numbers for 1015 and 1014 are 1049 and 1087 respectively. Phase check calibrations were performed on the Ross Model 5000 in accordance with the Hydrographic Manual. This calibration was conducted regularly and is noted on all fathograms.

Bar checks were taken as weather and sea conditions permitted. Quality of bar checks varied with wind, sea, and current conditions.

The automated hydroplot system was used to record depth on all days. No major problems were encountered using the Ross Model 5000.

Settlement and squat corrections are taken from trials performed by Whiting personnel in February, 1978. Graphs and corresponding tables for settlement and squat are in the appendix and applied on the TC/TT tape.

Velocity corrections were based on bar check averages. Data from bar checks was compiled in (direct comparison logs) and velocity corrections were computed in accordance with the Hydrographic Manual. Due to the varying quality of analog traces, the following days only were used for computing bar check averages. *\* Not included with the survey records.*

<u>VESNO 2931</u>	<u>VESNO 2932</u>
188	187 ✓
189	188 ✓
190	189 no DC
191	192 " "
	249 Bad trace

*In sufficient to construct a velocity table.*

\* (Three TDC) casts were performed, the results of which were in close agreement with the velocity curves derived from the bar checks.

\* The three TDC casts should have been used in computing velocity tables.

All soundings on this sheet were taken on the 0-100 foot scale.

E. HYDROGRAPHIC SHEETS

The field sheets were prepared by Whiting personnel using a Houston Instruments DP-3 Roll Plotter, S/N 4680-1. For processing purposes, the area was divided into two plotter sheets. Plotter origins for the sheets are as follows:

NORTH: 38/15/15 N 75/10/00 W

SOUTH: 38/11/00 N 75/10/00 W

A total of four plotter sheets are submitted with this survey. Two sheets cover the entire field sheet. One pair of plotter sheets contains all main scheme hydrography, splits and least depths found

in development areas. The second pair of sheets is a set of overlays which contain crosslines, bottom samples, and the detached position of one buoy.

F. CONTROL STATIONS

The following signals were used for electronic positioning sites or for calibration signals:

<u>SIGNAL NO.</u>	<u>NAME</u>
101	N. Jetty Lt., 1976
109	Mystic Harbour Tank 1976
113	O.C.C.G. Radio Tower, 1976
117	O.C. S. Municipal Tank, 1955-77
125	GY-01 1977
129	O.C. Center Tank, 1976
141	Azimuth Tank 1977
149	<del>LT. Green</del> Tank 1977
190	Royal, 1962-75
201	RL-01, 1978
207	MD-01 1978
209	ANT 1978
211	H-1-78
213	H-5-MD-78
215	North Beach 2, 1962-75
217	BEV 1978
219	FORT 1978

Stations 101, 109, 125, 149, 201, 207, 211 & 213 were established by third order traverse by Operations Division, Atlantic Marine Center.

Positions for the following signals were obtained from published horizontal control data: 113, 117, ~~129~~, 141, 190 & 215

Whiting personnel established the following spurs from existing third order stations.

<u>SPUR</u>	<u>From STATION</u>
209 (ANT)	H-5-MD-78
217 (BEV)	MD-01
219 (FORT)	North Beach 2, 1962-75

*Location of these stations is not in accordance with the Hydrographic Manual Chapter 3.*

All spurs were located using third order traverse methods and are non-recoverable. Distances were measured with an HP Model 3800A Distance Meter, S/N 0987A00157. All angles were measured by T2 S/N 35803.

G. HYDROGRAPHIC POSITION CONTROL

Two types of position control were used in this survey, range-range, and range-azimuth. The Del Norte positioning system provided range control for all work.

### 1) Range-Range

The range-range hydrography was performed by launches 1015 and 1014, equipped with Del Norte Master units and distance measuring units. The Hydroplot system was used in all range-range work. Remote Del Norte stations were selected so that hydrography was run where intersections of rates was greater than 30 degrees and less than 150 degrees.

Daily calibration of the system was accomplished by using three-point sextant fixes (with check angle). Pattern correctors were computed by comparing visual and electronic fixes. Inverse distances between fixes and check fixes were compared and daily pattern correctors computed by means of weighting and averaging. In addition to daily visual calibrations, a baseline calibration was performed every two weeks.

Del Norte master units and distance measuring units were kept paired between baseline calibrations. The following Master-DMU pairs were used for the duration of the survey.

<u>Vessel</u>	<u>Master S/N</u>	<u>DMU S/N</u>
2931	281	515
2932	159	123

### 2) Range-Azimuth

Vessels 1015 and 1014 performed all range-azimuth work.

All ranges and depths were recorded using RK-111, the Range-Range Real Time Plot. Azimuths were measured with a Wild T2 S/N 35803. Since a high dune line prevented turning azimuths from existing control, spurs were established along the beach.

### H. SHORELINE - See the Verifier's Report.

No shoreline manuscripts were available for this survey. Shoreline for this sheet was taken from a 1:20,000 blowup of NOS Chart No. 12211, 25 Ed. Jan. 8/78, 1:80,000, obtained from C351. Shoreline is therefore unverified.

The past two years have seen significant changes in the shoreline at the north end of Assateague Island. Extensive erosion due to surf and winter storms, coupled with the lack of vegetation and dunes in this area have caused much shoreline recession.

Two breaks in the island located at 38/17/48 & 38/18/27 leading  
75/06/34 & 75/06/19  
into Sinnepuxent Bay have since filled in, restoring the continuity of the shoreline.

### I. CROSSLINES

The percentage of crosslines run on this survey was 12.5%. Agreement with main scheme lines was excellent, in most cases 0-2 feet. Crosslines were run in a north-south direction, perpendicular to the east-west main scheme.

J. JUNCTIONS

Agreement with survey H-9759 to the east is excellent, 0-2 feet. To the south this survey junctions with H-9788, performed by the Whiting. Junctions are again excellent, 0-2 feet. Whiting survey H-9764 junctions to the north. Agreement is 0-2 feet in most cases. All junction surveys were performed in 1978 and as yet are unverified.

K. COMPARISON WITH PRIOR SURVEYS

*For comments on the junction with N-9715 (1977) see The Verifier's Report.*

*See the Verifier's Report.*

Survey 8711, Maryland Coast, Ocean City, May 1962, 1:10,000

Comparisons were made in the area bounded by:

NORTH: 38/19/30      EAST: 75/02/30  
SOUTH: 38/16/30     WEST: Assateague Island

In general, agreement between the current and prior surveys is good (0-4 ft).

A shoal centered at 38/18.9 N, 75/05.1 W, has shifted west and become more extensive. Least depths found on the old survey at this shoal are 7 feet. The current survey shows a least depth of 5 feet. The most notable shift in this shoal has occurred in the 6 foot curve to the west of the above position. Depths of 5 and 6 feet are found where the old survey shows depths of 12-15 feet. The 12 foot curve has also extended westward towards shore. It should be noted that breakers in this area might indicate a dynamic seasonal shift in this shoal.

Survey 5357, Great Gull Bank to Pope Island, June-October 1933, 1:20,000.

Comparisons were made in the area bounded by:

NORTH: 38/16/30      EAST: 75/04/30  
SOUTH: 38/11/55     WEST: Assateague Island

In general, agreement between current and prior surveys is good (0-4 feet). A shoal centered at 38/12.5 N, 75/06.5 W, shows a change in configuration between prior and current surveys. Comparison between the prior and current surveys shows that the 30 foot curve has narrowed and shifted slightly south. The prior survey reveals a least depth of 20 feet on this shoal. A current least depth of 24 feet was found. The southern edge of the shoal has shifted 350 meters south (refer to H-9788). The current survey further shows that the shoal slopes more gradually. It has been noted that shoals in this area are dynamic and subject to seasonal migration.

*like feature*  
A sand spit located at 38/12.5 N, 75/06.5 W *is still on the prior survey* has broadened and shifted approximately 430 meters east. Comparison between current and prior surveys shows that this area is now 6 feet deeper and bounded by a 36 foot curve rather than the 30 foot curve. *An isolated shoal with a least depth of 27 ft. is located 600 meters south, also a shoal depth of 31 ft. is located 400 meters S.E. on the present survey*

PSI 23

Charted item; Wreck "10 feet reported" Originates with Chart Letter 999 of 1965.

Charted Position: 38/19/17 N  
75/05/24 W  
.38'

VESNO 2932  
JD 249 (347-377)

This item is a sunken barge, approximately 90 feet long and 40 feet wide. Wire or chain drags of the area were not attempted because of the wreck's proximity to a rock jetty, the shallowness of the water and resultant choppy sea conditions. This area is also very popular to small boat fisherman.

The area was developed at reduced speed by running east-west lines with 20 meter spacing. Evidence of the wreck appeared on the fathogram three out from position 358 and again at position 376.

The first sounding, corrected for draft, settlement and squat, velocity and tide, reduces to 11.0 feet. Its geographic position is:

38/19/19.602 N  
75/05/22.076 W

The latter sounding with all the above corrections applied, reduces to 10.4 feet and has the following geographic position: 38/19/19.590 N  
11.2 75/05/21.583 W

It is recommended that the wreck symbol and notation "10 foot reported" *Do not* remain and be charted at position 376. (refer to following page)

*The wreck is accurately located at a least depth of 9 ft was acquired with lead line on H-9715 (1977-78) Chart the wreck is shown on H-9715 (1977-78)*

Charted Item: Wreck, Originates with NM 36 of 1966

Charted Position: 38/19/26 N VESNO 2932  
75/04/43 W JD 249 (378-435)

Note: Position approximate

This item was developed on H-9764, with no evidence of a wreck on the fathogram. Two chain drags on separate days were also performed and a hang was encountered on each occasion. However, there was a large discrepancy between the geographic positions of these two hangs. Because this item falls just within the sheet limits of WH-20-2-78, it was further developed by running east-west lines with 20 meter spacing. No trace of the wreck appeared on the fathogram.

Since Whiting divers were unable to verify the two hangs encountered while chain dragging for this item on WH-20-1-78 due to heavy vessel traffic, and fathogram traces were negative, it is recommended that the (wreck) symbol remain as presently charted. (PA) *The positions of the two hangs should have been included with this survey. The hangs were plotted on H-9764 (1978) as subm obstrs. One subm obstr was transferred to the present survey.*

L. COMPARISON WITH THE CHART — See the Verifier's Report — Sections 4. and 7. H-9780 was compared with Chart 12211, Fenwick Island Light to Chinco-teague Inlet, 25 Ed., Jan. 18/1978, a 1:80,000 scale.

Area bounded by: NORTH: 38/19/30 EAST: 75/02/30  
SOUTH: 38/11/55 WEST: Assateague Island

Charted hydrography originates from previously mentioned prior surveys and requires no further consideration.

It is recommended that due to the increase in shoaling in the area of 38/19/57 N, 75/05/25 W, that the "breaker limits: be extended approximately 400 meters west.

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys.

N. AIDS TO NAVIGATION

Buoy "5" Fl G 4 sec is the only aid to navigation within the limits of this survey.\* Its position; 38/19/20.235 N, 75/05/03.221 W, was determined with the Geodetic Three Point Fix Program (RK 410) using angles turned with a Wild T2 Theodolite, and is listed as position 436.

*\* BELL "2" falls within the hydrographic limits of this survey but was located on H-976A (1978) and was transferred to the present survey during*  
It is in good agreement with the charted position. It should be noted as in the Light List, that positions of buoys in this area frequently shift with changing conditions.

*Prk maint. white & orange fish haven buoy charted in lat. 38°16.46'N, long. 75°04.51'N was transferred to the present survey from H-9759 (1978)*

O. STATISTICS in lat. 38°16.64'N, long. 75°04.97'N.

<u>VESNO</u>	<u>NUMBER OF POSITIONS</u>	<u>LINEAR MILES-SOUNDING</u>
	719	170.5
2931	429	88.5
2932		259.0
	Totals: 1148	

Total square miles: 18.0

Tide gages established: None

P. MISCELLANEOUS — See the Verifier's Report - Section 4.

It should be noted that a few discrepancies exist where range-azimuth soundings are 3-4 feet deeper than the range-range with which it junctions on the south sheet. Surf action during this phase of hydrography was quite dynamic, as is common in this area, causing the perpetually changing bottom off Assateague Island.

*Fathogram depths were measured during verification thereby attaining excellent sdg. agreement in the overlap area.*

Q. RECOMMENDATIONS

None

R. AUTOMATED DATA PROCESSING

<u>PROGRAM NO.</u>	<u>DESCRIPTION</u>	<u>VERSION DATE</u>
RK 111	Range-Range Real Time Hydroplot	1-30-76
RK 201	Grid and H/R Lattice Plot	4-18-76
RK 211	Range-Range Off-Line Plot	1-15-76
RK 212	Visual Station Table Load	4-01-74
RK 216	Range-Azimuth Position and Sounding Plot	5-16-74
RK 300	Utility Computations	2-10-76
RK 330	Data Reformat and Check	3-12-76
RK 407	Geodetic Inverse/Direct Computation	10-23-75
RK 410	Geodetic Three Point Fix	8-23-73
AM 500	Predicted Tide Generator	11-10-72
RK 561	Hyperbolic and Range-Range Geodetic Calibration	2-19-75
AM 602	Extended Line Oriented Editor	3-10-72

APPROVAL SHEET

Submitted by:

*Alan W. Hickey*  
Alan W. Hickey  
Asst. Survey Technician

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 Project Instructions.

Approved/Forwarded:

*Karl Wm. Kieninger*  
Karl Wm. Kieninger  
CDR, NOAA  
Commanding Officer, NOAA Ship WHITING

BAR CHECK DATA ABSTRACTS

VESNO 2931

<u>DEPTH</u>	<u>CORRECTION</u>
5.3	-0.30
10.0	0.00
14.9	0.02
19.9	0.05
24.7	0.27
29.6	0.40
34.5	0.47
39.4	0.62
44.1	0.87
49.0	1.00



VELOCITY TAPE

VESSEL 2931

000082 1 0003 0001 000 293100 020278  
000142 1 0001  
000220 0 0001  
000290 0 0003  
000357 0 0005  
000424 0 0007  
000660 0 0009  
999999 0 0000

BAR CHECK DATA ABSTRACTS

VESNO 2932

<u>DEPTH</u>	<u>CORRECTION</u>
5.1	-0.10
10.0	0.00
14.9	0.10
19.3	0.65
24.4	0.60
29.1	0.80
34.0	0.90
38.9	1.00
43.9	1.10
48.8	1.20

VELOCITY TAPE

VESSEL 2932

000077 1 0001 0002 000 293200 020278  
000137 0 0001  
000195 0 0003  
000252 0 0005  
000312 0 0007  
000390 0 0009  
000488 0 0011  
000660 0 0013  
999999 0 0000

### SETTLEMENT AND SQUAT TRIALS

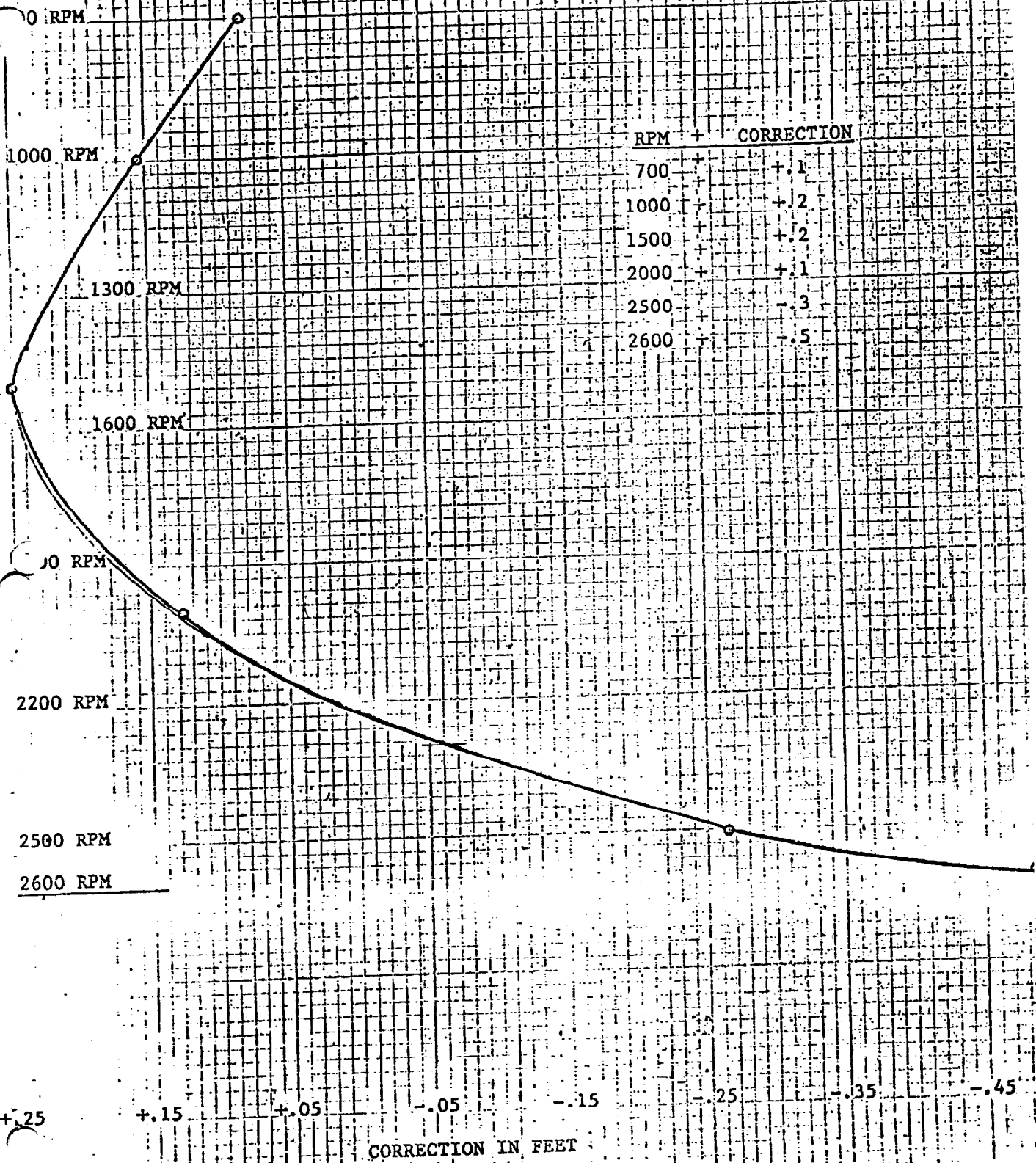
Settlement and squat trials were run on launches 1014 and 1015 at Governor's Island, New York in February and April 1978. Trials were run using a level and rod. The level rod was held over the transducer location. Results are the average of one run towards the observer and one run away from the observer at the speeds listed below.

<u>Speed in RPM</u>	<u>Correction 1014</u>	<u>Correction 1015</u>
700	+ .006	+ .080
1000	+ .070	+ .156
1500	+ .158	+ .250
2000	+ .172	+ .127
2500	- .081	- .263
2600	- .176	- .486

Corrections for settlement and squat are made on the TC/TT Tape. Periods of reduced speed during actual hydrography are noted in the sounding volumes and on the printouts.

See the attached graph of the correctors versus RPM for each vessel.

VESNO 2931, LAUNCH 1015



+ .25

+ .15

+ .05

- .05

- .15

- .25

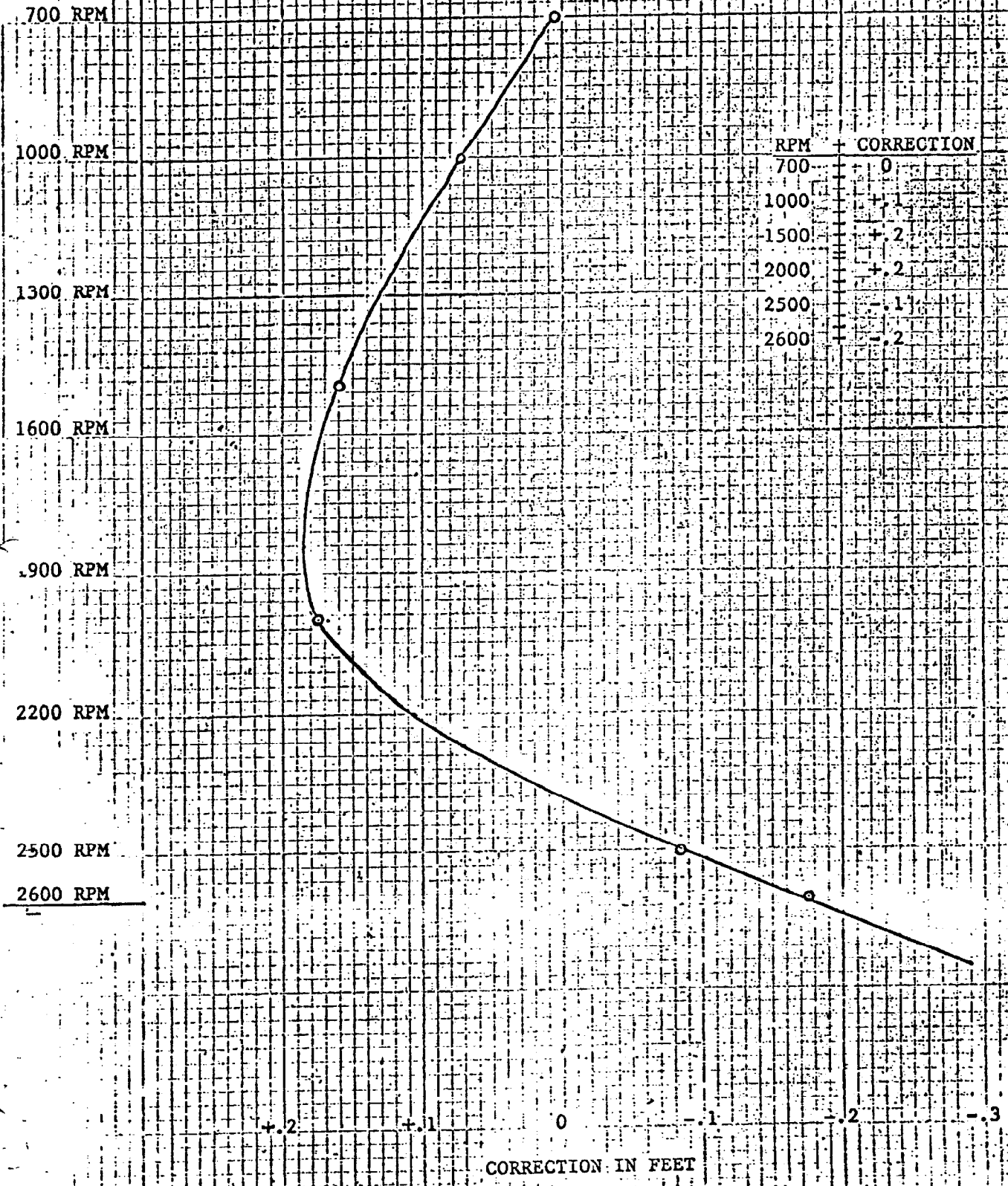
- .35

- .45

CORRECTION IN FEET

SETTLEMENT AND SQUAT CURVE

VESNO 2932, LAUNCH 1014



RPM	CORRECTION
700	0
1000	+ .1
1500	+ .2
2000	+ .2
2500	- .1
2600	- .2

D103

SIGNAL TAPE

*list of stations*

101	6	38	19	26626	075	05	06924	139	0000	000000	N. Jetty Lt., 1976
109	6	38	19	36984	075	07	03970	139	0000	000000	Mystic Harbour Tank 1976
113	6	38	19	39961	075	05	27474	139	0000	000000	O.C.C.G. Radio Tower, 1976
117	6	38	19	40442	075	05	21961	139	0000	000000	O.C. S.Municipal Tank, 1955-77
125	6	38	19	37617	075	05	00013	250	0000	000000	GY-01 1977
129	6	38	20	42283	075	04	51918	139	0000	000000	O.C. Center Tank, 1976
141	6	38	23	19347	075	04	02751	139	0000	000000	Azimuth Tank 1977
149	6	38	26	30359	075	03	20043	139	0000	000000	LT. Green Tank 1977
190	6	38	19	39886	075	05	58521	250	0000	000000	Royal, 1962-75
201	6	38	18	38190	075	06	28460	250	0000	000000	RL-01, 1978
207	5	38	14	30862	075	08	05052	250	0000	000000	MD-01 1978
209	6	38	14	09538	075	08	15101	243	0000	000000	ANT 1978
211	1	38	14	32122	075	08	04564	139	0000	000000	H-1-78
213	6	38	13	50265	075	08	30094	139	0000	000000	H-5-MD-78
215	6	38	11	56868	075	09	23217	250	0000	000000	North Beach 2, 1962-75
217	6	38	14	29865	075	08	01279	254	0000	000000	BEV 1978
219	7	38	11	54478	075	09	13731	254	0000	000000	FORT 1978

NOAA FORM 76-40  
(8-74)

Replaces C&GS Form 567.

**NONFLOATING AIDS**

**FOR CHARTS**

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

**ORIGINATING ACTIVITY**

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

REPORTING UNIT  
(If laid Party, Ship or Office)  
Coastal Mapping Div.  
Norfolk, Va.

STATE  
Maryland

LOCALITY  
Ocean City Inlet

DATE  
7/21/77

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

OPR PROJECT NO. 516

JOB NUMBER CM-7505

SURVEY NUMBER TP-00866

DATUM NA 1927

POSITION

LATITUDE		LONGITUDE	
D.M. Meters	°	D.P. Meters	//
38 19	26.63	75 05	06.92
38 19	39.82	75 05	168
38 19	1228	75 05	38.01
38 19	39.50	75 05	923
38 19	1218	75 06	47.28
38 19	36.38	75 06	1148
38 19	1122	75 06	03.73
38 19	10.70	75 06	91
38 20	330	75 05	25.37
38 20	29.89	75 05	616
38 20	922	75 05	
38 20	52.12	75 05	08.50
38 20	1607	75 05	206
38 20	56.56	75 05	15.20
38 20	1744	75 05	369
38 20		75 05	
38 20		75 05	

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

CHARTING NAME

LIGHT

Ocean City Inlet Light 6

LIGHT

Ocean City Inlet Obstruction Light

LIGHT

Ocean City Harbor Light 2

LIGHT

Ocean City Harbor Light 3

LIGHT

Sinepuxent Bay Channel Light 5

\*DAY BEACON

Isle of Wight Bay Daybeacon

LIGHT

Isle of Wight Bay Channel Light 2

\*DAY BEACON

Isle of Wight Bay Warning Daybeacon

\*DAY BEACON

Isle of Wight Bay Daybeacon 4A

\*DAY BEACON

Isle of Wight Bay Day Beacon 4

OFFICE

FIELD

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

CHARTS AFFECTED

12211

12211

12211

12211

\*N r in place at time of field investigation





NOAA FORM 76-40 (8-74) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION LANDMARKS FOR CHARTS

Replaces C&GS Form 567.

TO BE CHARTED (If field party, ship or office)  
 TO BE REVISED  
 TO BE DELETED  
 Coastal Mapping Div., Norfolk, Va.

REPORTING UNIT: Maryland  
 LOCALITY: Ocean City Inlet  
 DATE: 7/21/77

HAVE NOT been inspected from seaward to determine their value as landmarks.  
 HAVE

JOB NUMBER: CM-7505  
 SURVEY NUMBER: TP-00866  
 DATUM: NA 1927

CHARTING NAME	DESCRIPTION <small>(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)</small>	LATITUDE		LONGITUDE		METHOD AND DATE OF LOCATION <small>(See instructions on reverse side)</small>		CHARTS AFFECTED
		D.M. Meters	° / ' "	D.P. Meters	° / ' "	OFFICE	FIELD	
516	(Ocean City, Center Municipal Water Tank, 1955) Destroyed	42.27	75 04	51.98	-1262.2	-760(I) 3877	3/24/76	-12211

ORIGINATING ACTIVITY

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

Mystic Harbour standpipe should be included on all applicable charts.  
Its distinctive "nail shape" makes it a prominent object in the vicinity  
of Ocean-City Inlet.

FIELD TIDE NOTE

The soundings on the field sheet were reduced by predicted tides based on preliminary zoning furnished with the project instructions. Values of -1hr 40 min on Hampton Rds., VA, were applied to times of high and low water. A ratio of 1.50 was applied to heights of tide.

A tide gage at the fishing pier, Ocean City, Maryland, was the only control gage used in the survey area. The gage is a Fischer-<sup>38°19'37"N</sup> Porter ADR 1550, S/N 6803A3012M14. Location of the gage is: ~~38/19.37 N,~~  
<sup>75°05'00"W</sup>~~75/05.0 W~~. The tide gage was inspected on various occasions by Whiting personnel along with personnel from NOAA Launch 1255.



DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY

DATE: September 12, 1978  
TO: C331  
Chief, Tides & Water levels Branch  
FROM: *Karl Wm. Keninger*  
CDR. Karl Wm. Keninger, NOAA  
Commanding Officer, NOAA Ship WHITING  
SUBJECT: Smooth tides for survey H-9780

Please forward smooth tides for Assateague Island, to Chief, Processing Division (CAM 3), Atlantic Marine Center. Hydrography was done in the area shown on the attached chartlet. Smooth tides are needed for julian days, 187,188,189,190,191,192,249 .



U.S. DEPARTMENT OF COMMERCE  
January 30, 1979 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): 857-0280 Ocean City, Md.

Period: July 6 - September 6, 1978

HYDROGRAPHIC SHEET: H-9780

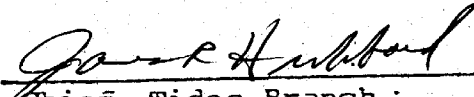
OPR: D103

Locality: Offshore Assateague Island, Maryland

Plane of reference (mean ~~lower~~ low water): 4.04 ft.

Height of Mean High Water above Plane of Reference is  
3.6 ft.

Remarks: Zone direct.

  
Chief, Tides Branch

H-9780

GEOGRAPHIC NAMES

Name on Survey	Source of Name									
	A	B	C	D	E	F	G	H	I	J
	ON CHART NO. 12211	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST		
<del>Atlantic Ocean</del>	✓									1
Ocean City	✓									2
Ocean City Inlet	✓									3
Assateague Island	✓									4
Little Gull Bank	✓									5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
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										18
										19
										20
										21
										22
										23
										24
										25

Approved

*Chas. E. Hamilton*  
Chief Geographer - C3x5

11 MARCH 1980

APPROVAL SHEET  
FOR  
SURVEY H-**9780**

- 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:

1-9-80

Signed:



Title:

Chief, Verification Branch



## HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	40
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	2

DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						1- misc. data
CAHIERS	1- with printouts					
VOLUMES	3					
BOXES			1- Smooth			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

1- Chrt. mark-up

## 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			1144
POSITIONS CHECKED		381	381
POSITIONS REVISED		47	47
SOUNDINGS REVISED		461	461
SOUNDINGS ERRONEOUSLY SPACED		0	0
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	0
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	2	0	2
VERIFICATION OF CONTROL		3	3
VERIFICATION OF POSITIONS		27	27
VERIFICATION OF SOUNDINGS		76	76
COMPILATION OF SMOOTH SHEET		40	40
APPLICATION OF TOPOGRAPHY		4	4
APPLICATION OF PHOTOBATHYMETRY		0	0
JUNCTIONS		10	10
COMPARISON WITH PRIOR SURVEYS & CHARTS		27	27
VERIFIER'S REPORT		14	14
OTHER		26	26
TOTALS	2	227	229

Pre-Verification by <b>S.K. Kelley</b>	Beginning Date 10/31/78	Ending Date 10/31/78
Verification by <b>F. Lamison, M.B. Hickson</b>	Beginning Date 12/12/78	Ending Date 12/18/79
Verification Check by <b>Harry R. Smith</b>	Time (Hours) 6	Date 12/19/79
Marine Center Inspection by <b>Hydrographic Inspection Team (AMC)</b>	Time (Hours) 12	Date 01/03/80
Quality Control Inspection by <b>F.P. Saulsbury</b>	Time (Hours) 48	Date 3/10/80
Requirements Evaluation by <b>D.J. Hill</b>	Time (Hours) 4	Date 5/1/80

C. Myers 6 hrs. 3/22/80

REGISTRY NO. H-9780

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-9780

FIELD NO. WH-20-2-78

Maryland, Atlantic Coast, Assateague Island

SURVEYED: July 6 through September 6, 1978

SCALE: 1:20,000

PROJECT NO.: OPR-D103

SOUNDINGS: Ross Digital  
Echo Sounder

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

Chief of Party ..... K.W. Kieninger  
Surveyed by ..... D. Kuhl  
                        ..... N. Perugini  
                        ..... D. Schultz  
Automated Plot by ..... XYNETICS 1201 Plotter (AMC)  
Verified and Inked by ..... M.B. Hickson  
Date ..... December 19, 1979

1. Introduction

No unusual problems were encountered. Necessary changes made by the verifier to the Descriptive Report are denoted in red ink.

2. Control and Shoreline

a. The source of control is adequately described in Section E. of the Descriptive Report.

b. There are two sources of shoreline on the smooth sheet. Final reviewed photogrammetric manuscript TP-00866 of 1976-77 provides shoreline from the northern limit of the sheet south to approximately latitude 38°17.5'. From approximately latitude 38°17.5' to approximately latitude 38°14.7' no shoreline is shown as significant conflicts exist between present hydrography and charted shoreline. South of approximately 38°14.7' the source of shoreline is from an enlargement of a section of Chart #12211, 25th Edition, January 7, 1978. As the shoreline is from the chart; it is shown in brown ink.

Prior surveys within the common area indicate the construction of the Ocean City Inlet and associated jettys after 1933 and prior to 1962. This change has caused a dynamic shifting of shoreline and bottom material (sand), altering the shoreline and bottom topography in the inshore areas. Subsequent to the prior survey in 1962 (after the inlet construction) there has also been considerable shifting of shoreline and bottom material. Of particularly notable change are the two charted minor inlets or shoreline breaks south of the Ocean City Inlet which have since closed and a continuous shoreline currently exists. The shoreline appears to maintain reasonable stability south of latitude

38°13' in the survey area.

### 3. Hydrography

- a. Depths at crossings are in good agreement.
- b. Depth contours were drawn at the standard intervals. The supplemental 36 foot contour was added on three shoals. Brown curves were added to portray features not apparent from standard and supplemental contours.
- c. Bottom configurations were adequately developed with the following six exceptions in which either developments or splits would have aided feature definition.
  1. Minor shoal - 36 foot sounding - latitude 38°18.68', longitude 75°03.70' - should have been investigated.
  2. Small shoal - 32 foot sounding - latitude 38°16.86', longitude 75°04.88' - should have been developed.
  3. Minor shoal - 37 foot soundings - latitude 38°16.10', longitude 75°05.55' - should have been split.
  4. Minor shoal - 43 foot sounding - latitude 38°12.58', longitude 75°05.25' - should have been investigated.
  5. Small isolated shoal - 27 foot sounding - centered at latitude 38°12.1', longitude 75°08.2' - should have been split.
  6. The northern extension of the major shoal in the southern area of the survey should have been split. This area is centered at latitude 38°13.6', longitude 75°05.4'.

Section 3 of the Project Instructions refers to development criteria.

### 4. Condition of Survey

The sounding records, smooth sheet and accompanying overlays, hydrographic records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual with the following exceptions:

- a. Additional meaning of sea action on the fathograms was necessary in some areas. Section P. of the Descriptive Report refers to a nonagreement between hydrography of different control types as a factor of surf action shifting the bottom whereas in verification this nonagreement was reconciled by meaning the sea action.

b. Bottom samples would have been desirable on the shoals in the vicinity of:

1. Latitude 38°12.7', longitude 75°06.2'
2. Latitude 38°13.7', longitude 75°05.4'
3. Latitude 38°16.9', longitude 75°04.9'

c. The positions of the two chain drag hangs occurring during PRI #24 investigations on H-9764 (1978) should have been included in the Descriptive Report. *Only one of these hangs is within the limits of the present survey & this hang was transferred to the smooth sheet as a*

d. The 11 foot "least depth" <sup>subm. abstr. during A.C.I.</sup> on PRI #23 may not be a valid least depth due to sea conditions on the day obtained. A lead-line sounding would have been preferable. *A least depth of 9ft. was acquired by lead line on H-9715 (1977-78)*

e. The location of electronic control stations 209, 217, and 219 is not in accordance with the Hydrographic Manual, Chapter 3.

f. Only two bar checks were used to construct the velocity curve for Vessel 2932. TDC cast data should have been used in velocity computations. The velocity curves derived from bar checks do not represent smooth curves through the data points indicated. Direct comparison logs were not included with the survey records. *General agreement of crosslines and junctional edggs, indicate velocity corrections are o.k.*

g. Section L. of the Descriptive Report is of no value as no comparison with the chart was made. *Do not concur, agree with statement made in Section L.*

## 5. Junctions

Adequate junctions have been effected with the following surveys:

H-9764 (1978)	1:20,000	to the north
H-9759 (1978)	1:20,000	to the east
H-9788 (1978)	1:20,000	to the south

A <sup>partial</sup> butt junction was effected with H-9715 (1977<sup>-78</sup>). Survey H-9715 is a 1:10,000 scale survey of the Ocean City Inlet conducted in 1977<sup>-8</sup>). Sufficient change in the inlet area had occurred so that a normal junction could not be effected. The present survey (H-9780) supersedes a large portion of H-9715 offshore of the inlet. Refer to H-9715 for the butt junction boundaries. *Boundary added to inset on this survey to facilitate compilation.*

## 6. Comparison With Prior Surveys

H-8711 (1962)	1:10,000
H-5357 (1933)	1:20,000
H-5347 (1933-34)	1:20,000
H-5346 (1933)	1:20,000

Prior survey H-8711 (1962) covers a significant portion of the present survey and supersedes portions of both prior surveys H-5346 and H-5347. This prior survey was conducted after the

construction of the inlet and associated jettys. Overall agreement is good with differences averaging plus or minus 2 to 3 feet with the exception of the alongshore areas and the inlet and associated shoals. The shoal south of the inlet has enlarged and has become shoaler and migrated primarily to the west south-west approximately 500 meters. There is a deepening along the shoreline areas, however these differences can be attributed to the changes in shoreline as previously discussed. The pattern of minor shoals between the shoreline and Little Gull bank and seaward of the 30 foot contour are still evident and display the basic northeast-southwest orientation. The general trend or "flow" of the bottom configuration remains similar with previously mentioned significant differences in the shoreline and inlet areas.

Prior survey H-5357 (1933) covers roughly the southern half of the present survey seaward of the 30 foot contour. Agreement between the present and prior survey is good in the areas of relatively flat or gentle sloping bottom with average differences varying plus or minus 1 to 3 feet. In areas of significant bottom relief the differences are greater, varying plus or minus 1 to 9 feet. The general bottom topography in regard to feature trend remains similar. The major shoal centered at latitude  $38^{\circ}12.8'$ , longitude  $75^{\circ}06.1'$  has changed, significantly in that the northern portion has become shoaler (from 1 to 6 feet) and the southern portion has become deeper (from 1 to 6 feet) except in the far southern area covered by the present survey where the shoal is presently continuous to the adjoining survey. The small isolated shoal on the present survey centered at latitude  $38^{\circ}12.1'$ , longitude  $75^{\circ}08.2'$  apparently was part of the continuous protruding shoal located 600 meters north on the prior survey. The various fish traps plotted on the prior survey are no longer in existence in the common areas.

Prior survey H-5347 (1933-34) is a shoreline survey extending 1000-1200 meters offshore. All prior survey hydrography north of latitude  $38^{\circ}16.65'$  has been superseded by H-8711 (1962). Prior survey hydrography north of latitude  $38^{\circ}15'$  is of ~~no~~ value in comparison due to the very significant shoreline changes previously discussed. Prior survey hydrography north of latitude  $38^{\circ}15'$  is significant for historical purposes as this prior survey was completed prior to the construction of the inlet and associated jettys and displays "cause and effect" data in comparisons of the shoreline and hydrography. Below latitude  $38^{\circ}15'$  comparisons between the present and prior hydrography are meaningful. The present survey shows a slightly deeper trend with the present contours (12' 18', & 30') displaced shoreward an average of 50-100 meters. If the contours are shifted to bring the present and prior in coincidence, comparisons are good with average differences varying plus or minus 1 to 3 feet in most areas. The shoal centered at latitude  $38^{\circ}12.1'$ , longitude  $75^{\circ}08.2'$  is now an isolated shoal instead of being continuous as shown by prior hydrography. The various fish traps plotted on the prior survey are no longer in existence in the common area.

Prior survey H-5346 (1933) is an offshore survey covering approximately the northern half of the present survey. A majority of the prior survey (approximately 80%) has been superseded by H-8711 (1962). Comparisons were made only with common areas not superseded. Agreement between present and prior hydrography is fair with average differences varying plus or minus 2 to 6 feet. The present survey shows a slightly deeper trend shoreward, as the present 30 foot contour is displaced toward the shore, and a slightly shoaler trend offshore near the limits of the present survey. Fish traps plotted on the prior survey are no longer in existence in the common area.

The differences between the present and the prior surveys are attributed largely to the changing shoreline and displacement of associated bottom material, and in part to a more detailed and sophisticated present survey.

The present survey is considered adequate to supersede all prior surveys within the common areas.

7. Comparison With Chart #12211 (25th Edition, January 7, 1978)

a. Hydrography

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

Comparison of charted hydrography with the present survey is adequately accomplished under section 6. of this report as the source of all charted hydrography has been identified and compared.

There are two numbered (23 & 24) and one unnumbered Presurvey Review Items within the limits of the present survey. One unnumbered Presurvey Review Item was touched by the eastern limit of this survey.

<sup>SR</sup> PRI #23 - Submerged Wreck "10 feet reported" - originates with Chart Letter 999 of 1965. This item was located and identified as described in the Descriptive Report. A least depth of 11 feet was obtained at latitude 38°19'18.50", longitude 75°05'21.30". ~~It is recommended that the submerged wreck symbol be charted and noted as determined by the present survey.~~ *A least depth of 9 ft (lead line) was acquired on the wreck on H-9715*

<sup>SR</sup> PRI #24 - Submerged Wreck "PA" - Originates with Notice to Mariners 36 of 1966. As indicated in the Descriptive Report no indications on the fathograms of an obstruction was found on either this survey or the adjoining survey H-9764 (1978). However during chain dragging operations in the item area on H-9764 (1978) two hangs occurred. The hangs did not concur with either each other or the charted wreck. Therefore it is recommended that the submerged wreck "PA" remain as charted ~~or charted as an obstruction~~ *concur* "PA".

Unnumbered <sup>SR</sup> PRI - The shoal south of the Ocean City Inlet and denoted by the notation "bkrs". This item is adequately

discussed in section 6. of this report. It is recommended that the shoal be charted as defined by the present survey. Also "breakers" should be annotated on the chart as shown on the present survey.

Unnumbered PRI - Little Gull Bank - The eastern limit of this survey just touches this PRI. No investigation of this item was conducted on this survey, however there is no discrepancy with survey and charted data in that very small common area. For complete disposition of this item see the adjoining survey H-9759 (1978). CONCUR

The limits of the fish haven common to the present survey (latitude 38°16' to 38°17', longitude 75°04:' to the survey limits) should be retained on the chart.

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

#### b. Aids to Navigation

Only one aid to navigation was located by the present survey, lighted buoy "5". Lighted buoy BELL "2" is within the hydrographic limits of the present survey but was located on adjoining survey H-9764 (1978). Lighted buoy R"24" falls at the limit of the present survey but was located on adjoining survey H-9715 (1977). All three aids to navigation are listed in the U.S. Coast Guard Light List, Volume 1, 1978. All aids are properly charted and serve their intended purposes. Lighted buoy "5" was located 100 meters southeast of the charted location, however this is not a discrepancy as the positions of buoys are frequently shifted with changing conditions. Nonlighted buoys RB C and W Or (Priv. Maintd.) are slightly east of the present survey limits and not located on the present survey but were located on adjoining survey H-9759 (1978). *Lt. Bell buoy "2" was transferred to the smooth sheet from H-9764 (1978) W Or (priv maint) buoy was transferred to the smooth sheet from H-9759 (1978). Lt. buoy "4" was transferred to the smooth sheet from H-9715 (1977-78)*

#### 8. Compliance With Instructions

This survey adequately complies with the Project Instructions except as noted in sections 3.c and 4. of this report.

#### 9. Additional Field Work

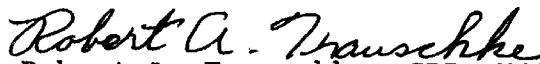
This is a good basic hydrographic survey except as noted. As this area is of a very changeable nature in both shoreline and bottom it is recommended that a periodic schedule of surveying be considered for this area. *Also charted wrecks in the vicinity of Ocean City Inlet Entrance should be proved or disproved.*

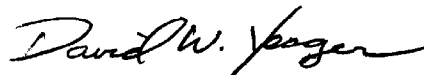


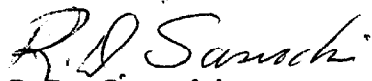
Inspection Report  
H- 9780


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: January 3, 1980

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


  
David W. Yeager, Lt, Cdr., NOAA  
Field Procedures Officer  
Operations Division

  
R.D. Sanocki  
Technical Assistant  
Processing Division

  
Maureen R. Kenny, LT, NOAA  
Chief, Electronic Data  
Processing Branch

  
Robert G. Roberson  
Team Leader  
Verification Branch

Approved/Forwarded

  
Richard H. Houlder  
RADM, NOAA  
Director, Atlantic Marine Center



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

OA/C352:FPS

March 10, 1980

TO: Glen R. Schaefer *GRS*  
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control *gm* Branch

FROM: F. P. Saulsbury *J.P. Saulsbury*  
Quality Evaluator

SUBJECT: Quality Control Report for H-9780 (1978), Maryland, Atlantic  
Coast, North Portion of Assateague Island

A quality control inspection of H-9780 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report and as follows:

1. Additions and revisions to survey items accomplished during quality control inspection are shown on the one-half scale survey copy furnished to verification.
2. Some triangulation station names and dates are in conflict with counterpart triangulation names and dates shown on the junctional surveys.
3. Some floating aids that appear on the adjoining surveys in areas of overlap with the present survey were mentioned by the hydrographer in the Descriptive Report. These aids were transferred to the verified smooth sheet during quality control. (See section 7.3.11.2 of the Hydrographic Manual.)

cc:  
OA/C35  
OA/C351





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

JUN 6 1980

OA/C351:DJ

TO: OA/CAM - Richard H. Houlder

FROM: *[Signature]*  
F/ OA/C3 - Roger F. Lanier

SUBJECT: H-9780 (1978), OPR-D103(516), Maryland, Atlantic Coast, North Portion  
of Assateague Island, Report of Compliance with Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. In addition to the Quality Control Report, dated March 10, 1980 (copy attached), and the Hydrographic Survey Inspection Team Report, dated January 3, 1980, the following is submitted:

Comments in paragraph 4.e of the Verifier's Report relative to deficiencies in the location of stations 207, 217, and 219 are supplemented with the following.

The AMC Processing Division Technical Assistant has indicated that rather than there being any problem with the quality of the respective positioning data, the stations were not marked in accordance with AMC specification and section 2.3 of the project instructions. Specifically, recoverable monuments were not established.

Future work should conform to all appropriate specifications to ensure that valuable field sites and data remain available to other users.

Except as noted, the survey is complete and adequate for the purposes intended and is in compliance with Project Instructions OPR-D103(516)-MI,WH-78, dated December 8, 1977.

Attachment

cc:  
OA/C352 w/o att.



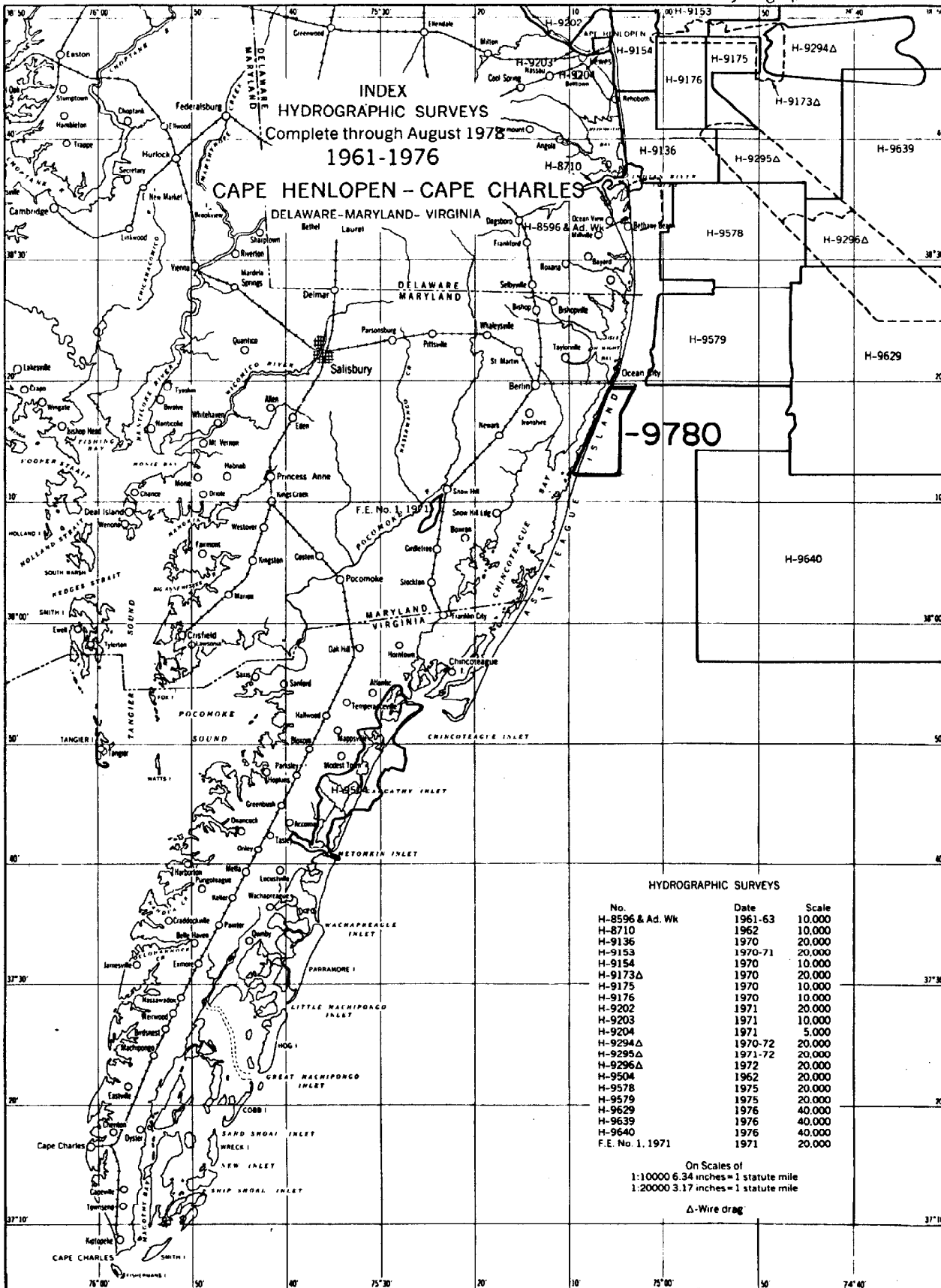
10TH ANNIVERSARY 1970-1980

National Oceanic and Atmospheric Administration

A young agency with a historic

DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Survey  
Rockville, Maryland

Hydrographic Index No. 69 K



HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-8596 & Ad. Wk	1961-63	10,000
H-8710	1962	10,000
H-9136	1970	20,000
H-9153	1970-71	20,000
H-9154	1970	10,000
H-9173Δ	1970	20,000
H-9175	1970	10,000
H-9176	1970	10,000
H-9202	1971	20,000
H-9203	1971	10,000
H-9204	1971	5,000
H-9294Δ	1970-72	20,000
H-9295Δ	1971-72	20,000
H-9296Δ	1972	20,000
H-9504	1962	20,000
H-9578	1975	20,000
H-9579	1975	20,000
H-9629	1976	40,000
H-9639	1976	40,000
H-9640	1976	40,000
F.E. No. 1, 1971	1971	20,000

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

Δ-Wire drag

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 9780

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
12211	07/24/80	Russell Kennedy	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 41
12200	9/2/80 30' L	D.C. Hopkins	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 46
13003	6-4-86	Barbara Loretz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. #60 Exam. NO Correction thru Chart 12200
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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