

AMENDMENT OF SOLICITATION

1. AMENDMENT/MODIFICATION NO. <p style="text-align: right;">0001</p>		2. EFFECTIVE DATE <p style="text-align: right;">SEP 12, 2002</p>	
3. ISSUED BY  DEPARTMENT OF THE ARMY, BALTIMORE DISTRICT CORPS OF ENGINEERS P.O. BOX 1715 BALTIMORE, MARYLAND 21203-1715  CODE: _____			
4. NAME AND ADDRESS OF CONTRACTOR (Name, street, county, State and ZIP Code)		4A. AMENDMENT OF SOLICITATION NO. <p style="text-align: right;">DACW31-02-B-0041</p>	
		4B. DATED (SEE ITEM 5) <p style="text-align: right;">AUG 28, 2002</p>	
5. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS  The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ___ is extended, <b>X</b> is not extended. BID OPENING DATE: 11:00 AM, Local Time SEP 27, 2002 Others must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 4 and 8, and returning <u> 1 </u> copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of the amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.			
6. ACCOUNTING AND APPROPRIATION DATA (If required) MAINTENANCE DREDGING, WICOMIC RIVER, WICOMIC COUNTY, MARYLAND			
7. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subjectmatter where feasible.)  <u>SOLICITATION:</u>  (1) <u>SECTION 00010, UNIT PRICE SCHEDULE:</u> Delete the Unit Price Schedule, as originally issued, and substitute therefor the attached revised Unit Price Schedule, dated SEP 10, 2002  <u>SPECIFICATIONS:</u>  (2) <u>Page TOC-2, ATTACHMENTS, Items #4 and 5:</u> Revise these items to read:  "4. State of Maryland, Water Quality Certification No. 02-WQ-0006 5. Subsurface Exploration Notes, Location Maps and Tests Results"  Except as provided herein, all terms and conditions of the document referenced in Item 4A, as heretofore changed, remains unchanged and in full force.			
8. NAME AND TITLE OF SIGNER (Type or print)		9. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	10. DATE SIGNED

(3) SECTION 1, Page 1, Paragraph 1, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK: Replace entire paragraph with the following: "The Contractor shall be required to commence work under this contract within 10 calendar days after the date of receipt by him/her of Notice to Proceed, to prosecute said work diligently and to complete the entire work ready for use not later than 150 calendar days after the date of receipt by him of notice to proceed. Due to environmental concerns, dredging is permitted between June 16 and Feb 14 in the upper reaches from Stations 84+000 to 159+000. If an extension of time is granted to complete the remaining work during the next succeeding environmentally acceptable dredging period of June 16 to February 14, additional mobilization and demobilization as a result of time extensions granted under this contract shall be the responsibility of the Contractor. Liquidated damages shall not be charged during the environmental constraint periods of February 15 through June 15 for the upper reach. Should the total quantity of material to be paid for and actually removed under the contract exceed the limit established in the Special Contract Requirement VARIATIONS IN ESTIMATED QUANTITY, additional time shall be allowed at the rate of one calendar day for each 2,000 cubic yards in excess of the established limit. The time stated for completion shall include final clean up of the premises. The Contractor's attention is called to Technical Provisions, paragraph 5.3.1 CONTROL OF DISPOSAL AREA EFFLUENT and paragraph 14. SEDIMENT CONTROL.

(4) SECTION 1, Page 1, Paragraph 2, ESTIMATED QUANTITIES: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 2:

"2. ESTIMATED QUANTITIES: The total estimated quantities of material necessary to be removed from within the specified limits, as shown on the contract drawings exclusive of allowable overdepth, to complete the work is approximately 116,233 cubic yards place measurement. The maximum amount of allowable overdepth dredging is estimated to be 66,563 cubic yards place measurement."

Channel Station	Project Depth (14 feet)	Allowable Overdepth (1 foot)	Total (cy)	Designated Disposal Site
105+300 to 106+300	2,107	2,631	4,738	Simm's Wharf
108+000 to 109+100	4,424	4,462	8,886	Simm's Wharf
112+100 to 114+000	6,182	4,463	10,645	Simm's Wharf
114+800 to 118+000	14,810	7,982	22,792	Simm's Wharf
Totals for Simm's Wharf	27,523	19,538	47,061	
140+000 to 148+200	88,710	47,025	135,735	Sharp's Point

(5) SECTION 2, Page 2, Paragraph 5.1: Revise the first and second sentences of this paragraph to read: "The Contractor will use the existing diked areas that have previously been used for the disposal of dredge material at Sharp's Point (Cells 1, 2, 3, 7, and 8), and Simm's Wharf (Upper Cell and Lower Cell). The Contractor will increase the height of the perimeter dikes at Sharp's Point and Simms Wharf as described in Paragraph 7 and as shown in the contract drawings."

(6) SECTION 2, Page 3, Paragraph 5.4, Disposal Weir Box: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 5.4:

"5.4 Disposal Weir Box: It shall be the responsibility of the Contractor to design, construct, and maintain weir boxes of sufficient size and capacity to take care of the effluent from the disposal area, and to prevent any material from escaping through the weir box or boxes in accordance with standard tests outlined herein. It is the intent of these specifications that the escape of material from the disposal area be held to an absolute practicable minimum. Pipes from the weir box or boxes through the dike shall be of adequate size and number to carry the effluent water. Pipe weirs shall not be permitted. Minimum weir box requirements are as follows:

(a) An effluent level board shall be installed on the side of the weir box. It shall be graduated in one-tenth of a foot intervals beginning with a datum level of zero feet at the elevation of the bottom of the weir box discharge pipe. The graduations shall continue to 1-foot above the highest point on the dike. Each foot shall be clearly marked and visible from the dike.

(b) A walkway and safety railing shall be installed to the weir box.

(c) The existing weir box was constructed and installed outside the limits of the dike toe and the effluent pipe extends beyond the dike toe to open water as specified in paragraph 5.3.2.

(d) Suitable screen shall be installed around the weir box(es) in order to stop debris entering into the weir box(es).

The Contractor shall be responsible for the design and construction of the new weir boxes and the excavation and reconstruction of the dike embankment. The new weir boxes shall be located outside of the limits of the proposed raised dike toe in the vicinity of the existing weir boxes. Any existing weir box in the footprint of the proposed dike raising shall be removed in its entirety. The ends of the effluent discharge pipes shall also extend beyond the dike toe. Embankment material excavated for the weir box installations shall be stockpiled and used for reconstruction of the dike. Temporary excavation slopes through the existing embankments shall be no steeper than 1H on 1V to facilitate compaction. Placement of material in the reconstructed dike shall be made in lifts not to exceed 8 inches in uncompacted thickness. Each lift shall be compacted by the controlled use of the hauling and spreading equipment or with approved power tampers. Compaction in areas within 3 feet of the discharge pipe shall be accomplished utilizing power tampers, approved by the Contracting Officer, to a density equivalent to that obtained by use of the hauling and spreading equipment in

the adjacent fill. In areas where power tampers are utilized for compaction, the lift thickness shall not exceed 4 inches. The moisture content of the dike embankment material shall be controlled as required to allow for proper compaction. The Contractor shall reconstruct the dike to the original configuration."

(7) SECTION 2, Page 5, Paragraph 7.1 General: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 7.1:

"7.1 General: The Contractor shall be responsible for the construction and integrity of diked disposal areas and confining dikes which must confine the dredged material throughout the life of the contract. The dike shall be constructed at the location shown on the drawings or as otherwise directed or approved by the Contracting Officer. At no time will dredge pipes be permitted to enter a disposal area through the dike. Under no circumstances shall the operating freeboard be less than 2 feet at any time. Freeboard shall be defined as the measurement between the elevation of the retained dredged slurry and the crest elevation of the confining dike. The Government has performed Borings at the site and the logs of the borings are included herein. Laboratory test results are also included."

(8) SECTION 2, Page 5, Paragraph 7.2. Stripping and Excavation: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 7.2:

"7.2. Stripping and Excavation: The dike foundation and borrow area shall be stripped of all trees and vegetation. Portions of the existing dikes that will have contact with new embankment construction shall be stripped of all trees and vegetation. Stripped vegetation or other organic material or earth containing organic material in quantities considered excessive by the Contracting Officer are not suitable for use in the dike embankment and may be spoiled inside the diked area. No material shall be excavated within 30 feet of the inside or outside toe of the dike, except for required removal of stripped vegetation or other organic material. The excavated slopes in the interior of the borrow area shall be no steeper than 1.5 horizontal on 1 vertical."

(9) SECTION 2, Page 6, Paragraph 7.4 Embankment Material: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 7.4:

"7.4 Embankment Material: The dike shall be constructed of material excavated from within the interior of the dike confining area as directed or approved by the Contracting Officer. Dissimilar excavated materials shall be blended so that the materials used to construct the dike are relatively consistent. The dike shall be constructed from suitable materials free of frozen material and organic material and shall be constructed on a non-frozen surface. The moisture content of the dike embankment material shall be controlled as required to allow for proper compaction such that the fill will not be excessively displaced by the normal operating procedure of the hauling and spreading equipment. If, in the opinion of the Contracting Officer, the material is too wet to facilitate the proper compaction, it shall be removed

from the fill and replaced or dried out by any method approved by the Contracting Officer."

(10) SECTION 2, Page 6, Paragraph 7.5 Dike Construction: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 7.5:

"7.5 Dike Construction: The disposal area was previously used as a dredge disposal containment site. The current project is divided into two sites, Sharp's Point and Simm's Wharf. The contractor shall utilize the existing dikes as part of the dike structure by adding embankment on the interior side, as shown on the attached drawings. Any existing spur dikes may be removed and if suitable, its material may be used in construction of the perimeter dikes.

Dike widths, slopes and maximum raising heights shall be as specified herein and as shown on the drawings. All dikes shall have a minimum crest width of 8 feet. All dikes shall be raised once no higher than the maximum elevations set in TABLE 1 and TABLE 2.

TABLE 1 - Sharps Point

Cell Number	Maximum Dike Elevation
Cell #1	+50 feet
Cell #2	+47 feet
Cell #3	+45 feet
Cell #7	+46 feet
Cell #8	+40 feet

TABLE 2 - Simms Property

Cell Number	Maximum Dike Elevation
Upper Cell	+27 feet
Lower Cell	+21 feet

Exterior side slopes of the new embankment shall be no steeper than 2.5 horizontal on 1 vertical and interior slopes shall be no steeper than 2 horizontal on 1 vertical. The requirements for constructing cross and spur dikes shall be the same as for the confining dikes. Existing exterior dike slopes shall not be disturbed except as necessary to perform the work specified herein and on the drawings and must be performed under the direction of the Contracting Officer. Where the existing exterior dike slopes are steeper than 2H:1V, the work requires projecting a 2 horizontal on 1 vertical slope from the outside toe of the existing dike to elevation of the existing dike crest. Refer to the attached drawings.

Placement of material in the dike shall be made in horizontal lifts not to exceed 12 inches in uncompacted thickness. Each lift shall be compacted by the controlled use of the hauling and spreading equipment. Movement of equipment shall be distributed as much as practicable over the surface of each lift to provide uniform compaction and complete coverage of fill. The contractor shall

maintain slopes that are equal to or less steep than those specified at all times during the construction of the confining dikes.

Stabilization of the completed dike slopes shall be accomplished in accordance with the applicable requirements of the state of Maryland as set forth in paragraph SEDIMENT CONTROL.

REPAIR OF ANY EXISTING "DAMAGED" AREAS: The Contractor shall remove any ground cover on the exterior slopes to allow for a thorough inspection. This thorough inspection is necessary along the entire area of exterior slopes to find any holes, sloughs or other existing conditions that would compromise the dikes integrity. Any damaged area shall be repair in its entirety. The damaged area shall be removed to the full depth and reconstructed within the above requirements under paragraph DIKE CONSTRUCTION."

(11) SECTION 2, Page 6, Paragraph 7.6 Remedial Measures: Delete this paragraph, as originally issued, and substitute therefor the following new Paragraph 7.6:

"7.6 Remedial Measures: The contractor shall maintain the following materials at the disposal site, and upon the direction of the Contracting Officer, be able to make any necessary repairs to the dike within 24 hours.

a. 4000 sq. ft. of non-woven or woven geotextile (AMOCO Non-woven Geotextile-4508 or 4553 or equivalent).

b. 4000 sq. ft. of an impervious plastic liner.

c. A list of available local suppliers of sand and gravel that can supply approximately 300 cubic yards of sand and gravel within 8 hours notice."

(12) SECTION 2, Page 10, Paragraph 12.3 Dike Construction: Revise the first sentence of this paragraph to read: "Dike construction shall include all costs in connection with excavation, raising, and construction of the existing diked disposal areas at Sharp's Point and Simms Wharf to contain the dredged material from the Federal navigation project in the Wicomico River."

SECTION 2, ATTACHMENTS:

(13) Add the attached Water Quality Certification No. 02-WQ-0006 to the end of this section.

(14) Add the attached Subsurface Exploration Notes, Location Maps and Tests Results section.

DRAWINGS :

(15) Sheet 5: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1.

(16) Sheet 6: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1.

(17) Sheet 8: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1.

(18) Sheet 9: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1.

(19) Sheet 10: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1.

ATTACHMENTS:

Revised Unit Price Schedule, dated SEP 10, 2002  
Water Quality Certification No. 02-WQ-0006  
Subsurface Exploration Notes, Location Maps and Tests Results  
Revised Drawings 5, 6, 8, 9, and 10 with Revision #1

SECTION 00010 - SUPPLIES OR SERVICES AND PRICES

UNIT PRICE SCHEDULE  
Revised: SEP 10, 2002

Item No.	Description	Estimated Quantity	Unit	Price	Amount
0001	Mobilization and Demobilization	---	JOB	L.S.	\$_____
0002	Dike Construction				
0002A	Simms Wharf	---	JOB	L.S.	\$_____
0002B	Sharps Point	---	JOB	L.S.	\$_____
0003	Maintenance Dredging				
0003A	Simms Wharf	47,061	C.Y.	\$_____	\$_____
0003B	Sharps Point	135,735	C.Y.	\$_____	\$_____
TOTAL ESTIMATED BID AMOUNT				\$_____	

DACW31-02-B-0041



# MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore, Maryland 21224

(410) 631-3000 • 1-800-633-6101 • [http:// www. mde. state. md. us](http://www.mde.state.md.us)

Parris N. Glendening  
Governor

Merrylin Zaw-Mon  
Acting Secretary

## WATER QUALITY CERTIFICATION

NABOP-TN-02-03

CERTIFICATION 02-WQ-0006

PUBLIC NOTICE DATE May 2, 2002

TO: Operations Division  
Baltimore District, Corps of Engineers  
P.O. Box 1715  
Baltimore, MD 21203-1715

RE: Maintenance Dredging, Wicomico River,  
Somerset and Wicomico Counties.  
Approximately 350,000 cubic yards of  
material will be removed and placed in  
previously used upland placement sites  
and at a new placement site proposed  
adjacent to Sharp's Point.

This water quality certification is issued under authority of Section 401 of the Federal Water Pollution Control Act and its Amendments and the Environment Article, Sections 9-313 - 9-323, inclusive, Annotated Code of Maryland. A copy of this required certification has been sent to the Corps of Engineers. This certification does not relieve the applicant of responsibility for obtaining any other approvals, licenses or permits in accordance with federal, State, or local requirements and does not authorize commencement of the proposed project. The Maryland Department of the Environment has determined from a review of the plans that the construction of this facility and its subsequent operation as noted herein will not violate Maryland's water quality standards, provided that the following conditions are satisfied.

The applicant shall comply with the conditions marked (X) below:

- (X) (1) The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant is to notify this department ten (10) days prior to commencing work. Verbal notification is to be followed by written notice within ten (10) days.
- (X) (2) The proposed project shall be constructed in accordance with the plan and its revisions as approved by the:
- (X) (a) Corps of Engineers  
( ) (b) Water Management Administration
- (X) (3) All fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.
- (X) (4) The applicant shall notify this Department upon transferring this ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request transfer of this water quality certification to his/her name.
- (X) (5) The certification holder shall allow the Maryland Department of the Environment or its representative to inspect the project area at reasonable times and to inspect records regarding this project.

Page Two Water Quality Certification

( ) (6) Construction of any bulkhead shall be completed prior to filling behind the bulkhead. The bulkhead shall be constructed in such a manner so as to prevent the loss of fill material to waters of this State. Only clean fill, which is free of organic, metallic, toxic or deleterious materials shall be used.

(X) (7) The disturbance of the bottom of the water and sediment transport into the adjacent State waters shall be minimized. The applicant shall obtain and certify compliance with a grading and sediment control plan which has been approved by the:

- ( ) (a) \_\_\_\_\_ Soil Conservation District or
- ( ) (b) Erosion and Control Representative, Division of Environmental Services, Bureau of Highways, Department of Public Works of the City of Baltimore or
- (X) (c) The Department of the Environment, Water Management Administration or
- ( ) (d) Montgomery County Department of Environmental Protection.

The approved plan shall be available at the project site during all phases of construction.

(X) (8) The spoil disposal area(s), including dikes where applicable, shall be constructed to limit the suspended solids content in the discharge to the waters of this State to four hundred (400) parts per million or less.

(X) (9) Dredging shall be done only in the period June 16 through February 14.

( ) (10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway. The natural vegetation shall be maintained and restored when disturbed or eroded. Stormwater drainage facilities shall be designed, implemented, operated and maintained in accordance with the requirements of the applicable approving authority.

( ) (11) \_\_\_\_\_ shall provide to the Water Management Administration a stormwater management plan including cross-sections which incorporates effective pollutant removal strategies in uplands to treat a minimum of the first one-half inch of runoff from impervious surfaces prior to release of stormwater into State waters or wetlands. There shall be no discharge of untreated stormwater to State waters or wetlands. The plan shall be provided by \_\_\_\_\_ and shall be implemented by \_\_\_\_\_.

( ) (12) \_\_\_\_\_ shall provide to the Water Management Administration a mitigation plan for the construction of \_\_\_\_\_ acre(s) of \_\_\_\_\_ wetland for review and approval by \_\_\_\_\_. The plan shall be implemented by \_\_\_\_\_.

- The plan shall show:
- the source of hydrology for the constructed wetland
  - the source and amount of soil to be used in constructing the wetland
  - the species, size and density of vegetation to be planted in the constructed wetland and a planting schedule.
  - a monitoring/maintenance plan.

( ) (13) \_\_\_\_\_ shall monitor the mitigation site for a period of five years and shall determine whether the wetland construction has been successful. A successful mitigation project shall result in: \_\_\_\_\_ plants/acre and 85% survivability of plants in forested and scrub/shrub wetlands and plants covering 85% of the area for emergent wetlands. If these standards are not met,

\_\_\_\_\_ shall determine the reason(s) for failure, the problem(s) shall be corrected, and the area(s) shall be replanted and monitored.

Page Three Water Quality Certification

( ) (14) The mitigation site shall be constructed in accordance with the plan, dated \_\_\_\_\_.

( ) (15) \_\_\_\_\_ shall provide a \_\_\_\_\_ plan for review and approval by \_\_\_\_\_. This plan shall be implemented by \_\_\_\_\_.

( ) (16) At least one culvert in every stream crossing shall be depressed at least one foot below existing stream bottom under the low flow condition. A low flow channel shall be provided through any riprap structures. The culvert shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species.

( ) (17) Stormwater discharges from ponds, stormwater management outfalls, and stormwater facilities shall have a velocity no greater than four feet per second for the two year storm in order to prevent erosion in the receiving waterway or wetland.

( ) (18) Future stormwater discharges to certified pond(s) are prohibited unless the first one half inch of stormwater runoff from impervious surfaces is managed in uplands for effective pollutant removal.

( ) (19) Authorized stormwater detention ponds shall have a maximum detention time of \_\_\_\_\_ hours.

( ) (20) \_\_\_\_\_ shall restore and revegetate all temporarily disturbed waters and wetlands to original contours upon completion of construction.

(X) (21) Plans for the newly proposed placement site adjacent to Sharp's Point shall be submitted to the Department for review and approval prior to construction.

Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification and legal proceedings may be instituted against the applicant in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime.

CERTIFICATION APPROVED

Elder A. Ghigiaroli  
Water Management Administration

9/3/05  
Expiration Date

# WOCOMICO DREDGE DISPOSAL SITES WICOMICO COUNTY, MD

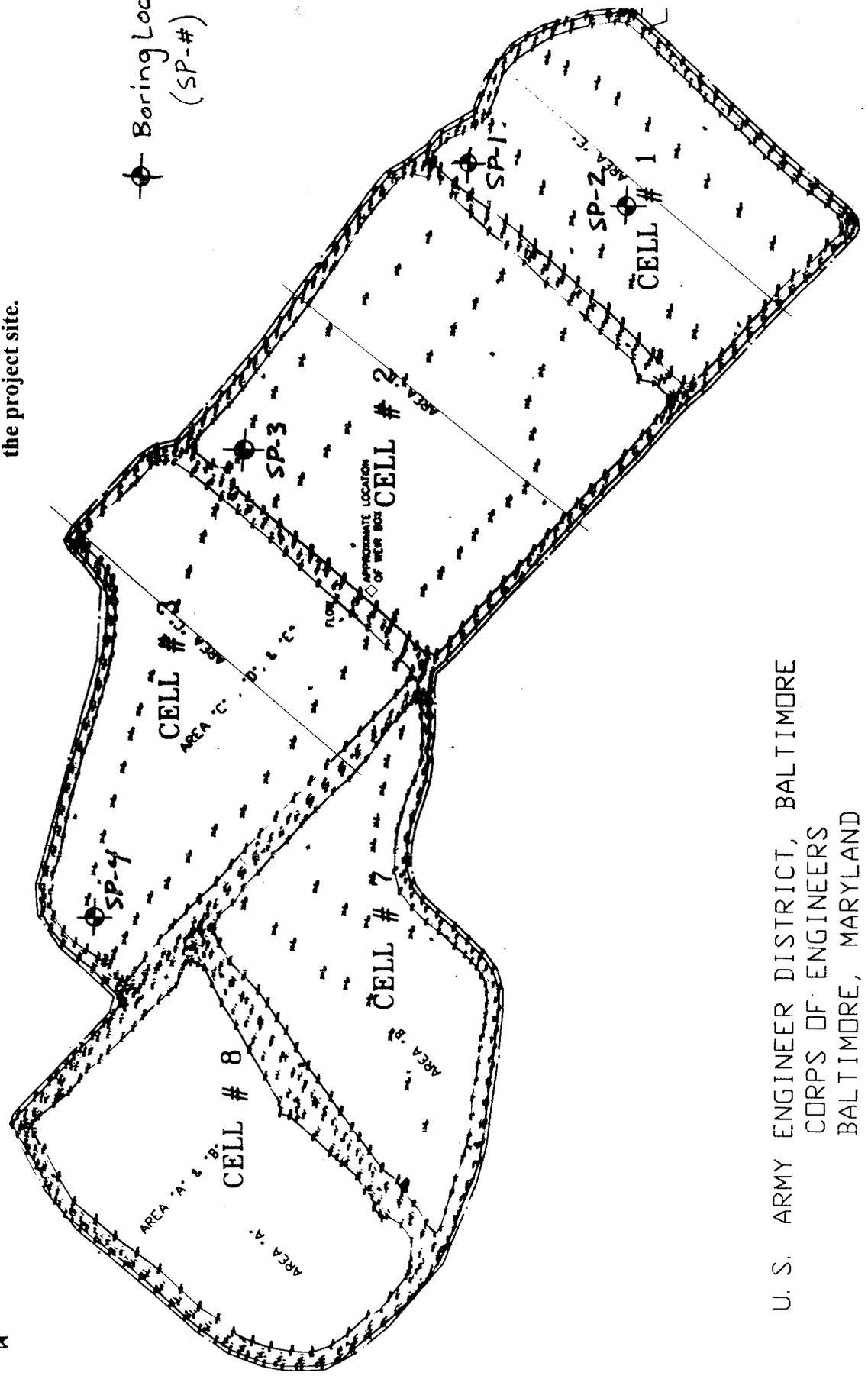
## SUBSURFACE EXPLORATION NOTES

1. EXPLORATION WAS PERFORMED DURING AUG 2002.
2. AUGER BORINGS (SP & SW) WERE MADE WITH A HAND AUGER.
3. COLUMN (b) SHOWS THE NATURAL WATER CONTENTS IN PERCENT OF DRY WEIGHT OF THOSE SAMPLES TESTED.
4. SOIL DESCRIPTIONS ARE SHOWN IN COLUMN (c).
5. SOIL DESCRIPTIONS ARE LABORATORY CLASSIFICATIONS BASED ON THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487/2488).
6. GROUNDWATER DEPTHS ARE INDICATED ON THE LOGS AS  $\nabla$ ,  $\nabla$  &  $\nabla$  ARE SHOWN IN COLUMN (d). PERTINENT DATA FOR THESE READINGS ARE SHOWN AT THE BOTTOM OF LOG UNDER GROUNDWATER DATA OR ADDITIONAL GROUNDWATER DATA. THESE READINGS MAY VARY DEPENDING UPON SEASONS AND AMOUNT OF RAINFALL.  
  
NE - INDICATES GROUNDWATER NOT ENCOUNTERED  
  
NT - INDICATES GROUNDWATER READING NOT TAKEN
7. ELEVATIONS SHOWN ON THE BORING LOGS ARE GROUND SURFACE ELEVATIONS AT THE TIME OF EXPLORATION. THEY WERE DETERMINED BY ESTIMATION FROM TOPOGRAPHIC CONTOUR MAPS; DESIGNATED ( $\pm$ ).
8. FOR LOCATIONS OF SUBSURFACE EXPLORATIONS, SEE BORING LOCATION PLANS.



The purpose of this drawing is to show the approximate location of the soil borings and to generally illustrate the locations of all the cells. This drawing is general and may not accurately match the existing conditions at the project site.

⊙ Boring Locations  
(SP-#)



U. S. ARMY ENGINEER DISTRICT, BALTIMORE  
CORPS OF ENGINEERS  
BALTIMORE, MARYLAND

MAINTENANCE DREDGING

SHARPS POINT  
PLACEMENT SITE



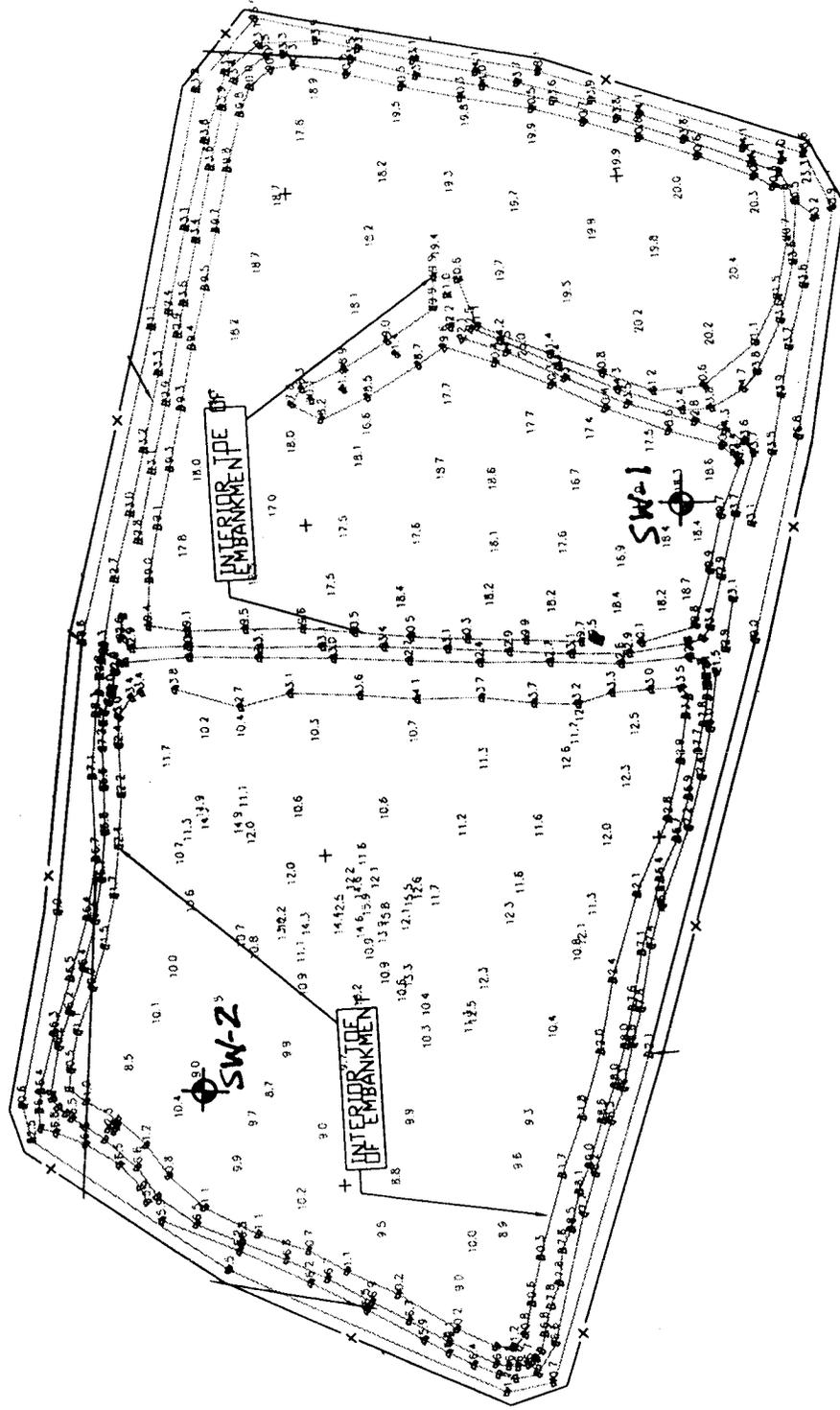
U. S. Army Corps  
of Engineers

MARYLAND

WICOMICO COUNTY

The purpose of this drawing is to show the approximate location of the soil borings and to generally illustrate the locations of all the cells. This drawing is general and may not accurately match the existing conditions at the project site.

⊕ Boring Locations  
(SW-#)



U. S. ARMY ENGINEER DISTRICT, BALTIMORE  
CORPS OF ENGINEERS  
BALTIMORE, MARYLAND

MAINTENANCE DREDGING  
SIMMS WHARF  
PLACEMENT SITE

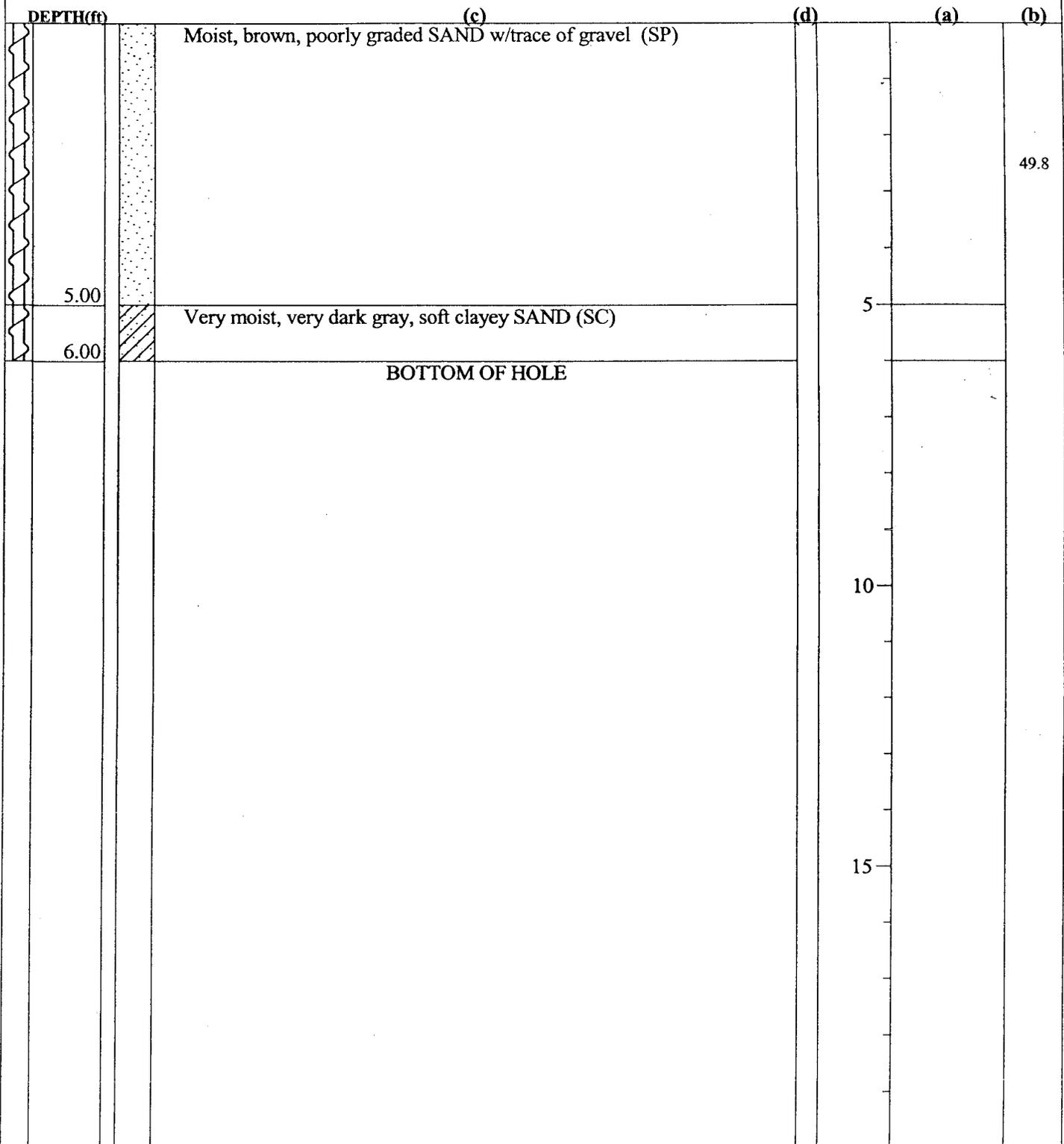


STA.  
 OFFSET:  
 TOP ELEV: 43±

WICOMICO DREDGE DISPOSAL SITES  
 WICOMICO COUNTY, MD

N  
 E  
 COMPLETED: August 2, 2002

SP-1  
 1 of 1



GEO-2 WICOMICO.GPJ 8/28/02 15:06

SP-1  
 GROUNDWATER DATA  
 WHILE DRILLING: NE  
 ON COMPLETION: NE  
 24 Hr. READING: NT

- |           |            |           |      |
|-----------|------------|-----------|------|
| Fill      | Auger      | SPT       | RB   |
| Cored     | 300 lb     | Tubex     | Hand |
| Fish Tail | Vibra Core | Water Jet | _    |

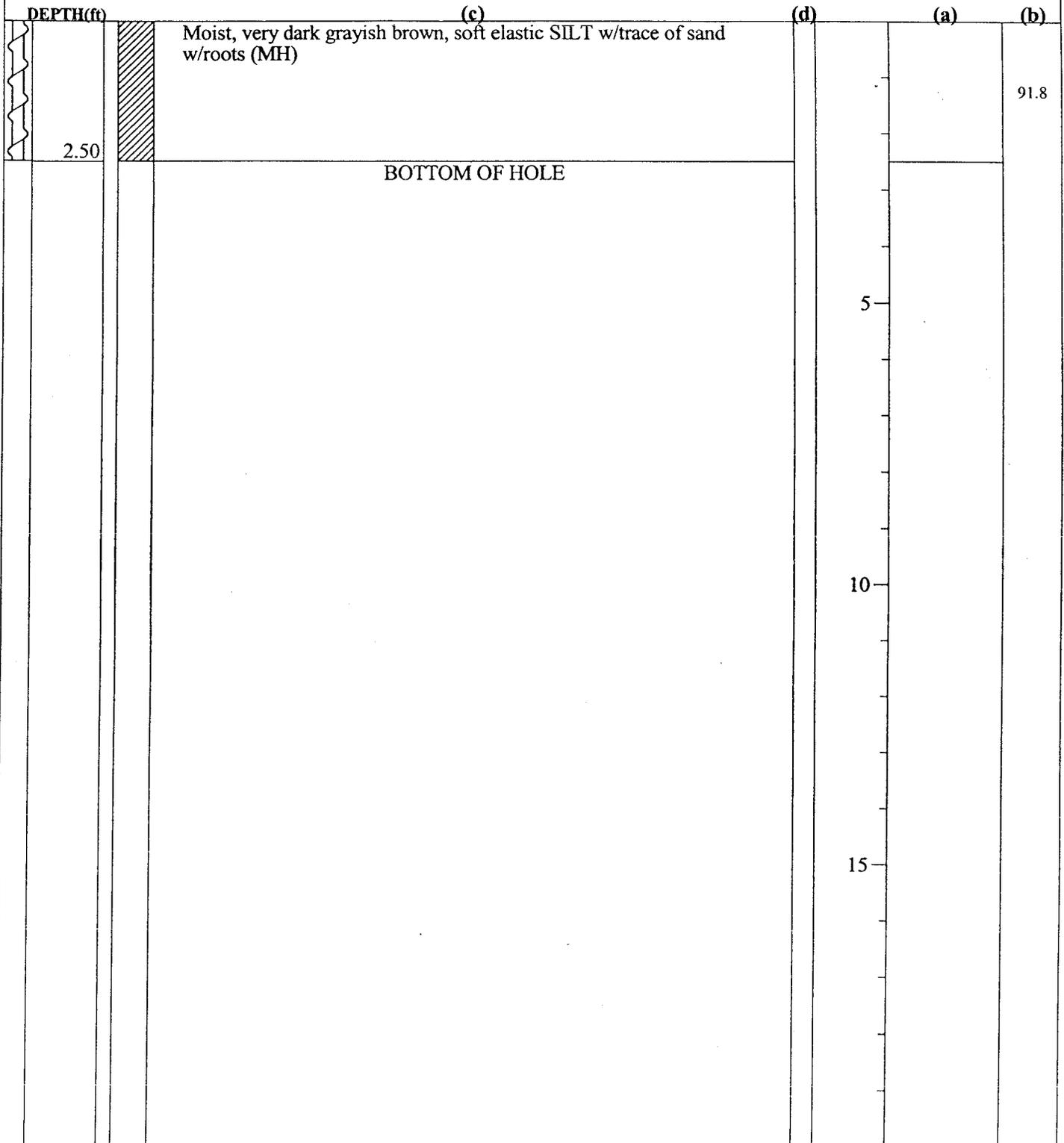
STA.  
 OFFSET:  
 TOP ELEV: 39'±

WICOMICO DREDGE DISPOSAL SITES  
 WICOMICO COUNTY, MD

N  
 E

SP-2  
 1 of 1

COMPLETED: August 2, 2002



GEO-2 WICOMICO.GPJ 8/28/02 15:06

SP-2  
 GROUNDWATER DATA  
 WHILE DRILLING: NE  
 ON COMPLETION: NE  
 24 Hr. READING: NT

-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  \_

STA.  
 OFFSET:  
 TOP ELEV: 36.3±

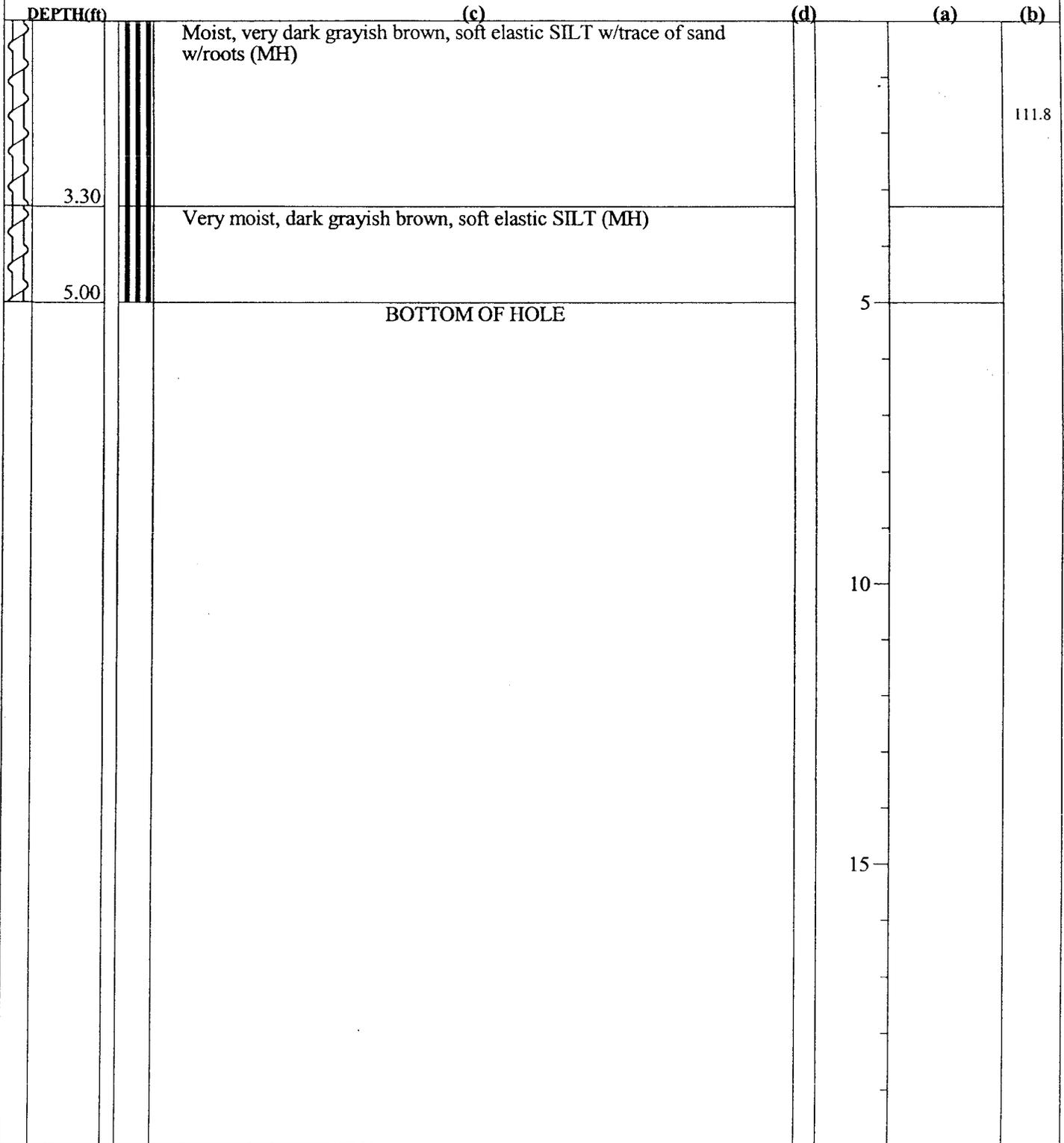
WICOMICO DREDGE DISPOSAL SITES  
 WICOMICO COUNTY, MD

N  
 E

SP-3

1 of 1

COMPLETED: August 2, 2002



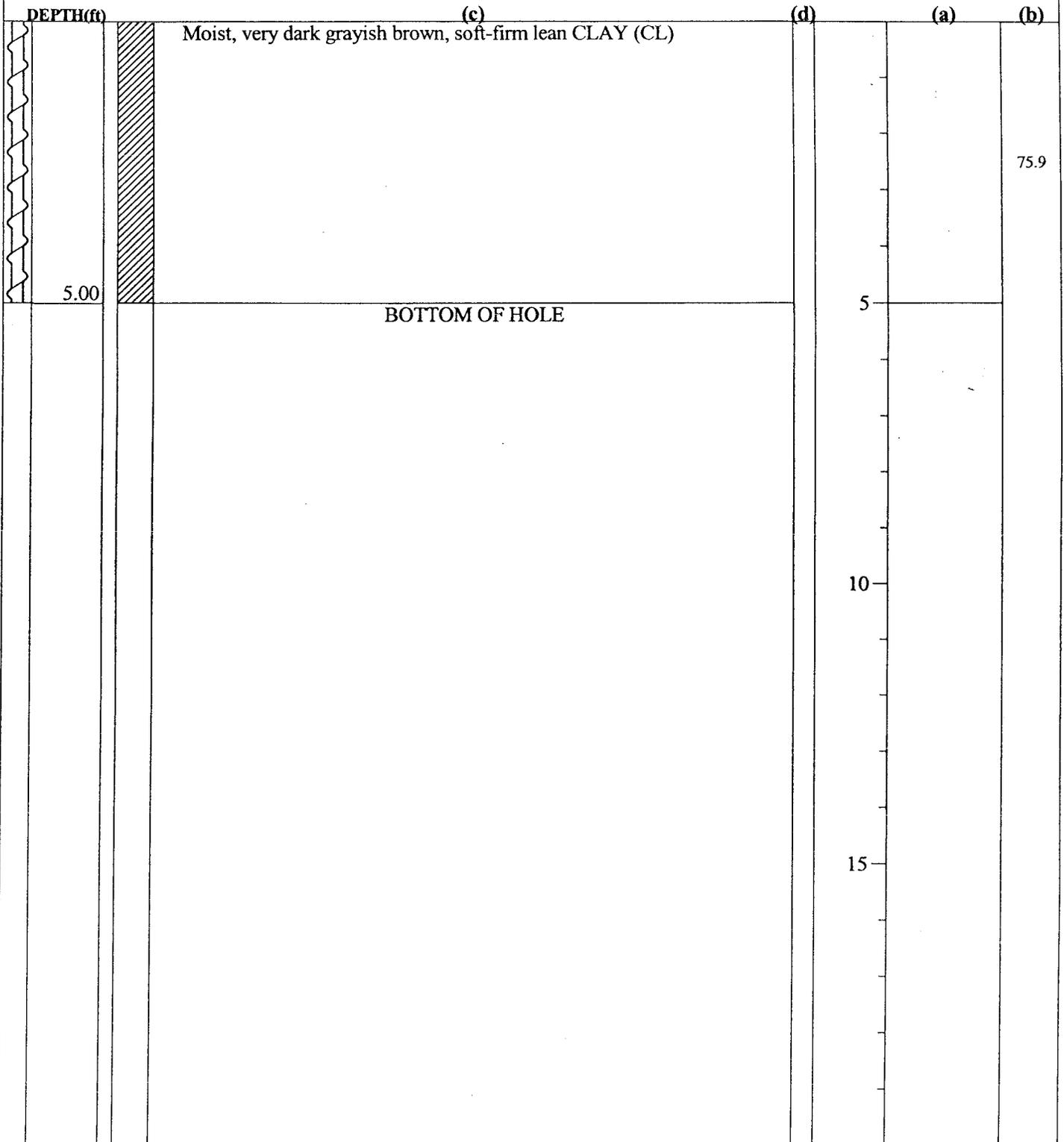
SP-3  
 GROUNDWATER DATA  
 WHILE DRILLING: NE  
 ON COMPLETION: NE  
 24 Hr. READING: NT

- Fill
- Auger
- SPT
- RB
- Cored
- 300 lb
- Tubex
- Hand
- Fish Tail
- Vibra Core
- Water Jet
- \_

STA.  
 OFFSET:  
 TOP ELEV: 34.2±

WICOMICO DREDGE DISPOSAL SITES  
 WICOMICO COUNTY, MD

N  
 E  
 COMPLETED: August 2, 2002  
 SP-4  
 1 of 1



GEO-2 WICOMICO.GPJ 8/28/02 15:06

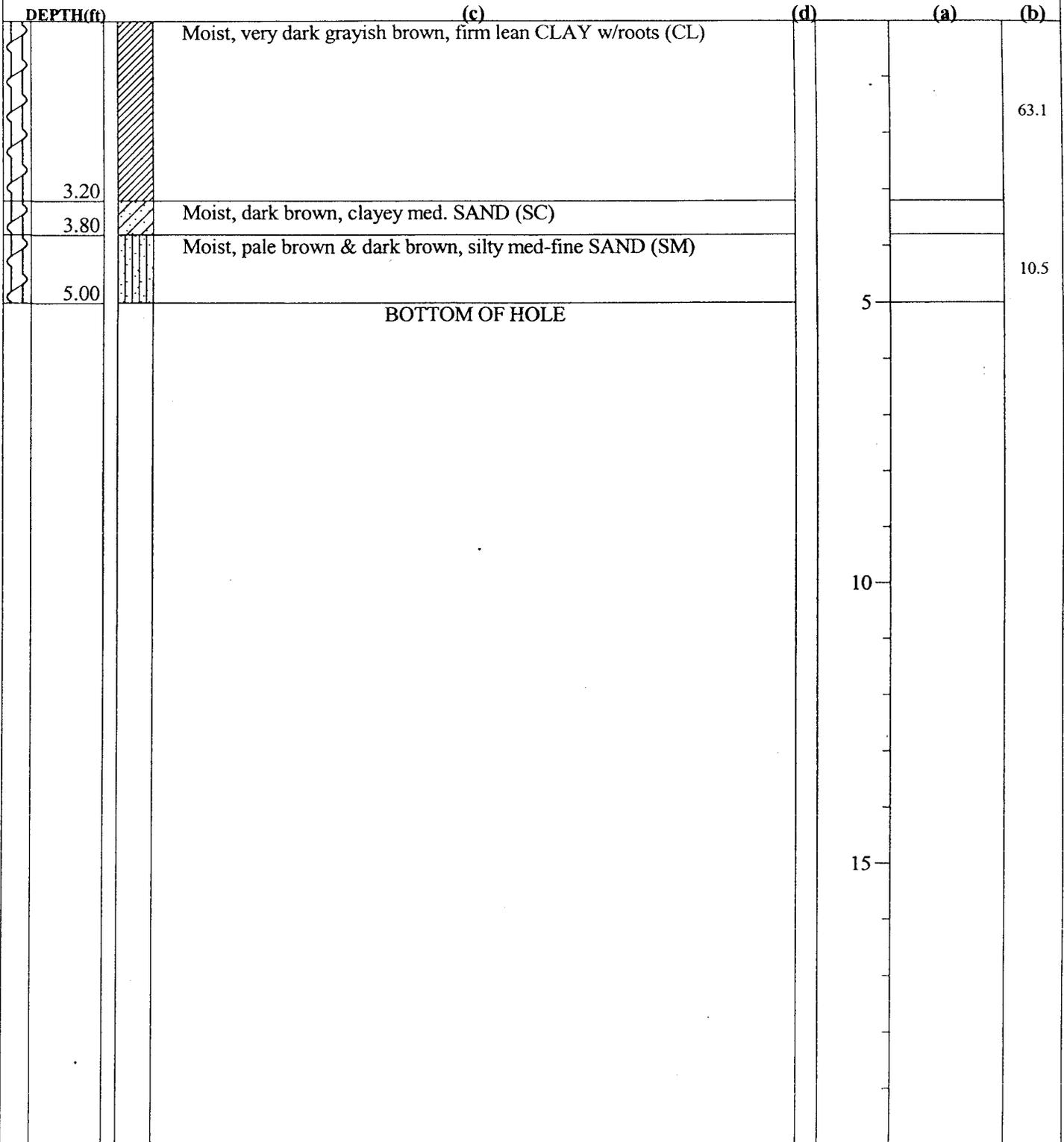
SP-4  
 GROUNDWATER DATA  
 WHILE DRILLING: NE  
 ON COMPLETION: NE  
 24 Hr. READING: NT

- |           |            |           |      |
|-----------|------------|-----------|------|
| Fill      | Auger      | SPT       | RB   |
| Cored     | 300 lb     | Tubex     | Hand |
| Fish Tail | Vibra Core | Water Jet | _    |

STA.  
 OFFSET:  
 TOP ELEV: 18.3'±

WICOMICO DREDGE DISPOSAL SITES  
 WICOMICO COUNTY, MD

N  
 E  
 COMPLETED: August 2, 2002  
 SW-1  
 1 of 1



GEO-2 WICOMICO.GPJ 8/28/02 15:06

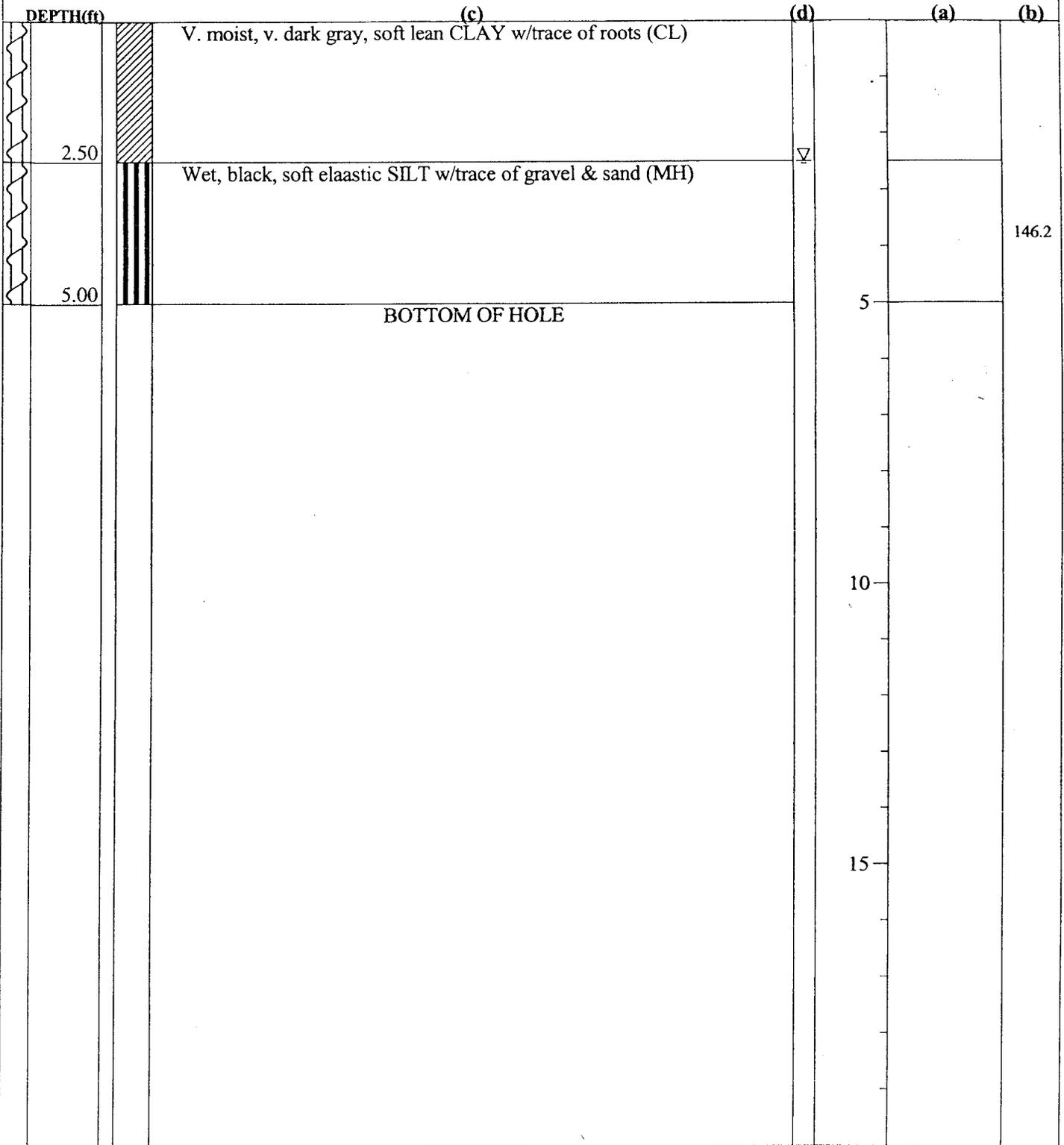
SW-1  
 GROUNDWATER DATA  
 WHILE DRILLING: NE  
 ON COMPLETION: NE  
 24 Hr. READING: NT

- Fill
- Auger
- SPT
- RB
- Cored
- 300 lb
- Tubex
- Hand
- Fish Tail
- Vibra Core
- Water Jet
- \_

STA.  
 OFFSET:  
 TOP ELEV: 9.0±

WICOMICO DREDGE DISPOSAL SITES  
 WICOMICO COUNTY, MD

N  
 E  
 COMPLETED: August 2, 2002  
 SW-2  
 1 of 1



GEO-2 WICOMICO.GPJ 8/28/02 15:06

SW-2  
 GROUNDWATER DATA  
 ▽ WHILE DRILLING: 2.5  
 ON COMPLETION: NT  
 24 Hr. READING: NT

- |           |            |           |      |
|-----------|------------|-----------|------|
| Fill      | Auger      | SPT       | RB   |
| Cored     | 300 lb     | Tubex     | Hand |
| Fish Tail | Vibra Core | Water Jet | _    |

**LABORATORY TEST RESULTS**

**LABORATORY TEST RESULTS**

**PROJECT:** Wicomico River Dredge Disposal Sites  
**AREA:** Wicomico County, MD

**DATE:** Aug.2002

**TEST:** Natural Moisture Contents (ASTM D2216)

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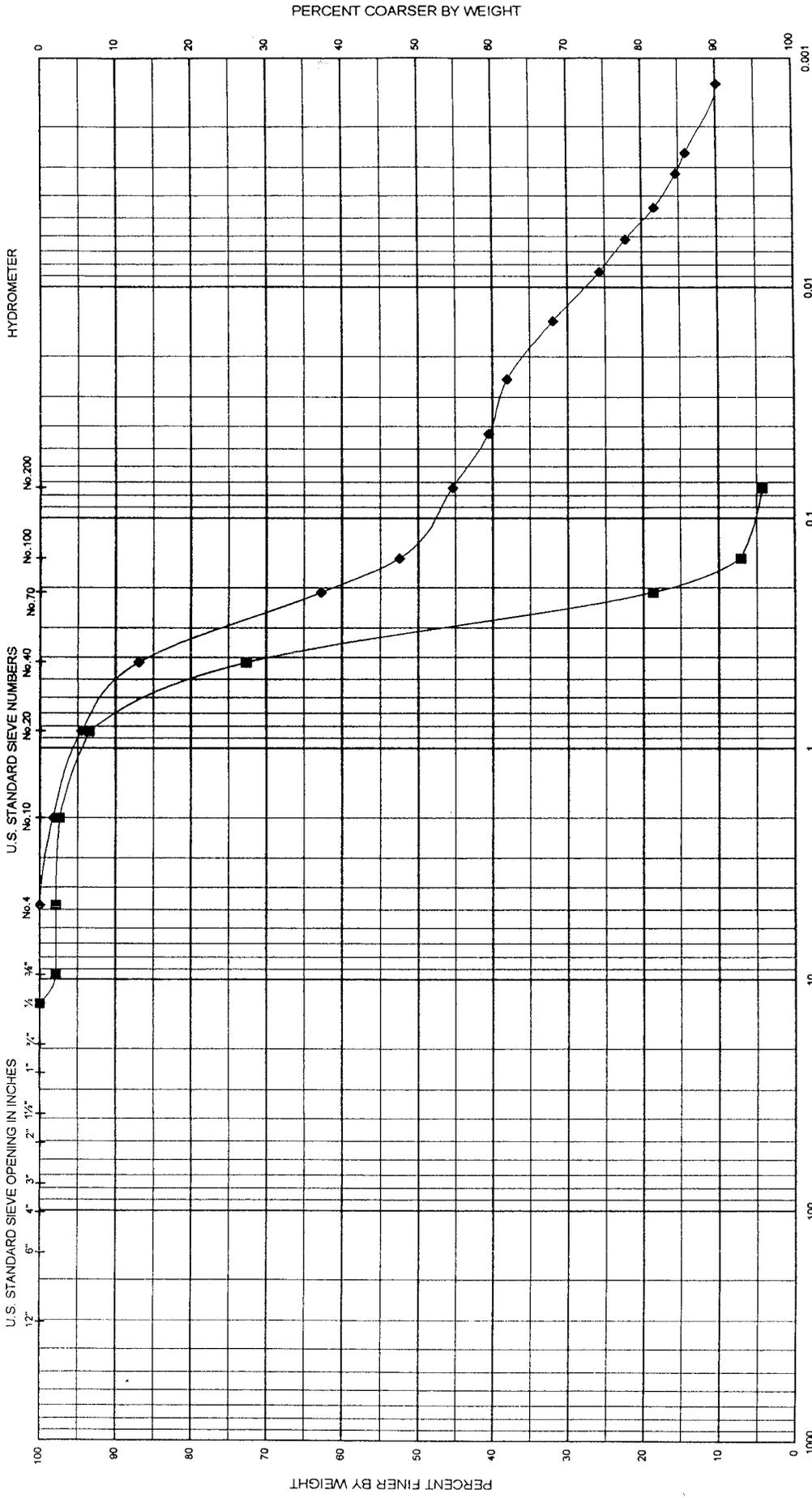
**SITE:** Sharps Point Dredge Disposal Site

<u>Hole No.</u>	<u>Sample No.</u>	<u>Depth (ft.)</u>	<u>Moisture Content, %</u>
SP-1	Jar-1	0.0-5.0	49.8
SP-2	Jar-1	0.0-2.5	91.8
SP-3	Jar-1	0.0-3.3	111.8
SP-4	Jar-1	0.0-5.0	75.9

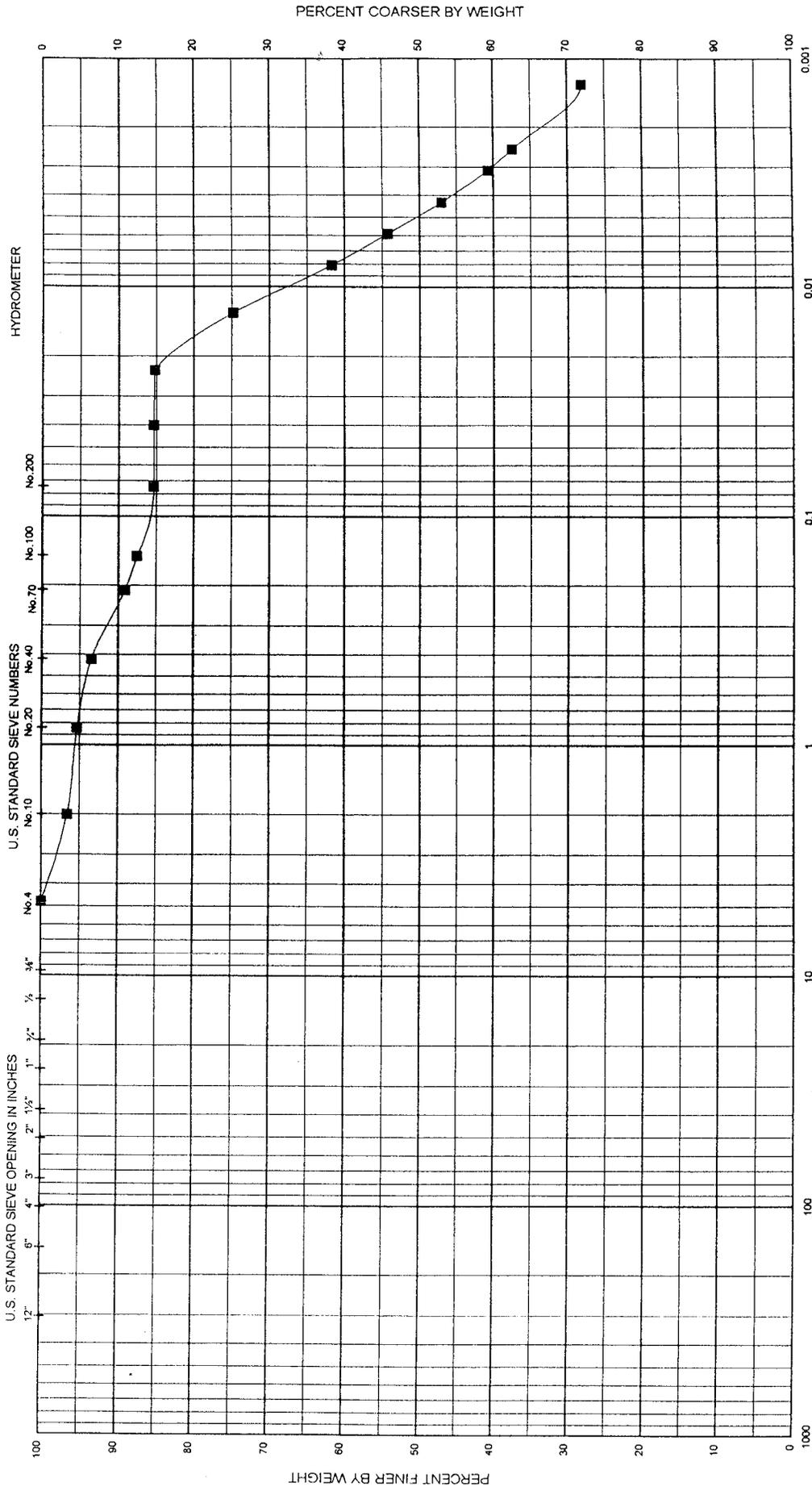
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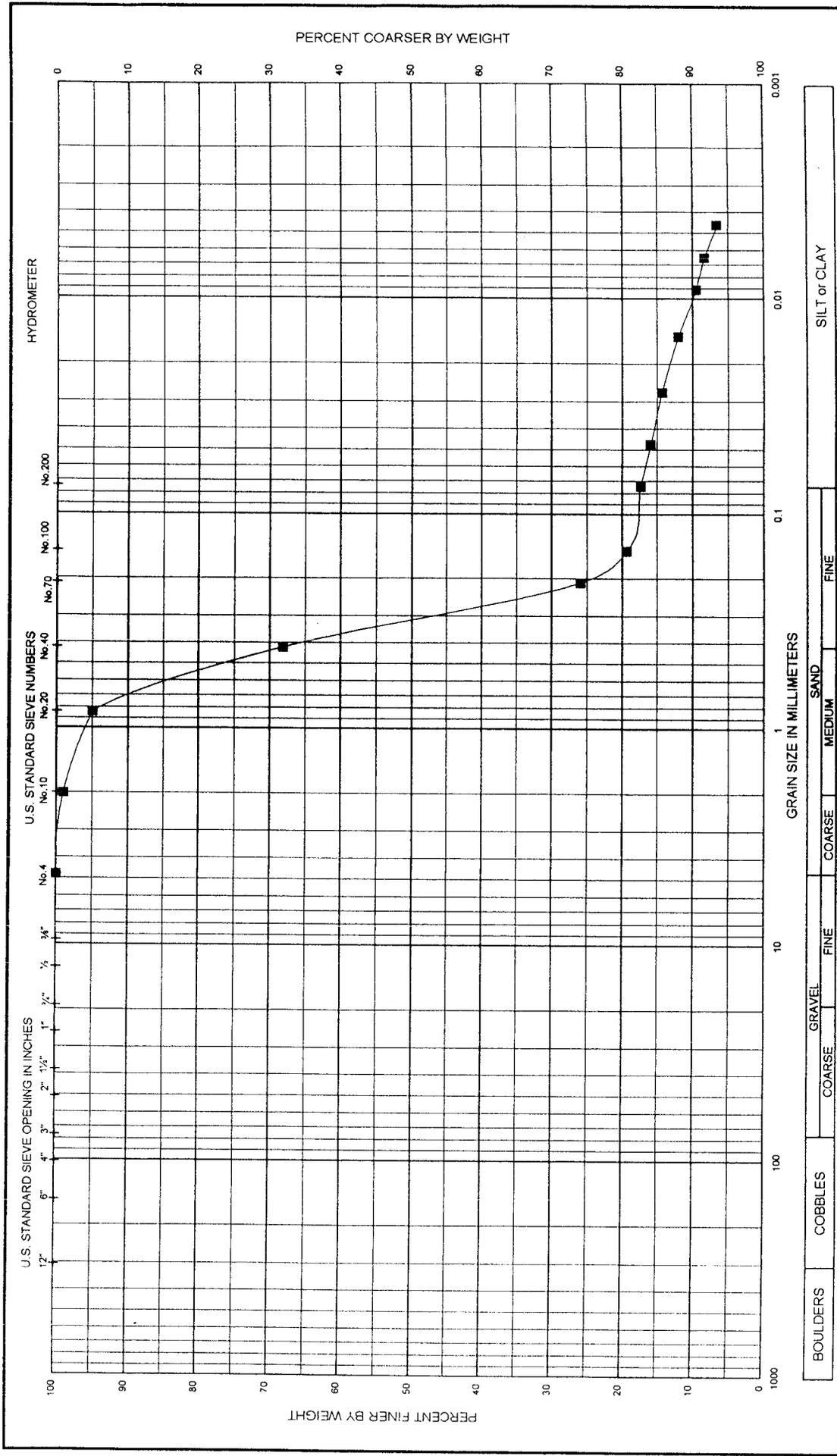
**SITE:** Simms Wharf Dredge Disposal Site

<u>Hole No.</u>	<u>Sample No.</u>	<u>Depth (ft.)</u>	<u>Moisture Content, %</u>
SW-1	Jar-1	0.0-3.2	63.1
	Jar-3	3.8-5.0	10.5
SW-2	Jar-2	2.5-5.0	146.2



		BOULDERS		COBBLES		GRAVEL		SAND		FINE		SILT or CLAY	
Legend	Sample No.	Depth (ft)	USCS Classification (ASTM D2487)	Net w%	LL	PL	PI						
■	Jar-1	0.0-5.0	Poorly graded sand (tr. gravel)	49.8	—	—	—						
◆	Jar-2	5.0-6.0	Clayey sand	—	—	—	—						
<b>PROJECT:</b> Sharps Point Dredge Disposal Site <b>AREA:</b> Wicomico River <b>Boring No.:</b> SP-1													
<b>DATE:</b> Aug 2002													
<b>GRADATION CURVES</b> (Sieve Analysis: ASTM D422)													





BOULDERS		COBBLES		GRAVEL		SAND		SILT or CLAY			
Sample No.	Depth (ft)	COARSE	FINE	COARSE	FINE	MEDIUM	FINE	Nat w%	LL	PL	PI
Jan-3	3.8-5.0							10.5			
USCS Classification (ASTM D2487) (SM) Silty sand											
PROJECT: Simms Wharf Dredge Disposal Site											
AREA: Wicomico River											
Boring No.: SW-1											
DATE: Aug 2002											
GRADATION CURVES (Sieve Analysis: ASTM D422)											

