FE294

Diagrams 1222-4 & 1227-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Field Examination

Field No. HFP-5-1-87

Registery No. FE-294

LOCALITY

State Virginia

General Locality Chesapeake Bay

Sublocality Little Creek

19 87

CHIEF OF PARTY
LCDR K.W. Perrin

LIBRARY & ARCHIVES

DATE September 28, 1987

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

FE294

NOAA FORM 77-28 (11-72)

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

REGISTER NO.

FE-294

HYDROGRAPHIC TITLE SHEET

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.

HFP 5-1-87

State VIRGINIA

General locality CHESAPEAKE BAY

Locality LITTLE CREEK

Scale 1:5,000 Date of survey 13 Jan. to 3 Mar., 1987

Instructions dated 21 Nov., 1986 Project No. S-E924-HFP-86

Vessel HFP-4 (launch 0520)

Chief of party LCDR. K.W.Perrin

Surveyed by Ltjg. J.Maddox, D.Davis, D.Bryant, M.Briscoe, E.Martin

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by J.M., D.D., D.B., M.B., E.M.

Graphic record checked by J.M., D.D., D.B., M.B., E.M.

Protracted by Automated plot by XYNETICS 1201 PLOTTER (AMC)

Verification by N/MOA23 D.V. Mason

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

REMARKS:

Notes in red were made during office processing

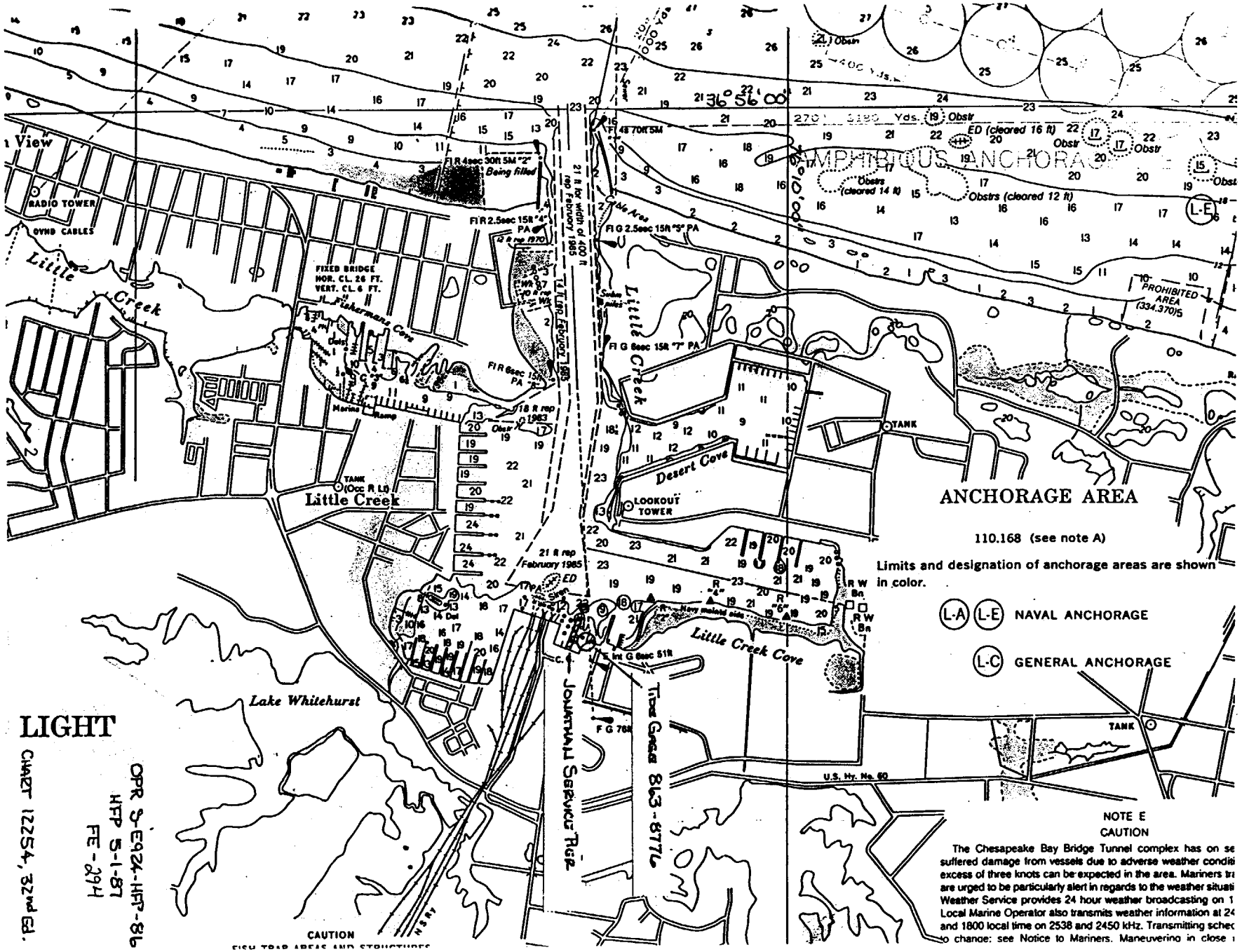
STANDARDS CK'D 9-30-87
C. Lay

AWOIS/SUBF mbm 9/14/88

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978-665-010-1174

INDEX

* Filed with original field data


ANCHORAGE AREA
110.168 (see note A)
Limits and designation of anchorage areas are shown in color.
L-A L-E NAVAL ANCHORAGE
L-C GENERAL ANCHORAGE
NOTE E
CAUTION
LIGHT
CAUTION
Little Creek
Desert Cove
Little Creek Cove
Lake Whitehurst
Fisherman's Cove
FIXED BRIDGE
HOR. CL. 26 FT.
VERT. CL. 6 FT.
RADIO TOWER
OVHD CABLES
TANK
LOOKOUT TOWER
PROHIBITED AREA
(334.370)5
U.S. Hy. No. 60
CHART 12254, 32nd Ed.
OPR S-E924-HFP-86
HFP S-1-87
FE-294

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY
FE-294
HFP-5-1-87

Scale: 1:5,000
Chief of Party: Lt. Cdr. Kenneth W. Perrin
Officer in Charge: Lt. (jg) Jason H. Maddox
Hydrographic Field Parties Section
Hydrographic Field Party 4
Launch 0520

A. PROJECT

This survey was conducted under Project Instructions S-E924-HFP-86, Item Investigations, Lower Chesapeake Bay, Virginia, dated November 21, 1986.

The purpose of this survey was to resolve items which were recommended for additional work during verification of H-9923 (1980).

B. AREA SURVEYED

The area surveyed was the Little Creek Harbor, Norfolk, Virginia at a scale of 1:5,000. The actual boundaries of the survey are as follows:

Lat. 36°~~56~~ 55' ~~00~~ 45"N.
Long. 76°11'~~30~~ 15"W.

Lat. 36°54'~~30~~ 40"N.
Long. 76°11'~~30~~ 15"W.

Lat. 36°~~56'00~~ 55'45"N.
Long. 76°~~09'30~~ 10'00"W.

Lat. 36°54'~~30~~ 40"N.
Long. 76°~~09'30~~ 10'00"W.

This survey was conducted from January 13, 1987 to March 3, 1987 (DN 013 and DN 062 ~~respectfully~~ respectively).

C. SOUNDING VESSEL

All soundings were obtained from NOAA Launch 0520, a 21-foot MonArk. All survey records are annotated with the vessel number.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS - See also section 4.d. of the Evaluation Report.

All soundings obtained by NOAA Launch 0520 were done by a Raytheon Fathometer DE 719B, S/N 10271.

Bar checks were taken twice daily and abstracted to produce the velocity corrections. No unusual abnormalities were observed.

All velocity tables, graphs, and computations are appended at the end of this text.

A settlement and squat test for launch 0520 was conducted on January 7, 1987 (DN 007) at Smith Creek, adjacent to the Atlantic Marine Center, Norfolk, Virginia. Correctors for settlement and squat are applied via corrector tape and appended at the end of this text.

Bar check lines were measured at the beginning and end of this project. No corrections are to be applied to the bar check lines.

All data was plotted using predicted tides furnished by the Tide Tables 1987. Smooth tides applied during office processing at AMC.

E. HYDROGRAPHIC SURVEY SHEETS (FIELD) See also section 4.c. of the Evaluation Report

All field sheets were prepared by HFP-4 personnel using Digital PDP8/e computer and a Houston DP-3 Complot plotter. Boatsheets, rough plots, overlays, blowups and final field sheets are included with this survey.

F. CONTROL STATIONS See section 2.a. of the Evaluation Report.

All horizontal control stations were historic Third-order, Class 1 horizontal control stations or new stations established by N/MOA222. All station geodetic positions are referred to the North American 1927 Datum and are listed in the appendix of this report.

G. HYDROGRAPHIC POSITION CONTROL See section 2.a. of the Evaluation Report.

The positioning control system for this survey was the Motorola Mini-Ranger Falcon positioning system, and a NIKON NT-20 Theodolite (RANGE/AZIMUTH)

The electronic equipment used for this survey follows:

Mini-Ranger		S/N
Launch 0520		
	Range Processing Unit	E0159
	Control Display Unit	G0253
	Master R/T Unit	E2957

Mini-Ranger	S/N
Shore Stations	
Remote Unit Code 2	G3471
Remote Unit Code 4	E2911
Other Electronic Equipment	
HP 3810B	1929A00411
Nikon NT-20 Theodolite	031005

All Mini-Ranger Falcon units were baselined once each month. Critical system checks were performed every day by means of an HP 3810B direct comparison calibration. The standard forms are included along with the survey data. There were no problems encountered for any of the critical system checks.

H. SHORELINE *See Section 2.b. of the Evaluation Report.*

Shoreline for this survey was transferred to the final field sheet from information based on aerial photographic interpretation only. No shoreline revision prints were used.

All shoreline features were verified within the project limits of this survey. No gross discrepancies were observed. All minor revisions to shoreline have been marked in red on the final field sheet.

I. CROSSLINES *See Section 3. a. of the Evaluation Report.*

There was no mainscheme hydrography conducted on this project. Hydrography conducted was developments on unresolved items recommended for additional work after verification of H-9923. Therefore, there are no crosslines.

J. JUNCTIONS *See section 5. of the Evaluation Report.*

This survey junctions with H-9923, a 1:5,000-scale 1980 basic survey. All soundings agreed to within two feet of each other when compared to this survey.

K. COMPARISON WITH PRIOR SURVEYS *See section 6. of the Evaluation Report.*

Not applicable.

L. COMPARISON WITH THE CHART See section 7.a. of the Evaluation Report.

Comparison was made with Chart 12255 (C&GS 3334), 1:5,000 scale, 11th Edition dated June 26, 1976 (For Official Use Only).

All items that were highlighted and appended at the end of the project instructions were investigated. A copy of the Item Investigation forms are appended at the end of this text.

All soundings were compared within the areas surveyed. Ninety-five percent of these soundings agree within one foot or less of each other.

Item # 8 was two submerged piles (H-9923, 1980) located at lat. 36°55'33"N, long. 076°10'35"W. The investigation was conducted on January 29,1987 (DN 029). A 50-foot chain was dragged between two otter boards behind a 21-foot MonArk at 1300 rpm. The spread of the chain was observed to be excellent while running lines parallel to shore and between channel markers "7" and "5". The lines were run from the waterline to just short of mid-channel and no hang was accomplished. Additional work was conducted on March 3, 1987 (DN 062) which used an extra mini-ranger located at control station #298 as navigation for the coxswain. This unit was used only for steering range arcs while dragging a chain that had a 15-meter swath. The drag lines were run ten meters apart and out to 30 meters on either side of the charted position. No hang was accomplished during this investigation. Recommend the two submerged piles be deleted from the chart. Concur, See Also section 7.a.1) of the Evaluation Report.

Item # 23 was ~~a charted~~ 12-foot sounding located at lat. 36°54' 49"N, long. 076°10'11"W originating from an unascertainable miscellaneous source. The chart had no 12-foot sounding located in any close proximity of the above position. A Fathometer search was conducted over the above position of this item then plotted for verification of coverage. It was observed that 20 to 22-foot depths were recorded at this position. This was discussed with verification branch and a chain drag operation on this item was suggested for complete disproval. On February 4, 1987 (DN 035), a chain was dragged over the above position and out to 30 meters around it. Again, no 12-foot sounding was observed, no hang was accomplished, and after the drag the chain was observed shiny; verifying that the chain had indeed dragged the bottom. Recommend this 12-foot sounding be removed from the chart. See section 7.a.2) of the Evaluation Report.

Item # 24 was a charted 17-foot sounding located at lat. 36°54' 52"N, long. 076°10'48"W originating from an unascertainable miscellaneous source. A Fathometer search was conducted on January 13, 1987 (DN 013) over the above position. It was observed that ~~the~~ an ~~17~~ 18-foot sounding does exist at this location and no further investigation was initiated. ~~Recommend the 17-foot sounding be retained at its presently charted location.~~ See Section 7.a.3) of the Evaluation Report.

Item # 26 was an charted 18-foot sounding located at lat. 36°54′50"N, long. 076°10′53.5"W originating from an unascertainable miscellaneous source. A Fathometer search was conducted on January 13, 1987 (DN 013) over the above position. It was observed that ~~the~~ ~~18~~-foot sounding does exist at this location. ~~and it is recommended that this sounding be retained at its presently charted location~~. See section 7.a.3) of the Evaluation Report.

Item # 27 was an charted 18-foot sounding located at lat. 36°54′50.5"N, long. 076°10′55.5"W originating from an unascertainable miscellaneous source. A Fathometer search was conducted over the above position on January 13, 1987 (DN 013). It was observed that ~~the~~ ~~18~~-foot sounding ~~does~~ exists at this location. No further investigation was initiated. ~~Recommend the 18-foot sounding be retained at its presently charted location~~. See section 7.a.3) of the Evaluation Report.

Item # 28 was a charted 16-foot sounding located lat. 36°54′ 50"N, long. 076°10′58.5"W originating from an unascertainable miscellaneous source. A Fathometer search was conducted on January 13, 1987 (DN 013) over the above position. The investigation was done by running arcs ten (10) meters apart in two different directions (i.e. north-south, east-west lines). It was observed that the 16-foot sounding does not exist at the above location. However, a 16-foot sounding was observed just slightly northwest of this position at lat. 36°54′50.8"N, long. 076°10′59.6"W. ~~Recommend the position of the 16-foot sounding be changed to the observed location found during this field examination~~. See section 7.a.3) of the Evaluation Report.

Item # 29 was a charted 18-foot sounding located at lat. 36° 54′52"N, long. 076°10′58"W originating from an unascertainable miscellaneous source. A Fathometer search was conducted on January 13, 1987 (DN 013) over the above position. It was observed that the 18-foot sounding does exist at this location. No further investigation was initiated. ~~Recommend the 18-foot sounding be retained at its presently charted location~~. See section 7.a.3) of the Evaluation Report.

Item # 38 was a charted 17-foot sounding located at lat. 36°55′ 14"N, long. 076°10′45.5"W originating from an unascertainable miscellaneous source. A Fathometer search was conducted on January 14, 1987 (DN 014) over the above position. It was observed that depths were in the 20-22 foot range at this location. A stray sounding did appear during the development but not at the position as reported. On January 30, 1987 (DN 030), a chain was dragged over the position and also over the area of the stray sounding. There was no hang accomplished during this investigation. The chain was observed to have a good swath and after the operation it was observed shiny verifying the chain had dragged the bottom. Recommend the 17-foot sounding be deleted from the chart. Concur. See also section 4.e. of the Evaluation Report.

A new concrete pier was observed during this investigation and was positioned by hydrographic methods. Further information was gathered for this pier since the chart showed the area gutted with dolphins. The party contacted a Mr. Bill Larson of Marine Contracting Corp. Mr. Larson stated they had built the pier and the concrete dolphin, just offshore from the pier, for the Jonathan Corporation.

They also were contracted to dredge the area around the pier that involved the extraction of many dolphins. The Jonathan Corporation was then contacted to verify this. A Mr. Paul Shefler, located on Front Street, Norfolk, Virginia, informed the party that this was true. Also, he stated that the area around the pier was being maintained by the U.S. Army Corps of Engineers. Appended is a copy of the dredged area next to the pier that contains depths recorded during a controlled position operation by the Marine Contracting Corp. For further information contact Bill Larson, Marine Contracting Corp., P.O. Box 6677, Deep Creek Station, Chesapeake, VA 23323, Telephone No. 804-460-4666. A picture of the pier and dolphin is also appended. Recommend the pier and dolphin be charted at the location found by this field examination. Recommend the dolphins in the approximate area of lat. 36°54'45"N, long. 076°10'39"W be deleted from the chart. See section 7.a.4) and 5) of the Evaluation Report.

A floating sailing pier was investigated on February 4, 1987 (DN 035), position 204. During operations on this field examination this pier did not exist except for the row of piles outlining the former pier. The floatation pontoons were at this time being repaired on shore. A picture is appended at the end of this text showing the piling configuration. Recommend the pier and piles be retained at its present~~ly charted~~ location. Concur. See section 7.a.6) of the Evaluation Report

~~An uncharted pile~~ Daymark "4" was located at lat. 36°54'48.5"N, long. 076° 10'14.5"W by Range-Azimuth means on January 14, 1987 (DN 014). Recommend ~~the pile~~ Daymark "4" be charted at the above position. Concur

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede the presently charted soundings and prior surveys.

N. AIDS TO NAVIGATION See section 7.b. of the Evaluation Report.

The following landmarks and fixed aids, which are visible from the survey area, are also triangulation stations:

(1) Little Creek Radar Reflector
(2) Little Creek Desert Cove Tank
(3) Amphib. (Lookout Tower)
(4) Little Creek Amphib. Base Tank
(5) Radio Transmitting Tower

All floating aids within the 1:5,000-scale survey were located and their characteristics compared to the Light List (Vol. I, 1986). All were found to be adequately described and charted for the purpose of which they were intended. All fixed aids not mentioned above were located by Third-order, Class 1 means and done by N/MOA222. Results were not obtained due to hydrogaphy being completed before the group from N/MOA222 completed this work. See "LITTLE CREEK 1987, LIST OF GEOGRAPHIC POSITIONS" appended to this report.

O. STATISTICS

VESNO 0520	TOTAL
Days of production (days at sea)	11
Total number of positions	218
Nautical miles of sounding lines	9.5
Nautical miles of crosslines	0.0
Square miles of hydrography	2.0
Detached positions	10
Martek Casts	0

P. MISCELLANEOUS

There were no bottom sample requirements for this survey.

There were no strong or abnormal currents observed during this field examination.

No local magnetic anomalies were observed in the survey area.

Q. RECOMMENDATIONS

Specific recommendations can be found in Sections K and L of this report.

R. AUTOMATED DATA PROCESSING

Programs used for the field processing of this survey are as follows:

PROGRAMS	DESCRPTIONS	VERSION
RK201	Grid, Signal, Lattice Plot	4/18/75
RK212	Visual Station Load and Plot	4/01/74
RK216	Range-AZ Non-Real Time Plot	2/09/81
RK300	Utility Computations	2/05/76
RK330	Reformat and Data Check	5/04/76
RA362	RK330 & AM602 Combined	8/20/84
RK407	Geodetic Inverse/Direct Comp.	9/25/81
AM500	Predicted Tide Generator	11/10/72
RK530	Velocity Correction Comp.	5/10/76
AM602	ELINORE	12/08/82

S. REFERANCE TO REPORTS

The following reports for Project S-E924-HFP-86 have been submitted:

Reports	Submitted
User Evaluation	N/MOA2x1
Coast Pilot Report	N/CG243

Respectfully Submitted,

Kenneth W. Perrin

for Jason H. Maddox, LTJG, NOAA
OIC, HFP-4

APPROVAL SHEET

For

FE-294

The hydrographic records transmitted with this survey are complete and adequate to supersede prior surveys for charting with no additional field work recommended.

No direct supervision was given by me during the field work.

Approved and forwarded.

Kenneth W. Perrin

Kenneth W. Perrin
LCDR, NOAA
Chief, Hydrographic Field Parties Section

SIGNAL TAPE LISTING

290	4	36	55	03231	076	10	29703	139	0000	000000 AMPHIB (Lookout Tower)
297	4	36	54	53575	076	11	01230	250	0000	000000 H-61-VA, 1980
298	4	36	55	13878	076	10	54906	250	0000	000000 H-62-VA, 1980
300	4	36	55	57125	076	10	35961	139	0000	000000 LITTLE CREEK, 1929
321	4	36	54	38788	076	11	00124	250	0000	000000 BM No.1 NAB, 1944
324	4	36	54	47852	076	10	32478	250	0000	000000 H-65-VA, 1980

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

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

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [X] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
HFP-4	VIRGINIA	N.A.B. LITTLE CREEK	6 FEB 1987

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

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
S-E924-HFP-86	5-1-87	FE-294	NA 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
DAYBEACON	LITTLE CREEK COVE DAYBEACON No. 6	36 54	46.490	76 10	00.044		F-2-6-L 1-14-87	12254 / 12255
"	LITTLE CREEK COVE DAYBEACON No. 4	36 54	48.485	76 10	14.478		"	"

48

L-133(87)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	HFP-4, E. MARTIN	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	HFP-4, E. MARTIN	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64.

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

SUPERSEDES NOAA FORM 76-40 (2-71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.

LITTLE CREEK 1987
LIST OF GEOGRAPHIC POSITIONS

SPN	STATION NAME	GPN CODE K	LATITUDE DEG	MN	SEC	LONGITUDE DEG	MN	SEC	G-NBR
1	AMPHIB	9	36	55	3.23119	76	10	29.70378	16603
2	H-62-VA	9	36	55	13.87942	76	10	54.90624	16603
3	H-65-VA	9	36	54	47.85245	76	10	32.47089	16603
4	JETTY	9	36	55	53.07400	76	10	45.55800	3541
5	LITTLE CREEK	9	36	55	57.12500	76	10	35.96100	4267
6	LITTLE CREEK HARBOR LT 4	5	36	55	44.23003	76	10	43.91184	
7	LITTLE CREEK HARBOR LT 5	2	36	55	41.38143	76	10	35.34840	
8	LITTLE CREEK HARBOR LT 7	4	36	55	25.34412	76	10	34.87913	
9	LITTLE CREEK HARBOR LT 8	4	36	55	21.58031	76	10	42.97564	
10	LITTLE CREEK HARBOR RNG FR LT	4	36	54	41.30244	76	10	36.51414	
11	LITTLE CREEK HARBOR RNG R LT	4	36	54	33.08007	76	10	36.11553	
12	LITTLE CREEK NAB DESERT COV TK	9	36	55	14.38200	76	9	42.06300	10989
13	PITA	5	36	54	47.88922	76	10	38.07009	

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
January 15, 1987

TO: Program Planing & Requirement
N/MOA2x1

FROM: LTJG Jason H. Maddox
OIC, HFP-4

SUBJECT: Coast Pilot Report for Little Creek, Virginia.

Coast Pilot report negative.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
January 15, 1987

TO: Program Planing & Requirement
N/MOA2x1

FROM: LTJG Jason H. Maddox
OIC, HFP-4

SUBJECT: User Evaluation for Little Creek, Virginia.

User Evaluation report negative.

Removed piles in shaded area

Marine Const. Corp.

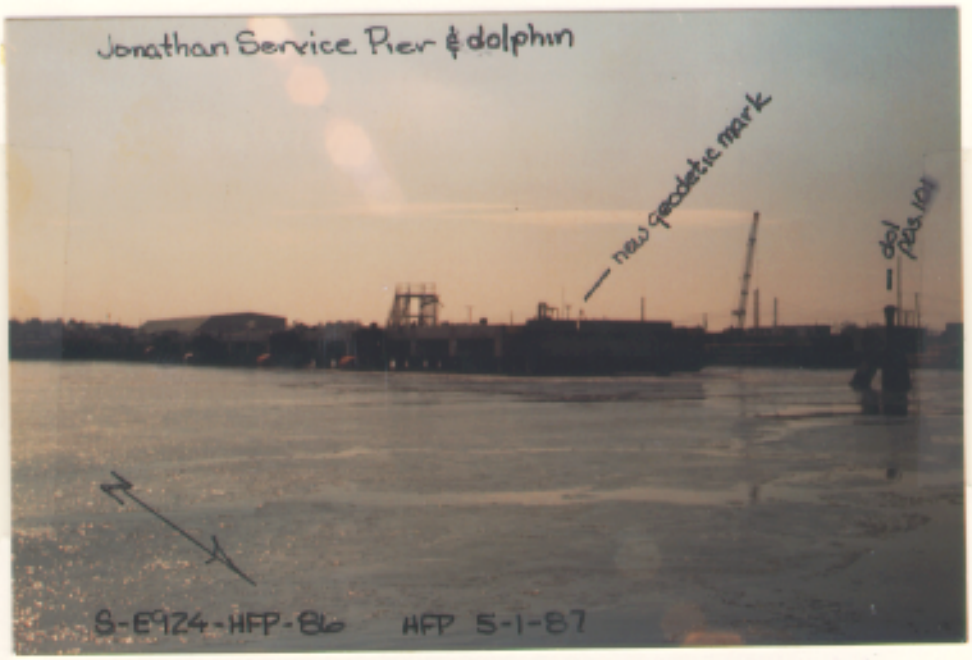
Little Creek

Jonathan Service Pier

460-4666

William Larson

Appd 4/6



Note: Day 029-030 (29-30 Jan 1987), HOA 2222 located a new geodetic mark at the end of Jonathan Service Pier, also on Day 029 (29 Jan 1987) HFP-4 personnel assisted HOA 2222 in the location of Lighted Fixed Aids at Little Creek — final geographic positions should be obtained from HOA 2222.

CHART # 12255 (OFFICIAL USE ONLY) ITEM# 8

ITEM DESCRIPTION: Two piles

SOURCE: UNKNOWN

INVESTIGATION DATE: JANUARY 29, 1987 ; MARCH 3, 1987

OIC: J. H. MADDOX

REFERENCES:

Position No. 172 - 191 Volume 1 PG. 46 - 52
214 - 238 1 65 - 72

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 55' 33"N	076° 10' 35" W
Observed:	—	—

Position Determined By: R/AZ

METHOD OF ITEM INVESTIGATION: Chain drag operations were conducted at charted location of piles. 100% coverage of area. After operations chain was observed shinny and sea grass entertangled. No hang was accomplished

CHARTING RECOMMENDATIONS: Recommend Piles be removed from chart. Concur. See Section 7.a.1) of the Evaluation Report Appd GLS

Compilation Use Only

CHART	APPLIED AS

CHART # 12255
(official use only)

ITEM# 23

ITEM DESCRIPTION: charted 12-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 14, 1987

OIC: J. H. MADDOX

REFERENCES:

Position No. 116 – 135 Volume I pg. 32–37

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 54′ 49″ N.	076° 10′ 11″ W
Observed:	—	—

Position Determined By: R/Az Mini Ranger

METHOD OF ITEM INVESTIGATION: Two different investigations were conducted at the above position. The first was a fathometer search conducted at 10 meters apart and over the Position. The second was a chain drag that covered a very wide area of the position. Both resulted in negative findings. The chain was observed shiney at the end of the investigation and covered 100% of the area.

CHARTING RECOMMENDATIONS: Recommend ~~charted~~ 12-ft sounding ~~be deleted from chart~~ not be charted and replaced by observed depths in this Field examination Concur. See section 7.a.2) of the Evaluation Report.

Compilation Use Only

CHART	APPLIED AS

CHART # 12255
(official use only)

ITEM# 24

ITEM DESCRIPTION: A charted 17-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 13, 1987

OIC: J.H. Maddox

REFERENCES:

Position No. 089 Volume 1 pg. 25

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 54' 52"N	076° 10' 48"W
Observed:	36° 54' 51.9"N	076° 10' 48.1"W

Position Determined By: R/Az Mini-Ranger

METHOD OF ITEM INVESTIGATION: A Development was conducted by fathometer search with positive results. Lines were run 10m apart at 1500 rpm

CHARTING RECOMMENDATIONS: Recommend ~~retain 17-ft sounding at chart location~~ See section 7.a.3) of the Evaluation Report

Compilation Use Only

CHART APPLIED AS

CHART # 12255
(official use only)

ITEM# 26

ITEM DESCRIPTION: Charted 18-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 13, 1987

OIC: J. H. MADDOX

REFERENCES:

Position No. 34-35 Volume 1 pg. 13

CORRECTIONS APPLIED:

Velocity – TRA Corrections /

Predicted or – Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 54'50"N	076°10'53.5W
Observed:	"	"

Position Determined By: R/Az Mini Ranger

METHOD OF ITEM INVESTIGATION: A development was conducted that involved a fathometer search over the above position. The development was run in two different directions with lines 10 meters apart. An 18-ft depth was recorded in the area of the charted position

CHARTING RECOMMENDATIONS: ~~Recommend the 18-ft sounding be retained at its presently charted location.~~ See section 7.a.3) of the Evaluation Report

Compilation Use Only

CHART APPLIED AS

CHART # 12255 (official use only)

ITEM# 27

ITEM DESCRIPTION: Charted 18-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 13, 1987

OIC: T. H. MADDOX

REFERENCES:

Position No. 19-20 Volume 1 pg. 9

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 54' 50.5"N	076° 10' 55.5"W
Observed:		

Position Determined By: R/AZ mini-Ranger

METHOD OF ITEM INVESTIGATION: An investigation (fathometer search) was conducted over the above position with positive results. An 18-ft sound was recorded in the same area by running lines 10 meters apart and at 2 different directions

CHARTING RECOMMENDATIONS: ~~Recommend the 18-ft sounding be retained at its presently charted position.~~

Compilation Use Only See Section 7.a.3) of the Evaluation Report.

CHART	APPLIED AS

CHART # 12255
(official use only)

ITEM # 28

ITEM DESCRIPTION: Charted 16-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 13, 1987

OIC: J. H MADDOX

REFERENCES:

Position No. 55-56 Volume 1 pg. 18

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 54' 50" N.	076° 10' 58.5" W.
Observed:	36° 54' 50.8" N.	076° 10' 59.6" W

Position Determined By: R/Az Mini-Ranger

METHOD OF ITEM INVESTIGATION: A 16-ft sounding was recorded at the observed position during a fathometer search that was ran w/10 meter lines and in two different directions.

CHARTING RECOMMENDATIONS: ~~Recommend the 16-ft sounding be charted at the observed position found in this field examination~~ See Section 7. a. 3) of the Evaluation Report.

Compilation Use Only

CHART APPLIED AS

CHART # 12255 (official use only) ITEM# 29

ITEM DESCRIPTION: Charted 18-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 13, 1987

OIC: J. H. MADDOX

REFERENCES:

Position No. 3-4 Volume 1 pg. 4

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors ✓

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 54′ 52″ N	076 10′ 58″ W
Observed:	"	"

Position Determined By: R/AZ Mini Ranger

METHOD OF ITEM INVESTIGATION: an investigation (fathometer search) was conducted over the position above running lines 10 meters apart and in two different directions. An 18-ft sound was ~~of~~ recorded at this position.

CHARTING RECOMMENDATIONS: ~~Recommend 18-ft charted sounding be retained at its presently charted location.~~

Compilation Use Only See section 7.a.3) of the Evaluation Report.

CHART	APPLIED AS

CHART # 12255 (official use only) ITEM# 38

ITEM DESCRIPTION: Charted 17-ft sounding

SOURCE: unascertainable miscellaneous source

INVESTIGATION DATE: January 14, 1987 and January 30, 1987

OIC: J. H. MADDOX

REFERENCES:

Position No. pos 137 - 169, 192 - 203 Volume 1 pg. 37 - 44, 54 - 57

CORRECTIONS APPLIED:

Velocity ✓ TRA Corrections ✓

Predicted or ✓ Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	36° 55' 14"N	076° 10' 45.5"W
Observed:	—	—

Position Determined By: R/AZ mini Ranger

METHOD OF ITEM INVESTIGATION: An ~~X~~ investigation was conducted on two separate days that included a fathometer search then a chain drag over the above position. The sounding plot showed depths that had previously been recorded by another survey. A chain was dragged with 100% coverage with negative results over the above position.

CHARTING RECOMMENDATIONS: Recommend 17-ft sounding be deleted from chart. Concur. See also Section 4.c. of this Evaluation Report.

Compilation Use Only

CHART APPLIED AS

Applied

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: May 15, 1987

Marine Center: Atlantic

OPR: E924

Hydrographic Sheet: FE-294

Locality: Little Creek (NAB), VA

Time Period: January 13 - March 2, 1987

Tide Station Used: 863 8776 Little Creek, VA
863 8863 Chesapeake Bay Bridge Tunnel, VA

Plane of Reference (Mean Lower Low Water): 863 8776 = 3.09 ft.
863 8863 = 24.84 ft.

Height of Mean High Water Above Plane of Reference:

863 8776 = 2.7 ft.
863 8863 = 2.7 ft.

Remarks:

Recommended Zoning:

1. In Little Creek, Va. zone direct on 863 8776
2. In Chesapeake Bay zone direct on 863 8863

Chief, Tidal Datum Quality Assurance Section

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-294

Name on Survey	A ON CHART NO. 12355	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
CHESAPEAKE BAY (title)										1
LITTLE CREEK (title)										2
VIRGINIA (title)										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
				Approved:						17
										18
				Charles E. Harrington						19
				Chief Geographer - N/CG2x5						20
				JUL 28 1987						21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: FE-294

Number of positions	178
Number of soundings	776
Number of control stations	6

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination	17	03/20/87
Verification of Field Data	71	6/10/87
Quality Control Checks	21	
Evaluation and Analysis	41	07/31/87
Final Inspection	12	07/28/87
TOTAL TIME	162	
Marine Center Approval		07/31/87

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

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: FE-294 FIELD NO.: HFP-5-1-87

Virginia, Chesapeake Bay, Little Creek

SURVEYED: 13 January to 3 March 1987

SCALE: 1:5,000 PROJECT NO.: S-E924-HFP-87

SOUNDINGS: RAYTHEON DE 719B Fathometer and Leadline

CONTROL: MOTOROLA Falcon 484 Mini-Ranger and NIKON NT-20 Theodolite (Range/Azimuth), and HP 3810B Total Station

Chief of Party.....K. W. Perrin

Surveyed by.....J. H. Maddox
.....E. L. Martin
.....D. H. Bryant
.....M. J. Briscoe
.....W. D. Davis

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

1. INTRODUCTION

a. Four page size smooth sheets and two page size chain drag investigations were generated during office processing and are inserted into the Descriptive Report. These final sheets adequately display the areas covered by this survey.

b. No unusual problems were encountered during office processing.

c. Notes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. The control is adequately discussed in sections F., and G. of the Descriptive Report.

b. The shoreline originates with a 1:5,000 scale, unreviewed photogrammetric manuscript compiled by personnel of the Photogrammetry Branch at the Atlantic Marine Center (AMC). The manuscript is unnumbered and unregistered. A conversation with the chief of the Photogrammetry Section at the AMC confirmed that the information on the manuscript would meet the criteria for a class III shoreline manuscript. The aerial photographs for this manuscript were flown in March of 1980. This shoreline is shown in black on the

present survey for orientation purposes. Changes to the shoreline were transferred from the final field sheets and are shown in red on the present survey.

3. HYDROGRAPHY

a. Crosslines are not required with this survey; however, where crossings occurred, soundings are in excellent agreement.

b. Standard depth curves within the areas of hydrography were drawn in their entirety.

c. Development of the bottom configuration and determination of least depth is considered adequate.

4. CONDITION OF SURVEY

The smooth sheets and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL with the following exceptions:

a. The annotation and quality of echograms was excellent. The scanning of these records was also excellent and complete.

b. The information in sounding volumes and raw data printouts was clear and complete.

c. The quality of the field sheets was excellent.

d. Due to mathematical errors, velocity correctors were recomputed, and velocity graphs were redrawn during office processing.

e. The chain drag conducted by the hydrographer does not cover the position of Item #38, a charted 17-foot sounding. Present survey soundings of 21 to 22 feet, however, show no indication of a shoal. See section L., page 7 of the Descriptive Report for the hydrographer's charting recommendation of Item #38.

5. JUNCTIONS

There are no junctional surveys with the present survey.

Soundings in areas where hydrography was performed are in harmony with the charted hydrography.

6. COMPARISON WITH PRIOR SURVEYS

H-9923 (1980) 1:5,000

Comparison with the present survey is good with soundings agreeing within plus or minus one (1) foot. Shoal features on the present survey are in fair agreement with the prior survey with slight shifting in various directions. Soundings in these areas agree within plus or minus two (2) feet.

The present survey is adequate to supersede the prior survey in the common areas.

7. COMPARISON WITH CHART 12255 (11th Ed., June 26/76)

a. Hydrography

The charted hydrography originates with the prior surveys, dredging surveys, and miscellaneous sources previously discussed in section 6. of the Evaluation Report for H-9923 (1980).

The following information is directed to the attention of the chart compiler concerning deficiencies of individual items discussed in section 7.a. of the Evaluation Report for H-9923 (1980) and not adequately discussed by the hydrographer:

1) Item #8 is two piles charted in Latitude 36°55'32.5"N, Longitude 76°10'34.8"W that are recommended to be revised to submerged piles in section 7.a.8) of the Evaluation Report for H-9923 (1980). A chain drag and fathometer search were conducted by the hydrographer with negative results. Present survey depths range from one (1) to three (3) feet in the immediate vicinity of the piles. The area is sonified and dragged, and is considered sufficient to disprove these two piles. It is recommended that the two piles be removed from the chart.

2) Item #23, a 12-foot sounding in Latitude 36°54'49"N, Longitude 76°10'11"W originating with an unascertainable miscellaneous source, is not shown on chart 12255. A chain drag and fathometer search was conducted by the hydrographer with negative results. Present survey depths of twenty-one (21) to twenty-three (23) feet show no indication of shoaling in the area. It is recommended that the 12-foot sounding not be charted and present survey depths be charted in this area.

3) The following items are charted soundings originating from unascertainable miscellaneous sources and were searched for by the hydrographer with negative results. Hydrography on the present survey is considered adequate to disprove these charted soundings.

Item #	Charted Sounding	Latitude(N)	Longitude(W)	Present Sounding
24	17 ft	36°54'52.0"	76°10'48.0"	18-22 ft

26	18 ft	36°54'50.0"	76°10'53.5"	19-21 ft
27	18 ft	36°54'50.5"	76°10'55.5"	20-22 ft
28	16 ft	36°54'50.5"	76°10'58.3"	18-20 ft
29	17 ft	36°54'52.0"	76°10'58.0"	19-22 ft

It is recommended that present survey hydrography supersede the charted soundings in the common area.

4) It is recommended that the uncharted pier, in the vicinity of Latitude 36°54'48.0"N, Longitude 76°10'38.0"W, and the uncharted dolphin, in Latitude 36°54'48.80"N, Longitude 76°10'37.68"W, located by the hydrographer be charted as shown on the present survey. The hydrographer states that the area around the new Jonathan Corporation pier has been dredged by the Marine Contracting Corporation. A copy of the survey of the area dredged on the west side of the pier is appended to the Descriptive Report. It is noted on the copy that all piles and dolphins within the hatched area have been extracted. It is recommended that charted piles and dolphins that fall within the limits of the hatched area be deleted from the chart. It is also recommended that piles and dolphins that are charted along the east face of the Jonathan Corporation pier be removed from the chart.

5) The charted floating sailing pier in the vicinity of Latitude 36°54'48.0"N, Longitude 76°11'08.5"W was investigated by the hydrographer. At the time of the survey the pier was on shore being repaired. It is recommended that the notation "floating pier" be added to the chart and that the floating sailing pier be charted as shown on survey H-9923 (1980).

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

b. Aids to Navigation

There are two (2) fixed aids and one (1) floating aid to navigation within the limits of the present survey. These aids appear adequate to serve their intended purposes. The following should be noted:

1) The hydrographer located a pile in Latitude 36°54'48.42"N, Longitude 76°10'24.07"W with a red buoy "2" five (5) meters to the east. This pile is located in the same position as Daymark "2" shown on H-9923 (1980). After a visual inspection by this verifier, it is recommended that Daymark "2" shown on survey H-9923 (1980) be revised to a pile baring one (1) foot at MLLW and the nun buoy "2" be charted as shown on the present survey provided the scale of the chart allows.

2) Daymark "4" was located by the hydrographer in Latitude 36°54'48.48"N, Longitude 76°10'14.44"W approximately

twenty-five (25) meters southeast of the position shown on survey H-9923 (1980). It is recommended that Day Beacon "4" be charted in the position shown on the present survey.

3) The hydrographer located Daymark "6" in Latitude 36°54'46.48"N, Longitude 76°09'59.96"W. This is 8.15 meters southwest of a pile shown on H-9923 (1980). After a visual inspection by this verifier, it is believed that the pile and Daymark "6" are one and the same. It is recommended that the pile shown on H-9923 (1980) not be charted and that Daymark "6" be charted in the position shown on the present survey.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted elsewhere in this report.

9. ADDITIONAL FIELD WORK

This is a good basic survey; no additional field work is recommended.

for Robert R. Thiel

Douglas V. Mason
Cartographic Technician
Verification of Field Data

Richard H. Whitfield

Richard H. Whitfield
Cartographer
Evaluation and Analysis

for Robert R. Thiel

Leroy G. Cram
Supervisory Cartographic Technician
Verification Check

ADDENDUM TO ACCOMPANY SURVEY FE-294

The average values for shifting surveyed NAD 1927 positions to NAD 1983 positions for this survey are as follows:

Position shifts (NAD 1983 minus NAD 1927):
Average latitude shift = 0.529 seconds = 16.3 meters
Average longitude shift = -1.227 seconds = -30.4 meters

INSPECTION REPORT
FE-294

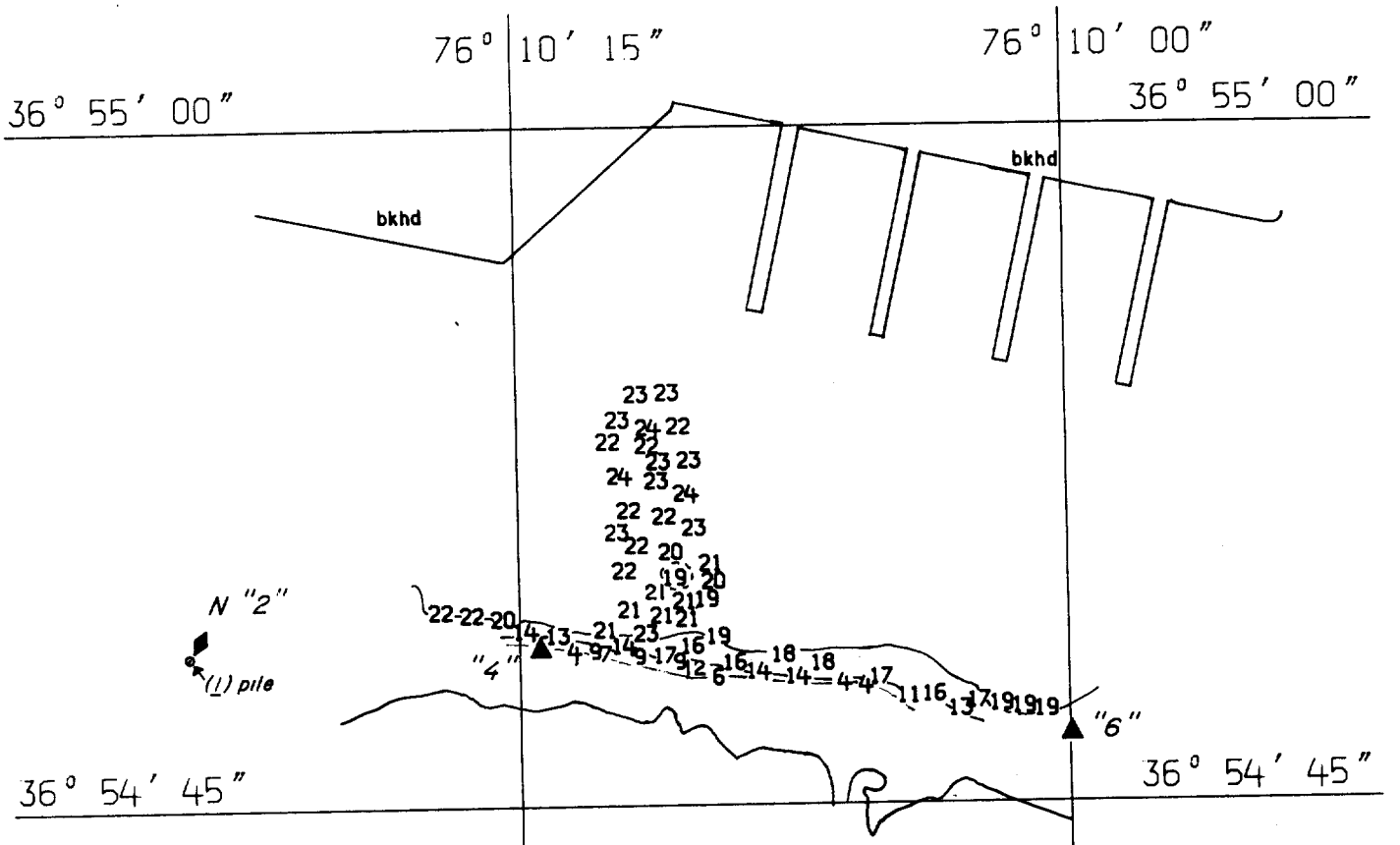
The completed survey has been inspected with regard to survey coverage, presentation of survey results, and the verification or disproval of the assigned items for investigation. The survey was found to be in compliance with National Ocean Service requirements except as noted in the Evaluation Report by the evaluator. The survey records comply with NOS requirements except where noted in the report.

R. G. Roberson
Chief, Evaluation and Analysis Group
Hydrographic Surveys Branch

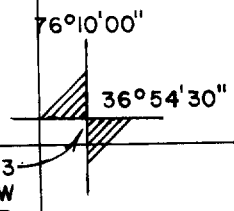
R. D. Sanocki
Acting Chief, Hydrographic Surveys Branch

Approved July 31, 1987

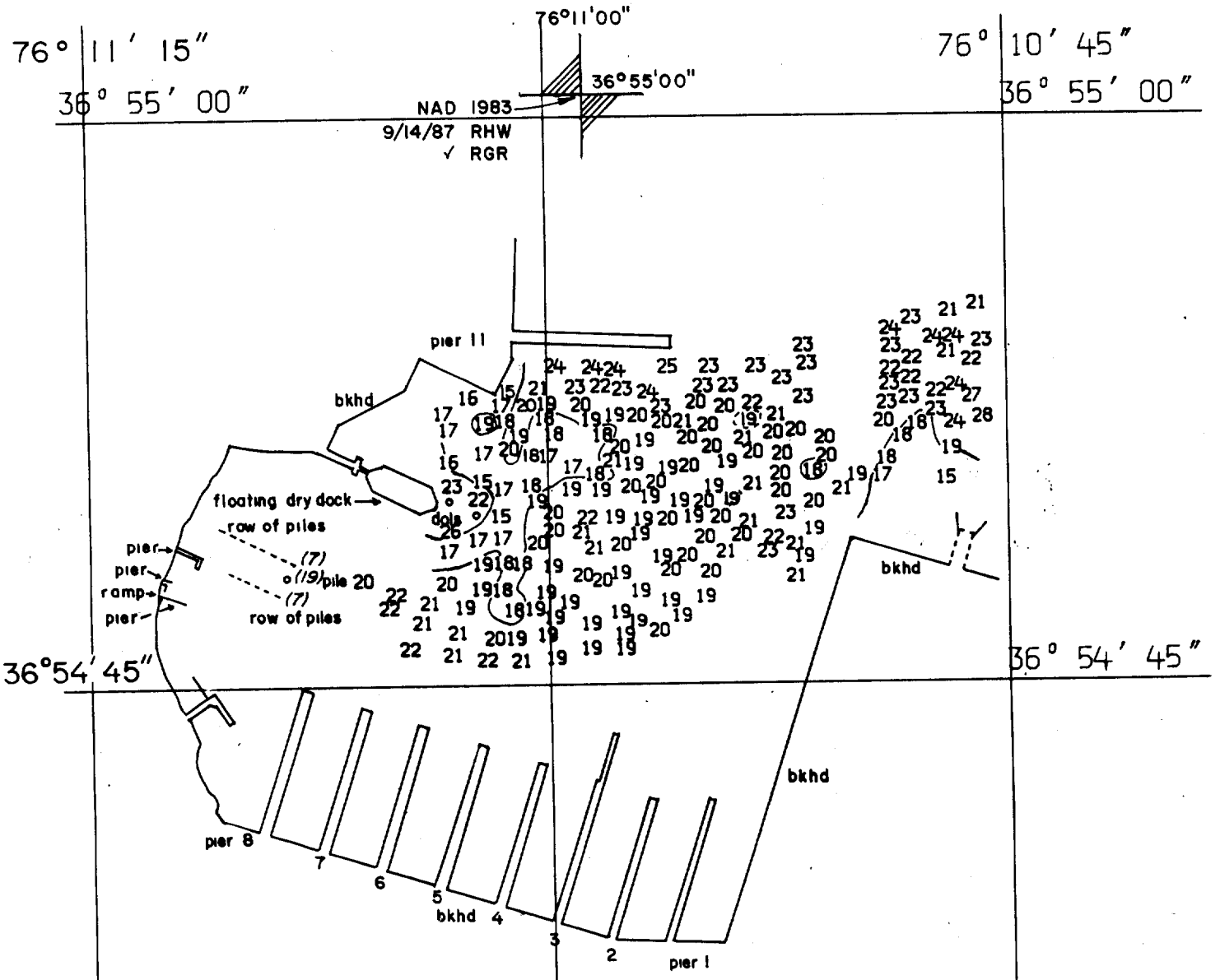
Ray E. Moses, RADM, NOAA
Director, Atlantic Marine Center

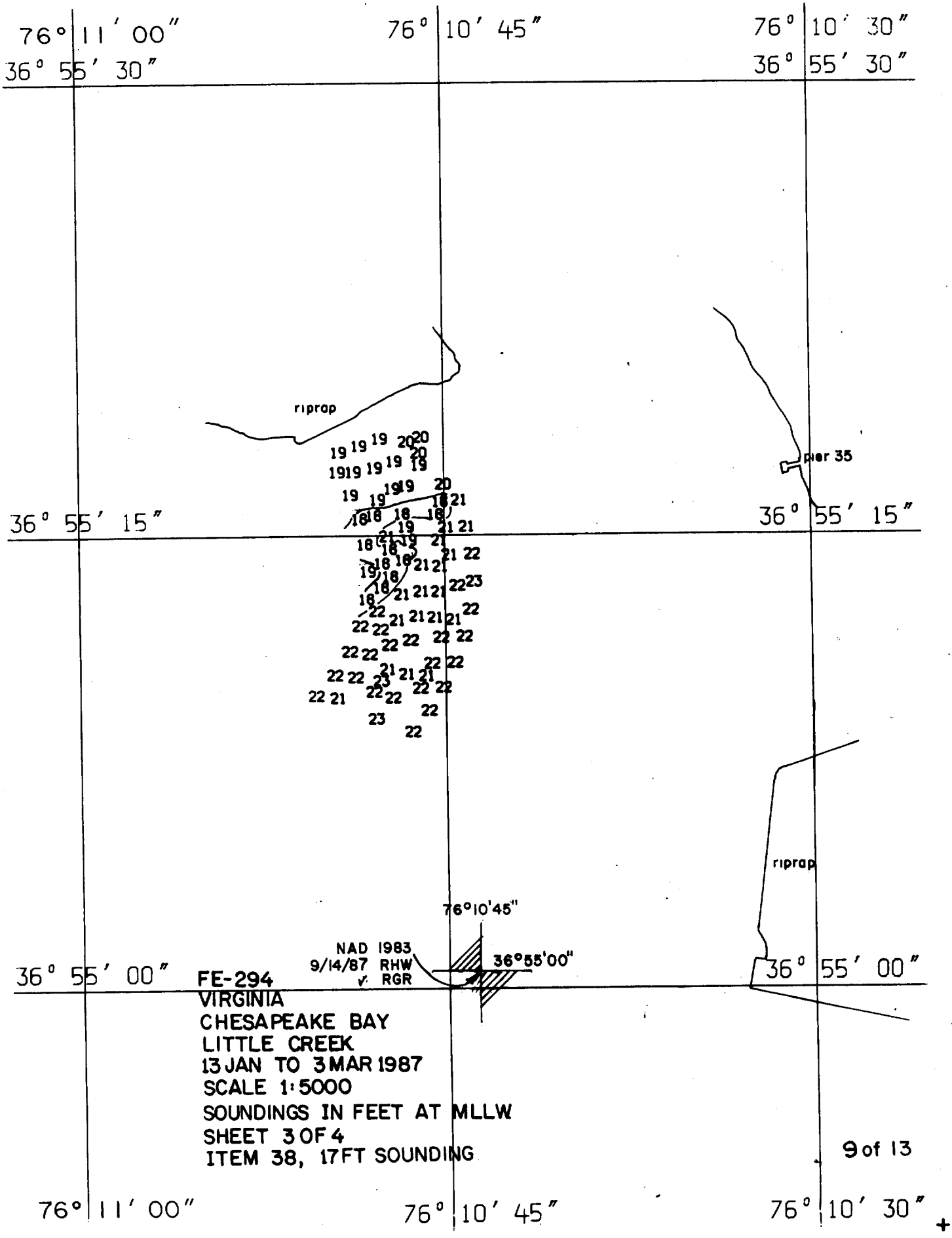


FE-294
VIRGINIA
CHESAPEAKE BAY.
LITTLE CREEK
13 JAN TO 3 MAR 1987
SCALE 1:5000
SOUNDINGS IN FEET AT MLLW
SHEET 1 OF 4
ITEM 23, 12 FT SOUNDING



NAD 1983
9/14/87 RHW
✓ RGR


76° 11' 15"
76°11'00"
76° 10' 45"
36° 55' 00"
36°55'00"
36° 55' 00"
NAD 1983
9/14/87 RHW
✓ RGR
pier 11
bkhd
floating dry dock
row of piles
(7)
(19) pile 20
(7)
row of piles
pier
pier
ramp
pier
bkhd
36°54' 45"
36° 54' 45"
bkhd
pier 8
7
6
5
bkhd
4
3
2
pier 1
FE-294
VIRGINIA
CHESAPEAKE BAY
LITTLE CREEK
13JAN TO 3MAR 1987
SCALE 1:5000
SOUNDINGS IN FEET AT MLLW
SHEET 2 OF 4
ITEMS 24,26,27,28,29,
CHARTED SOUNDINGS
36° 54' 30"
36° 54' 30"
76° 11' 15"
76° 11' 00"
76° 10' 45"


76° 11′ 00″
76° 10′ 45″
76° 10′ 30″
36° 55′ 30″
36° 55′ 30″
riprap
pier 35
36° 55′ 15″
36° 55′ 15″
riprap
76°10'45"
NAD 1983
9/14/87 RHW
RGR
36°55'00"
36° 55′ 00″
36° 55′ 00″
FE-294
VIRGINIA
CHESAPEAKE BAY
LITTLE CREEK
13 JAN TO 3 MAR 1987
SCALE 1:5000
SOUNDINGS IN FEET AT MLLW
SHEET 3 OF 4
ITEM 38, 17FT SOUNDING
76° 11′ 00″
76° 10′ 45″
76° 10′ 30″

76° 10′ 45″

36° 55′ 00″

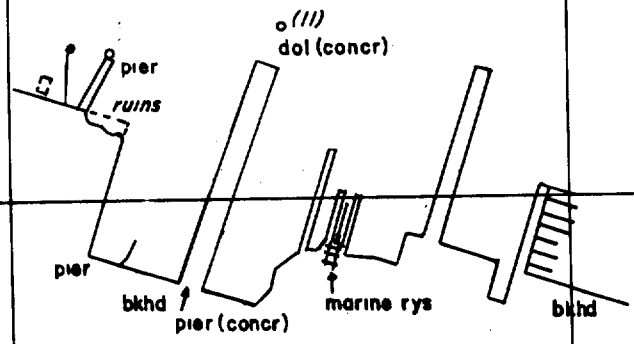
76°10'30"

36°55'00"

NAD 1983

9/14/87 RHW

✓ RGR



36° 54′ 45″

FE-294
VIRGINIA
CHESAPEAKE BAY
LITTLE CREEK
13 JAN TO 3 MAR 1987
SCALE 1:5000
SOUNDINGS IN FEET AT MLLW
SHEET 4 OF 4
ITEM NEW PIER

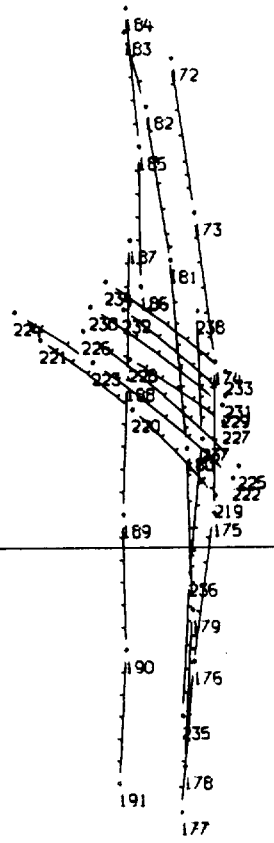
36° 54′ 30″

76° 10′ 45″

76° 10′ 30″

76° 10′ 45″ 76° 10′ 30″

36° 55′ 45″ 36° 55′ 45″



36° 55′ 30″ 36° 55′ 30″

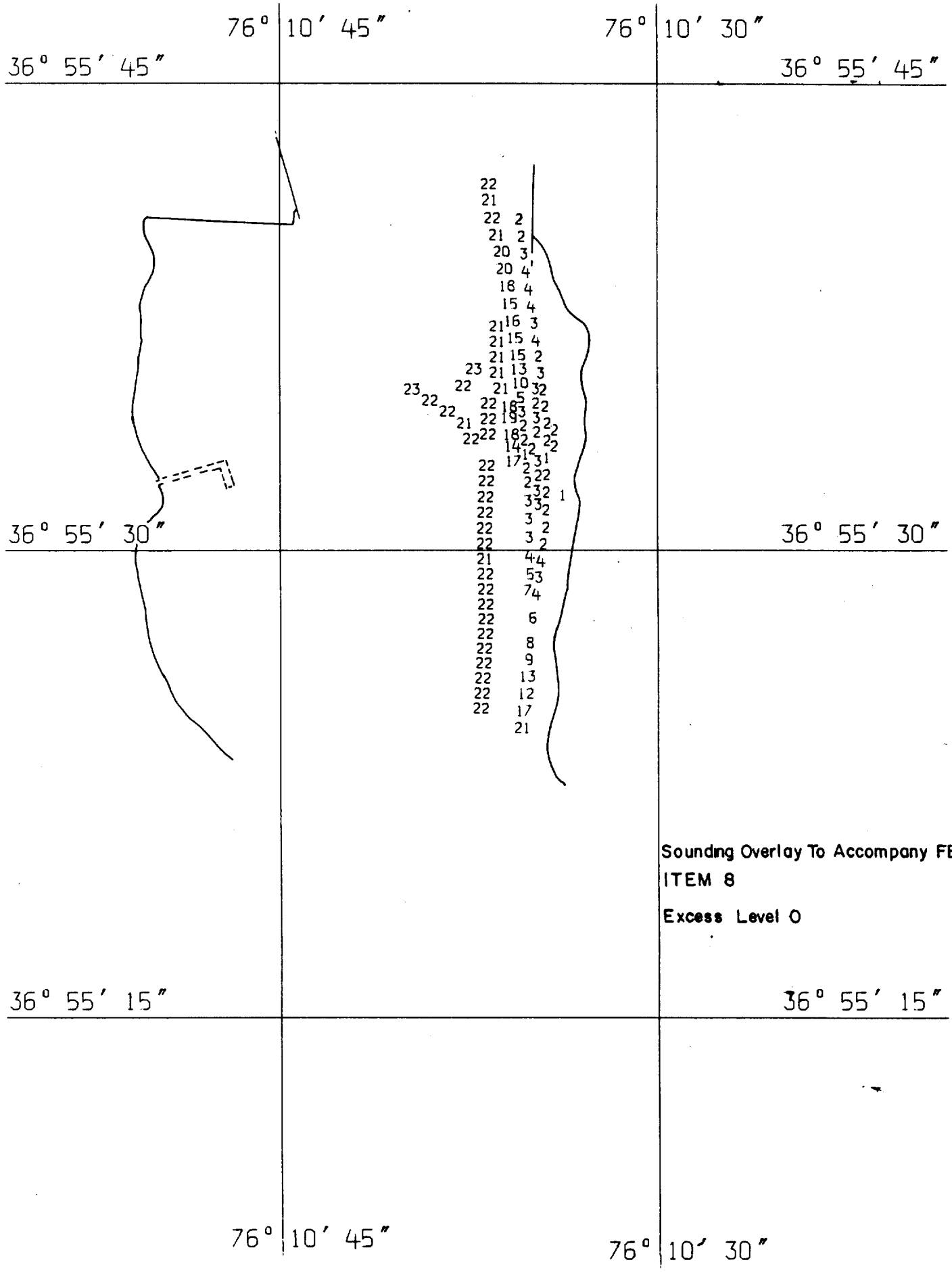
Position Overlay To Accompany FE - 294

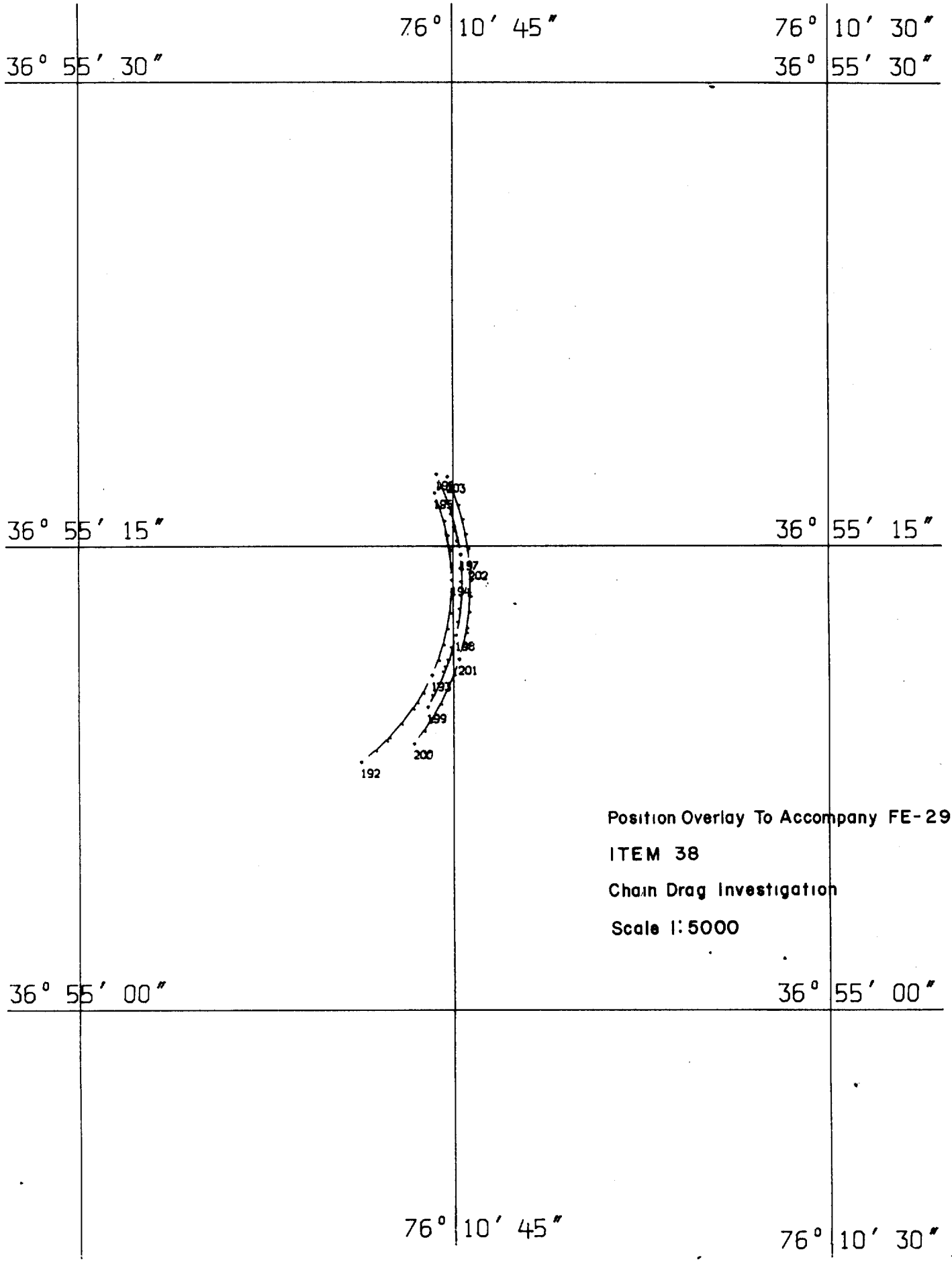
ITEM 8

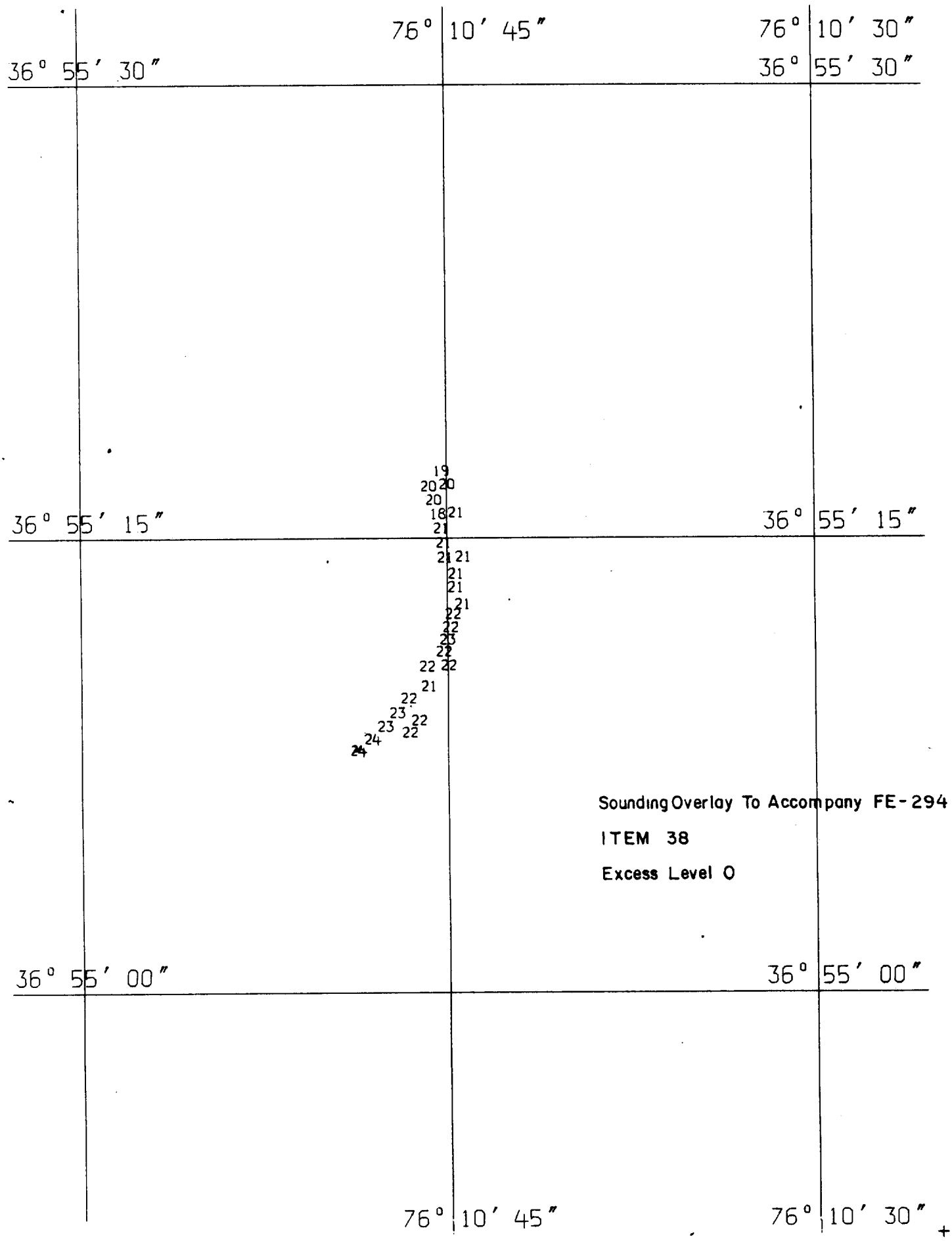
Chain Drag Investigation
Scale 1:5000

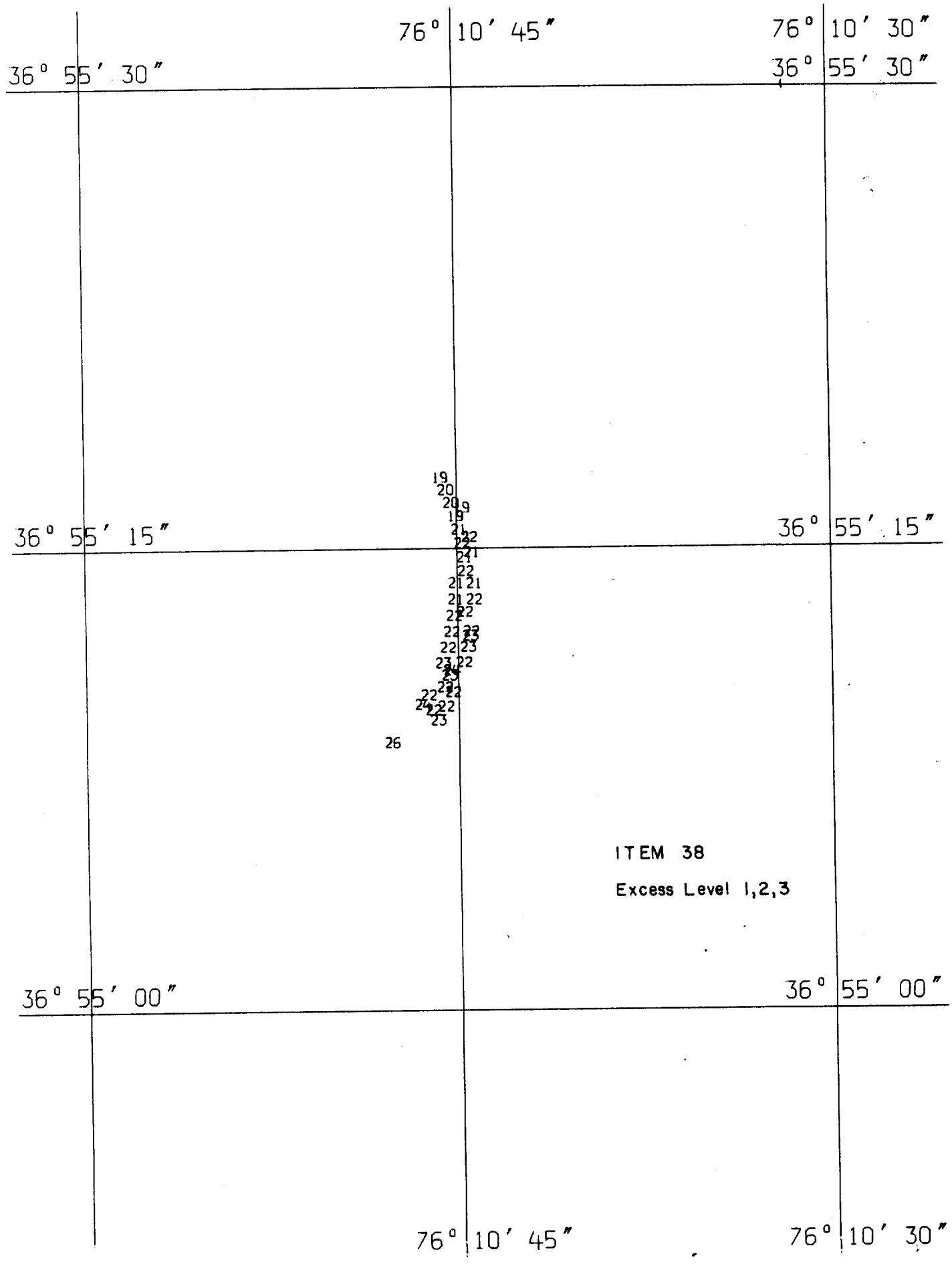
36° 55′ 15″ 36° 55′ 15″

76° 10′ 45″ 76° 10′ 30″


76° 10′ 45″
76° 10′ 30″
36° 55′ 45″
36° 55′ 30″
36° 55′ 15″
Sounding Overlay To Accompany FE-294
ITEM 8
Excess Level 0

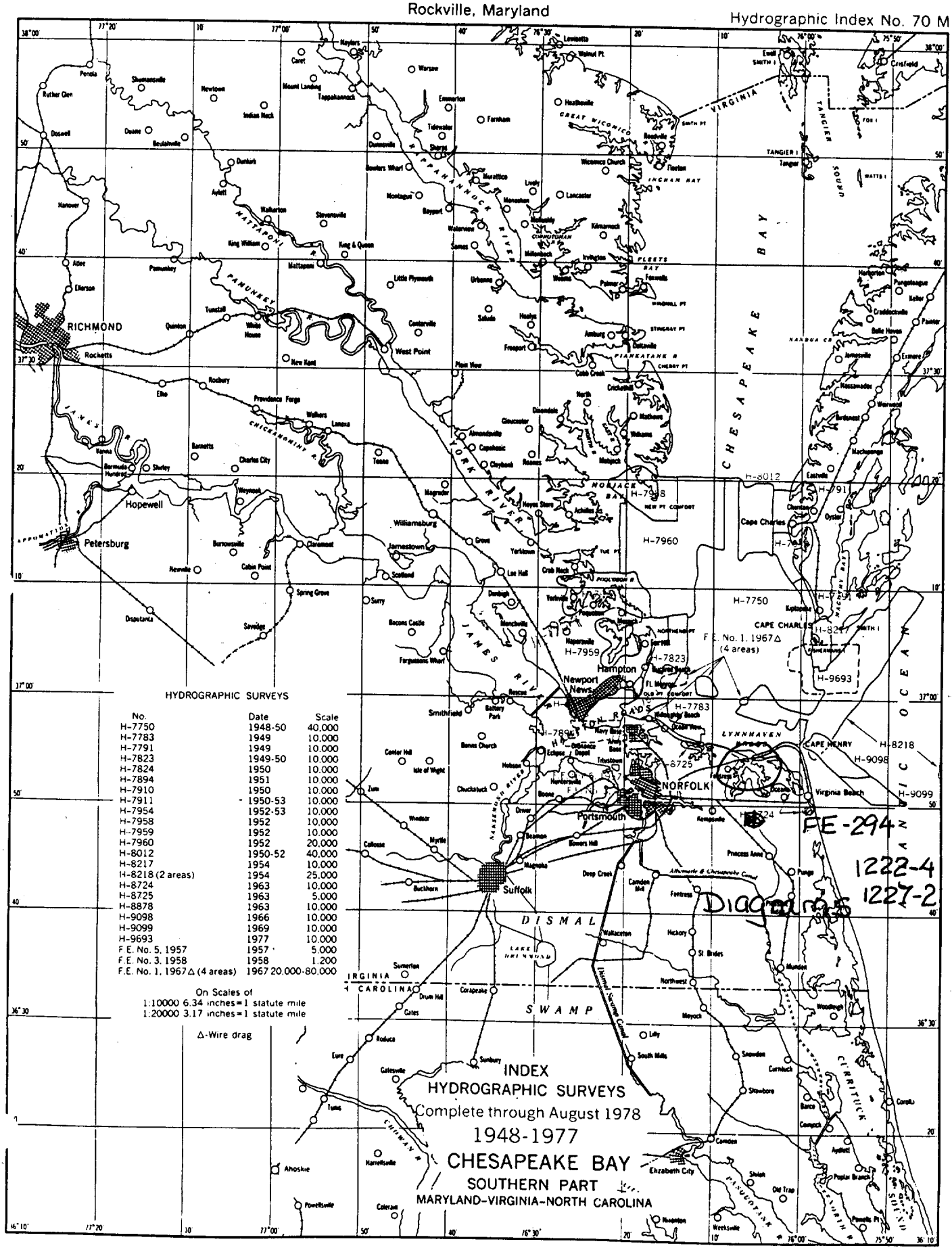

76° 10′ 45″
76° 10′ 30″
36° 55′ 30″
36° 55′ 15″
36° 55′ 00″
203
197
202
194
186
201
199
200
192
Position Overlay To Accompany FE-294
ITEM 38
Chain Drag Investigation
Scale 1:5000


76° 10′ 45″
76° 10′ 30″
36° 55′ 30″
36° 55′ 30″
19
20 20
20
18 21
21
21
21 21
21
21
21
22
22
23
22
22 22
21
22
23
23 22
24 22
24
36° 55′ 15″
36° 55′ 15″
Sounding Overlay To Accompany FE-294
ITEM 38
Excess Level 0
36° 55′ 00″
36° 55′ 00″
76° 10′ 45″
76° 10′ 30″


76° 10' 45"
76° 10' 30"
36° 55' 30"
36° 55' 30"
36° 55' 15"
36° 55' 15"
36° 55' 00"
36° 55' 00"
76° 10' 45"
76° 10' 30"
ITEM 38
Excess Level 1,2,3

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

Hydrographic Index No. 70 M



HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-7750	1948-50	40,000
H-7783	1949	10,000
H-7791	1949	10,000
H-7823	1949-50	10,000
H-7824	1950	10,000
H-7894	1951	10,000
H-7910	1950	10,000
H-7911	1950-53	10,000
H-7954	1952-53	10,000
H-7958	1952	10,000
H-7959	1952	10,000
H-7960	1952	20,000
H-8012	1950-52	40,000
H-8217	1954	10,000
H-8218 (2 areas)	1954	25,000
H-8724	1963	10,000
H-8725	1963	5,000
H-8878	1963	10,000
H-9098	1966	10,000
H-9099	1969	10,000
H-9693	1977	10,000
F.E. No. 5, 1957	1957	5,000
F.E. No. 3, 1958	1958	1,200
F.E. No. 1, 1967Δ (4 areas)	1967	20,000-80,000

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

Δ-Wire drag

INDEX
HYDROGRAPHIC SURVEYS
Complete through August 1978
1948-1977
CHESAPEAKE BAY
SOUTHERN PART
MARYLAND-VIRGINIA-NORTH CAROLINA

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1222-4
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NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-294

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
12255	11-19-87	C. STANLEY	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 16 Appd Survey in full.
			[redacted]
12256	5/23/89	[signature]	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 7
12254	5/23/89	[signature]	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 56
12222	6/23/89	[signature]	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 32
12221	10/26/89	[signature]	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 85
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.