SECTION 1

BORINGS AND PROBES - BOSTON HARBOR

BOSTON, MA

Contract No. DACW33-93-D-0004

Contracting/Ordering Officer:

Charles W. Coe

Delivery Order No. 0003

PREPARED FOR: U.S. Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149

PREPARED BY: Atlantic Testing Laboratories, Limited
P.O. Box 29
Canton, NY 13617

ATL REPORT NO. CD0040-1-6-93

JULY 15, 1993

SECTION 2

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SECTION 3

SCOPE OF INVESTIGATION

a. Delivery Order No. 0003

ORDER FOR SUPPLIES OR SERVICES

orig Jet Filler
CDO040
6/14/93 cc: Dispe

(Contractor must submit four copies of Invoice)

Form Approved
OMB No. 0704-0187
Expires Aug 31, 1992

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project(0704-0187), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send your completed form to the procurement official identified in item 6.

1. CONTRACT/PURCH ORDER NO.: DACW33-93-D-0004
2. DELIVERY ORDER NO.: 0003
3. DATE OF ORDER: 06/04/93
4. REQUISITION/PURCH REQUEST NO.: 961316-3145-8038
5. PRIORITY:

6. ISSUED BY — CODE 961316
Dept. of the Army
N. E. Division, Corps of Engrs
424 Trapelo Road
Waltham, MA 02254-9149
EVA MARIE SCALESE C02 (617)-647-8427

7. ADMINISTERED BY — CODE EMPTY

8. DELIVERY FOB
[X] DEST
[ ] OTHER
(See Schedule)

9. CONTRACTOR Vendor Id: 00001586 CODE 0GXT9 FACILITY CODE
NAME AND ADDRESS: ATLANTIC TESTING LAB, LIMITED
P. O. BOX 29
CANTON, NY 13617-

10. DELIVER TO FOB POINT BY 07/22/93

11. MARK IF BUS. IS
[X] SMALL
[ ] SMALL DIS-ADVANTAGED
[ ] WOMEN-OWNED

12. DISCOUNT TERMS
0 % 0 Net 0

13. MAIL INVOICES TO
See Block 15

14. SHIP TO — CODE GEB
Geotechnical Engineering
Division, Engineering
Directorate, at issuing office
DACW3393D0004/0003

15. PAYMENT WILL BE MADE BY — CODE FAO
Finance & Accounting Officer
U.S.A. Engr. Div., New England
424 Trapelo Road
Waltham, MA 02254-9149

MARK ALL PACKAGES AND PAPERS WITH CONTRACT OR ORDER NUMBER

16. DELIVERY [X] This delivery order is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.

PURCHASE [ ] Reference your _____ furnish the following on terms specified herein.

ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.

NAME OF CONTRACTOR | SIGNATURE | TYPED NAME AND TITLE | DATE SIGNED

[ ] If this box is marked, supplier must sign Acceptance and return the following number of copies:

17. ACCOUNTING AND APPROPRIATION DATA/LOCAL USE
96X3121 GI AF2020551A0FA20 (MD) $64,680.80

18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICE	20. QUANTITY ORDERED/ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT
0003	Furnish necessary Supplies and Services to complete borings and probes for the Boston Harbor Navigation Project in accordance with the attached Scope of Work. GEOTECHNICAL INSPECTOR	100	HR	48.000000	4800.00

*If quantity accepted by the Government is same as quantity ordered, indicate by x. If different, enter actual quantity accepted below quantity ordered and encircle.

24. UNITED STATES OF AMERICA
BY: CHARLES W. COE m01 — Charles W. Coe 6/4/93
CONTRACTING/~~ORDERING~~ OFFICER

25. TOTAL: 64680.80
29. DIFFERENCES:

26. QUANTITY IN COLUMN 20 HAS BEEN
[ ] INSPECTED [ ] RECEIVED [ ] ACCEPTED AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

DATE | SIGNATURE OF AUTHORIZED GOVERNMENT REP.

27. SHIP. NO.
[ ] PARTIAL
[ ] FINAL

28. D.O. VOUCHER NO.

30. INITIALS

31. PAYMENT
[ ] COMPLETE
[ ] PARTIAL
[ ] FINAL

32. PAID BY

33. AMT VERIFIED CORRECT FOR

34. CHECK NUMBER

35. BILL OF LADING NO.

36. I certify this account is correct and proper for payment

DATE | SIGNATURE AND TITLE OF CERTIFYING OFFICER

37. REC'D AT | 38. RECEIVED BY | 39. DATE REC'D | 40. TOTAL CONT. | 41. S/R ACCOUNT NUMBER | 42. S/R VOUCHER NO.

ATLANTIC TESTING LAB, LIMITED

ITEM NO.	SCHEDULE OF SUPPLIES/SERVICE	QUANTITY	UNIT	UNIT-PRICE	AMOUNT
0003 (continued)					
0004	GEOTECHNICAL INSPECTOR - STANDBY TIME	16	HR	48.000000	768.00
0005	PER DIEM - OVERNIGHT STAY	10	DA	55.000000	550.00
0006	MILEAGE FROM WALTHAM, MA AND RETURN	92	MI	0.500000	46.00
000703	50% of Line Item No. 0003 for Delivery Order No. 0003. Geotechnical Services and Report.	1	JB	2400.000000	2400.00
0015	SAMPLE DELIVERY	2	JB	110.000000	220.00
0016	MOBILIZATION AND DEMOBILIZATION ONE DRILL RIG, CREW AND AUXILIARY EQUIPMENT MOBILIZATION AND DEMOBILIZATION	1	JB	1320.000000	1320.00
0018	MILEAGE FROM/TO CONTRACTOR'S MAIN EQUIPMENT STORAGE SITE. SITE LOCATED IN MANCHESTER, NEW HAMPSHIRE	92	MI	1.650000	151.80
0020	STANDBY TIME/ON SITE MOVES	16	HR	110.000000	1760.00
0029	16 FOOT BOAT	10	DA	132.000000	1320.00
0030	OPERATOR FOR 12 FT. OR 16 FT. BOAT	10	DA	220.000000	2200.00
0038	1500 SQUARE FT. BARGE WITH SPUD ANCHORS	12	DA	2750.000000	33000.00
0043	DRIVE SAMPLE BORING WITHOUT CASING: CONTINUOUS SAMPLING 0-30 FT. DEPTH	210	LF	16.000000	3360.00
0056	MACHINE PROBES, 300 LB. HAMMER (5 FT.	590	LF	12.000000	7080.00

ATLANTIC TESTING LAB, LIMITED

ITEM NO.	SCHEDULE OF SUPPLIES/SERVICE	QUANTITY	UNIT	UNIT-PRICE	AMOUNT
0056 (continued)	MINIMUM TO 40 FT. MAXIMUM DEPTH)				
0062	DRIVING AND PULLING CASING BX, NX SIZE	210	LF	18.000000	3780.00
0082	NWX SIZE AND/OR NWM	25	LF	77.000000	1925.00

ATTACHMENT NO. 1

GED REQUISITION NO. 93 - 21

SCOPE OF WORK

PROJECT: Borings and probes.

SITE: Boston Harbor Navigation Improvement Project (Figure 1)

PURPOSE: Areas of suspected rock or dense soil have been identified at various locations. Borings and probes shall be done to investigate the presence of rock at dredge depth and to acquire soil samples for laboratory testing. Six areas around Boston Harbor have been selected for investigation. For the purposes of this work, the areas are identified as follows:

a. Reserved Channel (Boston Army Base)
b. Reserved Channel (Turning Basin)
c. Inner Confluence
d. Mystic River (Bridge)
e. Mystic River (Exxon Warf)
f. Chesea River

The attached table shows exploration quantities and approximate water depths for each area. Figures 2 thru 8 show the proposed boring and probe locations for each area.

1. SCOPE OF INVESTIGATIONS.

A. Probes shall be done to 10 and 15-foot depths as indicated on the table. Continuous drive samplings shall be taken to 15 feet. Five foot rock cores shall be taken for any refusal in a boring encountered above elevation -42 NGVD. Coring may also be required at locations of refusal found by probes if directed in the field by the Government.

B. The Contractor shall provide an experienced geotechnical inspector to log the explorations and prepare a report.

C. A spud barge is required for this work. The Contractor shall assure the barge is suitable to provide a stable drilling platform for the conditions of the Harbor.

D. Survey support shall be provided by the Government. Communication between the floating plant and shore shall be by radio. The Contractor shall coordinate communication requirements with the Government's Chief Surveyor, Mr. Steve Johnston (617- 647-8527).

E. The Contractor shall notify the Coast Guard as required.

2. SITE CONDITIONS.

The work is in open water in Boston Harbor and in areas of the Mystic and Chelsea Rivers (Figure 1). Water depths for explorations vary from about -20 feet MLW to -40 feet MLW. Tide levels in the area vary between 5.0 feet NGVD at mean high water and -4.5 feet NGVD at low water. Subsurface soils may consist of mixed deposits of silt, sand and clay, Boston Blue Clay, and/or compact glacial till. Bedrock may be encountered in certain areas.

Full size condition survey drawings showing Boston Harbor bottom elevations and exploration locations have been provided separately to the Contractor.

3. COORDINATION.

Liaison will be maintained for the duration of the delivery order through frequent telephone contacts with NED points of contact Yuri Yatsevitch (617 647-8387). Daily telephone contacts and field discussions are required between the Contractor and the NED points of contact during the work.

4. COMPLETION SCHEDULE.

All work under this delivery order shall be completed within the following time limits:

Mobilization to Site	Within 10 days from NTP
Submission of Draft Report	Within 20 days from completion of explorations
Submission of Final Report	Within 5 days from Government review comments

5. GOVERNMENT REVIEW.

The Government review will take approximately ten calendar days from receipt of draft report. Three copies of the final report shall be submitted no later than ten calendar days after your receipt of the Government-reviewed draft report including the action taken on possible comments.

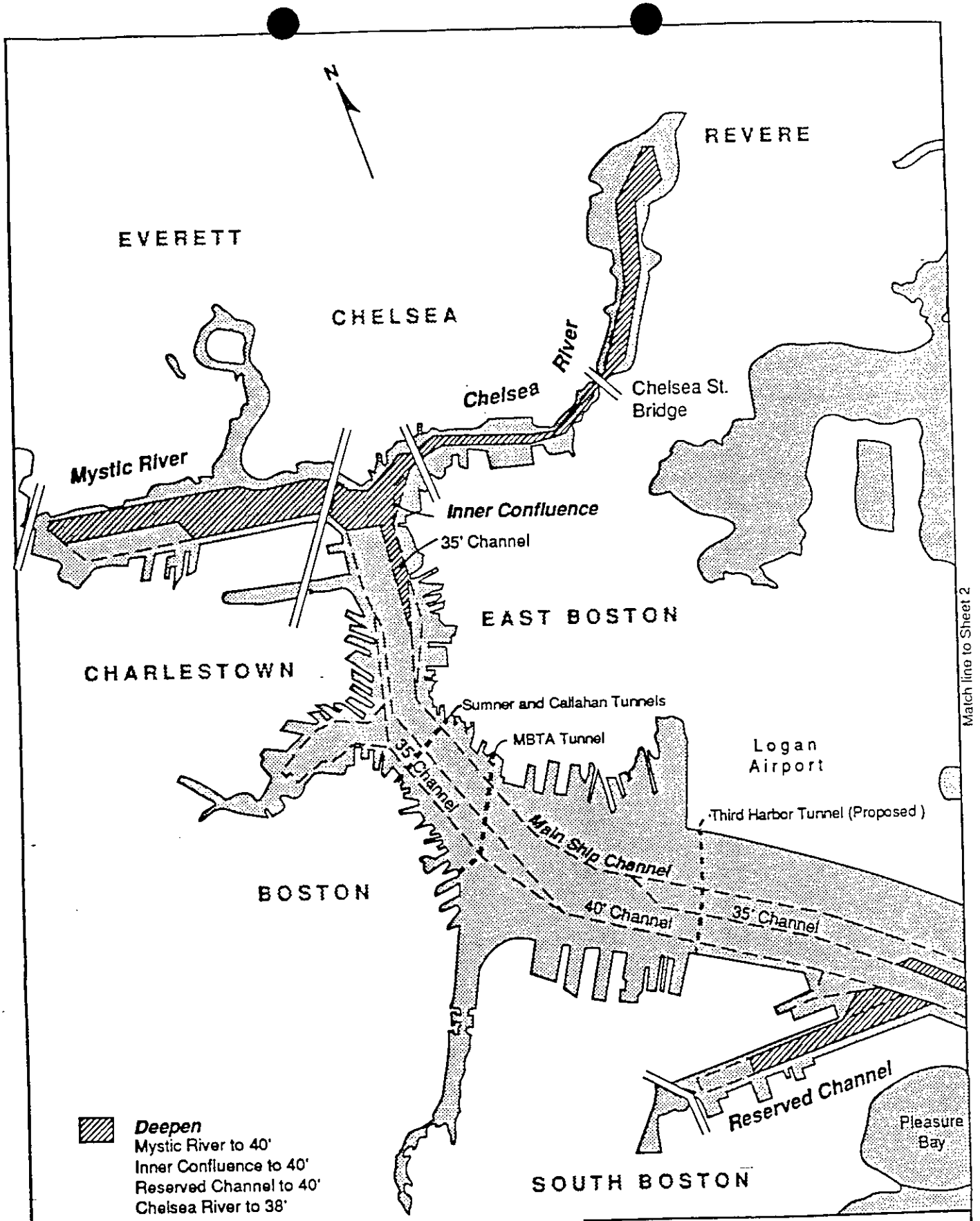
6. QUALITY CONTROL.

Your attention is invited to the Contract General Provisions, "Quality Control and Assurance". You will be held responsible for the quality of the report submitted and for all damages caused to the Government as a result of your negligence in the performance of any services furnished under the contract.

Although submissions required by our contract are technically reviewed by the Government, it is emphasized that your work must be prosecuted using proper internal controls and review procedures. The letter of transmittal for each submission which you make shall include a certification that the submission has been subjected to your own review and coordination procedures to insure (a) completeness for each discipline commensurate with the level of effort required for that submission, (b) professional and the technical accuracy of the submission. Documents which are significantly deficient in any of these areas will be returned to you for correction and/or upgrading prior to completing out review. Contract submission dates will not be extended if a resubmission of draft material is required for this reason.

TABLE OF EXPLORATIONS

AREA	APPROX. WATER DEPTH	PROBES	MAP DESIG	BORINGS	MAP SYMBOL
RESERVED CHANNEL (BOSTON ARMY BASE)	32′	6 X 15′	FP-A THRU -F	3 X 15′	FD-A THRU -C
RESERVED CHANNEL (TURNING BASIN)	35-37′	4 X 15′	FP-G THRU -J	2 X 15′	FD-D THRU -E
INNER CONFLUENCE	30-38′	5 X 10′	FP-K THRU -T	3 X 15′	FD-F THRU -H
MYSTIC RIVER NEAR BRIDGE	36′	5 X 15′	FP-U THRU -X	2 X 15′	FD-I THRU -J
MYSTIC RIVER NEAR EXXON WARF	36-38′	27 X 10′	FP-Z THRU -AAA	3 X 15′	FD-K THRU -M
CHELSEA RIVER	33-38′	4 X 15′	FP-BBB THRU -EEE	1 X 15′	FD-N



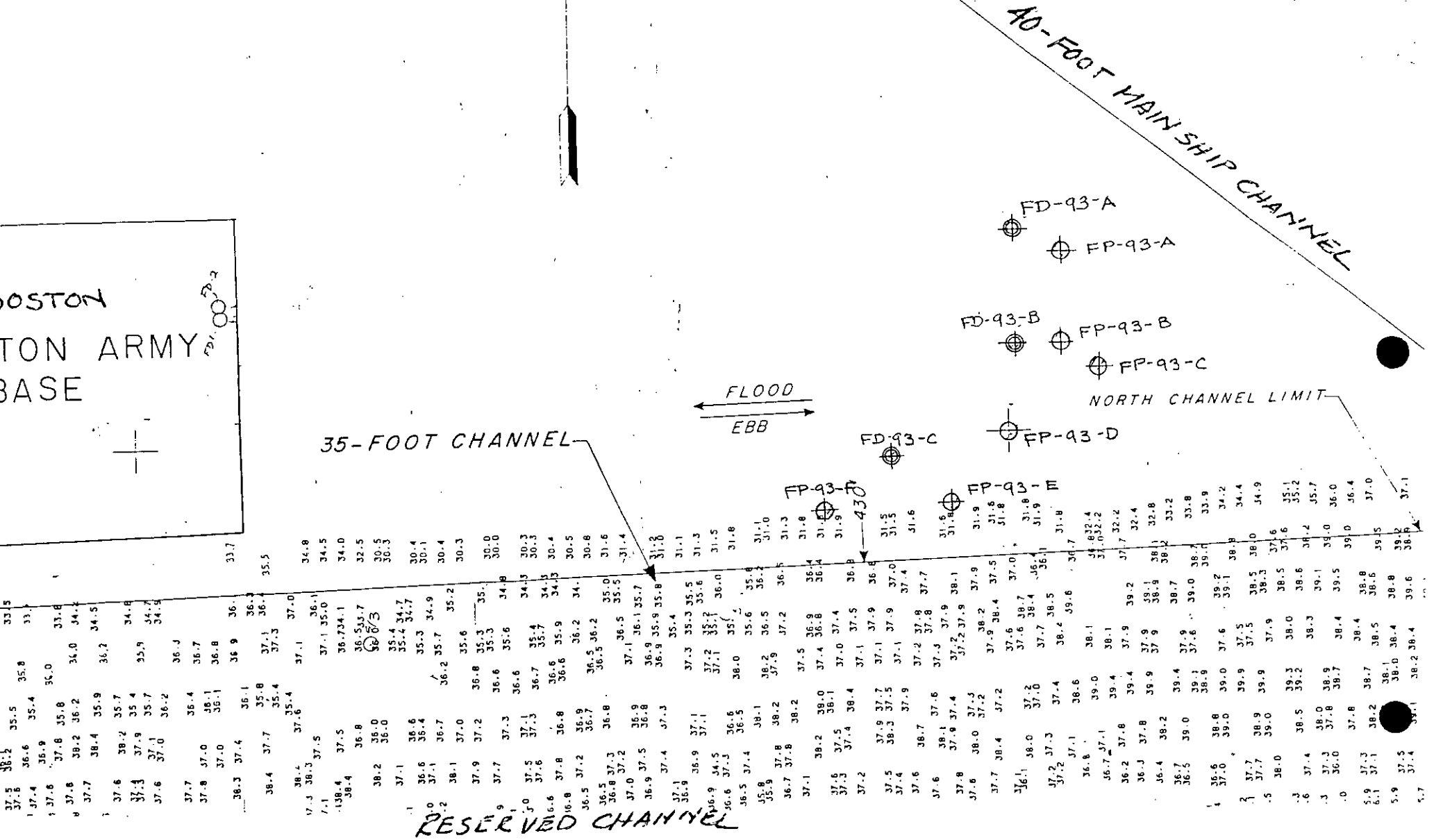
US Army Corps of Engineers
New England Division

Boston Harbor, Massachusetts
Navigation Improvement Project

Sheet 1 of 2

March 1992

FIG. 1

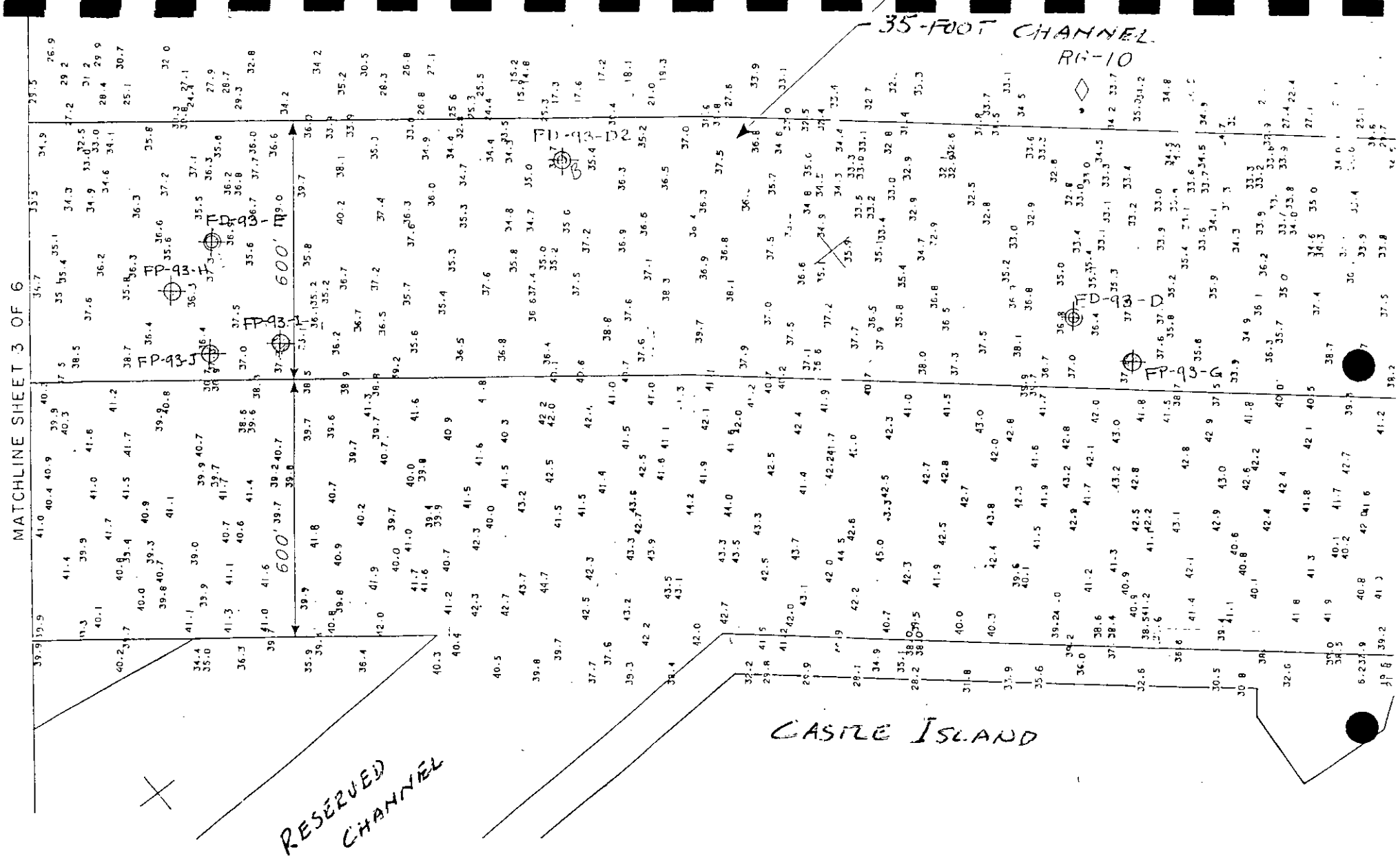


FD-93A Proposed boring

FP-93C Proposed probe

See Sheet 1-of 2 Dwg 1867
Condition Survey
35-Foot Reserved Channel

FIG. 2

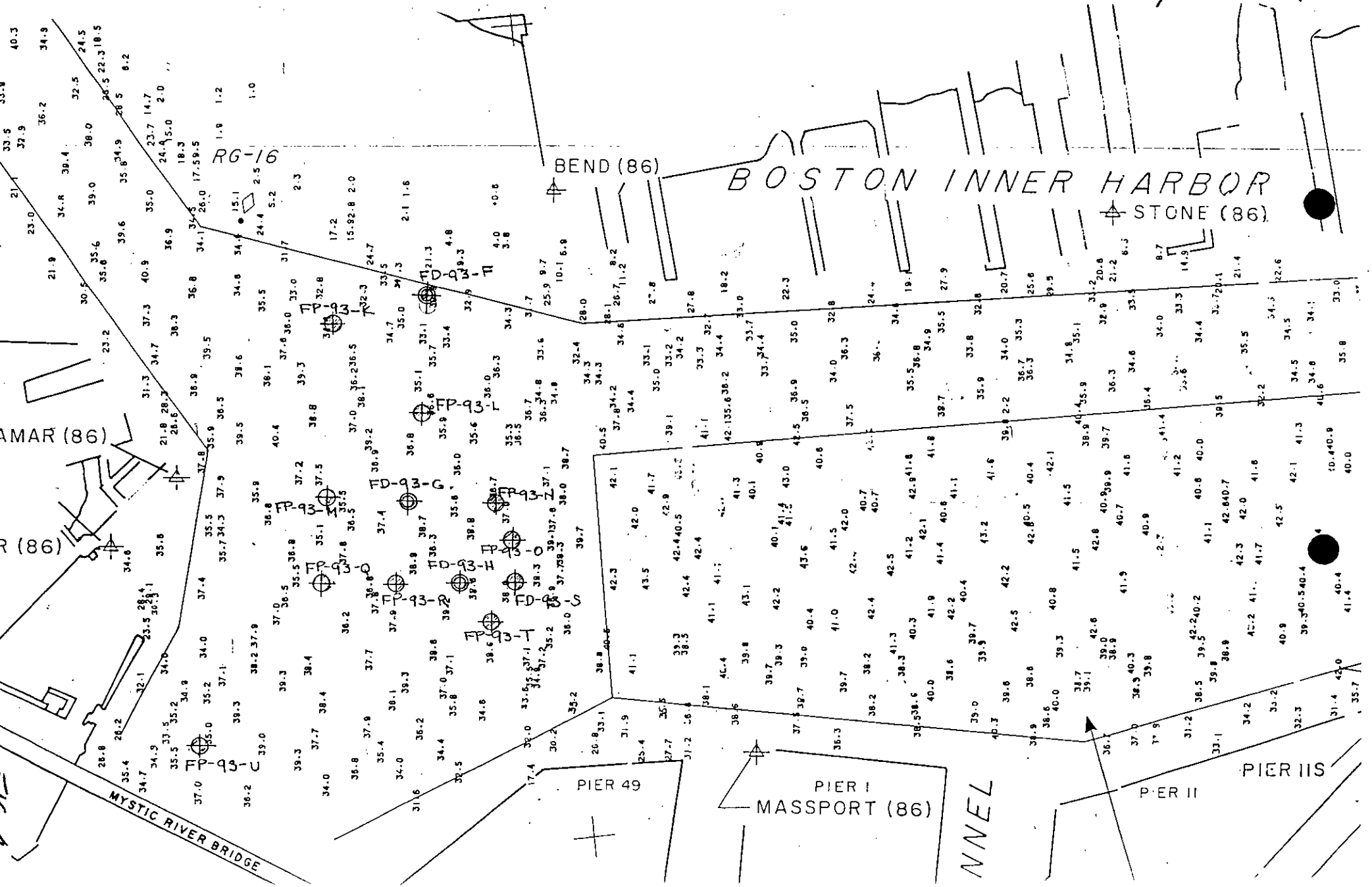


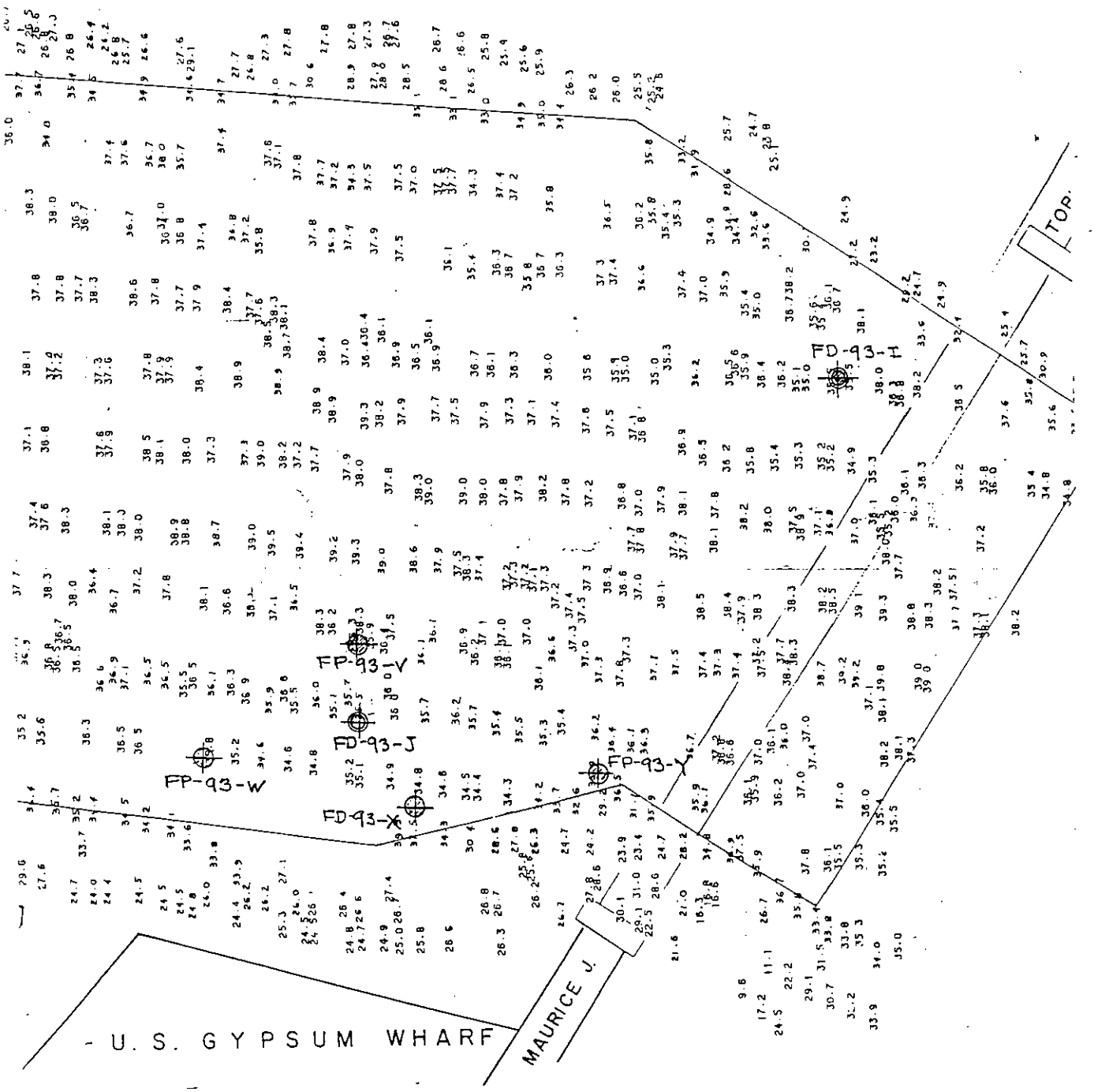
See Sheet 2 of 6. Dec 1965
Condition Survey
35-Foot Main Ship Channel
40-Foot Main Ship Channel

Fig 3

See Sheet 5 of 6 Dwg 865

Condition Survey
35-Foot Main Ship Channel
40-Foot Main Ship Channel

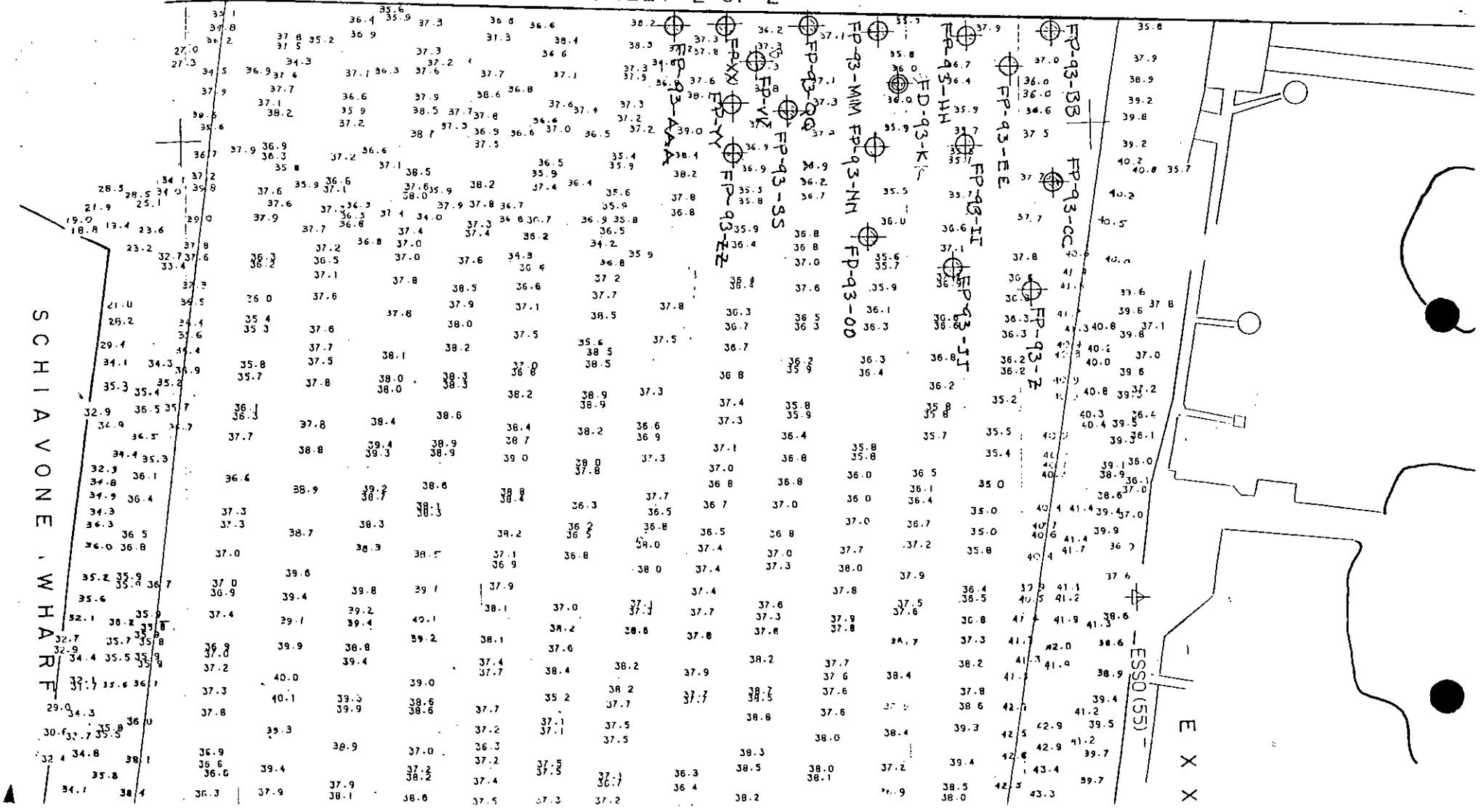




See Sheet 1 of 2 Dwg 400
Condition Survey
Mystic River
35 Foot Channel

FIG. 5

MATCH LINE SHEET 2 OF 2



See Sheet 1 of 2 Dwg 406
Condition Survey
Mystic River
35 Foot Channel

FIG. 6

See Sheet 2 of 2 Pg 406
Condition Survey
Mystic River
35 Foot Channel

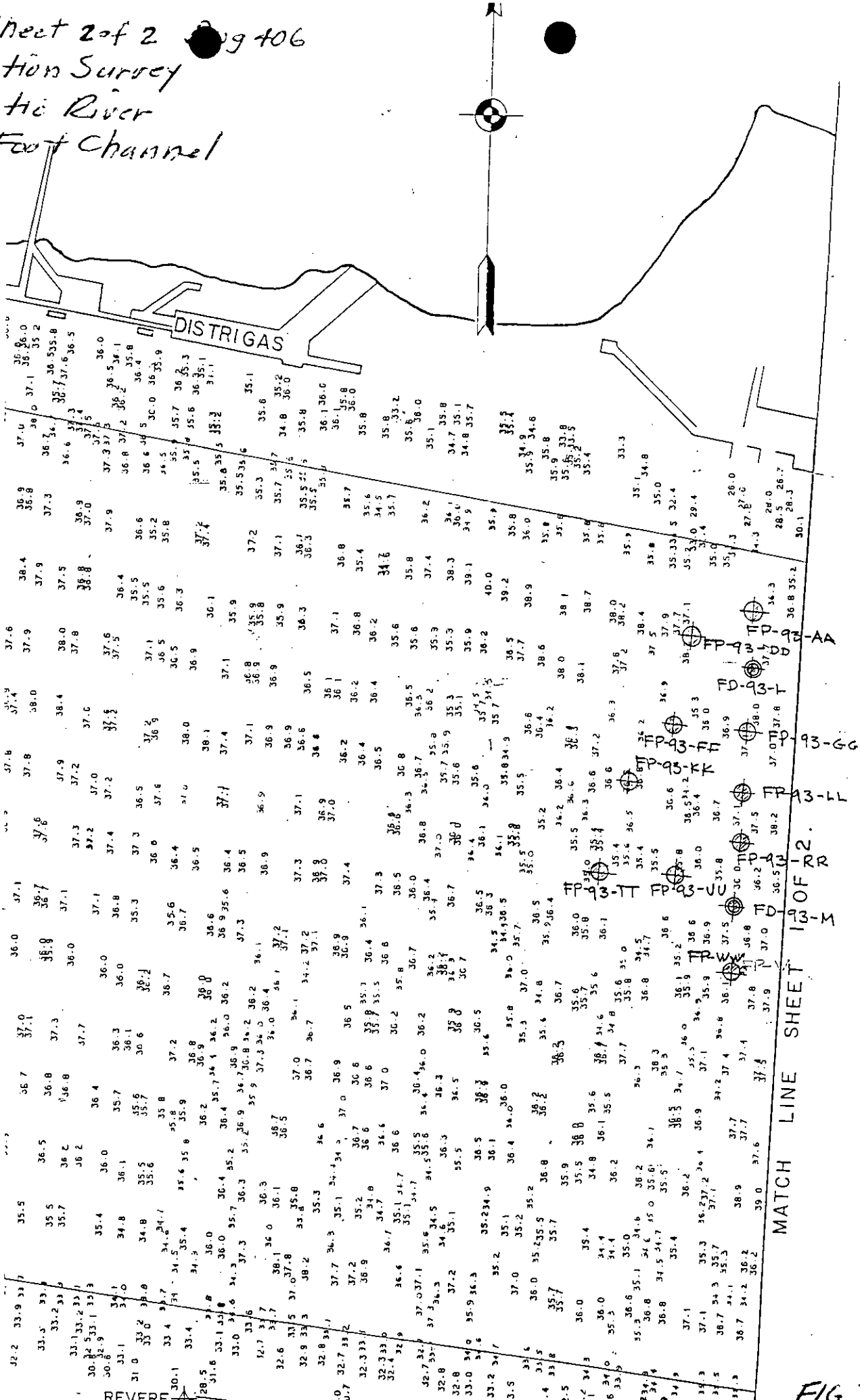


FIG 7

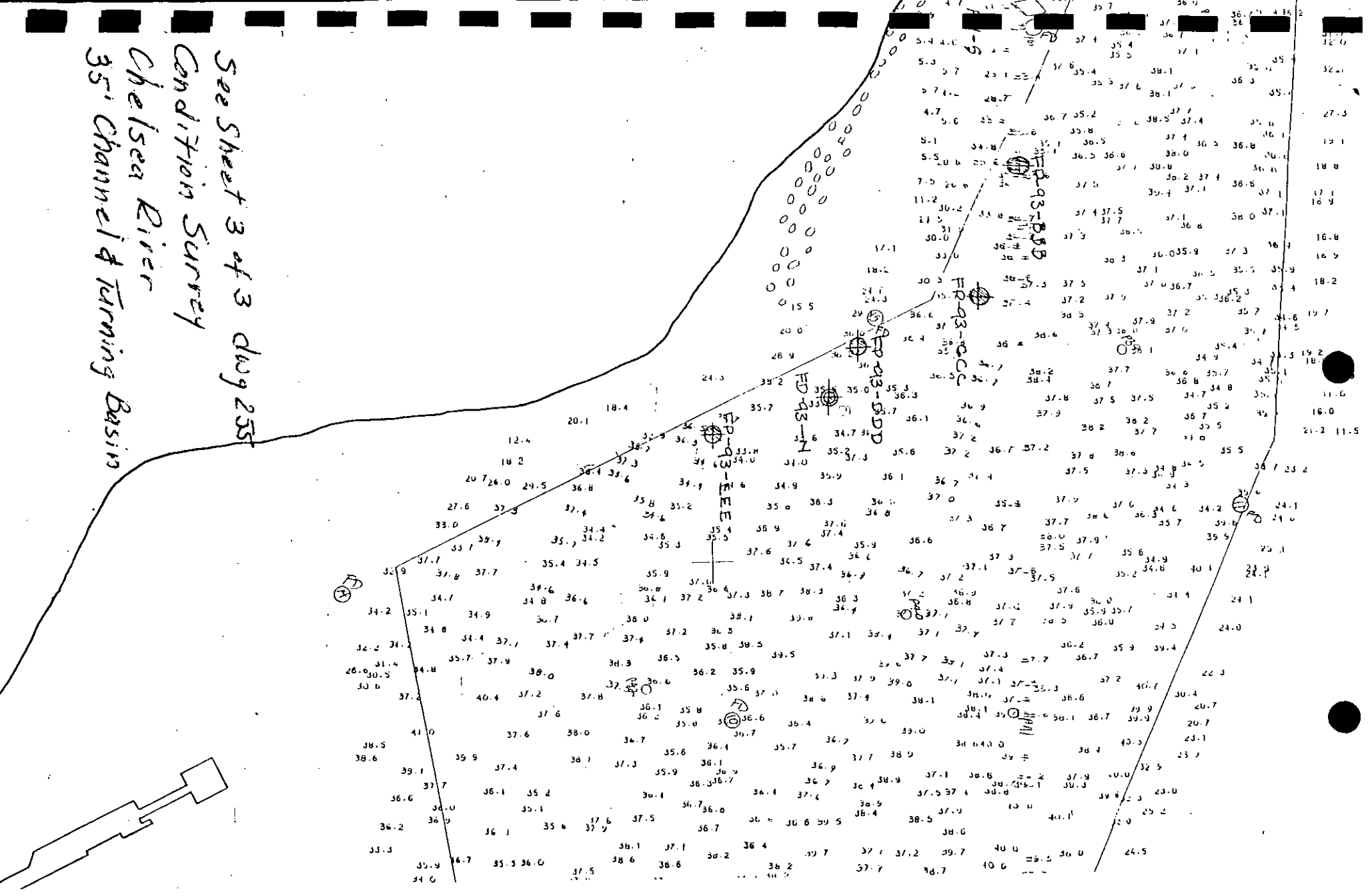

See Sheet 3 of 3 dwg 255
Condition Survey
Chelsea River
35' Channel & Turning Basin

FIG. 8

b. Project Site

The project site is located on the Boston Harbor, Boston, Massachusetts. The investigation took place on the Reserved Channel (Boston Army Base and Turning Basin), the Inner Harbor Confluence of the Mystic and Chelsea Rivers, the Mystic River near the Tobin Bridge, the Mystic River near the Exxon wharf, and on the Chelsea River.

c. Purpose

The purpose of the investigation was to determine dredging conditions, including the delineation of bedrock outcroppings, for channel deepening to -42 ft M.L.W. throughout Boston Harbor's major shipping lanes.

d. Scope of Work

Inspection and exploration instructions were provided by the Army Corps of Engineers (NED), in Delivery Order No. 0003 and are included in Section 3a. of this report. General inspection and exploration instructions were provided by the Army Corps of Engineers (NED) through the contracted Specifications for Services, and Equipment Necessary for Conducting Geotechnical Exploratory Work Various Locations in New England.

Drilling and sampling were performed by Atlantic Testing Laboratories, Limited's (ATL) personnel using Atlantic Testing Laboratories' equipment. The test borings were sampled using a 1-3/8" I.D. split spoon sampler advanced with a 140-lb. safety hammer. The borings were advanced using HW, and/or NW casing by spinning and washing. The casing was cleaned with the appropriate size roller bit. Machine probes were advanced with a 300-lb. safety hammer with an 18" drop. Rock cores were obtained using a NWD4 core and diamond bit.

The proposed scope of work required 15 test borings and 54 machine probes advanced from a barge at various locations throughout the Boston Harbor. The borings and probes were performed from June 7 through June 22, 1993 using a 36 ft x 120 ft spud barge owned and operated by Great Eastern Marine Service (GEMS) of Gloucester, Massachusetts.

U.S. Army Corps of Engineers' surveyors provided locations and elevations for the test borings and machine probes.

SECTION 4

QUALITY CONTROL

a. General Certification Statement

I hereby certify that the records, equipment, and procedures mentioned herein were used to perform the subsurface exploration. I also certify that the work was performed in a professional manner and meets the requirements set forth in the Delivery Order. This report has been subject to my review and is both complete and technically accurate.

CERTIFIED, July 2, 1993

Spencer F. Thew, P.E./L.S.

b. General Statement

The equipment and procedures used to perform the subsurface investigation are summarized below.

c. Records Taken

The "General Project Map", "Site Location Plan", and "Boring Location Plan" are included in Section 8.

Pertinent drilling procedures, sampling operations, and soil classification data were noted on the following forms provided by the Corps of Engineers:

NED 198	Daily Log of Field Explorations
NED 58 and 58a	Field Log of Test Boring
NED 130	Field Log of Test Boring in Rock and Probes

A series of logs for each of the borings and probes are included in Section 8.

A summary of daily activities and a telephone log are Table I and Table II of Section 5, respectively. A chain of custody log is in Section 6. Safety meeting, reports, and NED Form 251 are in Section 7.

d. Equipment Used

Drilling equipment and supplies were provided by Atlantic Testing Laboratories, Limited. The survey equipment was owned and operated by the U.S. Army Corps of Engineers. The subcontract equipment was owned and operated by Great Eastern Marine Service (GEMS). A list of pertinent equipment follows:

1. Survey Equipment (operated by the U.S. Army Corps of Engineers (NED), and not under the responsibility of the contractor (ATL):

   - 1 Topcon E-T-1 EDM Total Station
   - 1 Topcon Autolevel and Philly Rod (ATF4 Level)
   - 3 G.E. Portable Radios
   - 4 Tide Boards
   - 1 Suburban Truck
   - 1 Boston Whaler (boat) and 25 h.p. Outboard
   - 1 HP-41 Calculator
   - 2 Site Poles and Legs
   - 1 I-COM Portable Radio

2. Drilling Equipment:

   - CME-75 truck-mounted drill rig
   - HW and NW size casing with spin shoes
   - Drill rod, NW-threaded in 2 ft, 5 ft and 10 ft lengths used for sampling and advancing a roller bit
   - 300-lb. safety hammer for drilling probes
   - 2 ft x 1-3/8" I.D. split spoon samplers
   - Aluminum boat with outboard motor

3. Subcontract Equipment:

   - Tugboat-Michael T/Operator
   - 36 ft x 120 ft Spud Barge/Pilot
   - Crane/Operator
   - Cellular Phone
   - Aluminum Boat

e. Procedures

1. General Statement

   A marine test boring/machine probe investigation was performed in the Boston Harbor and adjacent shipping channels, Boston, Massachusetts during the period June 7, 1993 through June 22, 1993.

2. Surveying Procedures

   The U.S. Army Corps of Engineers were on-site throughout the duration of the project to locate the test borings and machine probes, and to determine their actual locations as drilled.

e. Procedures (con't.)

2. Surveying Procedures (con't.)

   a. Horizontal Control

      The coordinates of the proposed borings and probes were determined by scaling from a base map provided by the Corps of Engineers. Positioning the location of the borings/probes were accomplished by turning all angles to the right from a known benchmark or "zero" location, and acquiring distance measurements using an EDM (Electronic Distance Meter) from stations located near the end of piers. Actual coordinates were then determined, radioed to barge surveyor, and recorded.

   b. Vertical Control

      Benchmarks used for establishing vertical control are described in the Army Corps of Engineers Field Book, on Pages 3 and 23. The elevation of the bottom of the casing was determined on the barge by using the known length of rod assembled, subtracting the distance from the drill platform to water level and the stick-up elevation (platform to top of drill stem), minus the tide reading at that moment. Tidal elevation was read from a tide board by the survey instrument man and radioed to the barge and geotechnical inspector for calculations. Tide boards were located in convenient locations by the Corps of Engineers. The difference between high and low tide was approximately 10 ft; low tide being 0 M.L.W. (mean low water).

3. Boring Location Procedures

   Survey procedures other than that described above can be obtained from the U.S. Army Corps of Engineers (NED) Survey Section, and the accompanying Project Field Book.

4. Sampling and Drilling Procedures

   Sampling techniques involved retrieving material using the Standard Penetration Test. A 1-3/8" I.D. x 2 ft long split spoon sampler was advanced using a 140-lb. safety hammer. Samples were classified in the field in accordance with ASTM D-2488. Representative samples were taken from each soil sampling run and placed in 16-oz. jars with hermetically-sealed lids. Sample jars were labeled using a form similar to ENG Form 1742.

   Machine probes involved advancing NW rod using a 300-lb. safety hammer.

SECTION 5

SUMMARY OF ACTIVITIES
AND
CONVERSATION LOGS

a. Summary of Activities

TABLE I

DATE	ACTIVITY
Wednesday, May 26, 1993	- ATL drillers mobilized drill rig to Gloucester (46 miles). Loaded drill rig on barge, built work station, secured drill rig, and prepared for drilling to commence on June 7, 1993.
Monday, June 7, 1993	- 6:00 am - Mobilized barge from Gloucester to Boston. 9:00 am - ATL Drillers (Mike Hawkins and Paul McAloon) and Geotechnical Inspector (Tom Custeau) on site. Barge on site at 1:15 pm. Arrived at Black Falcon Terminal and NED surveyors on site; Paul O'Brien is the Party Chief. - T. Custeau spoke with Petty Officer Dugery, U.S. Coast Guard (USCG) - told him we thought we would be in the channel today; Dugery said we would be all set after 2:00 p.m. as he would broadcast it. - T. Custeau called Yuri Yatsevitch, Project Manager, U.S. Corps of Engineers (NED) to report project start; Y. Yatsevitch wants to start with Test Boring FD93-1, first. - T. Custeau called Petty Officer Dugery and Dugery requested he be given a call every morning with our work intentions. - Port Police Badge No. 17 told Atlantic Testing (ATL) and Great Eastern Marine Service (GEMS) to leave pier if we have no permit. He took T. Custeau to George Santry, Supervisor of Marine Terminals Massport, who told T. Custeau we could tie up at pier for $175/day or pay $2,000 fine; arranged to tie up at pier. - T. Custeau returned to barge and local union person threatened to "mess things up" at the pier because ATL and GEMS are non-union. T. Custeau reported this to G. Santry of Massport who said if we are outside of the tunnel project gate that the union could take no action. G. Santry called tunnel project and reported incident. - 3:15 pm - Held safety meeting. - 6:00 pm - Departed site.
Tuesday, June 8, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:30 am to 6:45 pm. Y. Yatsevitch was contacted by T. Custeau on radio, who asked which datum to use MLW or NGVD; he said use MLW (mean low water datum). Asked him for conversion factor and he was going to check on it.

a. **Summary of Activities (con't.)**

TABLE I (con't.)

DATE	ACTIVITY
Tuesday, June 8, 1993 (con't.)	- Positioned barge on Test Boring FD93-1 (40 ft HW casing installed to stabilize NX casing and drill rods through the water. Continuous sampling to -42.2 ft MLW - rock refusal; advanced roller bit 2 ft. - Y. Yatsevitch said obtain 3 ft rock core; cored from -44.2 to -47.2 ft MLW. - Lobsterman from Sandi complained about barge in vicinity of lobster traps and mariners short notice; directed them to USCG. - Y. Yatsevitch said to core all borings if refusal is above -42 ft MLW; use judgment on probes. - Positioned barge on Machine Probe FP93-1; bouncing refusal at -35.7 ft MLW. Y. Yatsevitch terminated hole and relocated it 30 ft off designated Machine Probe FP93-2; refusal at new location at -39.7 ft MLW. Y. Yatsevitch terminated hole. - Began moving to next location; waited for mobile barge, Iroquois, to pass. - Positioned barge on Test Boring FD93-2. Y. Yatsevitch changed program to continuous sampling to -42 ft MLW; then every 5 ft sample. Casing refusal at -44.9 ft MLW; Y. Yatsevitch requested a 3 ft core to verify material (bedrock cored, sample obtained); and boring terminated at -47.4 ft MLW. - 6:45 pm - Return to Black Falcon Terminal.
Wednesday, June 9, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:30 am to 3:30 pm. 6:30 am - Positioned barge on Machine Probe FP93-3 and drove 10.3 ft to -45.5 ft MLW elevation; rock refusal. - Positioned barge on Machine Probe FP93-4 and drove 14.8 ft to -49.6 ft MLW. - Positioned barge on Test Boring FD93-3 with continuous sampling; terminated at -47.4 ft MLW. - T. Custeau received word from USCG that he was needed at pier; received word that USCG would contact him on Marine Channel 13. - Boarded tug, Michael T, to await communication. USCG reported propane tanker would pass through at 1600 hrs and that we could not be in area. - Positioned barge on Machine Probe FP93-5 and drove 14.3 ft to -46.7 ft MLW. - T. Custeau left barge to call USCG - no need to move for tanker if not in 40-ft channel.

a. Summary of Activities (con't.)

TABLE I (con't.)

DATE	ACTIVITY
Wednesday, June 9, 1993 (con't.)	- Informed them that T. Hubbard, barge pilot, had beeper; returned to barge. - Positioned barge on Machine Probe FP93-6; drove 14.4 ft to -47.0 ft MLW. - Positioned barge on Machine Probe FP93-7; drove 14.7 ft to -46.8 ft MLW. - 3:30 pm - Returned to Black Falcon Terminal (Reserved Channel).
Thursday, June 10, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:30 am to 6:00 pm. 6:30 am T. Eldridge called USCG and spoke to Laskey to give him T. Hubbard's beeper number and told him the Michael T would be monitoring Channels 13 and 16. - Reviewed coastal chart; noted cable area off Castle Island; P. O'Brien of the USACE checking on coordinates of restricted area. - T. Custeau went to Black Falcon Terminal to make phone calls; received message from P. O'Brien that Machine Probe FP93-8 was on hold for now. - T. Custeau called Y. Yatsevitch and was told to hold off on Machine Probe FP93-8, probe expendable. - Positioned barge on Test Boring FD93-4; continuous sampling; terminated boring at 15.7 ft (-54.3 ft MLW). - Positioned barge on Test Boring FD93-6; continuous sampling; terminated boring at 15.7 ft (-51.3 ft MLW). - Positioned barge on Test Boring FD93-5; continuous sampling; terminated boring at 14.1 ft (-51.8 ft MLW). - Waited for tanker, Lana, to cross our bow (few minutes). - Positioned barge on Machine Probe FP93-8; high winds, small craft warnings; drove probe to 14.7 ft (-53.8 ft MLW). - Positioned barge on Machine Probe FP93-9; drove probe to 15.0 ft (-54.3 ft MLW). - Positioned barge on Machine Probe FP93-10; drove 15.8 ft to -54.9 ft MLW. - M. Hawkins, driller, reported bending 10-ft section of NW rod. - 6:00 pm - Returned to Black Falcon Terminal (Reserved Channel).

a. Summary of Activities (con't.)

TABLE I (con't.)

DATE	ACTIVITY
Friday, June 11, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:00 am to 11:30 am. 6:00 am Left Black Falcon Terminal and Reserved Channel; sailed to Inner Harbor Confluence area. - Positioned barge on Test Boring FD93-7; continuous sampling; terminated boring at 14.6 ft (-49.5 ft MLW). - T. Custeau contacted Y. Yatsevitch concerning "restricted areas" in Mystic and Chelsea Rivers, and Inner Harbor Confluence. - Left Inner Harbor Confluence area; passed Boston Fuel and Towing Terminal, and at 11:30 am returned to Black Falcon Terminal (Reserved Channel).
Monday, June 14, 1993	- Drillers, inspectors, crew, and surveyors on site from 11:30 am to 5:30 pm. 11:30 am T. Eldridge spoke with T. Custeau and he stated Y. Yatsevitch would be in training meetings most of this week, to communicate with Rose Schmidt. - T. Eldridge held safety meeting on barge; barge crew, ATL drillers, and Corps of Engineers surveyors all present. - Left Boston fuel pier; positioned barge on Machine Probe FP93-11; drove 15.3 ft to -52.7 ft MLW. - Positioned barge on Test Boring FD93-8; continuous sampling through 6 ft (to -45.5 ft MLW); spun and washed casing to 13 ft depth (-52.5 ft MLW). - Discontinued sampling bore hole as tanker ship, Pagoda, needed extra room to enter Chelsea River Channel; informed USCG of situation and lack of notice; contacted T. Hubbard, barge pilot, and he said he would see what he could to about acquiring shipping schedule from Boston Fuel and Towing Terminal. - Positioned barge on Machine Probe FP93-12; advanced 3.5 ft to -42.3 ft MLW; roller bitted to -45.1 ft MLW and terminated probe. Tightly packed Glacial Till evident from drill cuttings and fluid color. - 5:30 pm - Returned to Boston Fuel and Towing Terminal and docked up.

a. **Summary of Activities (con't.)**

TABLE I (con't.)

DATE	ACTIVITY
Tuesday, June 15, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:00 am to 6:00 pm. 6:00 am Left Boston Fuel and Towing Terminal for Test Boring FD93-9; continuous sampling from 0 to 4 ft (-40.5 ft to -44.5 ft MLW); then sampled 8 to 10 ft (-48.5 ft to -50.5 ft MLW); advanced casing 13 ft (-53.5 ft MLW) and began sampling; terminated boring at -53.9 ft MLW on refusal. - P. O'Brien of USACE left barge to acquire additional information on cable crossings, shipping schedules, etc. with no luck. T. Eldridge and P. O'Brien attempted to contact Y. Yatsevitch's office via radio with no luck. - Positioned barge on Machine Probe FP93-13; drove 10.2 ft to -51.7 ft MLW. - Positioned barge on Machine Probe FP93-14; drove to 10 ft to -51.3 ft MLW. - Positioned barge on Machine Probe FP93-15; drove 10.2 ft to -50.0 ft MLW. - Positioned barge on Machine Probe FP93-16; drove 10.5 ft to -48.6 ft MLW. - Positioned barge on Machine Probe FP93-17; drove 10.0 ft to -48.1 ft MLW. - P. O'Brien went by boat to west shore of Inner Harbor Confluence to determine location of cable crossing by taping from known point on coastal chart, for verification. Returned and plotted data more precisely on our maps by transferring scale. - Positioned barge on Machine Probe FP93-18; drove 10.1 ft to -49.4 ft MLW. - Positioned barge on Machine Probe FP93-19; drove 8.3 ft to -48.3 ft MLW; refusal at 50 blows, no penetration. - Moved barge up to the Mystic River; positioned on Test Boring FD93-10; continuous sampling from 0.0 to 9.0 ft; used roller bit through cobble layer; spun and washed casing to 13 ft and sampled to 14.9 ft (-51.7 ft MLW). - 6:00 pm - Returned to Boston Fuel and Towing Terminal. - **Note:** Machine Probe FP93-U was not done because of its location within a cable crossing restricted area between the Tobin Bridge.

a. Summary of Activities (con't.)

TABLE I (con't.)

DATE	ACTIVITY
Wednesday, June 16, 1993	- Drillers, inspectors, crew and surveyors on site from 6:30 am to 6:30 pm. 6:30 am Left Boston Fuel and Towing Terminal and moved up to Mystic River near Exxon wharf. - Positioned barge on Test Boring FD93-11; continuous sampling from 3 to 5 ft (-41.7 ft MLW); rock refusal - cored rock; 3.7 ft run from -41.7 ft to -45.4 ft MLW. - T. Custeau and P. O'Brien scouted Exxon wharf area and other side of Mystic Channel for physical evidence of cable crossing - none found; contacted Rose of USACE and she said to use data from coastal map as best evidence. - Moved barge downstream near Tobin Bridge; positioned barge on Test Boring FD93-12; continuous sampling from 0.0 to 7.5 ft; advanced casing then roller bitted to 13 ft (-49.1 ft MLW); sampled from 13.0 to 14.9 ft depth (-51.0 ft MLW). - Positioned barge on Test Boring FD93-13; continuous sampling from 0.0 to 10.3 ft (-46.5 ft MLW); spun and washed casing to 13 ft (-49.2 ft MLW); sampled from 13.0 to 15.0 ft depth (-51.6 ft MLW). - Replaced casing shoe with Type NW C/S Imp Serial No. 2N-1052. - Positioned barge on Machine Probe FP93-20; drove 15.0 ft to -53.3 ft MLW. - Positioned barge on Machine Probe FP93-21; drove 15.0 ft to -51.2 ft MLW. - T. Custeau called T. Wiggins and T. Wiggins recommended to stay at least 250 ft away from cable crossing in Exxon wharf area; suggested probing eastern end first until additional information became available. - Positioned barge on Machine Probe FP93-22; drove 15.0 ft to -51.7 ft MLW. - Positioned barge on Machine Probe FP93-23; drove 14.9 ft to -51.4 ft MLW. - 6:30 pm - Returned to Boston Fuel and Towing Terminal and docked.
Thursday, June 17, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:30 am to 7:30 pm. 6:30 am Early morning delay (one hour) waiting for ship and barge clearance to move up Chelsea River.

a. Summary of Activities (con't.)

TABLE I (con't.)

DATE	ACTIVITY
Thursday, June 17, 1993 (con't.)	- Positioned barge on Test Boring FD93-14; continuous sampling from 0.0 to 8.0 ft (-44.3 ft MLW); spun and washed casing and advanced with roller bit to 13.0 ft depth (-48.3 ft MLW); sampled from 13.0 to 15.2 ft (-50.5 ft MLW). - Positioned barge on Machine Probe FP93-24; drove 8.4 ft to -46.4 ft MLW; probe refusal - last 3 ft of penetration averaged 15.0 blows/ft. - T. Custeau and P. O'Brien spoke with R. Schmidt of USACE via radio concerning cable crossings in Mystic River Channel; R. Schmidt said Edison's cable crossing is definitely west of Exxon wharf and cable is not Edisons to check with New England Telephone. - T. Custeau spoke with R. Schmidt who said she had to check in with Dig Safe and they may need 72 hours to clear lines through a locator, maybe they would have some answers by tomorrow morning. - Positioned barge on Machine Probe FP93-25; drove 9.0 ft to -46.2 ft MLW; terminated in very dense material - most likely Glacial Till. - Positioned barge on Machine Probe FP93-26; drove 9.8 ft to -46.0 ft MLW; refusal with 50 blows; no penetration. - Positioned barge on Machine Probe FP93-27; drove 15.3 ft to -53.1 ft MLW. - Moved out of Chelsea River and up to Mystic River Channel. - Positioned barge on Machine Probe FP93-28; drove 10.2 ft to -48.6 ft MLW; silty sediments through 10 ft; weight of rod penetration. - Positioned barge on Machine Probe FP93-29; drove 11.1 ft to -49.7 ft MLW; silty sediments through 11 ft; weight of rod penetration. - Positioned barge on Machine Probe FP93-30; drove 5.5 ft to -43.4 ft MLW; rock refusal; rock cored 1.6 ft and terminated probe at -45.0 ft MLW. - 7:30 pm - Moved out of Mystic Channel and docked at Boston Fuel and Towing Terminal.

a. **Summary of Activities (con't.)**

TABLE I (con't.)

DATE	ACTIVITY
Friday, June 18, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:00 am to 12:30 pm. 6:00 am Moved barge up to Mystic River Channel. - Positioned barge on Machine Probe FP93-31; drove 10 ft to -48.0 ft MLW. - Positioned barge on Machine Probe FP93-32; drove 10 ft to -46.8 ft MLW. - Positioned barge on Machine Probe FP93-33; drove 10 ft to -47.1 ft MLW. - Positioned barge on Machine Probe FP93-34; drove 10 ft to -47.8 ft MLW. - T. Eldridge called R. Schmidt via barge radio - no information to add concerning cable crossing, to stick with limits shown on coastal chart as fact. - Positioned barge on Machine Probe FP93-35; drove 10 ft to -47.9 ft MLW. - Positioned barge on Machine Probe FP93-36; drove 9.2 ft to -47.8 ft MLW; refusal - 50 blows; no penetration - Positioned barge on Machine Probe FP93-37; drove 3.5 ft to -40.6 ft MLW; refusal - rock cored 2 ft to -42.6 ft MLW. - T. Eldridge notified R. Schmidt of USACE of progress to date and of coring Machine Probe FP93-37. - Two, 10-ft lengths of NW drill rod bent this day. - 12:30 pm - Returned to Boston Fuel and Towing Terminal.
Monday, June 21, 1993	- Drillers, inspectors, crew, and surveyors on site from 11:15 am to 6:45 pm. 11:15 am Left Boston Fuel and Towing Terminal and travelled up Mystic Channel beneath Tobin Bridge, toward Exxon wharf drilling area. - Positioned barge on Test Boring FD93-15; continuous sampling to 8.3 ft (-45.3 ft MLW); roller bitted to -47.4 ft MLW and terminated boring; much fractured or weathered rock encountered. - Positioned barge on Machine Probe FP93-38; weight of rod sank 11.2 ft below harbor bottom; terminated probe at -48.9 ft MLW. - Positioned barge on Machine Probe FP93-39; drove 10 ft to -47.5 ft MLW. - Positioned barge on Machine Probe FP93-40; drove 5.8 ft to -42.9 ft MLW; rock refusal. - Positioned barge on Machine Probe FP93-41; drove 4.5 ft to -42.3 ft MLW; rock refusal.

a. Summary of Activities (con't.)

TABLE I (con't.)

DATE	ACTIVITY
Monday, June 21, 1993 (con't.)	- Positioned barge on Machine Probe FP93-42; drove 3.9 ft to -43.3 ft MLW; rock refusal. - Positioned barge on Machine Probe FP93-43; drove 3.2 ft to -40.7 ft MLW; rock refusal - Positioned barge on Machine Probe FP93-44; drove 6.0 ft to -43.1 ft MLW; rock refusal. - Positioned barge on Machine Probe FP93-45; drove 8.9 ft to -45.4 ft MLW; rock refusal. - 6:45 pm - Returned to Boston Fuel and Towing Terminal in East Boston.
Tuesday, June 22, 1993	- Drillers, inspectors, crew, and surveyors on site from 6:00 am to 3:30 pm. T. Eldridge held safety meeting on barge; all present. - Left Boston Fuel and Towing Terminal for Mystic River Channel. - Positioned barge on Machine Probe FP93-46; drove 8.8 ft to -45.8 ft MLW. - Positioned barge on Machine Probe FP93-47; broke, then lost (1) NW deuce (2-ft) and (1) AW/NW adapter during first foot of blow counts (replaced adapter); used roller bit to -41.5 ft MLW; then cored bedrock from 5 to 10 ft (-41.5 to -47.0 ft MLW); 5.5 ft run - 94% recovery. - Positioned barge on Machine Probe FP93-48 (this probe was moved approximately 50 ft to the northeast of its designated position; due to its former proximity with the cable crossing zone shown on the coastal charts); drove 10 ft to -46.4 ft MLW. - Positioned barge on Machine Probe FP93-49; drove 10 ft to -47.1 ft MLW. - Positioned barge on Machine Probe FP93-50; drove 9.6 ft to -46.7 ft MLW. - Positioned barge on Machine Probe FP93-51; drove 7.8 ft to -44.9 ft MLW; rock refusal. - Positioned barge on Machine Probe FP93-52; drove 3.8 ft to -43.0 ft MLW; rock refusal. - T. Eldridge called R. Schmidt via barge radio to inform her of our progress and that we would be finishing the project soon; she acknowledged and was pleased with data to date.

a. Summary of Activities (con't.)

TABLE I (con't.)

DATE	ACTIVITY
Tuesday, June 22, 1993 (con't.)	- Positioned barge on Machine Probe FP93-53; drove 5.8 ft to -42.8 ft MLW; rock refusal. - Positioned barge on Machine Probe FP93-54; weight of rod sank 13.3 ft to -49.0 ft MLW; terminated probe. - Pulled drill rods and casing. - 3:30 pm - Returned to Boston Fuel and Towing Terminal, and docked up.
Wednesday, June 23, 1993	- Field work completed. - Delivered samples, etc. to Army Corps of Engineers (NED) in Waltham, MA. - Demobilized barge and equipment.

b. List of Telephone Logs (con't.)

TABLE II

DATE	TIME	CONVERSATION
Tuesday, June 1, 1993	9:12 am	T. Wiggins called Y. Yatsevitch to discuss schedule. Y. Yatsevitch asked that we call Corps' surveyor, S. Johnston to discuss details (where to meet, etc.) at 617/647-8527.
	9:30 am	Petty Officer Dugery called T. Wiggins with questions about information we faxed to him. Discussed dimensions of barge, radio call letters, and schedule of operations. Asked that we contact him daily with our plans. This is official USCG notification.
Wednesday, June 2, 1993	11:30 am	T. Wiggins called S. Johnston to discuss schedule of operations, USCG notification, radio contact, where to meet, etc.
Monday, June 7, 1993	7:15 am	Petty Officer Dugery called T. Wiggins and asked to have crew call him when they reached the Reserved Channel. Dugery will start marine broadcast indicating our presence in the harbor.
	8:15 am	T. Wiggins called T. Custeau with USCG's Dugery's phone number and asked T. Custeau to call Dugery before we start.
	11:30 am	T. Custeau called Petty Officer Dugery to report ATL would arrive at Black Falcon Terminal at ±1:30 pm.
	11:35 am	T. Custeau called S. Johnston to report ATL would arrive at Black Falcon Terminal at ±1:30 pm.
	1:45 pm	T. Custeau called Petty Officer Dugery to report project start. Dugery said we would be clear at 2:00 pm.
	±1:50 pm	T. Custeau called Y. Yatsevitch to report start of project. Y. Yatsevitch said to do Test Boring FD93-1 first. Y. Yatsevitch said he would be on site tomorrow. T. Custeau asked Y. Yatsevitch to explain coring at probe locations. Y. Yatsevitch notified T. Custeau if we get probe refusal above cutoff depth, the Corps needed a real good profile and that core locations would become apparent.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Monday, June 7, 1993 (con't.)	2:00 pm	T. Custeau called Petty Officer Dugery to report not working in channel today. Dugery asked to be called daily to be kept abreast of where we will be working.
	4:00 pm	T. Custeau called Y. Yatsevitch to report progress and drilling to start 6/8/93.
	4:04 pm	T. Custeau called T. Wiggins to report the safety meeting was completed and that we would start drilling 6/8/93 am.
	4:10 pm	T. Custeau called T. Wiggins to report progress.
Tuesday, June 8, 1993	6:10 am	T. Custeau called C. Graham (USCG) to report working in Reserved Channel area today.
	7:30 pm	T. Custeau called T. Wiggins to report project progress and to ask if he needed to notify FAA that we were in a flight path; was told no we weren't high enough.
	7:35 pm	T. Custeau called T. Wiggins with daily progress report. Y. Yatsevitch was on board all day today.
Wednesday, June 9, 1993	6:20 am	T. Custeau called USCG to report daily activities and was asked to call back at 7:30 am.
	7:30 am	T. Custeau called USCG (A. Sacchetti) to report working near Reserved Channel, possibly Main Channel later in day. T. Custeau to call USCG back if we go in channel.
	8:40 am	Petty Officer Dugery called T. Wiggins to confirm radio call letters for tugboat (WBJ9601).
	10:10 am	Y. Yatsevitch called T. Wiggins to discuss schedule.
	12:00 pm	T. Custeau called Petty Officer Dugery to report the operation was in violation of the safety zone when the "LNG" passed through on 6/8/93, which could have resulted in a $50,000 fine. The LNG was leaving the slip at 1600 hours and technically we should be out of the way. The coast had been trying to reach the Michael

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Wednesday, June 9, 1993 (con't.)	12:00 pm	T all morning, but couldn't get us on Marine Channels 13 and 16. I reported that the Michael T radio would be constantly monitored; also we had been unsuccessful reaching the USCG's Boston station. We could get PT Allentown, but not Boston.
	3:45 pm	T. Custeau called USCG and spoke to "Petrl" reported Michael T and barge tied up at the Black Falcon Terminal. Reported plans for 6/10/93 was the 35-ft Channel.
	3:50 pm and 4:00 pm	T. Custeau called Y. Yatsevitch but he was unavailable, so spoke to Rose. Left message for Y. Yatsevitch that Reserved Channel work was completed and no refusal encountered above -42 ft MLW, and that we intended to work in Reserved Channel on 6/10/93. If he had questions he could call me at the hotel.
Thursday, June 10, 1993	6:15 am	T. Custeau called USCG and spoke to W. Laskey to report work plan for day. Gave him T. Hubbard's (GEMS) beeper number and reported coordinates of first location (N489540, E732335); informed him we would be monitoring Marine Channels 13 and 16 and would call in our coordinates as we changed locations.
	10:05 am	T. Custeau called Y. Yatsevitch to report Test Boring FD93-8 is located in a cable area. Y. Yatsevitch reported that S. Johnston was looking into it. Y. Yatsevitch explained that this hole was expendable and could be omitted if need be. I explained ATL would not go in until the area was cleared.
	10:10 am	T. Custeau called P. Davis (ATL) to report project progress. P. Davis agreed not to drill near restricted areas.
Friday, June 11, 1993	6:30 am	T. Custeau called USCG and spoke with Dodson to report working in Inner Harbor Confluence, and we will radio our coordinates when we are on station.
	9:15 am	T. Custeau called T. Wiggins to report cellular phone on barge goes out only. Pager Number is 617/430-0867.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Friday, June 11, 1993	9:30 am	T. Custeau called Y. Yatsevitch to report completing Reserved Channel Turning Basin, and to discuss restricted areas in Mystic River, Main Channel. Y. Yatsevitch said he could not find a chart restricted area. Reported we were coordinating with P. O'Brien and he reported we could drill Test Boring FD93-7 and then end for the day.
	9:45 am	T. Custeau called T. Wiggins to report progress and that we were tying up at Boston Fuel and Towing Terminal.
	10:18 am	T. Custeau called T. Wiggins about schedule. Apparent we will not finish in 10 days. He will monitor and adjust program if necessary next week.
	11:33 am	M. Hawkins (ATL) called T. Wiggins to report completion of work for the day.
Monday, June 14, 1993	8:40 am	T. Custeau called T. Wiggins to inquire about utilities and told T. Wiggins I would try USACE Navigation of USCG.
	9:15 am	T. Custeau called T. Wiggins to discuss drilling near cable crossings.
	9:40 am	T. Custeau called Y. Yatsevitch, but not available, so spoke to R. Schmidt. R. Schmidt said Y. Yatsevitch was at training for the week, so read her the log for FD93-7 and reviewed progress. R. Schmidt informed us to do all the borings in the Inner Harbor Confluence first. T. Custeau told R. Schmidt that we would fax logs to USACE every pm.
	11:20 am	T. Custeau spoke to M. Hawkins to inform him of his conversation with R. Schmidt.
	12:20 pm	T. Eldridge called T. Custeau and T. Custeau informed him that Y. Yatsevitch would probably not be available as he was in training and to coordinate through R. Schmidt, and fax logs to USACE daily so they can keep abreast.
	3:30 pm	T. Custeau called S. Johnston but he was not available.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Monday, June 14, 1993 (con't.)	12:05 pm	T. Eldridge called Y. Yatsevitch to explain our intent of drilling in the Inner Harbor Confluence; Y. Yatsevitch hoped to drill Machine Probe FP93-11 then Test Boring FD93-8 and the probes surrounding this boring. Acknowledged.
	12:10 pm	T. Eldridge to Petty Officer Dugery to explain our intent of drilling in the Inner Harbor Confluence of Mystic and Chelsea Rivers. Received his o.k. and appreciation for calling.
	12:15 pm	T. Eldridge called T. Custeau to inform him of scope of today's work in the Inner Harbor Confluence; and T. Custeau informed T. Eldridge that Y. Yatsevitch was in training this week and work should be coordinated with R. Schmidt.
Tuesday, June 15, 1993	6:20 am	T. Eldridge called R. Bagley of USCG to notify them of our drilling intent at the Inner Harbor Confluence of Mystic and Chelsea Rivers downstream of Tobin Bridge in Boston Inner Harbor; this was acknowledged.
	9:20 am	T. Eldridge called R. Schmidt and explained the premature boring termination of Test Boring FD93-8 due to passage of tank ship with no advance notice given by USCG. I told her we need to obtain shipping schedule, proper clearances, etc. to proceed with our work, and that we will all work together in this research effort. Inquired about the order in which to drill probes and borings. R. Schmidt to contact Y. Yatsevitch for this information and for me to call back.
	2:45 pm	T. Eldridge called R. Schmidt to inform her of our completion of the Inner Harbor Confluence and she said to proceed with the test borings in Mystic River Channel near the Exxon facility, per Y. Yatsevitch.
	10:00 pm	T. Eldridge called Y. Yatsevitch at home to report progress to date and locations. Y. Yatsevitch said to concentrate on the probes and borings in Mystic River in front of the Exxon facility.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Monday, June 14, 1993 (con't.)	12:05 pm	T. Eldridge called Y. Yatsevitch to explain our intent of drilling in the Inner Harbor Confluence; Y. Yatsevitch hoped to drill Machine Probe FP93-11 then Test Boring FD93-8 and the probes surrounding this boring. Acknowledged.
	12:10 pm	T. Eldridge to Petty Officer Dugery to explain our intent of drilling in the Inner Harbor Confluence of Mystic and Chelsea Rivers. Received his o.k. and appreciation for calling.
	12:15 pm	T. Eldridge called T. Custeau to inform him of scope of today's work in the Inner Harbor Confluence; and T. Custeau informed T. Eldridge that Y. Yatsevitch was in training this week and work should be coordinated with R. Schmidt.
Tuesday, June 15, 1993	6:20 am	T. Eldridge called R. Bagley of USCG to notify them of our drilling intent at the Inner Harbor Confluence of Mystic and Chelsea Rivers downstream of Tobin Bridge in Boston Inner Harbor; this was acknowledged.
	9:20 am	T. Eldridge called R. Schmidt and explained the premature boring termination of Test Boring FD93-8 due to passage of tank ship with no advance notice given by USCG. I told her we need to obtain shipping schedule, proper clearances, etc. to proceed with our work, and that we will all work together in this research effort. Inquired about the order in which to drill probes and borings. R. Schmidt to contact Y. Yatsevitch for this information and for me to call back.
	2:45 pm	T. Eldridge called R. Schmidt to inform her of our completion of the Inner Harbor Confluence and she said to proceed with the test borings in Mystic River Channel near the Exxon facility, per Y. Yatsevitch.
	10:00 pm	T. Eldridge called Y. Yatsevitch at home to report progress to date and locations. Y. Yatsevitch said to concentrate on the probes and borings in Mystic River in front of the Exxon facility.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Wednesday, June 16, 1993	6:15 am	T. Eldridge called Petty Officer Courtney of USCG to report our intended position in the Harbor this day (Mystic River Channel); this was acknowledged.
	9:55 am	T. Custeau called T. Wiggins to report trouble locating cable in Mystic River near Exxon pier. T. Wiggins told T. Custeau to go to clear area and continue drilling.
	10:00 am	T. Custeau called T. Wiggins to report/ discuss cable crossing off Exxon pier. T. Wiggins did not want to chance drilling near cable, unless we can plot cable crossing on map; informed T. Wiggins that I had contacted the USCG office to try and locate cable.
	10:15 am	T. Custeau called R. Schmidt to explain ATL's concern and told her that from the water we looked close to the restricted area. R. Schmidt said that the USACE had transposed the area from Mariner's Chart 13272 (1991) and she thought we were clear. T. Custeau explained ATL's concern of needing to know exactly where the cable was located, and R. Schmidt requested I call her in the pm. I read her the results of Test Borings FD93-10 and FD93-11. I requested permission to work just west of the Tobin Bridge.
	2:25 pm	T. Custeau called R. Schmidt and she asked if we had transposed the crossing from the charts to our plan; the reply was no, due to the scale of the chart (given in yards).
	3:00 pm	T. Custeau called T. Wiggins to report progress and explained transposing chart location to USACE maps. T. Custeau asked T.Wiggins how close we could get and T. Wiggins replied no closer than 250 ft. T. Wiggins said to work on getting the crossing located.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Wednesday, June 16, 1993 (con't.)	3:50 pm	T. Custeau called R. Schmidt and told her we wanted to be at least 250 ft away. Suggested probing on east end of Exxon pier. R. Schmidt stated a miscommunication between Test Borings designated FD93-10 and FD93-11, in regards to which one had hit rock; I told her I would check it and call her back.
	4:10 pm	T. Custeau called R. Schmidt and told her Test Boring FD93-11 had hit rock at -41.7 ft MLW and that a core had been obtained. R. Schmidt prioritized the Machine Probes as follows: FD93-30, FP93-44, FP93-43, FP93-36, FP93-33, FP93-31, and FP93-35; and said to use our judgment about coring; however, the southern probes would require coring. R. Schmidt stated she had made contact with Boston Edison and that the person she needed to talk to regarding the cable crossing will be available 6/17/93; 0900 hours; and that we could work on probes until contact was made with Boston Edison.
	8:00 pm	T. Custeau called Y. Yatsevitch to explain ATL's need to know the cable location because of spuds, etc. I asked if we could go to the Chelsea River. Y. Yatsevitch explained this was a lower priority, and he agreed to ATL going to Chelsea, and if the cable could be located we would go back to Exxon late this afternoon. Y. Yatsevitch requested I have P. O'Brien check with S. Johnston to see if they could work one to two days. Y. Yatsevitch stated that he would have to change the contract amounts. Y. Yatsevitch said he would call T. Wiggins and discuss extending the contract.
	8:30 pm	T. Custeau called T. Wiggins to report conversations with Y. Yatsevitch.
Thursday, June 17, 1993		T. Eldridge called Lieutenant Miller of USCG to notify them of ATL's intended position in the Harbor this day (Chelsea River); acknowledged.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Thursday, June 17, 1993 (con't.)	9:40 am	T. Custeau informed R. Schmidt of his conversation with Y. Yatsevitch last night and that ATL was in Chelsea River. R. Schmidt asked which probe we had tried to reach; reply was Machine Probe FP93-35; but that barge crew and drillers were reluctant to set spuds and drill steel. R. Schmidt thought she had said that may have been a questionable location. R. Schmidt said she had yet to contact Boston Edison and requested a call back around lunch time. I told her I would call back at 11:30 am.
	11:35 am	T. Custeau called R. Schmidt but got Y. Yatsevitch and reported completing Test Boring FD93-14 - no rock. Y. Yatsevitch gave phone to R. Schmidt so T. Custeau could ask her if she had received information from the power company; she needed to assemble the information and thought it best if she give the information to the surveyors; she asked if S. Johnston was on site; reply was no that P. O'Brien was on site. R. Schmidt asked T. Custeau to have P. O'Brien call her in 1/2-hour.
	12:10 pm	Y. Yatsevitch called T. Wiggins and stated he would monitor the work next Monday and Tuesday, and would try to complete on Tuesday. R. Schmidt told T. Custeau that Boston Edison's Mystic River crossing is definitely west of Exxon and the crossing shown on the chart is not Boston Edisons. R. Schmidt was going to check with New England Telephone. T. Custeau then spoke to Y. Yatsevitch to ask if we could place more than 1 core/box; reply was yes, but make sure the core boxes are well labeled and not packed too tight. Agreed to use one box per core. R. Schmidt requested T. Custeau to call back when probes in Chelsea River were completed.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Thursday, June 17, 1993 (con't.)	3:15 pm	T. Custeau reported completion of Chelsea River probes to R. Schmidt. R. Schmidt said she had to go through Dig Safe to clear the line and hopes to talk to a locator on 6/18/93, and may have to wait 72 hours for a response. R. Schmidt requested we do some eastern most probes on the Mystic near Exxon pier. R. Schmidt hopes to have answer in morning. Informed T. Eldridge would be completing this project.
	3:30 pm	T. Custeau reported progress to T. Wiggins and that Y. Yatsevitch wants to work through Tuesday. Please notify barge company.
Friday, June 18, 1993	6:05 am	T. Eldridge called Petty Officer Dugery to notify USCG of our intended position this day in the Boston Harbor (Mystic River Channel). This was acknowledged and no known shipping obstructions were reported.
	8:50 am	T. Eldridge called R. Schmidt concerning location of cable crossing in Mystic River Channel and of our drilling progress to date. R. Schmidt said no definite information as to exact location of cable to date (not Boston Edison cable) and to refer to USCG map as best reference. She agreed to our strategy of the drilling order of probes and borings in the area. She said to call Y. Yatsevitch over the weekend.
	10:30 am	T. Eldridge called R. Schmidt to inform her of our position in the southeast quadrant of Mystic River drilling area and that bedrock was encountered at -6.42 ft MLW. She agreed with our intent to core this location.
Sunday, June 20, 1993	7:30 pm	T. Eldridge called Y. Yatsevitch and he said scope of work on Monday, June 21 to include Test Boring FD93-15 first, then pertinent machine probes in Exxon wharf (Mystic Channel area). He claims we are outside of cable crossing limits designated on coastal chart, no reason to believe we are drilling within. Y. Yatsevitch said to communicate closely with R. Schmidt, also.

b. List of Telephone Logs (con't.)

TABLE II (con't.)

DATE	TIME	CONVERSATION
Sunday, June 20, 1993 (con't.)		T. Eldridge called Y. Yatsevitch to inform him that we should finish program by Tuesday, June 22, 1993. Y. Yatsevitch said to do all the probes including Machine Probe FP93-48 by moving it eastward and north 30 to 50 ft; acknowledged.
Monday, June 21, 1993	10:55 am	M. Hawkins called T. Wiggins to discuss completing job tomorrow, demobing to Gloucester on Wednesday, and home on Thursday.
	11:05 am	T. Eldridge called B. Frost of USCG to inform them of our position in the Mystic River Channel today. Chinese ship docked at scrap metal pile, west of Exxon wharf, to be there until June 24, 1993.
	11:10 am	T. Eldridge called Y. Yatsevitch to verify our intent and strategy from our Sunday night conversation, and there were no changes.
	11:25 am	T. Eldridge called T. Wiggins to inform him of progress and concern of cable crossing location. T. Wiggins said to use best judgment in assessing the situation, and to proceed with caution using best information available.
	1:35 pm	T. Wiggins called GEMS with demobilization schedule.
Tuesday, June 22, 1993	6:05 am	T. Eldridge called Petty Officer Faneli of USCG to notify them of our intended positions in the Mystic River Channel for today. This was acknowledged.
	10:10 am	T. Eldridge called R. Schmidt to inform her of current progress, and to notify Y. Yatsevitch concerning our involvement with survey and boring location map in final report. R. Schmidt said she will speak with Y. Yatsevitch about this.
	1:00 pm	T. Eldridge called R. Schmidt to tell her of our rock core sample from Machine Probe FP93-47, and our drilling of subsequent machine probes in the Exxon wharf area (Mystic Channel). She acknowledged and also stated she was in communication with Y. Yatsevitch and that he is aware of the progress being made and that we are to finish soon.

SECTION 6

CHAIN OF CUSTODY LOG

CHAIN OF CUSTODY RECORD

ATLANTIC TESTING LABORATORIES, Limited

SCIENCE AND ENGINEERING
P.O. BOX 29
CANTON, NEW YORK 13617
315-386-4578, FAX 315-386-1012

ENVIRONMENTAL LABORATORY
48 LAGRASSE STREET
WADDINGTON, NEW YORK 13694
315-388-4452, FAX 315-388-5510

PROJECT NUMBER: CD 0040

PAGE 1 OF 2

PROJECT CONTACT: YURI YATSEVITCH

QA/QC CODE: ☐ DEC/ASP ☐ NYSDOH ☐ CLP ☐ SW-846 ☐ OTHER

PROJECT NAME: BOSTON HARBOR NAVIGATION IMPROVEMENT

PROJECT LOCATION: BOSTON, MA

PARAMETERS

REPORT DISTRIBUTION
DATES REQUIRED:
SEND REPORT TO:
FAX RESULTS TO: AT

CUSTODY SEAL 'X' EQUALS INTACT

DATE	TIME	SAMPLE LOCATION		SAMPLE TYPE*	NO. OF CONT.	LABORATORY IDENTIFICATION NUMBER	FIELD NOTES
6/8/93	A.M.	FD93-1-A	RESERVE CHANNEL ~~TURNING BASIN~~	SOIL	6		
6/8/93	P.M.	FD93-2-B	RESERVE CHANNEL	3" I.D.	6		
6/9/93	A.M.	FD93-3-C	RESERVE CHANNEL	SPLIT SPOON	7		
6/10/93	A.M.	FD93-4-D	RESERVE CHANNEL (TURNING BASIN)		5		
6/10/93	A.M.	FD93-5-D2	RESERVE CHANNEL (TURNING BASIN)		6		
6/10/93	P.M.	FD93-6-E	RESERVE CHANNEL (TURNING BASIN)		5		
6/11/93	A.M.	FD93-7-F	INNER CONFLUENCE		4		
6/14/93	P.M.	FD93-8-G	INNER CONFLUENCE		3		
6/15/93	A.M.	FD93-9-H	INNER CONFLUENCE		4		
6/15/93	P.M.	FD93-10-KK	EXXON WHARF MYSTIC RIVER		4		
6/16/93	A.M.	FD93-11-L	EXXON WHARF MYSTIC RIVER		2		
6/16/93	P.M.	FD93-12-I	MYSTIC RIVER NEAR TOBIN BRIDGE		5		

SAMPLERS NAME: Tom Eldridge
SAMPLERS SIG: Tom Eldridge
DATE: 6/8 - 6/22
TIME:

RECEIVED FOR LABORATORY NAME:
SIG:
DATE:
TIME:
SHIPMENT REC'D INTACT(YES/NO)?

SAMPLES RELINQUISHED BY:		SAMPLES RECEIVED BY:	
NAME: TOM ELDRIDGE SIG: Tom Eldridge	DATE: 6/23 TIME: 1130	NAME: ELAINE LAW SIG: Elaine Law	DATE: 6/23/93 TIME: 1130
NAME: SIG:	DATE: TIME:	NAME: SIG:	DATE: TIME:
NAME: SIG:	DATE: TIME:	NAME: SIG:	DATE: TIME:

* SAMPLE TYPE CODE KEY
B = QA/QC
C = COMPOSITE
G = GRAB
H = HEXANE SURFACE WIPES
ND = NOT DETERMINED BY SAMPLER
O = OIL
S = SOLID OR SLUDGE
W = WATER

DISTRIBUTION: WHITE WITH SAMPLES GREEN TO SCIENCE AND ENGINEERING FILES, GOLD TO CLIENT

LABORATORY STORAGE LOCATION:

LABORATORY REMARKS

THINK QUALITY

CHAIN OF CUSTODY RECORD

ATLANTIC TESTING LABORATORIES, Limited

SCIENCE AND ENGINEERING
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48 LAGRASSE STREET
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315-388-4452, FAX 315-388-5510

PROJECT NUMBER: CD 0040

PAGE 1 OF 2

PROJECT CONTACT: YURI YATSEVITCH

QA/QC CODE: ☐ DEC/ASP ☐ NYSDOH ☐ CLP ☐ SW-846 ☐ OTHER

PROJECT NAME: BOSTON HARBOR NAVIGATION IMPROVEMENT

PROJECT LOCATION: BOSTON, MA

PARAMETERS

REPORT DISTRIBUTION
DATES REQUIRED:
SEND REPORT TO:
FAX RESULTS TO: AT

CUSTODY SEAL 'X' EQUALS INTACT

DATE	TIME	SAMPLE LOCATION		SAMPLE TYPE*	NO. OF CONT.	LABORATORY IDENTIFICATION NUMBER	FIELD NOTES
6/8/93	A.M.	F093-1-A	RESERVE CHANNEL ~~TURNING BASIN~~	SOIL	6		
6/8/93	P.M.	F093-2-B	RESERVE CHANNEL		6		
6/9/93	A.M.	F093-3-C	RESERVE CHANNEL		7		
6/10/93	A.M.	F093-4-D	RESERVE CHANNEL (TURNING BASIN)		5		
6/10/93	A.M.	F093-5-D2	RESERVE CHANNEL (TURNING BASIN)		6		
6/10/93	P.M.	F093-6-E	RESERVE CHANNEL (TURNING BASIN)		5		
6/11/93	A.M.	F093-7-F	INNER CONFLUENCE		4		
6/14/93	P.M.	F093-8-G	INNER CONFLUENCE		3		
6/15/93	A.M.	F093-9-H	INNER CONFLUENCE		4		
6/15/93	P.M.	F093-10-KK	EXXON WHARF MYSTIC RIVER		4		
6/16/93	A.M.	F093-11-L	EXXON WHARF MYSTIC RIVER		2		
6/16/93	P.M.	F093-12-I	MYSTIC RIVER NEAR TOBIN BRIDGE	↓	5		

SAMPLERS NAME: Tom Eldridge
SAMPLERS SIG: Tom Eldridge
DATE: 6/9 - 6/22
TIME:

RECEIVED FOR LABORATORY NAME:
SIG:
DATE:
TIME:
SHIPMENT REC'D INTACT(YES/NO)?

SAMPLES RELINQUISHED BY:	SAMPLES RECEIVED BY:
NAME: TOM ELDRIDGE DATE: 6/23 SIG: Tom Eldridge TIME: 1130	NAME: ELAINE LITW DATE: 6/23/93 SIG: TIME: 1130
NAME: DATE: SIG: TIME:	NAME: DATE: SIG: TIME:
NAME: DATE: SIG: TIME:	NAME: DATE: SIG: TIME:

* SAMPLE TYPE CODE KEY
B = QA/QC
C = COMPOSITE
G = GRAB
H = HEXANE SURFACE WIPES
ND = NOT DETERMINED BY SAMPLER
O = OIL
S = SOLID OR SLUDGE
W = WATER

DISTRIBUTION: WHITE WITH SAMPLES GREEN TO SCIENCE AND ENGINEERING FILES, GOLD TO CLIENT

LABORATORY STORAGE LOCATION:

LABORATORY REMARKS

THINK QUALITY

CHAIN OF CUSTODY RECORD

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WADDINGTON, NEW YORK 13694
315-388-4452, FAX 315-388-5510

PROJECT NUMBER: CD0040

PAGE 2 OF 2

PROJECT CONTACT: YURI YATSEVITCH

QA/QC CODE: ☐ DEC/ASP ☐ NYSDOH ☐ CLP ☐ SW-846 ☐ OTHER

PROJECT NAME: BOSTON HARBOR NAVIGATION IMPROVEMENT

PROJECT LOCATION: BOSTON, MA

PARAMETERS

REPORT DISTRIBUTION
DATES REQUIRED:
SEND REPORT TO:
FAX RESULTS TO ____ AT ____

CUSTODY SEAL 'X' EQUALS INTACT

DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE*	NO. OF CONT.	LABORATORY IDENTIFICATION NUMBER	FIELD NOTES
6/16/93	P.M.	F093-13-J MYSTIC RIVER NEAR BRIDGE	1 3/8" I.D. SPLIT-SPOON	4		
6/17/93	A.M.	FD93-14-N CHELSEA RIVER	↓	4		
6/21/93	P.M.	F093-15-M EXXON WHARF MYSTIC RIVER	↓	3		
6/8/93	A.M.	FD93-1-A RESERVE CHANNEL	ROCK CORE	BOX 1		
6/8/93	P.M.	FD93-2-B RESERVE CHANNEL	2.06" DIA	↓		
6/16/93	A.M.	FD93-11-L EXXON WHARF MYSTIC RIVER	↓			
6/18/93	P.M.	FP93-30-OO EXXON WHARF MYSTIC RIVER		↓		
6/18/93	A.M.	FP93-37-SS EXXON WHARF MYSTIC RIVER		BOX 2		
6/22/93	A.M.	FP93-47-UU EXXON WHARF MYSTIC RIVER	↓	"		

SAMPLERS NAME: TOM ELDRIDGE
SAMPLERS SIG: Tom Eldridge
DATE: 6/8 TO 6/22
TIME:

RECEIVED FOR LABORATORY NAME: DATE:
SIG: TIME:
SHIPMENT REC'D INTACT(YES/NO)?

SAMPLES RELINQUISHED BY:		SAMPLES RECEIVED BY:	
NAME: TOM ELDRIDGE SIG: Tom Eldridge	DATE: 6/23 TIME: 1130	NAME: ELAINE LAW SIG: Elaine Law	DATE: 6/23/93 TIME: 1130
NAME: SIG:	DATE: TIME:	NAME: SIG:	DATE: TIME:
NAME: SIG:	DATE: TIME:	NAME: SIG:	DATE: TIME:

* SAMPLE TYPE CODE KEY
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C = COMPOSITE
G = GRAB
H = HEXANE SURFACE WIPES
ND = NOT DETERMINED BY SAMPLER
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W = WATER

DISTRIBUTION: WHITE WITH SAMPLES GREEN TO SCIENCE AND ENGINEERING FILES, GOLD TO CLIENT

LABORATORY STORAGE LOCATION:

LABORATORY REMARKS

THINK QUALITY

SECTION 7

SAFETY REPORTS

WEEKLY SAFETY MEETING

Date held 6/7/93

NEDSO

THRU: Area Engineer, YATSEUTCH Area

Time 3:15 / 3:25

TO: Safety Office, NED

1. Weekly safety meeting was held this date for the following personnel:

Contract No. _____ Contractor ATLANTIC TESTING LABORATORIES

Conducted By T. A. CUSTEAU

Personnel present (Contr) T. A. C. M. H. P.
(Sub) KEN TALLIDGE, LUBENCE, TNUBB
(Govt) PAUL O'BRIAN, SEAL

Subjects discussed (Note, delete, or add):

Individual Protective Equipment - L.J. + HARD HATS, DAVID Keddell

Prevention of Falls - WATCH YOUR STEP

Safe Lifting Techniques - USE Leg & NOT BACK

Emergency Communications - RADIO

Fire Prevention - EXISTING

Sanitation, First Aid - FIRST AID KITS, DRILL RIGS, TUG, Corp vehicle

Tripping Hazards - trash, hose, nails in lumber - GENERAL House clean - Keep AREA NEAT

Staging, Ladders, Concrete Forms - N/A

Hand Tools, Portable Power Tools, Woodworking Machinery - Zero defects,

Equipment Maintenance (Zero defects) -

Hoisting Equipment - USING TRAINED people only

Ropes, Hooks, Chains and Slings - ZERO DEFECTS,

Electrical Grounding, Temporary Wiring - N/A

Lockouts for safe clearance procedures - electrical, pressure, moving part N/A

Welding - GOOD

Excavations - N/A

Loose Rock and Steep Slopes - N/A

Explosives - N/A USE

Water Safety - LIFE JACKETS, ROUGH WATER - TWO people IN BOAT

Other - INDIVIDUAL Corporations Policy.

Prepared by T. A. CUSTEAU Title G.I.

2. Forwarded.

Signature [signature]
Resident Engineer

CP: MANHOURS

Contractor 10 MIN

SubContractor 10 MIN

Period Covered 6/7 - 6/11/93

FIG No. 11

Susse chalet Dorchester

647-287-9100

G.E.S-
411701

James initial
Early Bartlett House.

LEFT SUMMER TURN into L STREET TO BOULVARD by WATER

TAKE RT DAY BOULVARD. (Keep water on left hand side
to Rotary TAKE 1ST RIGHT Columbia on security free lights
motel will on left ~~motel will~~

4:00. called G. F. - reported not starting till 6:30am - Tues/ng

4:10 - T.A.N Mport program.

WEEKLY SAFETY MEETING

Date held 6/14/93

NEDSO

THRU: Area Engineer, ~~YORK YARMOUTH~~ NEW ENGLAND Area

Time 1220 - 1230

TO: Safety Office, NED

1. Weekly safety meeting was held this date for the following personnel:

Contract No. DACW33-93-D-0004 Contractor ATLANTIC TESTING LABORATORIES

Conducted By TOM ELDRIDGE

Personnel present (Contr) ATL 3
(Sub) GREAT EASTERN MARINE 3
(Govt) CORPS OF ENGINEERS 2

Subjects discussed (Note, delete, or add):

Individual Protective Equipment - HARD HATS, EYE PROTECTION

Prevention of Falls - CLEAR BARGE OF build up areas

Safe Lifting Techniques - bend with LEGS

Emergency Communications - RADIO

Fire Prevention - ✓ YES

Sanitation, First Aid - KITS AVAILABLE YES

Tripping Hazards - trash, hose, nails in lumber - ✓

Staging, Ladders, Concrete Forms - N/A

Hand Tools, Portable Power Tools, Woodworking Machinery -

Equipment Maintenance (Zero defects) -

Hoisting Equipment - TRAINED PERSONEL ONLY

Ropes, Hooks, Chains and Slings - OK

Electrical Grounding, Temporary Wiring - N/A

Lockouts for safe clearance procedures - electrical, pressure, moving part

Welding - HELMET & EYES ✓

Excavations - N/A

Loose Rock and Steep Slopes - N/A

Explosives - N/A

Water Safety - LIFE JACKETS, SAFETY BOAT

Other -

Prepared by TOM ELDRIDGE Title Q.I.

2. Forwarded.

Signature Tom Eldridge
Resident Engineer

CP: MANHOURS
Contractor 10 MIN
SubContractor 10 MIN
Period Covered 6/14 - 6/18/93

FIG No. 11

WEEKLY SAFETY MEETING

Date held JUNE 22, 1993

NEDSO

THRU: Area Engineer, NEW ENGLAND Area

Time 620 A.M.

TO: Safety Office, NED

1. Weekly safety meeting was held this date for the following personnel:

Contract No. DACW33-93-D-0004 Contractor ATLANTIC TESTING LABORATORIES

Conducted By TOM ELDRIDGE

Personnel present (Contr) ATLANTIC TESTING 3
(Sub) GREAT EASTERN MARINE 3
(Govt) CORPS OF ENGINEERS 2

Subjects discussed (Note, delete, or add):

Individual Protective Equipment - OK

✓ Prevention of Falls - CLEARING FREQUENT WALK WAY AREAS — OK

✓ Safe Lifting Techniques - RECOMEND LEGS NOT BACK

✓ Emergency Communications - RADIO OK

✓ Fire Prevention - EXTINGUISHERS OPERABLE

✓ Sanitation, First Aid - KITS AVAILABLE

Tripping Hazards - trash, hose, nails in lumber - CABLES, ETC.

Staging, Ladders, Concrete Forms - N/A

Hand Tools, Portable Power Tools, Woodworking Machinery - N/A

Equipment Maintenance (Zero defects) - OK

Hoisting Equipment - OK

Ropes, Hooks, Chains and Slings - OK

Electrical Grounding, Temporary Wiring - N/A

Lockouts for safe clearance procedures - electrical, pressure, moving part OK

Welding - HELMETS, EQUIPMENT FINE

Excavations - N/A

Loose Rock and Steep Slopes - N/A

Explosives - N/A

Water Safety - LIFE JACKETS, FIRST AID, ETC.. OK

Other - ✓

Prepared by TOM ELDRIDGE Title G.I.

2. Forwarded.

Signature Tom Eldridge
Resident Engineer

CP: MANHOURS

Contractor 10 MIN

SubContractor 10 MIN

Period Covered 6/21 - 6/23/93

FIG No. 11

SECTION 8

FIELD INSPECTOR'S LOGS AND MAPS

a. Daily Log of Field Explorations

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 1

DATE June 7, 1993
MONDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT Borings and Probes in Mystic & Chelsea River, Boston Harbor

TEMPORARY ADDRESS

LOCATION WHERE CAN BE REACHED Dorset Quarry Neponset Mass

PHONE 617-287-9200 TIME TEMPERATURE: MAX. MIN.

WEATHER Clear Pleasant

DRILLING TODAY

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
			None		

TEST PITS OR AUGER BORINGS TODAY

HOLE	AREA	DEPTH	MATERIAL

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	T.A. Cuseno - Inspector	9
ATL	M. Hawkins - Driller	9
ATL	P. Mulvey - Drill Helper	9
CREW	R. Cyr / Laborers (Gov't Rs)	11 1/4
CREW	W. Perrine - Small Boat Operator	11 1/4
CREW	T. Hallinan - Pilot	11 1/4
CREW	G. Stery - Captain	11 1/4

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
Barge Barge	11 1/4	
57' Tug Boat	11 1/4	
Gage 75 Drilling	11 1/4	
16 FT Boat	11 1/4	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-7-93
MONDAY

NARRATIVE OF DAYS OPERATIONS

Drill Rig, Barge and Tug Mobilized From Gloucester to Boston onsite 1:15pm
Drill Crew and Inspector Mobilized on site 1:15pm (Black Falcon Terminal)
Survey Crew (Med) on site upon Arrival
Completed Setting up Barge, Assemble Drill steel, Arranged for
Barge and Tug Mooring, Held Safety Meeting.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
T.A. Custers	4¼								4¾		9
M. Hawkins	4¼			4¾*							9
P. M. Aland	4¼			4¾*							9
K. Taliadoros	11¼										11¼
J. Benner	11¼										11¼
T. Hubbard	11¼										11¼

WORK FOR TOMORROW

Drill FD-93(A) - Call Yon. Yatsevich - ~~[illegible]~~ work in Reserve Channel.

FIELD PURCHASES

ITEM	AMOUNT	ITEM	AMOUNT

* Assemble steel, Safety Meeting, Arrangements.

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 2 DATE June 8 1993 TUESDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT Boring and Probes, Mystic, Chelsea Creeks, Boston Harbor

TEMPORARY ADDRESS

LOCATION WHERE CAN BE REACHED Same address as above

PHONE 617-28[illegible] TIME TEMPERATURE: MAX. MIN.

WEATHER

DRILLING TODAY

HOLE	AREA	FOOTAGE FROM (M.L.W)	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD93-1	Reserve Channel	-34.2'	-47.2'	13'	0.0 to 8.0 Brown Sands 8.0 to 13.0 Rock
FD93-2	"	-33.7'	-47.4	13.7'	0.0 to 3.5 Brown Sands, 3.5 to 10' Gray Silty Clay 10.0 to 13.7' Rock
FP93-1	"	-32.7	-35.7	3.0'	Probe - No Sampling (O vB)
FP93-2		-33.4	-39.7	6.3'	" " " (O vB)

TEST PITS OR AUGER BORINGS TODAY

HOLE	AREA	DEPTH	MATERIAL

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	T.A. Costello (ATL Geo Eng.)	12¼
ATL	T. Edwards (" " ")	12¼
ATL	M. Hawkins (ATL Driller)	12¼
ATL	P. Abraham (ATL Drill Helper)	12¼
CREW	W. Bonner (Great Eastern Dredging Boat Operator)	12¼
CREW	G. Story (Tug Captain) G.E. D/S.	12¼
CREW	T. Holmes (Pilot) G.E. D/S.	12¼

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
53' Tug Boat	12¼	
30' x 120' Barge	12¼	
Mobile 75 Drill Rig	12¼	
16' Boat	12¼	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-8-93
TUESDAY

NARRATIVE OF DAYS OPERATIONS

Positioned Barge at Boring FD 93-1, Performed Continuous Split Spoon Sampling from -34.2 to -42.2' MLW, Roller bit to -44.2' MLW, Cored to -47.2' MLW. Moved Barge to FP 93-1 Probed from -32.7' to -35.7' MLW, Refusal Criteria Met at -35.7 MLW, Hole terminated per Y. Yatsevich. Moved Barge to FP 93-2 Probed from -33.4 to -39.7 MLW Refusal Criteria Met at -39.7' MLW Probe terminated. Moved to FD 93-2 Performed Continuous Split Spoon Sampling from -33.7 to -43.7' MLW. Set Casing Refusal at 44.9 MLW per Yuri Yatsevich a 2.5' Core was obtained. Barge and tug tied up at Black Falcon Cruise Terminal

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
T.A. Custeau									12 1/4		12 1/4
M. Hawkins			3	7.75	1.5						12 1/4
P. McAloon			3	7.75	1.5						12 1/4
W. Benner			12 1/4								12 1/4
G. Story			12 1/4								12 1/4
T. Hubbard			12 1/4								12 1/4
T. Eldridge									12 1/4		12 1/4

WORK FOR TOMORROW

Continue Explorations in the Reserved Channel Area

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 3 DATE 6/9/93 WEDNESDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT Boston Harbor - Borings and Probes

TEMPORARY ADDRESS

LOCATION WHERE CAN BE REACHED

PHONE TIME TEMPERATURE: MAX. MIN.

WEATHER Overcast Foggy 70°F

DRILLING TODAY

HOLE	AREA	FOOTAGE FROM (M.L.W.)	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FP93-3	Reserve Channel	-31.9'	-45.5	10.3	Machine Probe - Overburden (OVB)
FP93-4	Reserve Channel	-31.8	-49.6'	14.8'	" " " " (OVB)
FP93-5	Reserve Channel	-32.2'	-47.4'	15.2'	0-4.5' Gray Brown Silty Sands, -4.5' to -6.5' Gray Silty Clay/Clayey Silt -6.5' to -15.2' Gray Silty Sands

~~TEST PITS OR AUGER BORINGS~~ TOWN DRILLING TODAY Continued

HOLE	AREA	DEPTH (M.L.W.)	MATERIAL
FP93-5	Reserve Channel	-32.4 to -46.7	14.3 Machine Probe (OVB)
FP93-6	Reserve Channel	-32.0 to -47.0	14.4 Machine Probe (OVB)
FP93-7	Reserve Channel	-32.1 to -46.8	14.7 Machine Probe (OVB)

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	E.A. Costello - Inspector	9
ATL	T. Clements - Inspector Trainee	9
ATL	M. Hawkins - Driller	10.5
ATL	P. McGillicuddy - Drill Helper	10.5
CREW	W. Benner G.E. 21.5 Sm. Boat Operator	9
CREW	T. Hubbard " - Pilot	9
CREW	G. Stone " - Capt.	9

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
36'x120' Spud Barge	9	
53' Tug Boat	9	
CME 75 Truckmount	9	
16' Boat	9	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-9-93
WEDNESDAY

NARRATIVE OF DAYS OPERATIONS

PERFORMED BORING FD-93-3 AND PROBE FP 93-3 THROUGH FP93-7 IN THE AREA NEAR THE RESERVE CHANNEL. THE DAY NEEDED TO BE "CUT SHORT" AS THE PROPANE TANKER "LNG" WAS SCHEDULED TO PASS OUR LOCATION AROUND 4pm - 5pm. BARGE AND TUG WERE DOCKED AT THE BLACK FALCON TERMINAL AT 3:30pm. THE DRILLER PERFORMED PREVENTIVE MAINTAINCE ON RIG TILL 5:00pm.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
T.A. Custeau									9		9
T. Eldridge									9		9
M. Hawkins			3	6		1½					10.5
P. McAloon			3	6		1½					10.5
W. Benner			9								9
K. Hubbard			9								9
G. Story			9								9

WORK FOR TOMORROW

PERFORM BORINGS AND PROBES IN RESERVE CHANNEL TURNING BASIN

FIELD PURCHASES

ITEM	AMOUNT	ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 4

DATE June 10, 1993
THURSDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT Boston Harbor Borings and Probes

TEMPORARY ADDRESS

LOCATION WHERE CAN BE REACHED

PHONE TIME TEMPERATURE: MAX. 84°F MIN. 72°F

WEATHER Clear to Pcloudy winds SW 15-25 mph gusting to 35 mph; waves to 2½'

DRILLING TODAY

HOLE	AREA	FOOTAGE FROM (M.L.W)	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD93A	Reserve Chan Turn. Basin	-38.6	-54.3	15.7 14.4	0.0 - -1.6' Rubble; -1.6 to -15.7' Grey Clay and Silt
FD 93-5	" "	-37.7	-51.8	14.1	0.0 - 3' Grey Black M F Sand, and Silt 3' to -13' Grey Clay and Silt -13' to 14.1 Gray Cm & Sand and Gravel, trace silt
FD 93 6	" "	-36.4	-51.3	14.6	0.0 - 2-3' Grey Brn & Cm Sand, little silt, little clay 2.3-3 to Brn Med Sand -3.0 to 14.6 Grey Clay and Silt Grading to Grey Silt, some Sand, some Gravel

Machine Probes 300# Hammer 18" Drop

~~TEST PITS OR AUGER BORINGS TODAY~~

HOLE	AREA	DEPTH	MATERIAL
FP93-8	Red. Chan. Turn. Basin	-39.1 / -53.8	14.7
FP93-9	" "	-39.3 / -54.3	15.0
FP93-10	" "	-39.1 / -54.8	15.8

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	H.A. Costello Engineer	11.5
ATL	T. Eldridge Engineer	11.5
ATL	M. Hawkins - Driller	11.5
ATL	R. McAbon Drill Helper	11.5
	W. Bonnice Sm. Boat Operator	11½ OL
	G. Story - Capt	11½ OL
	T. Hubbard Pilot	11½ OL

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
55' Tug Boat	11½	
30x130 Steel Barge	11½	
CME 75 (Track Mount)	11½	
16' Boat	11½	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-10-93
THURSDAY

NARRATIVE OF DAYS OPERATIONS

Positioned Barge at FD93-D (FD93-4) advanced Casing to -54.3' M.L.W. by spining and washing, performed split spoon sampling to -49.6' M.L.W., and spun and washed Casing to -51.8' M.L.W., and sampled while on this station. Noted that Probe Designated FP 93-G fell within a "Restricted Area" (Basic Crossing). Paul O'Brien (USACE Surveyor) was asked to plot the location of FD93-D, and FP 93-G on to Mariners Chart #13272. Informed Mr. Yatsko that FD93-D was very close to edge of Restricted Area, and that Probe FP-93-G plotted within the Restricted Area, it was agreed that Probe FP93-G would be placed on hold pending location of the Cable. Moved Barge to FD93-D-2 advanced hole to -51.8' M.L.W. by spining and washing Casing, continuous split spoon sampling was performed to a depth of -49.1' M.L.W., an additional sample was obtained from -50.7 to -51.8' M.L.W. Spoon Refusal was encountered at this Elev. Probes FP93-8 through FP 93-10 were performed by using N.W. Rod advanced with a 300# Hammer Falling 18"

On Site 6 hours off Site 6 hours.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
T.A. Costeau									11.5	4	11.5
T. Eldredge									11.5	4	11.5
M. Hawkins			3 1/4	8 1/4							~~11.5~~ 11.5
P. McAlown			3 1/4	8 1/4							~~11.5~~ 11.5
W. Benner			~~12~~ 11 1/2								~~12~~ 11 1/2
T. Hubbard			~~12~~ 11 1/2								~~12~~ 11 1/2
G. Stucy			~~12~~ 11 1/2								~~12~~ 11 1/2

WORK FOR TOMORROW

Move Barge and Tug to Inner Confluence Drill FD 93-F (FD93-7) Call Yuri with Results.

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 5 DATE 6/10/93 FRIDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT [illegible]

TEMPORARY ADDRESS

LOCATION WHERE CAN BE REACHED

PHONE TIME TEMPERATURE: MAX. [illegible] MIN. [illegible]

WEATHER [illegible]

DRILLING TODAY

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD 93-E	[illegible]	31.5	48.5	14.0	0-7.4' [illegible] 7.4-24'-14.6' [illegible]

TEST PITS OR AUGER BORINGS TODAY

HOLE	AREA	DEPTH	MATERIAL

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	[illegible]	5 1/2
ATL	[illegible]	5 1/2
ATL	[illegible] Driller	5 1/2
ATL	[illegible] Drill Helper	5 1/2
CREW	[illegible] SM. BOAT OPERATOR	5 1/2
CREW	[illegible] Pilot	5 1/2
CREW	[illegible]	5 1/2

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
[illegible] STILBARGE	5 1/2	
[illegible] BOAT	5 1/2	
[illegible] Driller	5 1/2	
16' BOAT	5 1/2	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-11-93
FRIDAY

NARRATIVE OF DAYS OPERATIONS

Moved Barge From Black Falcon Terminal up to Inner Confluence set up and Drilled FD-93-F (FD93-7) Advanced Hole to -44.3' M.L.W using HW Casing, A Tricone Roller Bit was used to advance the Hole to a depth of -47.5' M.L.W. Continuous Split Spoon Sampling to -44.4' MLW additional Split Spoon Sample was obtained From -47.5' MLW to -49.5' MLW. Secured Barge for the Weekend at Boston Transportation and Tooling.

On site Monday off site 11:30

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
T. Falconer									5 1/2		5 1/2
T. Eldridge									5 1/2		5 1/2
M. Hawkins			3 1/4	2 1/4							5 1/2
P. McAdoo			3 1/4	2 1/4							5 1/2
W. Brunner											5 1/2
T. Hubbard											5 1/2
G. Storey											5 1/2

WORK FOR TOMORROW

None

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 6 DATE JUNE 14, 1993 MONDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR

TEMPORARY ADDRESS DAYS INN - ROOM 122

LOCATION WHERE CAN BE REACHED LYNN, MA

PHONE (617) 581-5555 TIME AFTER 7 TEMPERATURE: MAX. 90 MIN. 60

WEATHER MOSTLY SUNNY CALM - LIGHT WIND

DRILLING TODAY - TEST BORINGS

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD93-8	INNER HARBOR	39.5	52.5	13.0	0-2' cmf SAND, little silt, trace gravel; 2'-6' mf SAND AND SILT little gravel, trace CLAY

~~TEST PITS OR AUGER BORINGS TODAY~~ MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-11	INNER HARBOR	15.3	LOOSE → DENSE
FP93-12	INNER HARBOR	6.4	DENSE - VERY DENSE

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	TOM ELDRIDGE (GEO INSPECTOR)	6
ATL	MIKE HAWKINS (DRILLER)	6
ATL	PAUL McALOON (DRILLER HELPER)	6
CREW	TIM HUBBARD (PILOT)	8
CREW	GEORGE STORY (CAPTAIN)	8
CREW	WARREN BENNER (SM. BOAT OPER)	8

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
53' TUG - MICHAEL T	6	
36'x120' SPUD BARGE	6	
CME 75 TRUCK MOUNT	6	
16' BOAT	6	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-14-93
MONDAY

NARRATIVE OF DAYS OPERATIONS

THE EXTENT OF WORK ACTIVITIES THIS DAY INCLUDED DRILLING TEST BORING FD93-8 AND TEST PROBES FP 93-11 AND FP 93-12. TEST BORING FD 93-8 WAS drilled TO -6 FT (-45.5' MLW) AND SAMPLED CONTINUOUS TO THAT DEPTH. THE CASING WAS BEING ADVANCED TO A GREATER DEPTH THEN DISCONTINUED, HOWEVER, AS A TANKER SHIP NEEDED CLEARANCE WITHIN THE CHANNEL. THE CASING WAS REMOVED.

MACHINE PROBE FPB-11 WAS ADVANCED -15.3 FT (-52.4' MLW). MATERIAL ENCOUNTERED WAS LOOSE-MEDIUM DENSE through -9 FEET, THE LAST 6 FEET WAS DENSE TO VERY DENSE GLACIAL TILL MATERIAL AS EVIDENCED FROM THE TEST BORING. PROBE FP93-12 WAS ADVANCED TO -3.5 FEET BEFORE MEETING SUBSTANTIAL RESISTANCE. THE TIGHTLY PACKED TILL MATERIAL WAS DRILLED ANOTHER 3 FEET USING A ROLLER BIT. DRILLING WAS RELATIVELY EASY AND QUICK.

THE ~~BORING~~ PROBE WAS TERMINATED at -45.1 FT. DEPTH AND NO ROCK WAS ENCOUNTERED.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
T. ELDRIDGE			~~3 1/4~~						6		6
M. HAWKINS			1 3/4	4 1/4							6
P. McAloon			1 3/4	4 1/4							6
T. HUBBARD			6							2	8
G. STORY			6							2	8
W. BENNER			6							2	8

WORK FOR TOMORROW

DRILL TEST BORINGS AND PROBES IN BOSTON INNER HARBOR — INNER CONFLUENCE, BORING FD 93-H AND SEVERAL PROBES, FP 93M THRU FD 93-S

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 7 DATE JUNE 15, 1993 TUESDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR

TEMPORARY ADDRESS DAYS INN - ROOM 122

LOCATION WHERE CAN BE REACHED LYNN, MA

PHONE (617) 581-5555 TIME AFTER 7 TEMPERATURE: MAX. 85 MIN. 60

WEATHER MOSTLY SUNNY AFTERNOON PARTLY CLOUDY INCREASING WINDS

DRILLING TODAY — TEST BORINGS

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD 93-9	INNER HARBOR	40.5	53.9	13.4	GRAY C-mF SAND; some gravel; TRACE-little silt
FD 93-10	MYSTIC RIVER	36.8	51.7	14.9	GRAY m-F SAND; some SILT; little GRAVEL

~~TEST PITS OR AUGER BORINGS TODAY~~ MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-13	INNER HARBOR	10.2	
FP93-14	↓	10.0	
FP93-15	↓	10.2	
FP93-16	↓	10.5	

HOLE	AREA	DEPTH	MATERIAL
FP93-17	INNER HARBOR	10.0	
FP93-18	↓	10.1	
FP93-19	↓	8.3	

PERSONNEL

	NAME	HOURS
ATL	TOM ELDRIDGE (GEO INSPECTOR)	12
ATL	TOM CUSTEAU (GEO INSPECTOR)	8
ATL	MIKE HAWKINS (DRILLER)	12
ATL	PAUL McALOON (DRILLER HELPER)	12
CREW	TIM HUBBARD (PILOT)	12
CREW	GEORGE STORY (CAPTAIN)	12
CREW	WARREN BENNER (SM. BOAT CREW)	12

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
53' TUG - MICHAEL T	12	
CME 75 TRUCK MOUNT RIG	12	
36' x 120' SPUD BARGE	12	
16' BOAT	12	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-15-93
TUESDAY

NARRATIVE OF DAYS OPERATIONS

THE EXTENT OF WORK ACTIVITIES THIS DAY INCLUDED DRILLING TEST BORINGS FD93-9 AND FD93-10 AND MACHINE PROBES FP93-13 THROUGH FP93-19. ALL TEST LOCATIONS WERE IN THE BOSTON INNER HARBOR WITH THE EXCEPTION OF FD93-10 WHICH WAS LOCATED UP MYSTIC RIVER IN FRONT OF THE EXXON FACILITY. TEST BORING FD93-9 MET REFUSAL AT -18.4 FEET EVIDENCED BY THE HIGH BLOW COUNT PER INCH. MUCH OF THE MATERIAL WAS DENSE, C-MF GRAY SAND, with a little silt. TEST BORING FD93-10, UP MYSTIC RIVER, WAS ADVANCED 14.9 FEET. MUCH OF THE MATERIAL WAS A GRAY, C-MF SAND with a little to some gravel. A COBBLE LAYER EXISTED between -11 AND -12 FT evidenced by the rough drilling and rock fragments encountered. NO BEDROCK WAS ENCOUNTERED AT OR NEAR -42' ELEV. M.L.W. 7 MACHINE PROBES WERE LOGGED.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
TOM ELDRIDGE									12		12
TOM CUSTEAU									8		8
MIKE HAWKINS			4	8						4	12
PAUL McALOON			4	8						4	12
TIM HUBBARD			12								12
GEORGE STORY			12								12
WARREN BENNER			12								12

WORK FOR TOMORROW

DRILL TEST BORINGS AND MACHINE PROBES IN THE MYSTIC RIVER AREA

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 8 DATE JUNE 16, 1993 WEDNESDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR

TEMPORARY ADDRESS DAYS INN - ROOM 122

LOCATION WHERE CAN BE REACHED LYNN, MA

PHONE (617) 581-5555 TIME AFTER 7 TEMPERATURE: MAX. 80 MIN. 55

WEATHER CLEAR TO PARTLY CLOUDY MILD 80° light WIND

DRILLING TODAY - TEST BORINGS

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD93-11	Mystic River	-37.9	-45.4	7.5	REFUSAL @ -41.7 MLW ROCK CORING TO -45.4' MLW
FD93-12	Mystic River	-36.1	-51.0	14.9	GRAY-BROWN C-MF SAND; AND GRAVEL Cobble LAYER
FD93-13	Mystic River	-36.2	-51.6	15.4	GRAY CLAY ; SOME SILT

~~TEST PITS OR AUGER BORINGS TODAY~~ - MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-20	Mystic River	15.0	
FP93-21	Mystic River	15.0	
FP93-22	Mystic River	15.0	
FP93-23	Mystic River	14.9	

HOLE	AREA	DEPTH	MATERIAL

PERSONNEL

	NAME	HOURS
ATL	TOM ELDRIDGE (GEO INSPECTOR)	12
ATL	TOM CUSTEAU (GEO INSPECTOR)	12
ATL	MIKE HAWKINS (DRILLER)	12
ATL	PAUL McALOON (DRILLER HELPER)	12
CREW	TIM HUBBARD (PILOT)	12
CREW	GEORGE STORY (CAPTAIN)	12
CREW	WARREN BENNER (~~DECKHAND~~ SM. BOAT OPERATOR)	12

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
53' TUG - MICHAEL T	12	
36'x120' SPUD BARGE	12	
CME 75 TRUCK MOUNT	12	
16' BOAT	12	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-16-93
WEDNESDAY

NARRATIVE OF DAYS OPERATIONS

THE EXTENT OF TODAYS WORK ACTIVITIES INCLUDED DRILLING TEST BORINGS FD93-11, FD93-12, AND FD93-13 AND MACHINE PROBES FP-20 THROUGH FP93-23, ALL LOCATED IN THE MYSTIC RIVER CHANNEL. ONLY BORING FD93-11, LOCATED OFF THE EXXON FACILITY, EXPERIENCED REFUSAL at approximately -42.0' MLW. 3.7 FEET OF BEDROCK WAS CORED WITH 95% RECOVERY. BORING FD-12 REVEALED LAYERS OF GRAY to BROWN COARSE, MEDIUM-FINE SAND MATERIAL WITH A LITTLE GRAVEL FROM APPROXIMATELY 40 TO 50 FT. DEPTH (MLW). BORING FD93-13 CONSISTED almost entirely of GRAY CLAY AND SILT at -43 FT DEPTH (MLW) ON DOWN. Above this clay rested the most recent deposits of BLACK SILT AND FINE SAND MATERIAL (-36 to -43 Ft MLW). ALL MACHINE PROBES WERE ADVANCED TO DESIGNATED DEPTHS WITH NO BEDROCK ENCOUNTERED.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
TOM ELDRIDGE									12		12
TOM CUSTEAU									12		12
MIKE HAWKINS			3 1/2	7 1/2	1						12
PAUL McALOON			3 1/2	7 1/2	1						12
TIM HUBBARD			12								12
GEORGE STORY			12								12
WARREN BENNER			12								12

WORK FOR TOMORROW

1-TEST BORING & 4 MACHINE PROBES UP CHELSEA RIVER THEN POSSIBLY MOVING UP MYSTIC CHANNEL AND PROBES THERE

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 9 DATE JUNE 17, 1993 THURSDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR

TEMPORARY ADDRESS DAYS INN - Room 122

LOCATION WHERE CAN BE REACHED LYNN, MA

PHONE (617) 581-5555 TIME AFTER 7 TEMPERATURE: MAX. 80 MIN. 55

WEATHER Mostly Sunny - generally calm conditions

DRILLING TODAY - TEST BORINGS

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FP93-14	CHELSEA RVR	-35.3	-50.5	15.2	GRAY MF SAND; little silt; little gravel; ROCK FRAGMENTS

~~TEST PITS OR AUGER BORINGS TODAY~~ MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-24	CHELSEA RVR	-46.4	V DENSE - 8.4 STIFF
FP93-25	↓	-46.2	STIFF 9.0
FP93-26	↓	-46.0	STIFF - 9.8 REFUSAL
FP93-27	↓	-53.1	MED DENSE - 15.3 STIFF

HOLE	AREA	DEPTH	MATERIAL
FP93-28	Mystic River	-48.6	LOOSE 10.2 BLACK SILTS
FP93-29	↓	-49.7	LOOSE 11.1 BLACK SILTS
FP93-30	↓	-45.0	BEDROCK @ 5.5 - 43.4 MLW
			1.6 ROCK CORES

PERSONNEL

	NAME	HOURS
ATL	TOM ELDRIDGE (GEO INSPECTOR)	13
ATL	TOM CUSTEAU (GEO INSPECTOR)	13
ATL	MIKE HAWKINS (DRILLER)	13
ATL	PAUL McALOON (DRILLER HELPER)	13
CREW	TIM HUBBARD (PILOT)	13 1/2
CREW	GEORGE STORY (CAPTAIN)	13 1/2
CREW	WARREN BENNER SR. BOAT STR. ~~(DECKHAND)~~	13 1/2

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
53' TUG - MICHAEL T	13 1/2	
36'x120' SPUD BARGE	13 1/2	
CME 75 TRUCK MOUNT	13 1/2	
16' BOAT	13 1/2	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-17-93
THURSDAY

NARRATIVE OF DAYS OPERATIONS

THE EXTENT OF TODAYS WORK INCLUDED THE DRILLING OF 7 MACHINE PROBES AND ONE TEST BORING. TEST BORING FD93-14 AND PROBES FP-23 thru 27 WERE ADVANCED IN THE CHELSEA RIVER SECTION AND MACHINE PROBES FP93-28 thru 30 WERE ADVANCED IN THE MYSTIC RIVER SECTION. BENEATH THE BLACK SILTY SANDS LAYER IN THE CHELSEA RIVER AREA EXISTED A DENSE TO VERY DENSE WELL GRADED M-F SAND & SILT material with a little gravel and rock FRAGMENTS most likely FROM COARSE AGGREGATE AND COBBLE LAYERS. AT FP93-30 MACHINE PROBE IN THE MYSTIC RIVER AREA, BEDROCK WAS ENCOUNTERED @ -43.4' MLW. A ROCK CORE WAS OBTAINED FOR LABORATORY INVESTIGATION. THE TOP LAYER OF THE HARBOR BOTTOM RANGES IN THICKNESS GENERALLY FROM 3 TO 10 FEET OF A MURKY BLACK SILTY SAND MATERIAL WITH ORGANICS, CONTAMINANTS AND A little CLAY. REFER TO THE BORING LOGS.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
TOM ELDRIDGE									13		13
TOM CUSTEAU									13		13
MIKE HAWKINS			5½	6½	1						13
PAUL McALOON			5½	6½	1						13
TIM HUBBARD			13¼								13¼
GEORGE STORY			13¼								13¼
WARREN BENNER			13¼								13¼

WORK FOR TOMORROW

DRILL MACHINE PROBES IN MYSTIC RIVER CHANNEL NEAR EXXON FACILITY
ADVANCE TO DESIGNATED DEPTHS

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NE NGLAND DIVISION
CORPS NGINEERS, U.S. ARM
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 10 DATE JUNE 18, 1993 FRIDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR NAVIGATION IMPROVEMENT

TEMPORARY ADDRESS 45 MONROE

LOCATION WHERE CAN BE REACHED MANCHESTER, NH

PHONE (603) 627-9143 TIME EVENINGS TEMPERATURE: MAX. 90 MIN. 60

WEATHER MOSTLY SUNNY - CALM - HUMID 80S-90S

DRILLING TODAY - TEST BORINGS

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL

~~TEST PITS OR AUGER BORINGS TODAY~~ - MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-31	MysticRiver	-48.0	BLACK SEDIMENTS SILTY SANDS 10.0
FP93-32	↓	-46.8	↓ 10.0
FP93-33	↓	-47.1	↓ 10.0
FP93-34	↓	-47.8	↓ 10.0

HOLE	AREA	DEPTH	MATERIAL
FP93-35	MysticRiver	-47.9	MED DENSE 10.0
FP93-36	↓	-47.8	" 9.2
FP93-37	↓	-42.6	ROCK REFUSAL 3.5 +2.0 ROCK @ -40.0

PERSONNEL

	NAME	HOURS
ATL	TOM ELDRIDGE	6½
ATL	MIKE HAWKINS (DRILLER)	6½
ATL	PAUL McALOON (DRILLER HELPER)	6½
CREW	TIM HUBBARD (PILOT)	6½
CREW	GEORGE STORY (CAPTAIN)	6½
CREW	WARREN BENNER (SM. BOAT OPER.)	6½

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
53' TUG-MICHAEL T	6½	
36'x120' SPUD BARGE	6½	
CME 75 TRUCKMOUNT	6½	
16' BOAT	6½	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-18-93
FRIDAY

NARRATIVE OF DAYS OPERATIONS

THE BARGE MOVED INTO MYSTIC RIVER CHANNEL THIS MORNING AND WAS POSITIONED OVER DESIGNATED PROBES FP93-31 thru FP93-37. SUBSURFACE CONDITONS below THE HARBOR BOTTOM WERE INVESTIGATED by ADVANCING MACHINE PROBES. FP93-31 thru FP93-34 CONSISTED PRIMARILY OF LOOSE SEDIMENTS AND SILTY SANDS ~~OF~~ 8 to 10 FEET below THE bottom AS EVIDENCED by the drop of the ROD AND POINT FROM THE PLATFORM ~~[illegible]~~ through THE SURFACE OF THE HARBOR BOTTOM. STIFFER MATERIAL WAS ENCOUNTERED AT SHALLOWER DEPTHS AT PROBE LOCATIONS FP93-35, 36 AND 37. FP93-37 MET ROCK REFUSAL AT APPROXIMATELY -40 FT. MLW AND WAS CORED FROM -40.6 TO -42.6.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
TOM ELDRIDGE									6½		6½
MIKE HAWKINS			2¼	3½	¾						6½
PAUL McALOON			2¼	3½	¾						6½
TIM HUBBARD			6½								6½
GEORGE STORY			6½								6½
WARREN BENNER			6½								6½

WORK FOR TOMORROW

FOR MONDAY: CONTINUE DRILLING (MACHINE PROBING) IN THE MYSTIC RIVER CHANNEL NEAR THE EXXON FACILITY

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 11 DATE JUNE 21, 1993 MONDAY

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR NAVIGATION IMPROVEMENT

TEMPORARY ADDRESS 45 MONROE ST.

LOCATION WHERE CAN BE REACHED MANCHESTER, NH

PHONE (603) 627-9143 TIME EVENINGS TEMPERATURE: MAX. 85 MIN. 70

WEATHER MOSTLY CLOUDY, HUMID, LIGHT WIND

DRILLING TODAY - TEST BORINGS

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL
FD93-15	MYSTIC RIVER	-37.0	-47.4	10.4	ROCK FRAGMENTS; GRAY-BLACK MF SAND

~~TEST PITS OR AUGER BORINGS TODAY~~ - MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-38	MYSTIC RIVER	-48.9	SILTY SAND BLACK SEDIMENTS 11.2
FP93-39		-47.5	10.0
FP93-40		-42.9	BEDROCK REFUSAL 5.8
FP93-41		-42.3	BEDROCK REFUSAL 4.5

HOLE	AREA	DEPTH	MATERIAL
FP93-42	MYSTIC RIVER	-43.3	BEDROCK REFUSAL 3.9
FP93-43		-40.7	BEDROCK REFUSAL 3.2
FP93-44		-43.1	BEDROCK REFUSAL 6.0
FP93-45		~~[illegible]~~ -45.4	BEDROCK REFUSAL 8.9

PERSONNEL

	NAME	HOURS
ATL	TOM ELDRIDGE (GEO INSPECTOR)	7½
ATL	MIKE HAWKINS (DRILLER)	7½
ATL	PAUL McALOON (DRILLER'S HELPER)	7½
CREW	TIM HUBBARD (PILOT)	8
CREW	GEORGE STORY (CAPTAIN)	8
CREW	WARREN BENNER (SM. BOAT OPER.) ~~[illegible]~~	8

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
36'x120' SPUD BARGE	7½	
53' TUG - MICHAEL T	7½	
CME 75 TRUCK MOUNT RIG	7½	
16' BOAT	7½	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-21-93
MONDAY

NARRATIVE OF DAYS OPERATIONS

THE EXTENT OF TODAY'S ACTIVITIES INCLUDED THE DRILLING OF ONE TEST BORING, FD 93-15, AND EIGHT MACHINE PROBES, FP38 THRU FP93-45, ALL LOCATED IN THE MYSTIC RIVER CHANNEL NEAR THE EXXON WHARF. TEST BORING FD 93-15 WAS ADVANCED 10.4 FEET TO -47.4 M.L.W. ELEVATION AND DISCONTINUED AS WE WERE DRILLING WITH A ROLLER BIT IN TO BEDROCK. BEDROCK ABOVE THIS DEPTH WAS FRACTURED AS EVIDENCED FROM SAMPLING FROM 0 TO 8.3 FT. DEPTH. MACHINE PROBES WERE ADVANCED IN DESIGNATED AREAS AND BEDROCK REFUSAL WAS EXPERIENCED at ELEVATIONS of APPROXIMATELY -41 TO -44 FT M.L.W. IN MOST.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
TOM ELDRIDGE									7 1/2		7 1/2
MIKE HAWKINS			3	4 1/4	1/4						7 1/2
PAUL McALOON			3	4 1/4	1/4						7 1/2
TIM HUBBARD			7 1/2							1/2	8
GEORGE STORY			7 1/2							1/2	8
WARREN BENNER			7 1/2							1/2	8

WORK FOR TOMORROW

FINISH TEST BORINGS & MACHINE PROBES IN THE MYSTIC RIVER CHANNEL AREA NEAR THE EXXON WHARF

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

NEW ENGLAND DIVISION
CORPS OF ENGINEERS, U.S. ARMY
WALTHAM, MASSACHUSETTS

FOUNDATIONS & MATERIALS BRANCH

LOG NO. 12 DATE JUNE 22, 1993 (TUESDAY)

DAILY LOG OF FIELD EXPLORATIONS

PROJECT BOSTON HARBOR NAVIGATION IMPROVEMENT

TEMPORARY ADDRESS 45 MONROE ST. #3

LOCATION WHERE CAN BE REACHED MANCHESTER, NH

PHONE (603) 627-9143 TIME EVENINGS TEMPERATURE: MAX. 82 MIN. 60

WEATHER MOSTLY SUNNY, AFTERNOON WIND AND SPOT SHOWERS

DRILLING TODAY

HOLE	AREA	FOOTAGE FROM	FOOTAGE TO	FOOTAGE TODAY	MATERIAL

~~TEST PITS OR AUGER BORINGS TODAY~~ MACHINE PROBES

HOLE	AREA	DEPTH	MATERIAL
FP93-46	MYSTIC RIVER	-45.8	FRACTURED OR WEATHERED ROCK 8.8
FP93-47	↓	-47.0	ROCK CORE FROM -41.5 TO -47.0 44+5.5
FP93-48	↓	-46.4	- 10.0
FP93-49	↓	-47.1	- 10.0

HOLE	AREA	DEPTH	MATERIAL
FP93-50	MYSTIC RIVER	-46.7	- 9.6
FP93-51	↓	-44.9	ROCK REFUSAL 7.8
FP93-52	↓	-43.0	ROCK REFUSAL 3.8
FP93-53	↓	-42.8	ROCK REFUSAL 5.8
FP93-54	↓	-49.0	SILTY SEDIMENTS 13.3

PERSONNEL

	NAME	HOURS
ATL	TOM ELRIDGE (GEO INSPECTOR)	9½
ATL	MIKE HAWKINS (DRILLER)	9½
ATL	PAUL McALOON (DRILLER'S HELPER)	9½
CREW	TIM HUBBARD (PILOT)	9½
CREW	GEORGE STORY (CAPTAIN)	9½
CREW	WARREN BENNER (SM. BOAT OPER.)	9½

PLANT USED

ITEM	HOURS	BREAKDOWN HOURS
36'x120' SPUD BARGE	9½	
53' TUG - MICHAEL T	9½	
CME 75 TRUCK MOUNT	9½	
16' BOAT	9½	

CHIEF OF FIELD PARTY

NED FORM DEC 63 198 REPLACES EDITION OF MAY 62 WHICH MAY BE USED UNTIL EXHAUSTED

(OVER)

6-22-93
TUESDAY

NARRATIVE OF DAYS OPERATIONS

THE EXTENT OF WORK ACTIVITIES THIS DAY INCLUDED DRIVING 9 MACHINE PROBES, FP93-46 to FP93-54 TO DEPTHS OF 10 FT. OR BEDROCK REFUSAL, WHICHEVER CAME FIRST. THIS COMPLETED THE PROPOSED DRILLING ACTIVITY FOR THE MYSTIC RIVER CHANNEL AND BOSTON HARBOR PROJECT. BEDROCK WAS CORED IN PROBE FP93-47 AND A 5½ FT. RUN WAS OBTAINED WITH GOOD RECOVERY AND GOOD RQD. ROCK REFUSAL WAS ENCOUNTERED throughout MUCH OF THE AREA DURING THE PROBING, depths RANGING FROM -41.0 MLW TO -45.0 MLW.

MAN-HOUR WORK BREAKDOWN

NAME	MOB.	DEMOB.	MOVING	DRILL OVB.	DRILL BEDROCK	PREV. MAINT.	EQUIP. FAILURE	LOST TIME (WEATHER)	INSP. & SUPER.	MISC.	TOTAL
TOM ELDRIDGE									9½		9½
MIKE HAWKINS			2¾	6	¾						9½
PAUL McALOON			2¾	6	¾						9½
TIM HUBBARD			9½								9½
GEORGE STORY			9½								9½
WARREN BENNER			9½								9½

WORK FOR TOMORROW

WORK WAS COMPLETED TODAY - 9 MACHINE PROBES, 1 PROBE-ROCK CORED

FIELD PURCHASES

ITEM	AMOUNT

ITEM	AMOUNT

b. Boring Logs

Rewrite

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Boston Harbor — Page 1 of 2 Pages

Boring No. ED931 Desig. ED93A Diam. (Casing) 3" I.D.

Co-ordinates: N 490230.91 E 730014.92

Elevation Top of Boring -34.2 ~~M.S.L.~~ M.L.W. — Hammer Wt. 140# — Boring Started 6/8/93

Total Overburden Drilled 8' Feet — Hammer Drop 30" — Boring Completed 6/8/93

Elevation Top of Rock -42.2 ~~M.S.L.~~ M.L.W. — Casing Left

Total Rock Drilled 5 Feet — Subsurface Water Data ____ Page ____

Elevation Bottom of Boring ____ M.S.L. — Obs. Well ____

Total Depth of Boring 13 Feet — Drilled By M. Hawkins P. McAloon (ATL)

Core Recovered 74 % No. Boxes 1 — Mfg. Des. Drill CME 75 truck mount

Core Recovered 2.2 Ft: ____ Diam. 2.06 in. — Inspected By: T.A. Custeau

Soil Samples 1 3/8 in. Diam. 6 No. — Classification By: T.A. Custeau / T. Eldridge

Soil Samples ____ in. Diam. ____ No. — Classification By: Y. YATSEVITCH, COE

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-34.2		1A		0-.5	WOR	1 3/8" I.D. SS, NW Rod, 140# Hammer	18" RECOVERY BLACK SILT; and CLAY; some f SAND (SISP)
	1	1B		.5-2.0	1 4 6	SPUN AND WASHED N.W. CASING TO -36.2' M.L.W 5th GEAR FULL THROTTLE SMOOTH EASY DRILLING	BROWN C m f SAND; trace SILT GRADING TO f SAND; trace SILT @ 1.2' w/ CLAY SILT LENSES (1/2" THICK) (SINP)
-36.2	2	2		2.0-4.0	10 8	1 3/8" I.D. SS, NW Rod, 140# Hammer SPUN AND WASHED N.W. CASING TO -38.2' M.L.W, 5th GEAR Full THROTTLE SMOOTH EASY DRILLING	SILTY SAND GREY BROWN C m f ~~SAND~~; LITTLE SILT; trace m f GRAVEL (S, NP)
	3				22 30		
-38.2	4	3		4.0-6.0	18 15	1 3/8" I.D. SS, N.W Rod, 140# Hammer SPUN AND WASHED N.W. CASING TO -40.2' M.L.W 5th GEAR 3/4 THROTTLE SMOOTH EASY DRILLING	18" RECOVERY; BROWN ~~BITTE~~ C m f SAND GRADING TO LIGHT GREY m f SAND trace SILT; trace m f GRAVEL (S, NP)
	5				32 20		
-40.2	6	4		6.0-8.0	15 48	1 3/8" I.D. SS, N.W. Rod, 140 Hammer 5th GEAR 3/4 THROTTLE SMOOTH EASY DRILLING.	18" RECOVERY BROWN C m f SAND; STRATIFIED WITH GREY m f SAND; trace SILT; trace m f GRAVEL. (S, NP)
	7				36 36	SPUN AND WASHED N.W. CASING TO -42.2 M.L.W, Driller Reported DENSER MATERIAL @ -42.0 M.L.W	
-42.2	8	5			100/1"	1 3/8 I.D. SS, NW Rod, 140# HAMMER Roller BIT TO -44.2 M.L.W DRILLING SMOOTH RELATIVELY EASY 4th GEAR, 1/2 THROTTLE DRILL REPORTS Probable Bedrock	1" RECOVERY GREY m f SAND; and ROCK FRAGMENTS
	9						

GENERAL REMARKS: WOR = WEIGHT OF ROD
SS = SPLIT SPOON.
MR. YURI YATSEVITCH ON SITE THIS DAY
WASH WATER supplied by Moynihan
4" (N.W.) CASING USED TO STABILIZE DRILL STEEL TO GROUND LEVEL.

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-41.2	10	1				NWD4 CORE FROM -41.2 MLW TO -47.2 MLW RUN #1	GREY THINLY BEDDED FEW CHIPS AND PIECES RQD = 22%
	11				74%	DEPTH / TIME (MIN) / NOTES -44.2'-45.2' MLW / 1:15 / 4th GEAR THROTTLE -45.2'-46.2' MLW / 5:15 / ↓ -46.2'-47.2' MLW / 5:35 / ↓	½: Gray, hard Argillite, closely-spaced laminac dip 45° w/ occ perpendicular joints, some stand wea.
-46.2	12						
	13					BORING TERMINATED @ -47.2' M.L.W.	
-48.2	14						
	15						

ED Form 58A (Test)

Boring No. ED 93-1

FIG NO :

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Boston Harbor — Page 1 of 2 Pages

Boring No. ED93-2 Desig. ED93 B Diam. (Casing) 3"

Co-ordinates: N 490 100.03 E 730 015.35

Elevation Top of Boring -33.7' ~~M.S.L.~~ MLW — Hammer Wt. 140 — Boring Started 6/8/93

Total Overburden Drilled 10.0' Feet — Hammer Drop 30" — Boring Completed 6/8/93

Elevation Top of Rock -43.7' ~~M.S.L.~~ MLW — Casing Left

Total Rock Drilled 3.7' Feet — Subsurface Water Data ____ Page ____

Elevation Bottom of Boring -47.4 ~~M.S.L.~~ MLW — Obs. Well

Total Depth of Boring 13.7 Feet — Drilled By M. Hawkins

Core Recovered 80 % No. Boxes 1 — Mfg. Des. Drill CME 75

Core Recovered 2 Ft: ____ Diam. 2.06 in. — Inspected By: T.A. Cosgrove

Soil Samples 1 3/8" in. Diam. 6 No. — Classification By: T.A. Cosgrove / T. Kodrick

Soil Samples ____ in. Diam. ____ No. — Classification By: Y. Yatsevitch (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
33.7		1		00-1.0'	WOR WOR WOR WOR	1 3/8" I.D. SPLIT SPOON, N.W. Rod No Hammer	BLACK STIFF SAND AND SILT (S,NP) STRONG odor 12" Recovery
35.7	1 2	2A		2-4	7 2 6 10	1 3/8" I.D. Split Spoon, N.W. Rod 140# Hammer SPUN and WASHED N.W. CASING TO -37.7' MLW, 4th GEAR, FULL THROTTLE SMOOTH EASY DRILLING	24" RECOVERY 2-0-3-5 GRAY-BLACK MF SAND AND SILT ODOR (S, NP)
	3 3.5	2B					3.5-4.0 BLUE-GRAY CLAY; little silt, trace sand, STIFF (S,P)
-37.7	4 5	3		4-6	5 5 6 8	1 3/8" I.D. SPLIT SPOON, N.W. ROD 140# HAMMER SPUN AND WASHED NW CASING TO -39.7' MLW, 4th GEAR full throttle SMOOTH EASY DRILLING	BLUE GRAY lean CLAY; little silt; trace c-m sands STIFF (S,P) 24" RECOVERY
-39.7	6 7	4		6-8	4 4 6 6	1 3/8" I.D. SPLIT SPOON, N.W. ROD 140# HAMMER SPUN AND WASHED N.W. CASING TO -41.7' MLW, 4th GEAR full throttle SMOOTH EASY DRILLING	24" RECOVERY GRAY CLAY; trace silt, STIFF (S,P)
-41.7	8	5		8-10	3 10 32 16	1 3/8" I.D. SPLIT SPOON, N.W. ROD 140# HAMMER SPUN AND WASHED N.W. CASING TO -44.9, CASING REFUSAL AT -44.9' M.L.W.	16" RECOVERY GREY CLAY; trace SILT STIFF (S,P)
43.7'	10						SHALE CHIPS IN BOTTOM OF SPOON @-43.7' M.L.W.

GENERAL REMARKS: WOR = WEIGHT OF ROD
Mr Yuri Yatsevitch on site this date
Wash water supplied by Hydro 3160
4" (N.W.) casing used to stabilize drill steel through water

ENG FORM MAR 1 58 (Test)

Boring No. ED 93-2

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
					24"	RUN #2 FROM -44.9' MLW TO -47.4 MLW depth TIME (MIN) NOTES -44.9 - -45.9 2:00 4 Yaggent to full thrust -45.9 - -46.9 2:30 4 Yaggent to full thrust 5 Yaggent full thrust -46.9 - -47.4 7:00 Loss of water at -46.4' MLW Core Refusal @ -47.4 MLW	CORE SIZE NW D4 Thinly Bedded Recovered chips Pieces and wafers 24" Recovery 0 RQD
-45.7	12						
	13				80%		Gray, hard Argillite, closely-spaced laminae, dip 45° (fragments and wafers)
-46.7'	14						
	15					BORING TERMINATED AT - 47.4 MLW	
-48.7'	16						

ED Form 58A (Test)

Boring No. ED 93-2

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Boston Harbor — Page 1 of 2 pages

Boring No. ED93-3 Desig. ED93-C Diam. (Casing) 3"

Co-ordinates: N 489976.03 E 729875.16

Elevation Top of Boring -32.2 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.2 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.21' ~~M.S.L.~~ MLW
Total Depth of Boring 15.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : 1 3/8" Diam. 1 3/4 In.
Soil Samples 1 3/8" In. Diam. 6 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140# Boring Started 6/9/93
Hammer Drop 30" Boring Completed 6/9/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. Hawkins, P McAloon
Mfg. Des. Drill CME 75
Inspected By: T.A. Custeau / T. Eldridge
Classification By: T.A. Custeau / T. Eldridge
Classification By: Y. Yatsevitch (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-33.2	1	1		0.0' to 1.0'	WOR WOR WOR WOR	1 3/8" I.D. SPLIT Spoon, NW Rod NO HAMMER Spoon SETTLED TO -35.1 M.L.W. SET NW CASING IT SETTLED TO -35.1 MLW. BEGAN DRIVING SPOONS, ~~BEGAN~~ FROM THIS depth	GREY BLACK m-f SAND; AND SILT 12" RECOVERY odor (S, NP)
-34.2	2				WOR WOR		
-35.2	3	2A		2.9' to 4.9'	9 14 42	1 3/8" I.D. SPLIT SPOON, NW Rod 140# HAMMER SPUN AND WASHED CASING TO -37.1' M.L.W 4th GEAR 3/4 THROTTLE" DRILLING SMOOTH EASY	24" RECOVERY GREY BLACK MF SAND; AND SILT GRADES IN TO C-MF SAND; TRACE SILT (S, NP)
-36.2	4						
-37.2	5	2B		4.4 4.9	17		~~24" RECOVERY~~ GREY SILT; SOME CLAY; SOME GRAVEL (S, P)
-38.2	6	3		5.0 to 6.3	4 7 8 19	1 3/8" I.D. SPLIT SPOON, NW Rod 140# HAMMER, SPUN AND WASHED CASING TO -39.1' MLW. 4th GEAR 3/4 THROTTLE DRILLING SMOOTH EASY	16" RECOVERY LEAN CLAY and SILT ~~GREY SILT; SOME CLAY~~; TRACE GRAVEL (S, P)
-39.2	7	4		7.0 to 9.0	6 10 11 16	1 3/8" ID SPLIT SPOON, NW Rod, 140# HAMMER SPUN AND WASHED CASING TO -41.1' MLW 4th GEAR 3/4 THROTTLE DRILLING SMOOTH EASY CASING SETTLED TO -41.5' MLW RESUMED SAMPLING	24" RECOVERY GREY ~~MF~~ SILTY SAND; ~~TRACE SILT~~ GRADED IN TO C-MF SAND; TRACE SILT (S, NP)
-40.2	8						
-41.2	9						
-42.2	10	5			6		NO RECOVERY

GENERAL REMARKS: WOR WEIGHT OF Rod
WASH WATER Supplied BY MOYNO 3L6 PUMP.
4" (H.W.) CASING USED TO STABILIZE DRILL STEEL THROUGH WATER

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE REC'VT	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'=	NO.	SIZE	DEPTH RANGE			
-42.2	10				7	1 3/8" ID SPLIT SPOON, NW Rod, 140# HAMMER, SPUN AND WASHED CASING TO -45.4' M.L.W. 4th GEAR 3/4 THROTTLE DRILLING SMOOTH EASY	
-43.2	11				6 9		
-44.2	12						
-45.2	13	6		13'to 14'	16 14	1 3/8" I.D. SPLIT SPOON, NW Rod 140# HAMMER	12" RECOVERY GREY C MF SAND ; AND GRAVEL ; TRACE SILT (GRAVEL IS CRUSHED OR BROKEN SHALE ROCK)
-46.2	14				15		
-47.2	15				95		
						BORING TERMINATED AT -47.2 M.L.W.	

ED Form 58A (Test)

Boring No. FD 93-3

FIG NO :

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 pages

Boring No. FD 93-4 Desig. FD93-D Diam. (Casing) 3 IN.

Co-ordinates: N 489539.31 E 732338.20

Elevation Top of Boring -38.6 M.S.L.
Total Overburden Drilled 15.7 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -54.3 M.S.L.
Total Depth of Boring 15.7 Feet
Core Recovered ___ % No. Boxes ___
Core Recovered ___ Ft. ___ Diam. ___ In.
Soil Samples 1 3/8 In. Diam. 5 No.
Soil Samples ___ In. Diam. ___ No.

Hammer Wt. 140 lb
Hammer Drop 30"
Casing Left ___
Subsurface Water Data ___ Page ___
Obs. Well ___ HAWKINS
Drilled By M. ~~DAWSON~~, P. McAlloon
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE/FAC
Classification By: TE
Classification By: Y. YATSEVITCH (CORE)

Boring Started 6/10/93
Boring Completed 6/10/93

DEPTH (Ft.)	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-38.6	S-1		0.0		1 3/8" I.D. SPLIT SPOON SAMPLER	
-39.6 (1)			TO		NW ROD	
			3.0	W		
				O	1.6	GRAY CLAY; AND SILT (S,P)
-40.6 (2)				R		18" RECOVERY
-41.6 (3)	S-2		3.0	5	1 3/8" I.D. SPLIT SPOON SAMPLER	LEAN GRAY CLAY; AND SILT (S,P)
			TO	4	140# HAMMER DROP 30"	24" RECOVERY
-42.6 (4)			5.0	9	NW ROD	
					CASING ADVANCED 4TH GEAR	
				8	1/2-3/4 THROTTLE	
-43.6 (5)					CASING DROP TO -45.5' ELEV.	
-44.6 (6)						
-45.6 (7)	S-3		7.0	14	1 3/8" I.D. SPLIT SPOON SAMPLER	24" RECOVERY
			TO	14	140# HAMMER 30" DROP	GRAY CLAY; AND SILT (S,P)
-46.6 (8)			9.0	16	ADVANCE CASING - 4TH GEAR	
				15	1/2-3/4 throttle	
-47.6 (9)					CASING SINK TO -48.1'	-47.5'
	S-4				1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb HAMMER 30" DROP	-48.1' 24" RECOVERY GRAY CLAY; AND SILT (S,P)
-48.6 (10)						

GENERAL REMARKS: [illegible]
4" (O.D.) CASING, USED TO SEAL [illegible] DRILL STEEL FROM [illegible] WATER

D [illegible] 58 (Test)

Boring No. FD 93-4

FIG NO 2B

	DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-48.6	10	S-4		9.5 TO 11.5	5 4 7 12		GRAY CLAY; AND SILT (S,P)
-49.6	11					ADVANCE CASING 1½-3¼ + THROTTLE 4TH GEAR	
							50.1'
-50.6	12					SPIN CASING TO -52.6' ELEV 4TH GEAR 3/4 THROTTLE	
-51.6	13						
		S-5		13.5 TO 15.5	4 5 6 7	1 3/8" I.D. SPLIT SPOON 140 lb. HAMMER DROP 30"	52.1 24" RECOVERY GRAY CLAY; AND SILT (S,P)
-52.6	14						
-53.6	15						
-54.3						BORING TERMINATED @ -54.3' MLW ELEV.	-54.3

ED FORM 58A (Test)

Boring No. FD 93-4

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR — Page 1 of 2 Pages

Boring No. ~~FD93-02-6~~ FD93-6 Desig. ~~FD93-02~~ Diam. (Casing) 3"

Co-ordinates: N 490558.29 E 731638.93

Elevation Top of Boring -36.7 ~~M.S.L.~~ MLW
Total Overburden Drilled 14.6 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.3 ~~M.S.L.~~ MLW
Total Depth of Boring 14.6 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 1 3/8 In. Diam. 5 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb Boring Started 6/10/93
Hammer Drop 30 IN. Boring Completed 6/10/93
Casing Left ____
Subsurface Water Date ____ Page ____
Obs. Well ____
Drilled By M. DAWSON, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: Y. YATSEVITCH (COE)

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
36.7						
0	S1A		0.0 TO 3.0	W O R	WEIGHT OF ROD SINK 3 FT. SPIN CASING 1 FT. TO -39.7' ELEV	12" RECOVERY sandy lean GRAY-BLACK ~~CLAY SAND~~, ~~LITTLE SILT, LITTLE CLAY~~ CLAY (S,P)
37.7						
1						
38.7						
2	S1B				2.3	LT BROWN C-MF SAND, Trace Silt (S,NP)
39.7					3.0	
3	S2		3.0 TO 5.0	12 11 5 6	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER, 30" DROP	12" RECOVERY lean CLAY GRAY ~~MF SAND~~ & SILT; SOME (CRUSHED SHALE) GRAVEL (S,NP) ~~GRADE TO GRAY CLAY & AND SILT (S,P)~~
40.7						
4						
41.7					Sampled CASING ~~DROP~~ TO -42.4' ELEV.	
5						
42.7	S-3		5.7 TO 7.7	5 6 6 8	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER, 30" DROP	42.4' 24" RECOVERY GRAY CLAY; AND SILT (S,P)
6						
43.7						
7						
44.7					CASING DROP TO -44.8'	
8	S-4		8.0 TO 10.0	5 5 5 6	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER, 30" DROP	24" RECOVERY GRAY CLAY; AND SILT (S,P)
45.7						
9						
46.7						
10						

GENERAL REMARKS: [illegible]
4" (NW) CASING USED TO [illegible] IN [illegible] STEEL [illegible] WATER

ENG FORM 1836 (Test)

Boring No. FD93-~~02~~-6

FIG NO 2B

	DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
46.7	10						
47.7	11					SPIN CASING TO -49.4' ELEVATION 3/4 THROTTLE 4TH GEAR SMOOTH EASY DRILLING	
48.7	12						
49.7	13	S-5		12.8 To 14.6	16 18 12 12	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER 30" DROP	12" RECOVERY GRAY CLAY; AND SILT GRADE TO GRAY SILT; SOME SAND; SOME GRAVEL (CRUSHED SHALE) (S, NP)
50.7	14						
51.7	15					TERMINATE DRILLING @ -51.3'	

ED Form 58A (Test)

Boring No. FD93-D2-6

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-5 Desig. FD93-E Diam. (Casing) 3 IN.

Co-ordinates: N 490919.52 E 730895.03

Elevation Top of Boring -37.7 ~~M.S.L.~~ MLW
Total Overburden Drilled 14.1 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.8 ~~M.S.L.~~ MLW
Total Depth of Boring 14.1 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 1 3/8 In. Diam. 5 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb
Hammer Drop 30 IN.
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE / T.A. COSTEAU
Classification By: TE / T.A. COSTEAU
Classification By: Y. YATSENITCH (COE)

Boring Started 6/10/93
Boring Completed 6/10/93

DEPTH (Elev.)	DEPTH (Ft.)	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.7	0	S-1A		0.0 To 5.0	W O R	1 3/8" I.D. SPLIT SPOON SAMPLER NW ROD	24" RECOVERY GRAY-BLACK MF SAND; AND SILT, SOME ODOR (S, NP)
-38.7	1						
-39.7	2						
-40.7	3	S-1B				SPIN AND WASH CASING 2.1' TO -42.7 MLW 4TH GEAR 3/4 throttle	-3' 24" RECOVERY GRAY LEAN CLAY; little SILT (S, P)
-41.7	4						
-42.7	5	S-2		5.0 To 7.0	3 3 4 5	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER 30" DROP N.W. ROD	24" RECOVERY little GRAY CLAY; ~~SOME~~ SILT (S, P)
-43.7	6						
-44.7	7					SPUN CASING AND WASHED TO -47.0 MLW 4TH GEAR 1/2-3/4 throttle EASY SMOOTH DRILLING	
-45.7	8						
-46.7	9						
-47.7	10	S-3			6	-47.0 1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER 30" DROP NW ROD	9.3' 24" RECOVERY GRAY CLAY; SOME SILT (S, P)

GENERAL REMARKS: [illegible] 4" (NW) CASING [illegible] DRILLED THROUGH WATER

D FORM 1 MAR 58 (Test)

Boring No. FD93-5

FIG NO 2B

	DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-47.7	10	S-3		9.3 To 11.3	6 6 / 0	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER 30 IN. DROP NW ROD	
-48.7	11						
-49.7	12					SPIN AND WASH CASING TO ~50.7' MLW 4TH GEAR 3/4 throttle	
-50.7	13	S-4		13.0 To 14.1	27 33 / 100/1"	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb. HAMMER 30 IN. DROP	8" RECOVERY GRAY, C-mF SAND; AND GRAVEL; TRACE SILT; TRACE CLAY (S, NP)
-51.7	14					BORING TERMINATED @ -51.8' MLW	
-52.7	15						

ED FORM 58A (Test)

Boring No. FD 93-5

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR — Page 1 of 2 Pages

Boring No. FD93-7 Desig. FD93-F Diam. (Casing) 3 IN.

Co-ordinates: N 504265.49 E 723367.25

Elevation Top of Boring -34.9 ~~M.S.L.~~ MLW
Total Overburden Drilled 14.6 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -49.5 ~~M.S.L.~~ MLW
Total Depth of Boring 14.6 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples 1 3/8 In. Diam. 5 No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 # Boring Started 6/11/93
Hammer Drop 30 IN. Boring Completed 6/11/93
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75
Inspected By: JE / J.A. Cushing
Classification By: JE / J.A. Cushing
Classification By: Y. YATSEVITCH (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-34.9	0						
		S-1		0.0		1 3/8" I.D. SPLIT SPOON SAMPLER NW ROD	12" RECOVERY GREY-BLACK MF SAND; little silt, odor (S, NP)
-35.9	1			TO	W		
				3.4	0		
-36.9	2						
					R		
-37.9	3						
-38.9	4					CASING ~~DROP~~ settled TO -39.6 MLW	
						SPIN CASING & WASH 0.3' TO ~~-39.9~~ -40.3 MLW	
-39.9	5						
		S-2					12" REC BROWN C-MF SAND; SOME GRAVEL (S, NP)
				5.4	33	1 3/8" I.D. SPLIT SPOON 140 lb. HAMMER 30" DROP	
-40.9	6			TO	17		
				7.4	12		
-41.9	7				14	SPIN CASING & WASH TO -42.3' MLW 1 1/2-3/4 THROTTLE 4TH GEAR CLEAN, SMOOTH	7.4
		S-3					8" REC LIGHT GRAY ~~C-MF~~ silty SAND; some GRAVEL, little SILT (S, NP) (GLACIAL TILL)
-42.9	8			7.4	9	1 3/8" I.D. SPLIT SPOON 140 lb. HAMMER 30" DROP	
				TO	16		
-43.9	9			9.4	20		
					24	INSTALL ROLLER BIT TO NW ROD	
-44.9	10						

GENERAL REMARKS: [illegible]

4" (O.D.) CASING [illegible] TO [illegible] CASING, TAKE [illegible] WATER [illegible] WATER SUPPLIED BY [illegible]

ENG FORM 1836 (Test)

Boring No. FD93-7

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VT	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-44.9	10					ADVANCE TO -47.5 MLW USING ROLLER BIT NW 3RD GEAR, 3/4 THROTTLE Hole STAYED OPEN TO -47.5 MLW	
-45.9	11						
-46.9	12						
-47.9	13	S-4			15 16 24 21	1 3/8" I.D. SPLIT SPOON SAMPLER 140 lb HAMMER 30 IN DROP	-47.5 8" REC. GRAY MF SAND; AND SILT; SOME GRAVEL (S,NP) GLACIAL TILL
-48.9	14						
-49.9	15					BORING TERMINATED @ -49.5 MLW	

ED FORM 58A (Test)

Boring No. F093-7

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-8 Desig. FD93-G Diam. (Casing) 3 IN.

Co-ordinates: N 504364.18 E 722872.80

Elevation Top of Boring -39.5 ~~M.S.L.~~ MLW
Total Overburden Drilled 6.0 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -45.5 ~~M.S.L.~~ MLW
Total Depth of Boring 6.0 Feet
Core Recovered ___ % No. Boxes ___
Core Recovered ___ Ft. ___ Diam. ___ In.
Soil Samples 1 3/8 In. Diam. 3 No.
Soil Samples ___ In. Diam. ___ No.

Hammer Wt. 140# Boring Started 6/14/93
Hammer Drop 30" Boring Completed 6/14/93
Casing Left ___
Subsurface Water Data ___ Page ___
Obs. Well ___
Drilled By CME 75 TRUCK MOUNT
Mfg. Des. Drill M. HAWKINS, P. McALOON
Inspected By: JE
Classification By: JE
Classification By: Y. YATSEVITCH (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.5	0						
		S-1		0.0 TO 2.0	W O R 1 6	WEIGHT OF ROD CASING DROP TO -40.9 MLW SPIN AND WASH CASING 1.3 FT. TO -41.5 MLW 3RD GEAR 1/2 throttle 140# HAMMER 30" DROP NW ROD	18" REC. silty GRAY ~~c mf~~ SAND; ~~little silt~~; TRACE Gravel (S,NP)
-40.5	1						
-41.5	2						
		S-2		2.0 TO 4.0	9 12 20 24	140 lb. HAMMER 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER SPIN & WASH CASING 1.9 FT TO -43.5 MLW 4TH GEAR 1/2-3/4 SMOOTH EASY DRILLING	12" REC. clayey GRAY ~~mf~~ SAND; AND SILT; little gravel (S,NP) (GLACIAL TILL)
-42.5	3						
-43.5	4						
		S-3		4.0 TO 6.0	24 33 37 46	140# HAMMER 30" DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER BORING TERMINATED @ -45.5' MLW *	12" REC GRAY mf SAND; AND SILT; ~~little~~ trace gravel, trace clay (S,NP) (TILL)
-44.5	5						
-45.5	6					SPIN AND WASH CASING TOWARD -52.5' (SEE NOTE) 4TH GEAR - 1/2 - 3/4 + throttle ↓	
-46.5	7						
-47.5	8						
-48.5	9						
-49.5	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER = MLW DATUM

NOTE! BORING TERMINATED PREMATURE FOR CLEARANCE FOR TANKER VESSEL NEEDING ROOM FOR MANEUVER IN TO CHELSEA RIVER - NO NOTICE FROM COAST GUARD

ENG FORM 1836 (Test)

Boring No. FD93-8

FIG NO 2B

DEPTH		CORE/SAMPLE			BLOWS PER FT	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE	CORE RECV'Y		
-49.5	10					SPIN AND WASH CASING TO 13 FT. DEPTH	
50.5	11					4TH GEAR ½-¾ THROTTLE relatively EASY DRILLING - IN TILL MATERIAL	
51.5	12					↓ DISCONTINUED	
52.5	13						
53.5	14						
54.5	15						

ED FORM 58A (Test)

Boring No. FD 93-8

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-9 Desig. FD93-H Diam. (Casing) 3 IN.

Co-ordinates: N 504259.99 E 722656.03

Elevation Top of Boring -40.5 ~~M.S.L.~~ MLW
Total Overburden Drilled 13.4 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -53.9 ~~M.S.L.~~ MLW
Total Depth of Boring 13.4 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 1 3/8 In. Diam. 4 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb Boring Started 6/15/93
Hammer Drop 30 IN Boring Completed 6/15/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: Y. YATSEVITCH (COE)

DEPTH	1"s	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-40.5	0						
		S-1		0.0 TO 2.0	W O R 20 32	WEIGHT OF ROD CASING DROP TO -41.5 MLW 140# HAMMER 30 IN. DROP NW ROD SPIN & WASH CASING 1.7 FT. TO -42.5 MLW EASY DRILLING	8" REC GRAY C-mf SAND, little SILT, little gravel (S, NP)
41.5	1						
42.5	2	S-2		2.0 TO 4.0	44 42 31 18	140# HAMMER - 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	12" REC GRAY ~~c-mf~~ SILTY SAND; SOME GRAVEL, ~~little SILT~~ (S, NP) (SOME SHALE ROCK)
43.5	3						
44.5	4					SPIN AND WASH CASING 6 FT. TO -48.5' MLW 4TH GEAR - 1/2 - 3/4 + THROTTLE RELATIVELY EASY DRILLING	
45.5	5						
46.5	6						
47.5	7						
48.5	8	S-3		8.0 TO 10.0	35 35 37 32	140# HAMMER - 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	12" REC GRAY C-mf SAND; SOME GRAVEL; trace SILT (S, NP) (TRACE SHALE ROCK) (S, NP)
49.5	9						
50.5	10						

GENERAL REMARKS:

MLW = MEAN LOW WATER DATUM

ED ... 58 (Test)

Boring No. FD93-9

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
50.5	10					ADVANCE CASING TO -53.5 MLW	
-51.5	11					SPIN & WASH CASING TO -53.5 MLW 4th GEAR - 3/4 THROTTLE	
-52.5	12						
-53.5	13	× S-4		13.0 TO 13.4	153 100/1"	140# HAMMER, 30" DROP NW ROD SPLIT SPOON SAMPLE TERMINATE BORING @ -53.9 MLW	4" REC GRAY C-MF SAND; SOME SILT; little gravel (S, NP) V. DENSE (ROCK FRAGMENTS)
-54.5	14						
-55.5	15						

NED FORM 58A (Test)

Boring No. FD 93-9

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-10 Desig. FD93-K Diam. (Casing) 3 IN.

Co-ordinates: N 505785.50 E 718945.34

Elevation Top of Boring -36.8 MLW ~~M.S.L.~~ | Hammer Wt. 140 lb. | Boring Started 6/15/93

Total Overburden Drilled 14.9 Feet | Hammer Drop 30 in. | Boring Completed 6/15/93

Elevation Top of Rock — M.S.L. | Casing Left

Total Rock Drilled — Feet | Subsurface Water Data ____ Page ____

Elevation Bottom of Boring -51.7 MLW ~~M.S.L.~~ | Obs. Well

Total Depth of Boring 14.9 Feet | Drilled By M. HAWKINS, P. McALOON

Core Recovered ____ % No. Boxes | Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered ____ Ft. ____ Diam. ____ In. | Inspected By: JE

Soil Samples 1 3/8 In. Diam. 4 No. | Classification By: JE

Soil Samples ____ In. Diam. ____ No. | Classification By: Y. YATSEVITCH (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
36.8							
37.8	1	S-1		0.0 TO 4.8	W	1 3/8" I.D. SPLIT SPOON SAMPLER WEIGHT OF ROD CASING SINK 4.8 FT. TO -41.6 MLW	
38.8	2				O		
39.8	3				R		12" RECOVERY BLACK SILT; AND MF SAND; ODOR GRADE TO GRAY SILT, little clay (SP)
40.8	4					SPIN & WASH CASING TO -41.8 MLW 3RD GEAR 3/4 throttle EASY DRILLING	
41.8	5	S-2		5.0 TO 7.0	W O R	WEIGHT OF ROD -5' TO -6'	8" REC CLAYEY BLUE-GRAY ~~mf~~ SAND; SOME SILT; little gravel (S, NP)
42.8	6				5 9	140 lb. HAMMER - 30" DROP NW ROD SPIN & WASH CASING TO -43.8 MLW	
43.8	7	S-3		7.0 TO 9.0	17 88 32 36	140 lb. HAMMER 30" DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	2" REC ROCK FRAGMENTS; TRACE GRAY f-mf SAND (S, NP)
44.8	8						
45.8	9					SPIN AND WASH CASING 5.6 FT TO -47.8 MLW	
46.8	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
46.8	10					4TH GEAR 1/2-3/4 throttle	
47.8	11				47.8	INSTALL ROLLER BIT DRILL TO -48.6 MLW	COBBLE LAYER
48.8	12					SPIN AND WASH CASING TO -49.8 MLW 4TH GEAR 3/4 throttle SMOOTH EASY DRILLING	
49.8	13	S-4		13.0 TO 15.0	34 27 37 84	140 lb. HAMMER 30 IN DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	10" REC. GRAY MF SAND, SAND-GRAVELS, LITTLE SILT ROCK FRAGMENTS (S, NP)
50.8	14						
51.8	15					BORING TERMINATED @ -51.7 MLW	

NED FORM 58A (Test)

Boring No. FD 93-10

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 pages

Boring No. FD93-11 Desig. FD93-L Diam. (Casing) 3 IN.

Co-ordinates: N 505908.09 E 718831.23

Elevation Top of Boring -37.9 ~~M.S.L.~~ MLW
Total Overburden Drilled 3.5 Feet
Elevation Top of Rock -41.4 ~~M.S.L.~~ MLW
Total Rock Drilled 4 Feet
Elevation Bottom of Boring -45.4 ~~M.S.L.~~ MLW
Total Depth of Boring 7.5 Feet
Core Recovered 97 % No. Boxes 1
Core Recovered 4 Ft : Diam. 2.06 in.
Soil Samples 1 3/8 in. Diam. D No.
Soil Samples in. Diam. No.

Hammer Wt. 140 lb Boring Started 6/16/93
Hammer Drop 30 IN. Boring Completed 6/16/93
Casing Left
Subsurface Water Data Page
Obs. Well
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: Y. YATSEVITCH (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.9							
38.9	1	S-1		0.0 TO 3.1	W O R	1 3/8" I.D. SPLIT SPOON SAMPLER WEIGHT OF ROD CASING SINK TO -41 MLW	8" REC. BLACK SILT; AND MF SAND ODOR (S, NP)
39.9	2						
40.9	3	S-2	41.4	3.1 TO 3.5	12 B / 13/3	140 lb HAMMER 30 IN. DROP NW ROD REFUSAL @ -41.7	4" REC. GRAY-BLACK ROCK & ROCK FRAGMENTS SHALE; TRACE SILT (S, NP)
41.9	4			3.5 TO 7.5	R-1: 100% 1 FT	ROCK CORING TO -45.4' RELATIVELY SLOW DRILLING 4TH GEAR 1/2-3/4 THROTTLE	Gray, hard Argillite, massive bedding, some faint structure 60°, fresh fragments
42.9	5						
43.9	6				R-2: 97% 3 FT		
44.9	7					BORING TERMINATED @ -45.4' MLW	
45.9	8						
46.9	9						
47.9	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

(Test)

Boring No. FD93-11

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-12 Desig. FD93-I Diam. (Casing) 3 IN.

Co-ordinates: N 505156.94 E 722089.95

Elevation Top of Boring -36.1 ~~M.S.L.~~ MLW
Total Overburden Drilled 14.9 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.0 ~~M.S.L.~~ MLW
Total Depth of Boring ~~-51.0~~ 14.9 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 1 3/8 In. Diam. 5 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb Boring Started 6/16/93
Hammer Drop 30 IN Boring Completed 6/16/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McAloon
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: Y. Yatsevitch (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.1	0						
		S-1A		0.0 To 3.5	W 0	1 3/8" I.D. SPLIT SPOON SAMPLER WEIGHT OF ROD SINK 3.5 FT TO -39.6 MLW	8" REC BLACK MF SAND AND SILT, ODOR (S,NP)
-37.1	1						
-38.1	2				R	SPIN & WASH CASING 1 FT. TO -39.6 MLW EASY DRILLING	3.0 ~~LEAN~~ GRAY SILT AND CLAY (S,P)
-39.1	3	S1B					
-40.1	4	S-2		3.5 To 5.5	20 12 27 34	140 lb. HAMMER, 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER SPIN & WASH CASING -1.7 FT TO -41.6 MLW	12" REC SILTY GRAY ~~C-mf~~ SAND, little gravel, ~~little silt~~, trace clay GRADE TO BROWN C-mf SAND, TRACE SILT (S,NP)
-41.1	5						
-42.1	6	S-3		5.5 To 7.5	47 28 41 24	140 lb HAMMER 30 IN DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	12" REC GRAY-BROW C-mf SAND; AND GRAVEL; TRACE SILT (SOME ROCK SHALE FRAGMENTS) (S,NP)
-43.1	7						
-44.1	8					SPIN & WASH CASING ~~[illegible]~~ 4 FT TO -46.2 MLW 4TH GEAR 3/4 throttle relatively easy drilling then difficult INSTALL ROLLER BIT ADVANCE TO -49.1 MLW	
-45.1	9						
-46.1	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ED ... 58 (Test)

Boring No. FD93-12

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
46.1	10					46.2	
47.1	11					HOLE STAYED OPEN -	
48.1	12						
49.1	13	S-4			85	140 lb. HAMMER 30 IN DROP NW ROD	4" REC ROCK FRAGMENTS; TRACE C-MF SAND (S, NP)
					82	1 3/8" I.D. - SPLIT SPOON SAMPLER	
50.1	14				45		
					36	BORING TERMINATED @ -51.0 MLW	
51.1	15						

NED FORM 58A (Test)

Boring No. FD 93 - 12

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-13 Desig. FD93-J Diam. (Casing) 3 IN

Co-ordinates: N 504814.73 E 721609.04

Elevation Top of Boring -36.2 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.4 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.6 ~~M.S.L.~~ MLW
Total Depth of Boring 15.4 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 1 3/8 In. Diam. 5 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb Boring Started 6/16/93
Hammer Drop 30 IN Boring Completed 6/16/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: Y. YATSEVITCH (COE)

DEPTH	1"s	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.2							
		S-1A				1 3/8" I.D. SPLIT SPOON SAMPLER NW ROD	
37.2	1						
					W	WEIGHT OF ROD SINK 8.3 FT. TO -44.5 MLW	
38.2	2						
39.2	3				O		
40.2	4						24" RECOVERY BLACK SILT; little mFSAND; trace clay; ODOR (S,NP)
41.2	5				R		
42.2	6						
43.2	7	S1B					~~FAT~~ GRAY CLAY, SOME SILT (S,P)
44.2	8						
		S-2			8.3 TO 10.3	140 lb. HAMMER 30" DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	24" REC GRAY CLAY, SOME SILT (S,P)
45.2	9					SPIN AND WASH CASING TO -49.2 MLW EASY DRILLING 4TH @ 1/12th, 8TH 1/2	
46.2	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ED ... 58 (Test)

Boring No. FD93-13

FIG NO 2B

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1°	NO.	SIZE	DEPTH RANGE			
-46.2							
						SPIN AND WASH CASING TO -49.2 MLW	
-47.2	11					4TH GEAR 1/2-3/4 throttle Smooth, Easy drilling	
-48.2	12						
-49.2	13	S-3		13.0 TO 15.0	1 5 5 6	140 lb. HAMMER 30 IN DROP NW ROD	24" REC GRAY CLAY, SOME SILT; (S.P)
-50.2	14						
-51.2	15					BORING TERMINATED @ -51.6 MLW	

ED FORM 58A (Test)

Boring No. FD93-13

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD93-14 Desig. FD93-N Diam. (Casing) 3 IN.

Co-ordinates: N 508816.25 E 730857.77

Elevation Top of Boring -35.3 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.2 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -50.5 ~~M.S.L.~~ MLW
Total Depth of Boring 15.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 1 3/8 In. Diam. 4 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb. Boring Started 6/17/93
Hammer Drop 30 IN Boring Completed 6/17/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: Y. YATSENITCH (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-35.3							
-36.3	1	S-1		0.0 To 5.0	W	1 3/8" I.D. SPLIT SPOON SAMPLER WEIGHT OF ROD SINK 5 FT. TO -40.3 MLW	
-37.3	2				0		
-38.3	3				R	SPIN & WASH CASING 3.0 FT TO -40.3 FT. MLW	12" RECOVERY BLACK, MF SAND; AND SILT; trace clay (S, NP) ODOR
-39.3	4						
-40.3	5	S-2		5.0 To 7.0	29 26 29 36	140 lb. HAMMER, 30 IN DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER SPIN & WASH CASING 2.1 FT. TO -42.3 MLW relatively easy drilling 4TH GEAR 3/4 throttle	18" RECOVERY Sandy SILT GRAY ~~mf SAND~~; little gravel; little silt; trace rock fragments (S, NP)
-41.3	6						
-42.3	7	S-3		7.0 To 9.0	44 49 34 27	140 lb. HAMMER, 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER SPIN & WASH CASING ~~[illegible]~~ TO -48.8 MLW	18" RECOVERY silty GRAVEL GRAY ~~mf SAND; some silt~~; little gravel; rock fragments (S, NP)
-43.3	8						
-44.3	9						
-45.3	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE			
-45.3 -	10					SPIN & WASH CASING ~~[illegible]~~ TO -46.8 MLW	
46.3	11					4TH GEAR 3/4 + throttle RELATIVE SMOOTH DRILLING becomes DIFFICULT	
						INSTALL ROLLER BIT - ADVANCE TO -48.3 MLW	
47.3	12					(HOLE STAYED OPEN)	
48.3	13	S-4		13.0 TO 15.0	26 27 32 40	140 lb. HAMMER 30 in. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	12" RECOVERY GRAY mf SAND; AND SILT: little gravel; trace Rock fragment DENSE (S, NP)
49.3	14						
50.3	15					BORING TERMINATED @ -50.5 MLW	

ED Form 58A (Test)

Boring No. FO 93-14

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. F093-15 Desig. F093-M Diam. (Casing) 3 IN.

Co-ordinates: N 505619.37 E 718812.91

Elevation Top of Boring -37.0 ~~M.S.L.~~ MLW
Total Overburden Drilled 8.3 Feet
Elevation Top of Rock ≈-45.3 ~~M.S.L.~~ MLW
Total Rock Drilled 2.1 Feet
Elevation Bottom of Boring -47.4 ~~M.S.L.~~ MLW
Total Depth of Boring 10.4 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140 lb. Boring Started 6-21-93
Hammer Drop 30 IN. Boring Completed 6-21-93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCKMOUNT
Inspected By: TE
Classification By: TE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
37.0							
		S-1		0.0 TO 4.3	W O R	1 3/8" I.D. SPLIT SPOON SAMPLER WEIGHT OF ROD SINK 4.3 FT TO -41.3 MLW	8" REC BLACK-mf SAND and SILT, little GRAVEL & ODOR GRADE TO GRADE TO cmf SAND, little GRAVEL (ROCK FRAGMENTS) (S, NP)
38.0	1						
39.0	2						
40.0	3					SPIN & WASH CASING 1.1 FT. TO -41.3 MLW 3RD GEAR 3/4 throttle SMOOTH EASY drilling	
41.0	4						
		S-2		4.3 TO 6.3	15 17 22 96	140 lb. HAMMER 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER SPIN & WASH CASING TO -43.6 MLW 4TH GEAR 1/2 throttle	6" REC BLACK-GRAY mf SAND and SILT; little GRAVEL (ROCK FRAGMENTS) (S, NP)
42.0	5						
43.0	6						
		S-3		6.3 TO 8.3	25 31 42 58	140 lb. HAMMER 30 IN. DROP NW ROD 1 3/8" I.D. SPLIT SPOON SAMPLER	8" REC. cmf GRAVEL (ROCK FRAGMENTS); trace GRAY-Black mf SAND (S, NP)
44.0	7						
45.0	8						
46.0	9					ROLLER BIT TO -47.4 MLW RELATIVELY EASY DRILLING THROUGH FRACTURED ROCK ROCK FRAGMENTS IN CUTTINGS	
47.0	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1558 (Test)

Boring No. F093-15-M

FIG NO 2B

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE			
-47.0						BORING TERMINATED @ -47.4 MLW	
-48.0	11						
-49.0	12						
-50.0	13						
-51.0	14						
-52.0	15						

ED FORM 58A (Test)

Boring No. FD93-15-M

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Boston Harbor Page 1 of 1 Pages

Boring No. FP93-1 Desig. FP93A Diam. (Casing) _____

Co-ordinates: N 490 203.72 E 730061.20

Elevation Top of Boring -32.7 ~~M.S.L.~~ MLW
Total Overburden Drilled 3 Feet
Elevation Top of Rock -35.7 ~~M.S.L.~~ MLW
Total Rock Drilled 0 Feet
Elevation Bottom of Boring -35.7 ~~M.S.L.~~ MLW
Total Depth of Boring 3. Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : ____ Diam. ____ In.
Soil Samples 0 In. Diam. — No.
Soil Samples 0 In. Diam. — No.

Hammer Wt. 300 Boring Started 6/8/93
Hammer Drop 18 Boring Completed 6/8/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M Hawkins P Mandlow
Mfg. Des. Drill CME 75
Inspected By: T.A. Cuccaro
Classification By: ____
Classification By: ____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1				WOR	Machine Probe using MW Rod 300# Hammer Falling 18"	
2				154		
3				100 THEN Bouncing		
4					Boring Terminated @ -35.7' MLW per Yuri Yatsevitch	
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

GENERAL REMARKS: WOR = Weight of Rods
Mr. Yuri Yatsevitch on site this date, Relocated Hole 30' out, See Boring Log FP93-2 Designated FP93-A-2
~~Chart Where Supplied by~~
4" (H.W.) casing used to stabilize drill steel through water

ENG FORM MAR 58 (Test)

Boring No. FP 93-1

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Provincetown Harbor — Page 1 of 1 Pages

Boring No. FP93-2 Desig. FP93-A-2 Diam. (Casing) _____

Co-ordinates: N 490213.45 E 730089.47

Elevation Top of Boring -33.4 ~~M.S.L.~~ MLW
Total Overburden Drilled 6.3 ~~Feet~~
Elevation Top of Rock -39.7 ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -39.7 ~~M.S.L.~~ MLW
Total Depth of Boring 6.3 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples 0 In. Diam. _____ No.
Soil Samples 0 In. Diam. _____ No.

Hammer Wt. 300 Boring Started 6/8/93 (2:00 p.m.)
Hammer Drop 18" Boring Completed 6/8/93 (2:10 p.m.)
Casing Left _____
Subsurface Water Date _____ Page _____
Obs. Well _____
Drilled By M. Hawkins
Mfg. Des. Drill CME 75
Inspected By: T.A. Gustafson
Classification By: _____
Classification By: _____

DEPTH (Ft's)	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1				WOR	MACHINE PROBE	
				2	300# HAMMER, 18" drop, N.W. Rod	
2				7		
3				22		
4				32		PLATFORM RISING AND FALLING 6" TO 1'
5				100		
6				200/3"		
7					BORING TERMINATED AT -39.7± M.L.W. per Yuri Yatsevitch	
8						

GENERAL REMARKS:
W.O.R. = WEIGHT OF ROD
MR. YURI YATSEVITCH ON SITE THIS DATE
4"(H.V.) CASING USED TO STABILIZE DRILL STEEL THROUGH WATER

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Boston Harbor — Page 1 of 2 Pages

Boring No. EP93B Desig. EP-93B Diam. (Casing) N/A

Co-ordinates: N 490096.58 E 730050.00

Elevation Top of Boring -34.9 ~~M.S.L.~~ MLW
Total Overburden Drilled 10.3 Feet
Elevation Top of Rock -45.5 ~~M.S.L.~~ MLW
Total Rock Drilled 0 Feet
Elevation Bottom of Boring -45.5 ~~M.S.L.~~ MLW
Total Depth of Boring 10.3 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 Hammer Drop 18"
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. Hawkins, P. McAloon
Mfg. Des. Drill Cme 75
Inspected By: T.A. Custer
Classification By: ____
Classification By: ____

Boring Started 6/9/93
Boring Completed 6/9/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-34.5					WOR	MACHINE PROBE USING 300# HAMMER and 18" DROP N.W. Rod	
35.5	1				WOR		
36.5	2				WOR		
37.5	3				WOR		
38.5	4				17		
39.5	5				20		
40.5	6				18		
41.5	7				36		
42.5	8				42		
-43.5	9				89		
	10						

GENERAL REMARKS: WOR = Weight of Rod
4" (N.W.) Casing used to stabilize Drill Steel through water

DEPTH	CORE/SAMPLE					SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY		
					200/3"	MACHINE PROBE 300# HAMMER 18" DROP INW ROD	
	11					~~Boring~~ TERMINATED AT ~~-46.5'~~ Probe: -45.5±	M.L.W.

ED FORM 58A (Test)

Boring No. EP93-~~B~~3

FIG NO :

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site Boston Harbor — Page 1 of 2 Pages

Boring No. EP93-4 Desig. EP93-C Diam. (Casing) N/A

Co-ordinates: N 490 064.31 E 730 097.43

Elevation Top of Boring -34.8 ~~M.S.L.~~ MLW — Hammer Wt. 300# — Boring Started 6/9/93

Total Overburden Drilled ~~15.0~~ 14.8 Feet — Hammer Drop 18" — Boring Completed 6/9/93

Elevation Top of Rock — M.S.L. — Casing Left

Total Rock Drilled — Feet — Subsurface Water Data ____ Page ____

Elevation Bottom of Boring -49.6 ~~M.S.L.~~ MLW — Obs. Well

Total Depth of Boring 14.8 Feet — Drilled By M. Hawkins P McAloon

Core Recovered ____ % No. Boxes ____ — Mfg. Des. Drill CME 75 Truck Mont.

Core Recovered ____ Ft: ____ Diam. ____ In. — Inspected By: T.A. Custeau / T.E. Eldridge

Soil Samples ____ In. Diam. ____ No. — Classification By:

Soil Samples ____ In. Diam. ____ No. — Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
						MACHINE PROBE 300# HAMMER 18" DROP, N-W Rod.	
					WOR		
-35.8	1						
					WOR		
-36.8	2						
					WOR		
-37.8	3						
					WOR		
-38.8	4						
					WOR		
-39.8	5						
					WOR		
-40.8	6				WOR THEN 10/3"		
-41.8	7						
					31		
-42.8	8						
					19		
-43.8	9						
					18		
	10						

GENERAL REMARKS: WOR = Weight of Rod
4" (N.W.) Casing used to stabilize drill steel through water

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE			
					22	MACHINE PROBE 300# HAMMER 18" DROP, N-W Rod,	
-46.8	11						
					100		
-46.8	12						
					63		
-47.8	13						
					82		
-48.8	14						
					90		
-49.8	15					PROBE TERMINATED AT -49.6 MSL	

ED FORM 58A (Test)

Boring No. EP93-9

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-5 Desig. FP93-D Diam. (Casing) N/A

Co-ordinates: N 489999.50 E 730000.64

Elevation Top of Boring -32.4 MLW M.S.L.
Total Overburden Drilled 14.3 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -46.7 MLW
Total Depth of Boring 14.3 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ in.
Soil Samples ____ in. Diam. ____ No.
Soil Samples ____ in. Diam. ____ No.

Hammer Wt. 300 # Boring Started 6/9/93
Hammer Drop 18" Boring Completed 6/9/93
Casing Left ____
Subsurface Water Date ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75
Inspected By: TE
Classification By: TE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-32.4	0				WOR		
-33.4	1				WOR	WEIGHT OF ROD SINK 4.0' TO -36.4 MLW	
-34.4	2				WOR		
-35.4	3				WOR		
-36.4	4				7	MACHINE PROBE 300lb. HAMMER 18 IN. DROP NW ROD	
37.4	5				9		
38.4	6				14		
39.4	7				27		
40.4	8				17		
41.4	9				29		
42.4	10						

GENERAL REMARKS: WOR = WEIGHT OF ROD
4½" CASING WAS DRIVEN INTO STEEL THROUGH WATER

ENG FORM 1836 (Test)

Boring No. FP93.5

FIG NO 2B

	DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-42.4	10				30	MACHINE PROBE 300# HAMMER 18" DROP ON N.W ROD	
-43.4	11				77		
-44.4	12				111		
-45.4	13				114		
-46.4	14						
-46.7					110	TERMINATION @ -46.7' PROBE	
-47.4	15						

NED Form 58A (Test)

Boring No. FP-93-5

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP 93-6 Desig. FP 93-E Diam. (Casing) N/A

Co-ordinates: N 489922.75 E 729932.90

Elevation Top of Boring -32.6 ~~M.S.L.~~ MLW
Total Overburden Drilled 14.4 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.0' ~~M.S.L.~~ MLW
Total Depth of Boring 14.4 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300# Boring Started 6/9/93
Hammer Drop 18 IN. Boring Completed 6/9/93
Casing Left ____
Subsurface Water Date ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill C.M.E. 75
Inspected By: TE
Classification By: TE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-32.6							
					WOR		
-33.6	1					WEIGHT OF ROD SINK 4.0' TO -36.6 MLW	
					WOR		
-34.6	2						
					WOR		
-35.6	3						
					WOR		
-36.6	4						
					4	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP N.W. ROD	
-37.6	5						
					5		
-38.6	6						
					7		
-39.6	7						
					10		
-40.6	8						
					8		
-41.6	9						
					9		
-42.6	10						

GENERAL REMARKS: WOR - WEIGHT OF ROD
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP 93-6

FIG NO 2B

	DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-42.6	10					MACHINE PROBE	
					13	300 lb HAMMER 18" DROP	
-43.6	11					N.W. ROD	
					14		
-44.6	12						
					13		
-45.6	13						
					14		
-46.6	14						
						PROBE TERMINATED @ -47.0 MLW	
					24		
-47.6	15						

ED FORM 58A (Test)

Boring No. FP93-6

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. F93-7 Desig. F93-F Diam. (Casing) N/A

Co-ordinates: N 489911.88 E 729794.45

Elevation Top of Boring -32.1 MLW M.S.L.
Total Overburden Drilled 14.7 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -46.8 MLW ~~M.S.L.~~
Total Depth of Boring 14.7 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 in.
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALLOON
Mfg. Des. Drill ____
Inspected By: TE
Classification By: TE
Classification By: ____

Boring Started 6/9/93
Boring Completed 6/9/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-32.1	0					MACHINE PROBE	
					WOR	300 lb. HAMMER 18" DROP	
-33.1	1					N.W. ROD	
					WOR		
-34.1	2						
					5		
-35.1	3						
					9		
-36.1	4						
					7		
-37.1	5						
					12		
-38.1	6						
					24		
-39.1	7						
					17		
-40.1	8						
					15		
-41.1	9						
					15		
-42.1	10						

GENERAL REMARKS:
[illegible]

Boring No. F93-7

FIG NO 2B

	DEPTH	CORE/SAMPLE			BLOWS PER FT / CORE RECVT	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'=	NO.	SIZE	DEPTH RANGE			
-42.1						MACHINE PROBE	
					16	300 lb. HAMMER 18 IN. DROP	
-43.1	11					N.W. ROD	
					22		
-44.1	12						
					48		
-45.1	13						
					51		
-46.1	14						
					53	PROBE TERMINATED @ -46.8 MLW	
-47.1	15						

NED FORM 58A (Test)

Boring No. FP93-7

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-8 Desig. FP93-N Diam. (Casing) 3 in N/A

Co-ordinates: N 490902.39 E 730746.46

Elevation Top of Boring -49.1 M.S.L. Hammer Wt. 300# Boring Started 6/10/93

Total Overburden Drilled 14.7 Feet Hammer Drop 18 IN. Boring Completed 6/10/93

Elevation Top of Rock — M.S.L. Casing Left

Total Rock Drilled — Feet Subsurface Water Data Page

Elevation Bottom of Boring -53.8' M.S.L. Obs. Well

Total Depth of Boring 14.7 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered % No. Boxes Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered Ft: Diam. In. Inspected By: TE

Soil Samples In. Diam. No. Classification By: TE

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.1	0				Wor	MACHINE PROBE N.W. ROD	
-40.1	1						
-41.1	2					Rod settled ~~CASING~~ ~~PROB~~ TO -41.7 ELEV MLW	
-42.1	3				2	300 lb. HAMMER 18" DROP N.W. ROD	
-43.1	4				5		
-44.1	5				5		
-45.1	6				7		
-46.1	7				6		
-47.1	8				6		
-48.1	9				5		
-49.1	10				6		

GENERAL REMARKS: Wor - Weight of Rod

MLW = MEAN LOW WATER DATUM

4" (Nom) CASING USED TO STABILIZE DRILL STEM

ENG FORM 1836 (Test)

Boring No. FP-93-8

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-49.1	10					MACHINE PROBE	
					12	300 lb. HAMMER 18" DROP	
-50.1	11					N.W. ROD	
					18		
-51.1	12						
					33		
-52.1	13						
					25		
-53.1	14						
					27		
-54.1	15					TERMINATE PROBE @ -53.8' ELEV. MLW	

ED FORM 58A (Test)

Boring No. FP-93-8

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-9 Desig. FD93-I Diam. (Casing) 3 IN. N/A

Co-ordinates: N 490637.13 E 730885.64

Elevation Top of Boring -39.3 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.0 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -54.3 ~~M.S.L.~~ MLW
Total Depth of Boring 15.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 Boring Started 6/10/93
Hammer Drop 18 Boring Completed 6/10/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.3	0						
					Vac	Rod sorted to -40.8' MLW	
-40.3	1				4		
					4	300 lb HAMMER 18 IN DROP N.W. ROD MACHINE PROBE	
-41.3	2				13		
-42.3	3				15		
-43.3	4				20		
-44.3	5				22		
-45.3	6				22		
-46.3	7				20		
-47.3	8				23		
-48.3	9				22		
-49.3	10						

GENERAL REMARKS: [illegible]

D FORM 1 MAR 58 (Test)

Boring No. FP93-9

FIG NO 2B

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE			
-49.3	10						
					24	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP N.W. ROD	
-50.3	11						
					24		
-51.3	12						
					22		
-52.3	13						
					29		
-53.3	14						
					23		
-54.3	15					TERMINATION @ -54.3' MLW	

ED FORM 58A (Test)

Boring No. FP 93-9

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FD 93-10 Desig. FD 93-d Diam. (Casing) ~~3 in.~~ N/A

Co-ordinates: N 490722.91 E 730744.36

Elevation Top of Boring -39.1 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.8 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -54.9 ~~M.S.L.~~ MLW
Total Depth of Boring 15.8 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/10/93
Hammer Drop 18 IN. Boring Completed 6/10/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. DAWKINS, P. McALLOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: JE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.1	0						
					W	ROD ~~CASING~~ DROP TO -40.1' MLW	
-40.1	1				O		
					R	300 lb. HAMMER 18 IN. DROP MACHINE PROBE	
					6		
-41.1	2						
					6		
-42.1	3						
					11		
-43.1	4						
					24		
-44.1	5						
					34		
-45.1	6						
					37		
-46.1	7						
					65		
-47.1	8						
					42		
-48.1	9						
					56		
-49.1	10						

GENERAL REMARKS: [illegible]

ENG FORM 1836 (Test)

Boring No. FD 93-10

FIG NO 2B

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1°	NO.	SIZE	DEPTH RANGE			
-49.1	10						
					42	300 lb. HAMMER - 18" DROP MACHINE PROBE	
-50.1	11						
					37		
-51.1	12						
					36		
-52.1	13						
					31		
-53.1	14						
					117		
-54.1	15						
						TERMINATION @ -54.9 MLW	

ED FORM 58A (Test)

Boring No. Fp 93-10

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-11 Desig. FP93-K Diam. (Casing) 3 IN

Co-ordinates: N 504499.152 E 723322.927

Elevation Top of Boring -37.4 MLW ~~M.S.L.~~ Hammer Wt. 300 lb. Boring Started 6/14/93

Total Overburden Drilled 15.3 Feet Hammer Drop 18" Boring Completed 6/14/93

Elevation Top of Rock — M.S.L. Casing Left

Total Rock Drilled — Feet Subsurface Water Data Page

Elevation Bottom of Boring -52.7 MLW ~~M.S.L.~~ Obs. Well

Total Depth of Boring 15.3 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered %, No. Boxes Mfg. Des. Drill CME 75 TRUCKMOUNT

Core Recovered Ft: Diam. In. Inspected By: TE

Soil Samples In. Diam. No. Classification By: TE

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.4	0						
-38.4	1				W	WEIGHT OF ROD DROP TO -41.5 FT. MLW	
-39.4	2				0		
-40.4	3				R		
-41.4	4				4	300# HAMMER 18" DROP N.W. ROD MACHINE PROBE	
-42.4	5				6		
-43.4	6				6		LOOSE TO
-44.4	7				10		MEDIUM DENSE
-45.4	8				19		
-46.4	9				38		DENSE
-47.4	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP 93-11

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-47.4	10				73	300 lb. HAMMER, 18" DROP N.W. ROD	DENSE TO VERY DENSE
-48.4	11				49		
-49.4	12				44		
-50.4	13				87		
-51.4	14				112		
-52.4	15					PROBE TERMINATED @ -52.7 MLW	

D[illegible] 58A (Test)

Boring No. FP93-11

FIG NO [illegible]

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site: BOSTON HARBOR — Page 1 of 1 Pages

Boring No. FP93-12 Desig. FP93-L Diam. (Casing) 3 IN.

Co-ordinates: N 504310.54 E 723084.14

Elevation Top of Boring: -38.7 MLW ~~M.S.L.~~
Total Overburden Drilled: 6.4 Feet
Elevation Top of Rock: — M.S.L.
Total Rock Drilled: — Feet
Elevation Bottom of Boring: -45.1 MLW ~~M.S.L.~~
Total Depth of Boring: 6.4 Feet
Core Recovered: ___ % No. Boxes: ___
Core Recovered: ___ Ft.: ___ Diam. ___ In.
Soil Samples: ___ In. Diam. ___ No.
Soil Samples: ___ In. Diam. ___ No.

Hammer Wt. 300# Boring Started 6/14/93
Hammer Drop 18" Boring Completed 6/14/93
Casing Left ___
Subsurface Water Data ___ Page ___
Obs. Well ___
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: JE
Classification By: ___

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
38.7	0						
					W O R 9	WEIGHT OF ROD ~~CASING~~ DROP TO 40.2 MLW	
39.7	1						
40.7	2				~~86~~ 86	300 lb HAMMER 18" DROP NW ROD	
41.7	3				280	-42.3 REFUSAL	TIGHTLY PACKED MATERIAL
42.7	4					INSTALL ROLLER BIT ADVANCE 3 FT. TO -45.1 MLW 3RD GEAR 3/4 - Full throttle 4TH GEAR 3/4 - Full throttle 4TH GEAR 3/4 - Full throttle SMOOTH, EASY DRILLING	SILT/CLAY, DARK GRAY IN CUTTINGS FLUID
43.7	5						
44.7	6					TERMINATE PROBE @ -45.1 MLW	
45.7	7						
46.7	8						
47.7	9						
48.7	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG 58 (Test)

Boring No. FP93-12

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-13 Desig. FP93-T Diam. (Casing) 3 IN.

Co-ordinates: N 504191.30 E 722552.83

Elevation Top of Boring -41.5 ~~M.S.L.~~ MLW
Total Overburden Drilled 10.2 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.7 ~~M.S.L.~~ MLW
Total Depth of Boring 10.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300# Boring Started 6/15/93
Hammer Drop 18 in. Boring Completed 6/15/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: JE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-41.5							
					W	WEIGHT OF ROD DROP TO -44.2' MLW	
-42.5	1				O		
-43.5	2				R		
-44.5	3				3	300 lb. HAMMER 18 in. DROP NW ROD	
					6		LOOSE
-45.5	4						
					7		
-46.5	5						
					9		
-47.5	6						
					8		LOOSE
-48.5	7						
					10		
-49.5	8						
					12		MEDIUM DENSE
-50.5	9						
					14	PROBE TERMINATED @ -51.7 MLW	
-51.5	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

D FORM MAR 1 58 (Test)

Boring No. FP93-13

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-14 Desig. FP93-5 Diam. (Casing) 3 IN.

Co-ordinates: N 504119.68 E 722639.61

Elevation Top of Boring -41.3 ~~MSL~~ MLW
Total Overburden Drilled 10 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.3 ~~MSL~~ MLW
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Hammer Drop 18 IN.
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: TE
Classification By: ____

Boring Started 6/15/93
Boring Completed 6/15/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-41.3							
-42.3	1				W O R	WEIGHT OF ROD - DROP 3.2 FT TO -44.5' MLW	
-43.3	2						
-44.3	3						
-45.3	4				4 6 8 8 10 12 13	300 lb. HAMMER 18 IN. DROP - NW ROD	LOOSE
-46.3	5						
-47.3	6						
-48.3	7						MEDIUM DENSE
-49.3	8						
-50.3	9						
-51.3	10					PROBE TERMINATED @ -51.3 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1158 (Test) MAR 1

Boring No. FP93-14

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-15 Desig. FP93-0 Diam. (Casing) 3 IN

Co-ordinates: N 504115.00 E 722744.34

Elevation Top of Boring -39.8 ~~M.S.L.~~ MLW
Total Overburden Drilled 10.2 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -50.0 ~~M.S.L.~~ MLW
Total Depth of Boring 10.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/15/93
Hammer Drop 18 IN. Boring Completed 6/15/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: JE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.8							
					W	WEIGHT OF ROD DROP 2.3 FT. TO -42.1 MLW	
-40.8	1				0		
					R		
-41.8	2						
					3	300 lb. HAMMER 18 IN. DROP NW ROD	
-42.8	3						
					6		
-43.8	4						
					6		
-44.8	5						
					8		
-45.8	6						
					11		
-46.8	7						
					12		
-47.8	8						
					14		
-48.8	9						
					16		
-49.8	10					PROBE TERMINATED @ -50 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM MAR 1 58 (Test)

Boring No. FP 93-15

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-16 Desig. FP93-N Diam. (Casing) 3 IN

Co-ordinates: N 504156.38 E 722847.70

Elevation Top of Boring -38.1 ~~M.S.L.~~ MLW
Total Overburden Drilled 10.5 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -48.6 ~~M.S.L.~~ MLW
Total Depth of Boring 10.5 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Boring Started 6/15/93
Hammer Drop 18 IN. Boring Completed 6/15/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: JE
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-38.1	0						
					W	WEIGHT OF ROD SINK 1.9 FT. TO -40.0' MLW	
-39.1	1				0		
					R		
-40.1	2				2	300 lb. HAMMER. 18 IN. DROP NW ROD	
					18		
-41.1	3						
					33		
-42.1	4						
					38		
-43.1	5						
					41		
-44.1	6						
					52		
-45.1	7						
					72		
-46.1	8						
					90		
-47.1	9						
					87		
-48.1	10					PROBE TERMINATED @ -48.6 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 58 (Test)

Boring No. FP 93-16

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-17 Desig. FP93-M Diam. (Casing) 3 IN.

Co-ordinates: N 504556.61 E 722895.29

Elevation Top of Boring -38.1 ~~M.S.L.~~ MLW
Total Overburden Drilled 10.0 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -48.1 ~~M.S.L.~~ MLW
Total Depth of Boring 10.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Hammer Drop 18 IN.
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

Boring Started 6/15/93
Boring Completed 6/15/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
38.1	0						
39.1	1					WEIGHT OF ROD SINK 7-9 FT. TO -46.0 MLW	
40.1	2				W		
41.1	3						
42.1	4				O		
43.1	5						
44.1	6				R		
45.1	7						
46.1	8					300 lb. HAMMER 18 IN DROP NW ROD MACHINE PROBE	
47.1	9				51		
48.1	10				44	PROBE TERMINATED @ -48.1 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1558 (Test)

Boring No. FP93-17

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-18 Desig. FP93-Q Diam. (Casing) 3 IN.

Co-ordinates: N 504586.54 E 722688.01

Elevation Top of Boring -39.3 ~~M.S.L.~~ MLW
Total Overburden Drilled -10.1 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -49.4 ~~M.S.L.~~ MLW
Total Depth of Boring ~~-49.4~~ -10.1 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Hammer Drop 18 IN.
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/15/93
Boring Completed 6/15/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.3							
					W	WEIGHT OF ROD SINK TO -42.0 MLW -2.7 FEET	
-40.3	1				O		
-41.3	2				R		
-42.3	3				4	300 lb. HAMMER, 18" DROP NW ROD	
-43.3	4				20	MACHINE PROBE	
-44.3	5				26		
-45.3	6				26		
-46.3	7				42		
-47.3	8				60		
-48.3	9				87		
-49.3	10				117	PROBE TERMINATED @ -49.4 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER

ENG FORM MAR 1 58 (Test)

Boring No. FP93-Q-18

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 pages

Boring No FP93-19 Desig. FP93-R Diam. (Casing) 3 IN.

Co-ordinates: N 504407.32 E 722667.45

Elevation Top of Boring -40.0 MLW ~~MSL~~

Total Overburden Drilled 8.3 Feet

Elevation Top of Rock — ~~MSL~~

Total Rock Drilled — Feet

Elevation Bottom of Boring -48.3 MLW ~~MSL~~

Total Depth of Boring 8.3 Feet

Core Recovered ____ % No. Boxes ____

Core Recovered ____ Ft : ____ Diam. ____ In.

Soil Samples ____ In. Diam. ____ No.

Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Hammer Drop 18 IN.

Casing Left ____

Subsurface Water Data ____ Page ____

Obs. Well ____

Drilled By MI HAWKINS, P. McALOON

Mfg. Des. Drill CME 75 TRUCK MOUNT

Inspected By: JE

Classification By: ____

Classification By: ____

Boring Started 6/15/93

Boring Completed 6/15/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-40.0							
41.0	1				W	WEIGHT OF ROD SINK 3.0 FT. TO -43.0 MLW	
42.0	2				O		
43.0	3				R		
44.0	4				18	300 lb. HAMMER 18" DROP NW ROD MACHINE PROBE	
45.0	5				17		
46.0	6				25		
47.0	7				35		
48.0	8				95		
49.0	9				50/0	PROBE TERMINATED @ -48.3' MLW	
50.0	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
50/0 = 50 blows, NO PENETRATION

ENG 58 (Test)

Boring No. FP93-19

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-20 Desig. FP93-X Diam. (Casing) 3 IN

Co-ordinates: N 504727.42 E 721658.76

Elevation Top of Boring -38.3 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.0 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -53.3 ~~M.S.L.~~ MLW
Total Depth of Boring 15.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300# Boring Started 6/16/93
Hammer Drop 18 IN. Boring Completed 6/16/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCKMOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
38.3							
39.3	1				W	WEIGHT OF ROD SINK 6 FT. TO -44.3 MLW	
40.3	2						
41.3	3				O		
42.3	4				R		
43.3	5						
44.3	6				10	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
45.3	7				9		
46.3	8				13		
47.3	9				11		
48.3	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP93-20

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-48.3	10						
					12	300 lb. HAMMER 18 IN. DROP NW ROD	
49.3	11						
					12		
50.3	12						
					16		
51.3	13						
					15		
52.3	14						
					18		
53.3	15					PROBE TERMINATED @ -53.3 MLW	

D Form 58A (Test)

Boring No. FP93-20

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-21 Desig. FP93-Y Diam. (Casing) 3 IN

Co-ordinates: N 504755.43 E 721841.11

Elevation Top of Boring -36.2 ~~M.S.L.~~ MLW
Total Overburden Drilled -15.0 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.2 ~~M.S.L.~~ MLW
Total Depth of Boring -15.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/16/93
Hammer Drop 18 IN Boring Completed 6/16/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.2	0						
-37.2	1				W	WEIGHT OF ROD SINK 6.8 FT. TO -43.0 MLW	
-38.2	2				0		
-39.2	3						
-40.2	4				R		
-41.2	5						
-42.2	6						
-43.2	7				5	MACHINE PROBE 300 lb. HAMMER, 18 IN. DROP NW ROD	
-44.2	8				39		
-45.2	9				29		
-46.2	10				41		

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP 93-21-Y

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-46.2							
-47.2	11				42	MACHINE PROBE 300 lb. HAMMER 18 in. DROP NW ROD	
-48.2	12				81		
-49.2	13				72		
-50.2	14				103		DENSE
-51.2	15				108	PROBE TERMINATED @ -51.2 MLW	

D Form 58A (Test)

Boring No. FP93-21

FIG NO.

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-22 Desig. FP93-W Diam. (Casing) 3 IN.

Co-ordinates: N 504780.11 E 721441.46

Elevation Top of Boring -36.7 ~~M.S.L.~~ MLW
Total Overburden Drilled -15.0 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.7 ~~M.S.L.~~ MLW
Total Depth of Boring -15.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300# Boring Started 6/16/93
Hammer Drop 18 IN Boring Completed 6/16/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.7	0						
-37.7	1					WEIGHT OF ROD SINK 9.5 FT TO -46.2 MLW.	
-38.7	2				W		
-39.7	3						
-40.7	4				O		
-41.7	5						
-42.7	6						
-43.7	7				R		
-44.7	8						
-45.7	9						
-46.7	10				4	MACHINE PROBE 300 lb HAMMER 18 IN. DROP NW ROD	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1558 (Test)

Boring No. FP93-22

FIG NO 2B

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-46.7							
					8	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
47.7	11						
					9		
48.7	12						
					9		
49.7	13						
					12		
50.7	14						
					14	PROBE TERMINATED @ -51.7' MLW	
51.7	15						

ED FORM 58A (Test)

Boring No. FP93-22

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-23 Desig. FP93-V Diam. (Casing) 3 in.

Co-ordinates: N 504892.19 E 721605.82

Elevation Top of Boring -36.5 ~~M.S.L.~~ MLW
Total Overburden Drilled 14.9 Feet
Elevation Top of Rock — M.S.L.
Total Rock Drilled — Feet
Elevation Bottom of Boring -51.4 ~~M.S.L.~~ MLW
Total Depth of Boring 14.9 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 IN
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/16/93
Boring Completed 6/16/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
36.5	0						
37.5	1				W	WEIGHT OF ROD SINK 10.9 FT. TO -47.4 FT MLW	
38.5	2						
39.5	3						
40.5	4				O		
41.5	5						
42.5	6						
43.5	7						
44.5	8				R		
45.5	9						
46.5	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1 MAR 58 (Test)

Boring No. FP93-23-V

FIG NO 2B

DEPTH		CORE/SAMPLE			BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1'	NO.	SIZE	DEPTH RANGE			
-46.5	10				WOR	ROD SINK TO -47.4 FT.	
47.5	11				1	MACHINE PROBE	
					9	300 lb. HAMMER 18 IN. DROP NW ROD	
48.5	12						
					9		
49.5	13						
					14		
50.5	14						
					23	PROBE TERMINATED @ -51.4 MLW	
51.5	15						

ED FORM 58A (Test)

Boring No. FP93-23

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-24 Desig. FP-93-CCC Diam. (Casing) —

Co-ordinates: N 508701.87 E 730676.71

Elevation Top of Boring -38.0 MLW ~~MSL~~ Hammer Wt. 300 lb Boring Started 6/17/93

Total Overburden Drilled 8.4 Feet Hammer Drop 18 IN Boring Completed 6/17/93

Elevation Top of Rock — ~~MSL~~ Casing Left

Total Rock Drilled — Feet Subsurface Water Data Page

Elevation Bottom of Boring -46.4 MLW ~~MSL~~ Obs. Well

Total Depth of Boring 8.4 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered % No. Boxes Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered Ft: Diam. In. Inspected By: JE

Soil Samples In. Diam. No. Classification By:

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-38.0							
					W	WEIGHT OF ROD SINK TO -39.9 MLW	
39.0	1				0		
					R		
40.0	2				9	300 lb. HAMMER 18" DROP NW ROD MACHINE PROBE	
					40		
41.0	3						
					58		
42.0	4						
					80		
43.0	5						
					149		V. DENSE
44.0	6						
					122		
45.0	7						
					150/9		
46.0	8					PROBE TERMINATED @ -46.4 MLW	
47.0	9						
48.0	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP93-24

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-25 Desig. FP93-BBB Diam. (Casing) —

Co-ordinates: N 508545.92 E 730632.44

Elevation Top of Boring -37.2 MLW ~~M.S.L.~~ Hammer Wt. 300 lb Boring Started 6/17/93

Total Overburden Drilled 9.0 Feet Hammer Drop 18 IN Boring Completed 6/17/93

Elevation Top of Rock — ~~M.S.L.~~ Casing Left

Total Rock Drilled — Feet Subsurface Water Data Page

Elevation Bottom of Boring -46.2 MLW ~~M.S.L.~~ Obs. Well

Total Depth of Boring 9.0 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered % No. Boxes Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered Ft: Diam. In. Inspected By: JE

Soil Samples In. Diam. No. Classification By:

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.2	0						
-38.2	1				W	WEIGHT OF ROD SINK TO -40.6 MLW	
-39.2	2				O		
-40.2	3				R		
-41.2	4				50	MACHINE PROBE 300lb. HAMMER 18" DROP NW ROD	
-42.2	5				165		V. DENSE
-43.2	6				128		
-44.2	7				80		
-45.2	8				127		
-46.2	9				188	PROBE TERMINATED @ -46.2 MLW	V. DENSE
	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1558 (Test)

Boring No. FP93-BBB-25

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site: BOSTON HARBOR — Page 1 of 1 Pages

Boring No. FP93 26 Desig. FP93-EEE Diam. (Casing) —

Co-ordinates: N 508864.05 E 730992.35

Elevation Top of Boring: -36.2 MLW ~~M.S.L.~~
Total Overburden Drilled: 9.8 Feet
Elevation Top of Rock: -46.0 MLW ~~M.S.L.~~
Total Rock Drilled: —
Elevation Bottom of Boring: -46.0 MLW ~~M.S.L.~~
Total Depth of Boring: 9.8 Feet
Core Recovered: ____ % No. Boxes: ____
Core Recovered: ____ Ft: ____ Diam. ____ In.
Soil Samples: ____ In. Diam. ____ No.
Soil Samples: ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Hammer Drop 18 IN
Casing Left: ____
Subsurface Water Data: ____ Page: ____
Obs. Well: ____
Drilled By: M. HAWKINS, P. McALOON
Mfg. Des. Drill: CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/17/93
Boring Completed 6/17/93

DEPTH	1'=	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.2							
-37.2	1				W	WEIGHT OF ROD SINK TO -39.8 'MLW	
-38.2	2				O		
-39.2	3				R		
-40.2	4				11	MACHINE PROBE 300 lb. HAMMER, 18" DROP NW ROD	
-41.2	5				31		
-42.2	6				71		
-43.2	7				46		
-44.2	8				59		
-45.2	9				75		
-46.2	10				50/0	PROBE REFUSAL @ -46.0' MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
50/0 = 50 blows, NO PENETRATION

ENG FORM 1258 (Test)

Boring No. FP93-26

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 2 Pages

Boring No. FP93-27 Desig. FP93-DDD Diam. (Casing) —

Co-ordinates: N 508755.17 E 730819.31

Elevation Top of Boring -37.8 ~~M.S.L.~~ MLW
Total Overburden Drilled 15.3 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -53.1 ~~M.S.L.~~ MLW
Total Depth of Boring 15.3 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/17/93
Hammer Drop 18 IN. Boring Completed 6/17/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.8							
38.8	1				W	WEIGHT OF ROD CASING SINK 3.3 FT TO -41.1	
39.8	2				O		
					R		
40.8	3						
					54	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
41.8	4				73		
42.8	5				54		
43.8	6				46		
44.8	7				67		
45.8	8				79		
46.8	9				70		
47.8	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-48.8	10						
					53	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
-48.8	11						
					113		
-49.8	12						
					110		
-50.8	13						
					101		
-51.8	14						
					142		
-52.8	15					PROBE TERMINATED @ -53.1 MLW	

ED FORM 58A (Test)

Boring No. FP93-27

FIG NO

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-28 Desig. FP93-Z Diam. (Casing) —

Co-ordinates: N 505938.80 E 719184.26

MYSTIC RIVER

Elevation Top of Boring -38.4 ~~M.S.L.~~ MLW
Total Overburden Drilled 10.2 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -48.6 ~~M.S.L.~~ MLW
Total Depth of Boring 10.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Boring Started 6/17/93
Hammer Drop 18 IN Boring Completed 6/17/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
38.4							
39.4	1					WEIGHT OF ROD SINK 10.2 FT. TO -48.6' MLW	
40.4	2				W		
41.4	3						
42.4	4						
43.4	5				O		
44.4	6						
45.4	7						
46.4	8				R		
47.4	9						
48.4	10					PROBE TERMINATED @ -48.6 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

(Test)

Boring No. FP 93-28

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. Fp93-29 Desig. Fp93-CC Diam. (Casing) –

Co-ordinates: N 505953.09 E 719057.52

Elevation Top of Boring –38.6 MLW ~~M.S.L.~~ Hammer Wt. 300 lb Boring Started 6/17/93

Total Overburden Drilled 11.1 Feet Hammer Drop 18 IN

Elevation Top of Rock – MLW ~~M.S.L.~~ Casing Left _____ Boring Completed 6/17/93

Total Rock Drilled – Feet Subsurface Water Data _____ Page _____

Elevation Bottom of Boring –49.7 MLW ~~M.S.L.~~ Obs. Well _____

Total Depth of Boring 11.1 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered _____ % No. Boxes _____ Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered _____ Ft : _____ Diam. _____ In. Inspected By: JE

Soil Samples _____ In. Diam. _____ No. Classification By: _____

Soil Samples _____ In. Diam. _____ No. Classification By: _____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
–38.6							
–39.6	1						
–40.6	2				W		
–41.6	3					WEIGHT OF ROD SINK TO –49.7' MLW	
–42.6	4				O		
–43.6	5						
–44.6	6						
–45.6	7				R		
–46.6	8						
–47.6	9						
–48.6	10					PROBE TERMINATED @ –49.7 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1558 (Test)

Boring No. Fp 93-29

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-30 Desig FP93-BB Diam. (Casing) —

Co-ordinates: N 505960.75 E 718897.15

Elevation Top of Boring -37.9 ~~M.S.L.~~ MLW
Total Overburden Drilled 5.5 Feet
Elevation Top of Rock -43.4 ~~M.S.L.~~ MLW
Total Rock Drilled 1.6 Feet
Elevation Bottom of Boring -45.0 ~~M.S.L.~~ MLW
Total Depth of Boring 7.1 Feet
Core Recovered 100 % No. Boxes 1
Core Recovered 1.6 Ft : Diam. 2.06 In.
Soil Samples _____ In. Diam. ____ No.
Soil Samples _____ In. Diam. ____ No.

Hammer Wt. 300 lb. Hammer Drop 18 IN.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: _____
Classification By: Y. YATSEVITCH (COE)

Boring Started 6/17/93
Boring Completed 6/17/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.9							
38.9	1				W	WEIGHT OF ROD SINK TO -42.7 MLW	
39.9	2				O		
40.9	3						
41.9	4				R		
42.9	5				S	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
43.9	6			5.5 To 7.1	242 100%	REFUSAL @ -43.9 MLW; ROCK CORE DRILL FROM -43.4 TO -45.0 MLW	Gray, hard Argillite, massive bedding, faint structure dips 80°. (Frags to 6") RQD 75%
44.9	7					TERMINATE PROBE @ -45.0 MLW	
45.9	8						
46.9	9						
47.9	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1558 (Test) MAR 1

Boring No. FP-93-30

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-31 Desig. FP93-JJ Diam. (Casing) —

Co-ordinates: N 505853.87 E 719164.11

Elevation Top of Boring -38.0 ~~M.S.L.~~ MLW
Total Overburden Drilled 10 Feet
Elevation Top of Rock — ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -48.0 ~~M.S.L.~~ MLW
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/18/93
Hammer Drop 18 IN. Boring Completed 6/18/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McAloon
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
38.0	0						
39.0	1						
40.0	2				W	WEIGHT OF ROD SINK TO -46.8 FT MLW 8.8 FT.	
41.0	3						
42.0	4				O		
43.0	5						
44.0	6				R		
45.0	7						
46.0	8						
47.0	9				2	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
48.0	10				8	PROBE TERMINATED @ -48.0 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93 32 Desig. FP93 II Diam. (Casing) —

Co-ordinates: N 505860.96 E 719015.93

Elevation Top of Boring -36.8 M.S.L.
Total Overburden Drilled 10 Feet
Elevation Top of Rock —
Total Rock Drilled — Feet
Elevation Bottom of Boring -46.8 M.S.L.
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 301b
Hammer Drop 18 IN
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

Boring Started 6/18/93
Boring Completed 6/18/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.8							
-37.8	1				W	WEIGHT OF ROD SINK 9.0 FT TO -45.8 MLW.	
-38.8	2						
-39.8	3						
-40.8	4				O		
-41.8	5						
-42.8	6						
-43.8	7				R		
-44.8	8						
-45.8	9					MACHINE PROBE 300lb HAMMER 18 IN DROP NW ROD	
46.8	10				41	PROBE TERMINATED @ -46.8 MLW	
46.8							

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. Fp 93-33 Desig. Fp 93-NN Diam. (Casing) —

Co-ordinates: N 505770.97 E 719024.74

Elevation Top of Boring -37.1 ~~MSL~~ MLW
Total Overburden Drilled 10 Feet
Elevation Top of Rock — ~~MSL~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.1 ~~MSL~~ MLW
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/18/93
Hammer Drop 18 IN Boring Completed 6/18/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
37.1							
39.1	1				W	WEIGHT OF ROD SINK 9.4' TO -46.5 MLW	
39.1	2						
40.1	3						
41.1	4				O		
42.1	5						
43.1	6						
44.1	7				R		
45.1	8						
46.1	9						
47.1	10				6	MACHINE PROBE PROBE TERMINATED @ -47.1 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FD93-34 Desig. FD93-00 Diam. (Casing) —

Co-ordinates: N 505754.29 E 719121.76

Elevation Top of Boring -37.8 ~~M.S.L.~~ MLW
Total Overburden Drilled 10 Feet
Elevation Top of Rock — ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.8 ~~M.S.L.~~ MLW
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/18/93
Hammer Drop 18 IN Boring Completed 6/18/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.8							
-38.8	1				W	WEIGHT OF ROD SINK 9.4 FT. TO -47.2 MLW	
-39.8	2						
-40.8	3						
-41.8	4				O		
-42.8	5						
-43.8	6						
-44.8	7				R		
-45.8	8						
-46.8	9						
-47.8	10				4	MACHINE PROBE PROBE TERMINATED @ -47.8 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM MAR 58 (Test)

Boring No. FD 93-34

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-35 Desig. FP93-ZZ Diam. (Casing) —

Co-ordinates: N 505611.01 E 719030.73

Elevation Top of Boring -37.9 ~~M.S.L.~~ MLW
Total Overburden Drilled 10 Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.9 ~~M.S.L.~~ MLW
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/18/93
Hammer Drop 18 IN Boring Completed 6/18/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
37.9							
38.9	1						
39.9	2				W	WEIGHT OF ROD SINK 7.6 FT. TO -45.5 MLW	
40.9	3						
41.9	4				O		
42.9	5						
43.9	6				R		
44.9	7						
45.9	8				5	MACHINE PROBE 300 lb. HAMMER, 18 IN. DROP NW ROD	
46.9	9				23		
47.9	10				23	PROBE TERMINATED @ -47.9' MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP93-35-ZZ

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-36 Desig. FP93-YY Diam. (Casing) —

Co-ordinates: N 505611.48 E 718976.52

Elevation Top of Boring -38.6 MLW ~~MSL~~
Total Overburden Drilled 9.2 Feet
Elevation Top of Rock -47.8 MLW ~~MSL~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.8 MLW ~~MSL~~
Total Depth of Boring 9.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/18/93
Hammer Drop 18 IN Boring Completed 6/18/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JF
Classification By: ____
Classification By: ____

DEPTH	1'=	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-38.6							
					W	WEIGHT OF ROD SINK 2.8 FT TO -41.4' MLW	
39.6	1				O		
40.6	2				R		
41.6	3				1	MACHINE PROBE 300 lb. HAMMER, 18 in. DROP NW ROD	
					54		
42.6	4						
					45		
43.6	5						
					69		
44.6	6						
					37		
45.6	7						
					43		
46.6	8						
					49		
47.6	9				100	REFUSAL PROBE TERMINATED @ -47.8 MLW	
					50/0		
48.6	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
50/0 = 50 BLOWS, NO PENETRATION

ENG FORM MAR 1 58 (Test)

Boring No. FP93-36

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-37 Desig. FP93-SS Diam. (Casing) –

Co-ordinates: N 505671.78 E 718984.14

Elevation Top of Boring –37.1 MLW ~~MSL~~.
Total Overburden Drilled 3.5 Feet
Elevation Top of Rock –40.6 MLW ~~MSL~~.
Total Rock Drilled 2.0 Feet
Elevation Bottom of Boring –42.6 MLW ~~MSL~~.
Total Depth of Boring 5.5 Feet
Core Recovered 90 % No. Boxes 1
Core Recovered 2 Ft. Diam. 2.06 In.
Soil Samples _____ In. Diam. ____ No.
Soil Samples _____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/18/93
Hammer Drop 18 IN Boring Completed 6/18/93
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: _____
Classification By: Y. YATSEVITCH (COE)

DEPTH	1" =	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
–37.1							
38.1	1			0.0 To 2.5	W O R	WEIGHT OF ROD SINK TO –39.5 FT MLW	
39.1	2						
40.1	3				100+/1	SPIN AND MACHINE PROBE REFUSAL WASH CASING TO –40.6' MLW SEAT ON ROCK	
41.1	4			3.5 To 5.5	92%	INSTALL CORING TOOL ROCK CORE 2 FT. TO –42.6' MLW	Gray, hard Argillite, massive bedding, faint structure, fresh RQD 45%
42.1	5					PROBE TERMINATE @ –42.6 MLW	
43.1	6						
44.1	7						
45.1	8						
46.1	9						
47.1	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test) Boring No. FP93-37 FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-38 Desig. FP93-AAA Diam. (Casing) —

Co-ordinates: N 505546.85 E 718883.31

Elevation Top of Boring -37.7 ~~M.S.L.~~ MLW
Total Overburden Drilled 11.2 Feet
Elevation Top of Rock — ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -48.9 ~~M.S.L.~~ MLW
Total Depth of Boring 11.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 in
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCKMOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/21/93
Boring Completed 6/21/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
37.7							
38.7	1				W	WEIGHT OF ROD - SINK 11.2 FEET TO -48.9 MLW	
39.7	2						
40.7	3						
41.7	4				O		
42.7	5						
43.7	6						
44.7	7						
45.7	8				R		
46.7	9						
47.7	10					PROBE TERMINATED @ -48.9' MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1 MAR 58 (Test)

Boring No. FP93-38-AAA

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-39 Desig. FP93-XX Diam. (Casing) —

Co-ordinates: N 505597.16 E 718877.22

Elevation Top of Boring -37.5 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock — ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.5 ~~M.S.L.~~ MLW
Total Depth of Boring 10 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 390 lb Boring Started 6/21/93
Hammer Drop 18 IN Boring Completed 6/21/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.5							
-38.5	1				W	WEIGHT OF ROD SINK 3.3 FT. TO -40.8' MLW	
-39.5	2				O		
-40.5	3				R		
-41.5	4				42	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
-42.5	5				44		
-43.5	6				41		
-44.5	7				36		
-45.5	8				43		
-46.5	9				37		
-47.5	10				40	PROBE TERMINATED @ -47.5 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 MAR 58 (Test)

Boring No. FP39-XX

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-40 Desig. FP93-VV Diam. (Casing) —

Co-ordinates: N 505631.23 E 718916.04

Elevation Top of Boring -37.1 MLW ~~M.S.L.~~ Hammer Wt. 300 lb Boring Started 6/21/93

Total Overburden Drilled — Feet Hammer Drop 18 IN. Boring Completed 6/21/93

Elevation Top of Rock -42.9 MLW ~~M.S.L.~~ Casing Left

Total Rock Drilled — Feet Subsurface Water Data Page

Elevation Bottom of Boring -42.9 MLW ~~M.S.L.~~ Obs. Well

Total Depth of Boring 5.8 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered % No. Boxes Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered Ft : Diam. In. Inspected By: TE

Soil Samples In. Diam. No. Classification By:

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.1							
-38.1	1				W	WEIGHT OF ROD SINK 4.4 FT TO -41.5 MLW	
-39.1	2				O		
-40.1	3				R		
-41.1	4						
-42.1	5				50 / 100+ / 50%	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD PROBE REFUSAL @ -42.9 MLW	
-43.1	6						
-44.1	7						
-45.1	8						
-46.1	9						
-47.1	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM MAR 58 (Test)

Boring No. FP93-40

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-41 Desig. FP93-99 Diam. (Casing) —

Co-ordinates: N 505688.10 E 718880.60

Elevation Top of Boring -37.8 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -42.3 ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -42.3 ~~M.S.L.~~ MLW
Total Depth of Boring 4.5 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/21/93
Hammer Drop 18 IN Boring Completed 6/21/93
Casing Left ____
Subsurface Water Date ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.8							
					W	WEIGHT OF ROD	
-38.8	1					-SINK 4.0 FT. TO -41.8 MLW	
					0		
-39.8	2						
-40.8	3				R		
-41.8	4				5%	MACHINE PROBE PROBE REFUSAL @ -42.3 MLW	
					BOUNCING REFUSAL		
-42.8	5						
-43.8	6						
-44.8	7						
-45.8	8						
-46.8	9						
-47.8	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 58 (Test)

Boring No. FP93-41

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-42 Desig. FP93-MM Diam. (Casing) —

Co-ordinates: N 505766.86 E 718892.05

Elevation Top of Boring -39.4 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -43.3 ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -43.3 ~~M.S.L.~~ MLW
Total Depth of Boring 3.9 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Boring Started 6/21/93
Hammer Drop 18 IN. Boring Completed 6/21/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.4							
-40.4	1				W O R	WEIGHT OF ROD SINK TO -42.4 MLW 3 FT.	
-41.4	2						
-42.4	3				100 50/0	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP N/W ROD PROBE REFUSAL @ -43.3 MLW	
-43.4	4						
-44.4	5						
-45.4	6						
-46.4	7						
-47.4	8						
-48.4	9						
-49.4	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
50/0 = 50 blows, NO PENETRATION

ENG FORM MAR 1 58 (Test)

Boring No. FP93-42-MM

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-43 Desig. FP93-HH Diam. (Casing) —

Co-ordinates: N 505858.94 E 718895.41

Elevation Top of Boring -37.5 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -40.7 ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -40.7 ~~M.S.L.~~ MLW
Total Depth of Boring 3.2 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 IN
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME TRUCK MOUNT 75
Inspected By: JE
Classification By: ____
Classification By: ____

Boring Started 6/21/93
Boring Completed 6/21/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.5							
-38.5	1				W	WEIGHT OF ROD SINK 2.9 FT. TO -40.4 MLW	
-39.5	2				O		
-40.5	3				R	PROBE REFUSAL @ -40.7 MLW	
					BOUNCING REF.	MACHINE PROBE	
-41.5	4						
-42.5	5						
-43.5	6						
-44.5	7						
-45.5	8						
-46.5	9						
-47.5	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test) MAR 1

Boring No. FP93-43-HH

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-44 Desig. FP93-EE Diam. (Casing) —

Co-ordinates: N 505908.04 E 718929.56

Elevation Top of Boring ~37.1 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈-43.1 ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -43.1 ~~M.S.L.~~ MLW
Total Depth of Boring 6.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 IN.
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCKMOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/21/93
Boring Completed 6/21/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.1							
38.1	1				W	WEIGHT OF ROD SINK 5.5 FT. TO -42.6 MLW	
39.1	2				O		
40.1	3						
41.1	4				R		
42.1	5						
43.1	6				100+ 50/0	MACHINE PROBE PROBE TERMINATED @ -43.1 MLW	
44.1	7						
45.1	8						
46.1	9						
47.1	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
50/0 = 50 blows, NO PENETRATION

ENG FORM MAR 1 58 (Test)

Boring No. FP93-44-EE

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-45 Desig. FP93-AA Diam. (Casing) —

Co-ordinates: N 505968.15 E 718827.12

Elevation Top of Boring -36.5 ~~MSL~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -45.4 ~~MSL~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -45.4 ~~MSL~~ MLW
Total Depth of Boring ~~9.5~~ 8.9 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 IN
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/21/93
Boring Completed 6/21/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-36.5							
-37.5	1				W	WEIGHT OF ROD SINK 7.8 FT. TO -44.3 MLW	
-38.5	2						
-39.5	3						
-40.5	4				0		
-41.5	5						
-42.5	6				R		
-43.5	7						
-44.5	8				100+ 5%	300 lb HAMMER MACHINE PROBE 18 IN. DROP NW ROD PROBE REFUSAL @ -45.4 MLW	
-45.9	9						
-46.4	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
5% = 50 blows, NO PENETRATION

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-46 Desig FP93-KK Diam. (Casing) —

Co-ordinates: N 505763.99 E 718682.01

Elevation Top of Boring -36.9 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -45.8 ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -45.8 ~~M.S.L.~~ MLW
Total Depth of Boring 8.8 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/22/93
Hammer Drop 18 IN Boring Completed 6/22/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCKMOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
36.9							
37.9	1				W	WEIGHT OF ROD SINK 4.6 FT. TO -41.5 MLW	
38.9	2				0		
39.9	3				R		
40.9	4						
41.9	5				20	MACHINE PROBE 300 lb. HAMMER 18 IN DROP NW ROD	
42.9	6				94		
43.9	7				110		
44.9	8				125		
45.9	9				150	PROBE TERMINATION -45.7 MLW	
46.9	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 (Test)

Boring No. FP93-46

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-47 Desig. FP93-UU Diam. (Casing) —

Co-ordinates: N 505658.44 E 718741.41

Elevation Top of Boring -36.6 ~~MSL~~ Hammer Wt. 300 lb Boring Started 6/22/93

Total Overburden Drilled — Feet Hammer Drop 18 IN Boring Completed 6/22/93

Elevation Top of Rock -41.5 ~~MSL~~ Casing Left

Total Rock Drilled 5.5 Feet Subsurface Water Data Page

Elevation Bottom of Boring -47.0 ~~MSL~~ Obs. Well

Total Depth of Boring 10.4 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered 94 % No. Boxes 1 Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered 5' Ft : 2" Diam. 2.06 In. Inspected By: TE

Soil Samples In. Diam. No. Classification By:

Soil Samples In. Diam. No. Classification By: Y. YATSEVITCH (COE)

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
36.6							
37.6	1				W	WEIGHT OF ROD SINK 4.5 FT. TO -41.1 MLW	
38.6	2				O		
39.6	3				R		
40.6	4					ROLLER BIT TO -41.5 MLW 0.6'	
41.6	5	41.5		41.5 To 47.0 OR 5.0 To 10.0		ROCK CORE: MWD 4 CORE 5.5 FT. TO -47.0 MLW RUN 5.5 FT. 22 MIN. 62 IN. RECOVERY (94%) RQD = 73%	Gray, hard, Argillite, massive bedding, faint structure dips 60°, fresh RQD 83%
42.6	6						
43.6	7						
44.6	8						
45.6	9						
46.6	10					TERMINATE PROBE @ -47.0 MLW	

GENERAL REMARKS:
MLW = MEAN LOWWATER DATUM

ENG FORM 1558 (Test)

Boring No. FP93-47

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-48 Desig. FP93-TT Diam. (Casing) —

Co-ordinates: N 505699.47 E 718701.12

Elevation Top of Boring −36.4 MLW ~~MSL~~.
Total Overburden Drilled — Feet
Elevation Top of Rock — ~~MSL~~.
Total Rock Drilled — Feet
Elevation Bottom of Boring −46.4 MLW ~~MSL~~.
Total Depth of Boring 10.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft: ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/22/93
Hammer Drop 18 IN. Boring Completed 6/22/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: JE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
−36.4							
−37.4	1				W	WEIGHT OF ROD SINK 5.3 FT TO −41.7 MLW	
−38.4	2				O		
−39.4	3						
−40.4	4				R		
−41.4	5						
−42.4	6				24	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
−43.4	7				90		
−44.4	8				45		
−45.4	9				35		
−46.4	10				142	PROBE TERMINATED @ −46.4 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM MAR 1 58 (Test)

Boring No. FP93-48-TT

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-49 Desig. FP93-FF Diam. (Casing) —

Co-ordinates: N 505843.45 E 718742.84

Elevation Top of Boring -37.1 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -47.1 ~~M.S.L.~~
Total Depth of Boring 10.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft : ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/22/93
Hammer Drop 18 IN. Boring Completed 6/22/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.1							
38.1	1				W	WEIGHT OF ROD SINK 5.7 FT. TO -42.8 MLW	
39.1	2						
40.1	3				0		
41.1	4				R		
42.1	5						
43.1	6				5	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
44.1	7				27		
45.1	8				14		
46.1	9				18		
47.1	10				21	PROBE TERMINATED @ -47.1 MLW	

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1 MAR 58 (Test)

Boring No. FP93-49FF

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-DD Desig. FP93-50 Diam. (Casing) —

Co-ordinates: N 505944.47 E 718752.90

Elevation Top of Boring -37.1 MLW ~~M.S.L.~~ Hammer Wt. 300 lb Boring Started 6/22/93

Total Overburden Drilled — Feet Hammer Drop 18 IN Boring Completed 6/22/93

Elevation Top of Rock — ~~M.S.L.~~ Casing Left

Total Rock Drilled — Feet Subsurface Water Data Page

Elevation Bottom of Boring -46.7 MLW ~~M.S.L.~~ Obs. Well

Total Depth of Boring 9.6 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered %, No. Boxes Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered Ft: Diam. In. Inspected By: JE

Soil Samples In. Diam. No. Classification By:

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.1							
-38.1	1				W	WEIGHT of ROD SINK 7.3 FT. TO -44.4 MLW	
-39.1	2						
-40.1	3				O		
-41.1	4						
-42.1	5				R		
-43.1	6						
-44.1	7						
-45.1	8				21 43	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
-46.1	9						
-47.1	10				42	PROBE TERMINATED @ -46.7 MLW	(1)

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
(1) RUSHING TIDE LEVEL - UP

ENG FORM 1558 (Test) MAR 1

Boring No. FP93-50-DD

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-51 Desig. FP93-GG Diam. (Casing) —

Co-ordinates: N 505825.36 E 718,822.82

Elevation Top of Boring -37.1 MLW ~~M.S.L.~~
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -44.9 ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -44.9 MLW ~~M.S.L.~~
Total Depth of Boring 7.8 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb. Boring Started 6/22/93
Hammer Drop 18 IN. Boring Completed 6/22/93
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
37.1							
38.1	1				W	WEIGHT OF ROD SINK 3.2 FT. TO -40.3 MLW	
39.1	2				O		
40.1	3				R		
41.1	4				55	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
42.1	5				81		
43.1	6				104		
44.1	7				70		
45.1	8				75		
46.1	9				100+ 5%	PROBE REFUSAL @ -44.9 MLW	
47.1	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

ENG FORM 1836 MAR 58 (Test)

Boring No. FP93-51-GG

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-52 Desig. FP93-LL Diam. (Casing) –

Co-ordinates: N 505764.75 E 718829.78

Elevation Top of Boring -39.2 ~~M.S.L.~~ MLW Hammer Wt. 300 lb Boring Started 6/22/93

Total Overburden Drilled – Feet Hammer Drop 18 IN Boring Completed 6/22/93

Elevation Top of Rock ≈ -43.0 ~~M.S.L.~~ MLW Casing Left

Total Rock Drilled – Feet Subsurface Water Data Page

Elevation Bottom of Boring -43.0 ~~M.S.L.~~ MLW Obs. Well

Total Depth of Boring 3.8 Feet Drilled By M. HAWKINS, P. McALOON

Core Recovered % No. Boxes Mfg. Des. Drill CME 75 TRUCK MOUNT

Core Recovered Ft : Diam. In. Inspected By: TE

Soil Samples In. Diam. No. Classification By:

Soil Samples In. Diam. No. Classification By:

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-39.2							
40.2	1				W O R	WEIGHT OF ROD SINK 2.3 FT. TO	
41.2	2						
42.2	3				74	MACHINE PROBE 300lb. HAMMER 18 IN. DROP NW ROD	
43.2	4				222	PROBE REFUSAL @ -43.0 MLW	
44.2	5						
45.2	6						
46.2	7						
47.2	8						
48.2	9						
49.2	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP93-53 Desig. FP93-AR Diam. (Casing) —

Co-ordinates: N 505704.73 E 718827.27

Elevation Top of Boring -37.0 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock ≈ -42.8 ~~M.S.L.~~ MLW
Total Rock Drilled — Feet
Elevation Bottom of Boring -42.8 ~~M.S.L.~~ MLW
Total Depth of Boring 5.8 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb Boring Started 6/22/93
Hammer Drop 18 IN Boring Completed 6/22/93
Casing Left ____
Subsurface Water Date ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

DEPTH	1'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
-37.0							
-38.0	1				W	WEIGHT OF ROD SINK 4.5 FT TO -41.5 MLW	
-39.0	2				O		
-40.0	3				R		
-41.0	4						
-42.0	5				75	MACHINE PROBE 300 lb. HAMMER 18 IN. DROP NW ROD	
					100+ 50%	PROBE TERMINATED @ -42.8 MLW	
-43.0	6						
-44.0	7						
-45.0	8						
-46.0	9						
-47.0	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER DATUM
50% = 50 blows, No penetration

ENG 58 (Test)
MAR 1

Boring No. FP93-53-AR

FIG NO 2B

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site BOSTON HARBOR Page 1 of 1 Pages

Boring No. FP9354 Desig. FP93-WW Diam. (Casing) —

Co-ordinates: N 505540.23 E 718808.24

Elevation Top of Boring -35.7 ~~M.S.L.~~ MLW
Total Overburden Drilled — Feet
Elevation Top of Rock — ~~M.S.L.~~
Total Rock Drilled — Feet
Elevation Bottom of Boring -49.0 ~~M.S.L.~~ MLW
Total Depth of Boring 13.3 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft ____ Diam. ____ In.
Soil Samples ____ In. Diam. ____ No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 300 lb
Hammer Drop 18 IN
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By M. HAWKINS, P. McALOON
Mfg. Des. Drill CME 75 TRUCK MOUNT
Inspected By: TE
Classification By: ____
Classification By: ____

Boring Started 6/22/93
Boring Completed 6/22/93

DEPTH		CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
35.7							
36.7	1				W	WEIGHT OF ROD SINK 13.3 FT. TO -49.0 MLW	
37.7	2						
38.7	3						
39.7	4				O		
40.7	5						
41.7	6						
42.7	7				R		
43.7	8						
44.7	9						
45.7	10						

GENERAL REMARKS:
MLW = MEAN LOW WATER

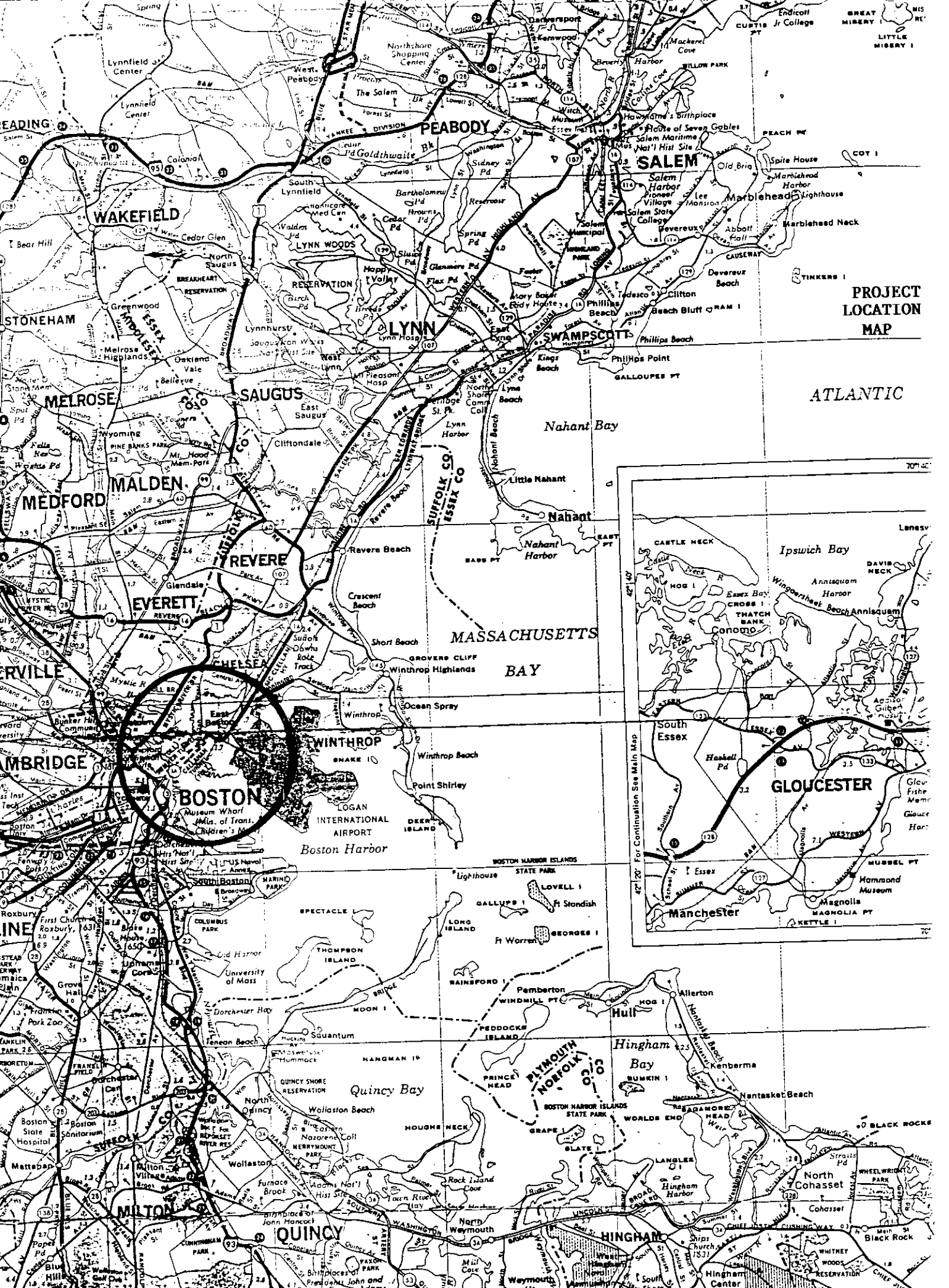
PROBE TERMINATED @ -49.0 MLW

ENG FORM MAR 1 58 (Test)

Boring No. FP93-54-WW

FIG NO 2B

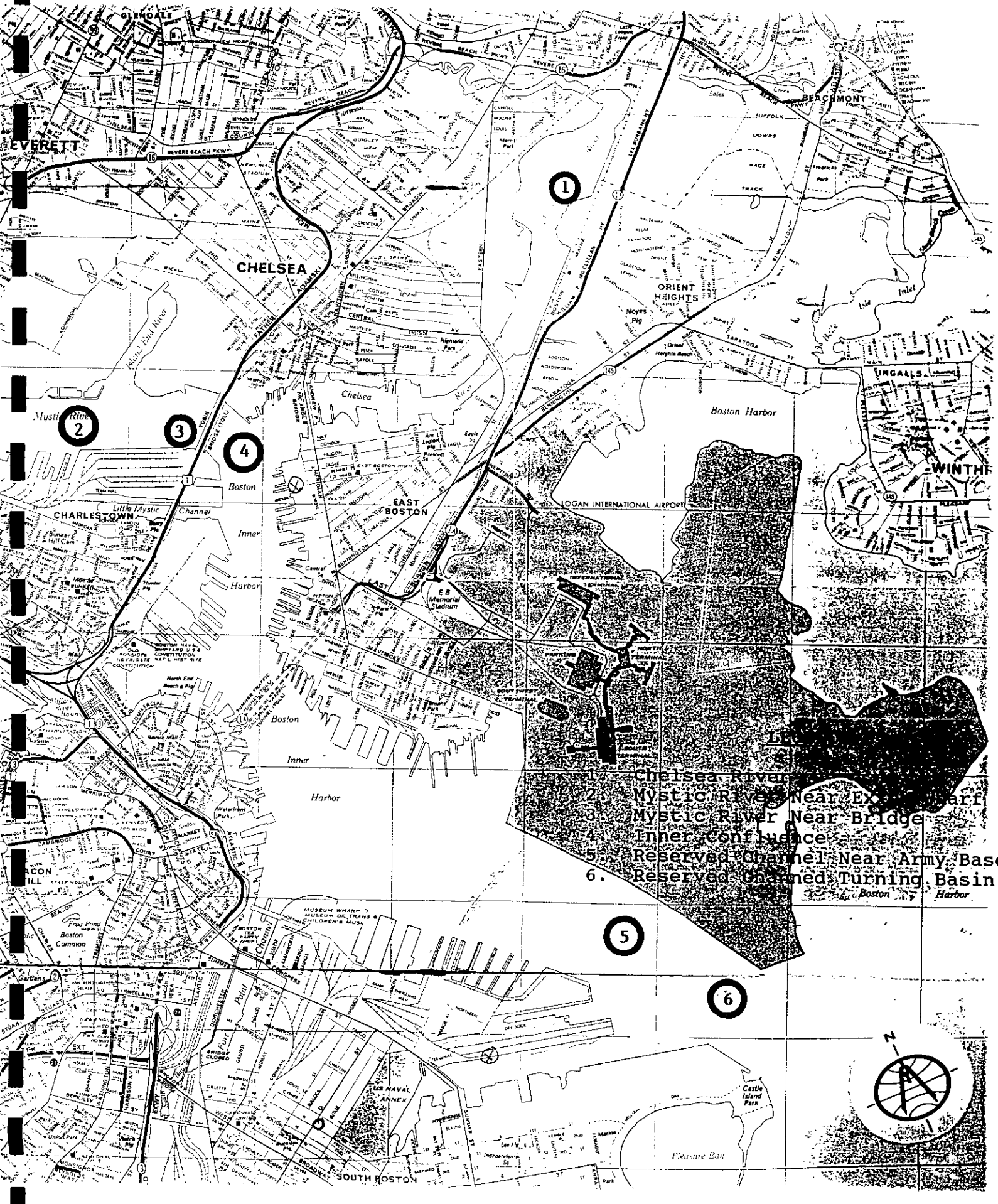
c. Figure 1 - General Project Location Map


PROJECT LOCATION MAP
ATLANTIC
MASSACHUSETTS BAY
Nahant Bay
Boston Harbor
Quincy Bay
Hingham Bay
Ipswich Bay
WAKEFIELD
READING
PEABODY
SALEM
Marblehead
STONEHAM
LYNN
SWAMPSCOTT
MELROSE
SAUGUS
MALDEN
MEDFORD
REVERE
EVERETT
CHELSEA
WINTHROP
BOSTON
CAMBRIDGE
MILTON
QUINCY
HINGHAM
Hull
GLOUCESTER
Manchester
Nahant
LOGAN INTERNATIONAL AIRPORT
For Continuation See Main Map

d. Figure 2 - Site Location Map

(The Corps will be plotting boring locations on detailed maps which are not available at the time of this report.)

SITE LOCATION MAP



SECTION 9

OTHER RECORDS TAKEN

BOSTON HBR - RESERVE CHANNEL TURNING AREA - CONFLUENCE - MYSTIC RIVER & CHELSEA CREEK

EQUIPMENT USED

ONE TOPCON E-T-1 EDM TOTAL STATION
ONE TOPCON AUTOLEVEL & PHILLY ROD (ATE & LEVEL)
THREE G.E. PORTABLE RADIOS
FOUR TIDE BOARDS
ONE SUBURBAN TRUCK
ONE BOSTON WHALER (BOAT) & 25 HP OUTBOARD
ONE HP-41 CALCULATOR
TWO SITE POLES & LEGS
ONE I-COM PORTABLE RADIO

Index

BOSTON HARBOR & VICINITY

6 JUNE 93	T.G. DATA B.M. K.12	Pgs 2 & 3
8 & 9 JUNE	PROBES & BORINGS RESERVE AREA	Pgs 4 & 5
10 JUNE	PROBES & BORINGS BOSTON HBR	Pgs 6 & 7
11 JUNE	T.G. DATA B.M #3 1916	Pgs 8 & 9
JUNE 11-14-15	PROBES & BORINGS CONFLUENCE AREA	Pgs 10-11
15 JUNE 93	T.G. DATA T.B.M. BMT (1981) MYSTIC RIVER	Pgs 13-22
JUNE 15-16	PROBES & BORINGS MYSTIC RIVER	Pgs 12-13
14 JUNE	T.G. DATA BM #1 1945 CHELSEA CREEK	Pgs 14 & 23
17 JUNE	PROBES & BORINGS CHELSEA CREEK	Pgs 14-15
JUNE 17.18.21.22	PROBES & BORINGS MYSTIC RIVER	Pgs 16-21

Boston Hydro Mass 6 June 1993

6 June 1993

Reserve Channel

Hale's + Berry's Survey

Fwd: PK O'Brien

S Marette

D Kedd II

Description of BM K-D

BM K-D 1934 is a Mass Geodetic Disk set flush in the granite foundation at the SW corner of the intersection of Atlantic and Northern Avenue's, at the NE corner of the Aquarium Steel building 9.5 ft (2.9 m) SE of curb line of the intersection and 0.7 ft (0.2 m) SW corner of the building

Elevation: 18.79 ft above MLW

☒ Kedd II — Hale's + Berry's

	Location		Vertical	Control	
Pt.	(+) B.S.	H.I.	(-) F.S.	Elev.	Desc.
BM K-D (K)	4.33	22.17		18.79	MASS Disk Stamped
PK nail			9.99	12.18	PK nail in Fedn. Plate
— Reverse Run —					
PK nail	4.39	21.97		12.19	[illegible]
			5.23	18.79	See P.7.
				(18.79)	

Note: Set elev. of 12.19 on existing PK nail @ vic of BM 18 (Fwd)

Measured down 7.43'

Then rod 4.76' to PK O'Brien

then set TB cut @ vic of A Kedd (57)

12.19
7.43
4.76

Boston Hbr. Mass — June 93 — W Keddell — Probe + Boring

T EDM @ Karol (1957)

B.S. 0°00' on EDM Sta. Base

∡'s - Dist to Probe + Boring

Sheet 2 of 2

Conversion from MLW to NGVD

factor = 4.51

Station	∡	Dist.	Date	Tides	Coordinates
FD-93-A-1	69-04-25	967.370	6/8		N 490230.91 E 730014.92
FP-93-A-1	71-25-30	1002.650	6/8		N 490203.72 E 730061.17
FP-93-A2	71-22-32	1032.570	6/8		N 490213.45 E 730080.47
FD 93-B-2	76-41-00	932.010	6/8		N 490[illegible].03 E 730015.35
FP-93-B-3	77-13-42	965.280	6/9		N 490086.58 E 730050.00
FP 93-C-4	79-38-42	1002.245	6/9	0.0-6.51 -0.2-9.15	N 490061.31 E 730097.43
FD 93-C-3	83-40-47	7[illegible]	6/9	-0.1 9.[illegible] +0.1 10.03 -0.3 10.2[illegible]	N 489972.03 E 729875.1[illegible]
FP-93-D-5	82-41-50	901.125	6/9	4.1 9.7 5.1 10.3	N 490540.51 E 730000.64
FP 93-E-6	87-52-31	629.370	6/9	6.9 12.6 7.1 13.5	N 48[illegible] E 729[illegible]
FP 93-E-7	88-12-49	690.710	6/9	7.7 21.5 6.3 23.6	N 48[illegible] E 729[illegible]

*Note: Vertical control for this page is found on page 3 of this book.

Station	#	Dist	Date	Tides	Coordinates
	Sheet 2 of 6				
FD-93-D-4	95-00-41	3250.230	6/10	4.5 1139 1.6 911 3.0 820 0.9 328 2.7 831 2.1 940	N 489539.31 E 732338.20
FD 93D-2-6	74-15-55	2417.770	6/10	0.2 1032 1.0 1121 0.4 1051 1.1 1128 0.6 1102 1.3 1135 1.7 1151	N 490558.29 E 731688.93
FD 93 E-5	59-11-36	2058.120	6/10	3.0 1241 4.2 117 3.7 101 4.7 133 4.0 111 5.2 147	N 490919.52 E 730895.03 } Heavy Tide
FP 93-H-8	57-27-22	1921.255	6/10	7.8 307 8.3 323	N 490902.39 E 730746.46 }
FP 93-I-9	66-23-11	1926.050	6/10	9.0 357 9.2 415	N 490637.12 E 730855.64
FP 93-J-10	62-13-31	1832.730	6/10	9.4 4:44 9.3 508	N 490722.91 E 730744.36

*Note: Vertical control for this page is found on page 3 of this book.

A KAROL (1957) U.S.E. (EDM @ KAROL)
N 489906.12
E 729103.70

E.D.M. STATION "BASE" 1986 (BACKSITE)
N 490239.68
E 729111.32

Return the Mass 4 June 1993

11 June 1993

Conditions [illegible]

Party: R. [illegible]

S. [illegible]

D. [illegible]

Description of BM #3

BM #3 (1916) is a Bronze disk set vertically in [illegible] which forms a landing at head of stairs leading down to interior from head on North end of dry dock #2. BM is ≈ 0.7 ft below Top edge of block, 0.7 ft. West of ℄ of block + directly under BM #8 (USN)

Elevation: 13.70 (MLW)

Note: BM #8 is missing

Kedder II — Probert Range

Location & Vertical Control

Vertical Control for vicinity of Sd. Pt. Mass Port

Sta	(+) B.S.	H.I.	(−) F.S.	Elev.	Desc.
BM #3 (1916)	4.01	17.71		13.70	Standard disk set vert. in
			9.75	7.96	℄ top of permanent T.G.
		Return Run			
℄ metal T.G.	10.79	18.75		7.96	See above
BM #3 (1916)			5.04	13.71	(13.70) ✓

Note: Set elevation on ℄ of permanent metal T.G. vic. of BM #3 (1916).

Then measured down 0.47 ft.

7.96
−0.47
7.49

@ Reduced a disk reading of 7.49 ft.

To P.K. O'Brien who then set T.G. correct @ vic. of Sd. Pt. Mass port. 86

Boston Hbr.	Mass		June '93	Kedd II + Walter (EDM @)	Probe - Boring (BACKSITE)
1	EDM @ S.J. Pt.	Mass Port	86	SOG Pt MASSPORT 86	☑ ULTRAMAR 86.
B.S	0°00' on	Ultramar (86.)		N.503581.218	N.504909.019
	∠'s Rt to	Probe + Boring		E 722164.079	E 722990.322
	Start				

Station	∠	Dist.	Date	Tides		Coordinates
FD-93-F-7	08-08-47	1384.175	6/11	4.7 @ 840 3.4 @ 903 2.9 @ 918	2.2 906 1.8 954	N 504265.49 E 723367.75
FP-93-K-11	19-13-28	1478.355	6/14	1.4 @ 100 1.6 @ 136		N 504499.15 E 723322.93
FD-93-G-8	10-15-30	1056.095	6/14	1.8 @ 2:27 2.3 @ 2:50 2.6 302	2.2 319 3.3 341	N 504364.17 E 722872.80
FP-93-L-12	10-42-15	1174.015	6/14	4.8 432 5.5 458 5.1 444 5.7 505		N 504310.54 E 723084.14
FD-93-H-9	04-02-26	838.325	6/15	8.0 @ 7:37 8.1 @ 7:53 8.2 @ 8:08	8.3 @ 8:27 8.2 @ 8:48	N. 504,259.99 E. 722,656.03
FP-93-T-13	00-36-47	723.410	6/15	7.1 @ 10:04 7.0 @ 10:13		N. 504,191.30 E. 722,552.83
FP-93-S-14	09-33-21	718.380	6/15	6.6 @ 10:34		N. 504,119.68 E. 722,639.6068
FP-93-O-15	15-29-48	788.435	6/15	5.7 @ 11:06 5.4 @ 11:16		N. 504,115.00 E. 722,744.34
FP-93-N-16	18-01-55	893.395	6/15	4.8 @ 11:37 4.5 @ 11:51		N. 504,156.38 E. 722,847.70
FP-93-M-17	04-57-53	1219.040	6/15	3.7 @ 12:17 3.5 @ 12:27		N. 504,556.61 E. 722,895.29
FP-93-Q-18	355-38-03	1,133.655	6/15	2.5 @ 1:00 1.7 @ 1:43	1.4 @ 1:56	N.504,586.54 E.722,688.01
FP-93-R-19	359-27-46	967.385	6/15	1.2 @ 2:22 1.4 @ 2:44		N. 504,407.32 E. 722,667.45

BOSTON HARBOR, MA. / MYSTIC RIVER — 15TH JUNE 1993 — M MARCHI — PROBES + BORINGS

— LOCATION OF VARIOUS CRACKS —

N F.D.M @ A REVERE (1975)

B.S: 00-00 ON D B.M#1 + RIVER

* MEASURED DOWN FROM T.B.M. BOLT (ELEV. 10.17)

X RT. TO PROBES + BORINGS

TO WATER SURFACE DOWN 3.70 — TIDE STEAD SET 0 1993

SHEET: # 1 + 2 OF 2

T.G. CONNECT @ VIC OF A REVERE (1975) @ WATER SURFACE 6.77

STATION	X	DIST.	DATE	TIDES	COORDINATES
FD-93-K-10	101-10-27	1,080.725	6/15	2.9 @ 3:50; 3.6 @ 4:22, 4.0 5:12; 3.9 @ 4:33, 5.0 @ 5:20; 3.3 @ 4:10; 4.2 @ 4:49, 5.1 @ 5:50	N. 505,785.50; E. 718,945.34
FD-93-L-11	92-23-47	1,097.210	6/16	6.3 @ 7:25; 7.1 @ 7:46; 5.3 @ 8:21; 8.6 @ 9:31	N. 505,908.09; E. 718,931.23

* NOTE; FOR DESCRIPTION OF T.B.M. BOLT

SEE REF BOOK R.H. # 2481 PG. 73

STATION	X	DIST.	DATE	TIDES	COORDINATES
FD-93-I-12	143-32-27	3,921.515	6/16	7.3 @ 11:03; 7.4 @ 11:05; 7.1 @ 11:19; 6.8 @ 10:19, 5.6 @ 12:4, 6.5 @ 11:31, 5.4 @ 12:1, 6.2 @ 11:05, 4.8 @ 12:1	N. 505,156.94; E. 722,089.95
FD-93-J-13	148-58-57	3,445.495	6/16	4.0 @ 1:04; 3.5 @ 1:18; 3.5 @ 1:32	N. 504,814.73; E. 721,669.04
FP-93-X-20	150-21-25	3501.635	6/16	1.7 @ 2:35; 1.6 @ 2:47	N. 504,727.42; E. 721,658.77
FP-93-Y-21	149-40-32	3681.110	6/16	1.3 @ 3:09; 1.3 @ 3:26	N. 504,755.44; E. 721,841.11
FP-93-W-22	149-46-14	3280.715	6/16	1.9 @ 4:10	N. 504,780.11; E. 721,441.44
FP-93-V-23	147-41-51	3438.255	6/16	2.7 @ 4:39	N. 504,892.19; E. 721,605.82

* TBM R.H description on page 1 of this book

BOSTON HARBOR / CHELSEA CREEK 17TH JUNE 1997 M. KENNY PROBE + BORING

- LOCATION OF VERTICAL CONTROL

- LEVEL RUN - CHELSEA CREEK

STATION	B.S.	H.I.T.	F.S.	ELEV.	DESCRIPTION
B.M. 1945	4.17	19.33		15.16	PG. 3 R44-44.1
Upper Side			15.26	4.07	Upper Side
		- Return Run -			
Upper Side	15.85	19.92		4.07	" "
B.M. 1945			4.78	15.14	" "
				(15.16) ✓✓ (S.M.)	

A.G.O. 1982 E.D.M. @ AGO 1997

N 507910.31

E 730155.67

E.D.M. @ N.E. 92 BACKSITE

N 509570.74

E 730315.64

↑ EDM @ N.E. 92

BS 0°00' on G.O. 1982

∠'s + Dist. to Probe + Boring

Station	∠	Dist.	Date	Tide	Coordinate
FD-93-N-14	318-47-55	929.065	6/17		N 508816.25 E 730857.77
FP-93-CCC-24	331-55-52	940.965	6/17		N 508701.87 E 730676.71
FP-93-BBB-25	337-19-08	1072.615	6/17	6.1 12 28 5.0 10.7	N 508545.93 E 730632.44
FP-93-EEE-26	310-44-17	978.440	6/17		N 508964.06 E 730997.35
FP-93-DDD-27	322-48-02	958.605	6/17		N 509755.12 E 730819.31

*Note: Description of BM on pg 23 of this book.

Boston Hbr / Mystic River — June 1993

EDM @ Revere 1975

0°00'00" ☐ BM#1 ± Power

X's + Dist to Pole + Bolt

* Note Vertical Control is on pg 13 this book

Station	X	Dist.	Date
FP-93-Z-28	103-53-26	1360.075	6/17
FP-93-CC-29	99-17-35	1278.670	6/17
FP-93-BB-30	93-24-44	1179.175	6/17
FP-93-JJ-31	105-46-36	1289.405	6/18
FP-93-II-32	100-56-10	1183.915	6/18
FP-93-NN-33	104-30-44	1129.450	6/18
FP-93-OO-34	108-09-51	1194.345	6/18
FP93-ZZ-35	111-25-53	1031.990	6/18
FP93-YY-36	109-39-43	992.645	6/18
FP93-SS-37	107-11-48	1034.990	6/18

☐ Kedale II (EDM @) Revere 1975

N. 505032.20

E. 718170.42

+ Description is on pg 22 this book

Tide	Coordinate
1.5 439	N 505938.80 E 719184.26
2.2 513	N 505953.09 E 719057.52
2.9 538	N 505960.75 E 718897.15
3.5 631	
3.0 705	N 505953.87 E 719164.11
4.0 737	N 505860.96 E 719015.93
5.0 805	N 505770.97 E 719024.74
5.7 829	N 505754.29 E 719121.76
7.5 920	N 505611.01 E 719030.73
8.2 957	N 505611.46
8.6 1003	E 718976.52
8.8 1019	N 505571.78
8.7 1124	E 718984.14

Prahner Bruce (Backsite) — 17

☐ BM#1 ± Power

N 506630.30

E. 715856.98

Rt 1 Hy / Mystic River

EDM @ Revere 1975

[illegible]

[illegible]

[illegible]

Station	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
					12.0[illegible]	[illegible]			N 505619.37
FP-93-M-15	[illegible]	[illegible]	[illegible]	6/21	9.2[illegible]	[illegible]			E 718917.91
					8.6 233				N 505546.85
FP-93-AA-38	109-32-15	879.250	6/21						E 718883.31
					7.7 303				N 505507.16
FP-93-XX-39	106-40-40	904.845	6/21						E 718877.22
					6.7 342				N 505631.23
FP-93-VV-40	105-35-[illegible]	[illegible]	6/21		6.3 377				E 718916.04
					5.6 404				N 505688.10
FP-93-RR-41	107-38-20	911.725	6/21		5.3 412				E 718880.60
					4.8 423				N 505766.86
FP-93-MM-42	99-57-05	1029.795	6/21		4.4 432				E 718892.06
					3.6 456				N 505858.94
FP-93-HH-43	96-34-41	1099.595	6/21		3.4 500				E 718895.41
					2.8 516				N 505908.04
FP-93-EE-44	96-16-51	1159.045	6/21		2.6 524				E 718929.56
					1.8 545				N 505968.15
FP-93-AA-45	90-25-16	1193.395	6/21		1.5 556				E 718817.11
					-0.8 721				N 505763.99
FP-93-KK-46	90-19-14	892.520	6/22		-0.6 756				E 718620.01
					-0.1 810	1.1 555	2.1 920		N 505658.44
FP93-UU-47	91-43-16	817.470	6/22		0.8 848	1.3 903			E 718741.41

Rotation [illegible]

[illegible] @ [illegible]

[illegible]

[illegible]

Station	X	Dist.	Date	Tide	Coordinates
FP-92-PP-41	48 [illegible]	[illegible]	6/22	45 [illegible]	N 505 [illegible] 71 E 718701.12
FP-93-FF-42	[illegible]	332.[illegible]	6/22	[illegible]	N 505843.45 E 718742.84
FP-93-DD-40	[illegible]	[illegible]	6/22	[illegible]	[illegible]
FP-92-GG-41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FP-93-LL-52	91-41-12	[illegible]	[illegible]	[illegible]	N 505764.65 E 718829.18
FP-92-RR-53	37-41-17	940.080	[illegible]	102 [illegible]	N [illegible] 724.73 E 718[illegible]
FP-93-WW-54	106-41-34	9[illegible].420	[illegible]	[illegible]	N [illegible] 5[illegible].23 E 718808.24

*Note: Verified control pg 8 this book, description in pg 2[illegible] book

Reference, Line Book

Description of Vertical Control

Mystic River Area

TBM B.M. 1951

TBM B.M. was a P.K. spike
bolt and tag set in a hardwood post on
N.E. side of a [illegible] cell, it is
the Fence Corp. post in front of cell
on [illegible] at the entrance
with the Mystic River TBM. B.M. is
set diagonally with the building
place. Elevation is on the Bos.
Lt. Co. datum - 1.95 [illegible]
from the concrete [illegible]

Elev. 10.17 At date MHW

Description of Vertical Control

Point No. [illegible]

BM [illegible]

[illegible]

[illegible] of Chelsea [illegible] Hotel bridge,
[illegible] Mystic River. It is
[illegible]

Elev. 15.6 [illegible] MHW

NED US ARMY CORPS OF ENGINEERS
424 TRAPELO RD WALTHAM, MA 02254-9149

JOB NUMBER: 80A

06-29-1993
11:39:16

BOSTON HARBOR, BOSTON, MA.
LOCATION OF HORIZONTAL CONTROL

PROBES & BORING LOCATIONS SEE R+H 4435

STARTS HERE

PT.#	NORTHING	EASTING	ELEVATION	DESCRIPTION
44	489906.1200	729103.7000		KAROL (1957) *
45	490230.9077	730014.9177		FD93-A1
46	490203.7204	730061.1659		FP93 A1
47	490213.4519	730089.4727		FP93-A2
48	490100.0293	730015.3456		FD93-B2
49	490096.5789	730050.0038		FP93-B3
50	490064.3062	730097.4334		FP93-C4
51	489976.0338	729875.1635		FD93-C3
52	489999.5074	730000.6364		FP93-D5
53	489922.7526	729932.9032		FP93-E6
54	489911.8795	729794.4460		FP93-F7
55	489539.3081	732338.1971		FD93-D4
56	490558.2860	731638.9316		FD93-D2-6
57	490919.5243	730895.0318		FD93-E5
58	490902.3921	730746.4607		FP93-H8
59	490637.1254	730885.6371		FP93-I9
60	490722.9083	730744.3572		FP93-J10
61	504265.4880	723367.2548		FD93-F7
62	504499.1518	725322.6081		FP93-K11
63	504364.1788	722979.8019		FD93-G8
64	504310.5390	723084.1439		FP93-L12
65	504260.0122	722865.0416		FD93-H9

PROBES & BORING LOCATIONS

PT.#	NORTHING	EASTING	ELEVATION	DESCRIPTION
66	504191.2979	722552.8263		FP93-T13
67	504119.6816	722639.6069		FP93-S14
68	504115.0002	722744.3430		FP93-O15
69	504156.3829	722847.7017		FP93-N16
70	504556.6115	722895.2877		FP93-M17
71	504586.5383	722688.0110		FP93-Q18
72	504407.3232	722667.4516		FP93-R19
143	490239.6800	729111.3200		EDM STA BASE (86) *

NED US ARMY CORPS OF ENGINEERS
424 TRAPELO RD WALTHAM, MA 02254-9149

JOB NUMBER: 79

06-29-1993
11:31:18

MYSTIC RIVER, BOSTON, MA.
LOCATION OF HOIZONTAL CONTROL

PROBES & BORING LOCATIONS SEE R+H 4435

PT.#	NORTHING	EASTING	ELEVATION	DESCRIPTION	
71	506630.3000	715856.9800		POWER	*
72	505032.2000	718170.4200		REVERE (75)	*
73	505785.5021	718945.3409		FD93-K10	
74	505908.0939	718831.2374		FD93-L11	
75	505156.9415	722089.9505		FD93-I12	
76	504814.7268	721609.0449		FD93-J13	
77	504727.4232	721658.7661		FP93-X20	
78	504755.4350	721841.1109		FP93-Y21	
79	504780.1149	721441.4357		FP93-W22	
80	504899.1895	721605.8033		FP93-V23	
81	505938.7995	719184.2649		FP93-Z28	
82	505953.0926	719057.5249		FP93-CC29	
83	505960.7480	718997.1486		FP93-BB30	
84	505853.8727	719164.1097		FP93-JJ31	
85	505860.9618	719015.9255		FP93-II32	
86	505770.9737	719024.7448		FP93-NN33	
87	505754.2920	719121.7575		FP93-OO34	
88	505611.0613	719030.8082		FP93-ZZ35	
89	505611.4738	718976.5130		FP93-YY36	
90	505671.7783	718984.1423		FP93-SS37	
91	505619.3746	718812.9120		FP93-M15	
92	505546.8500	718883.3127		FP93-AAA38	

PT.#	NORTHING	EASTING	ELEVATION	DESCRIPTION
93	505597.1575	718877.2209		FP93-XX39
94	505631.2348	718916.0367		FP93-VV40
95	505688.1014	718880.5964		FP93-QQ41
96	505766.8567	718892.0551		FP93-MM42
97	505858.9379	718895.4122		FP93-HH43
98	505908.0411	718929.5561		FP93-EE44
99	505968.1485	718827.1770		FP93-AA45
100	505763.9956	718682.0134		FP93-KK46
101	505658.4433	718741.4058		FP93-UU47
102	505699.4677	718701.1238		FP93-PP-A48
103	505843.4529	718742.8356		FP93-FF49
104	505944.4685	718752.8977		FP93-DD50
105	505825.3550	718822.8186		FP93-GG51
106	505764.7521	718829.7796		FP93-LL52
107	505704.7292	718827.2723		FP93-RR53
108	505540.2293	718808.2413		FP93-WW54

NED US ARMY CORPS OF ENGINEERS
424 TRAPELO RD WALTHAM, MA 02254-9149

JOB NUMBER: 80-1

06-29-1993
11:10:36

CHELSEA RIVER, CHELSEA, MA.
LOCATION OF HORIZONTAL CONTROL

PROBES & BORING LOCATIONS SEE R+H 4435

PT.#	NORTHING	EASTING	ELEVATION	DESCRIPTION	
136	509570.7400	730315.6400		N.E.(92)	*
137	508816.2460	730857.7550		FD93-N14	
138	508701.8716	730576.7076		FP93-CCC24	
139	508545.9250	730632.4436		FP93-BBB25	
140	508864.0554	730992.3539		FP93-EEE26	
141	508755.1166	730819.3086		FP93-DDD27	
142	507910.3100	730155.6700		G.O. (1982)	*

Rcd H
4435

Final
6/29/93

Boston Harbor & Vicinity

6 June 93	T.G DATA B.M. K 12	Pgs 2 & 3
[illegible]	Probes & Borings Reserve Hole	Pgs 4 & 5
10 June	Probes & Borings Boston Harb	Pgs 6 & 7
[illegible] June	T.G. DATA B.M. #3 1916	Pgs 8 & 9
June [illegible]	Probes & Borings Confluence Hole	Pgs 10-11
15 June 93	T.G DATA T.B.M. 3 OT (1981) Mystic River	Pgs 13-22
[illegible]	Probes & Borings Mystic River	Pgs 12-13
14 June	T.G. DATA BM #1 1945 Chelsea Creek	Pgs 14 & 23
17 June	Probes & Borings Chelsea Creek	Pgs 14-15
June 17, 18, 21, 22	Probes & Borings Mystic River	Pgs 16-21

Begin on Mon 6 June 1993

6 June 1993

Reserve Chanel

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Description of Sign

DM 1-17 1984 is a Mass Monitor [illegible]

set flush in the ground foundation at the

Welcome of the intersection of Maple and

[illegible] is [illegible] the

Unknown [illegible]

[illegible]

and [illegible] Welcome [illegible]

[illegible]

Elevation 18.79 ft above MLW

DT Kendall — Robert Sharpe — 3

Location of Vertical Control

Sta.	BS	HI	FS	Elev.	Desc.
[illegible]	[illegible]	[illegible]		18.79	[illegible]
PK nail			[illegible]	12.18	PK nail in [illegible]
— [illegible]					
[illegible]	[illegible]	[illegible]		12.18	[illegible]
			[illegible]	18.79	[illegible]
ΣBS+	16.27	ΣFS(−)	16.27	(18.79)	

diff 0.0 ✓ WW

Note: Set elev of BS in existing PK nail

@ elev of [illegible] 12.18

[illegible] 7.61 − 4.76

[illegible] 4.76 to PK O'Brien [illegible]

[illegible] @ elev of A Kind (57)

Boston Mix Mass June 93 ☑ Keddell Probe + Bring 5

(38) EDM @ Karol (1957)

(30) 0°00' on EDM St. Pole

∡'s - Dist. to Probe + Bring

Sheet 2 of 2

Conversion from MLW to NGVD

factor = 4.51

	Station	∡	Dist.	Date	Tides	Coordinates
(45)	FD-93-A1	69-04-25	967.310	6/8		N 490230.91 E 730014.92
(46)	FP-93-A1	71-25-30	1002.650	6/8		N 490203.72 E 730061.17 ✓
(47)	FP-93-A2	71-22-32	1032.570	6/8		N 490213.45 E 730089.47 ✓
(48)	FD 93-B-2	76-11-00	932.040	6/8		N 490102.03 E 730015.35 ✓
(49)	FP-93-B-3	77-13-14	9[illegible]	[illegible]		N 490096.58 E 730050.00 ✓
(50)	FP-93-C-1	79-35-48	1002.245	[illegible]	[illegible]	N 490064.31 E 730097.43 ✓
(51)	FD-93 C-3	[illegible]	[illegible]	[illegible]	[illegible]	N 489974.03 E 729975.16 ✓
(52)	[illegible]	[illegible]	[illegible]	[illegible]		N 489940.51 E 730050.64 ✓
(53)	FP 93-E-6	87-32-31	822.510	6/9	[illegible]	N 489922.75 E 729932.90 ✓
(54)	FP 93-F-7	88-10-16	690.710	6/9	[illegible]	N 489911.58 E 729794.15

*Note: Vertical control [illegible] Ground on [illegible] Bolt this date.

Probe Hole 111 — June '93 — Karol — Probes - Borings — 7

Log as pg 4

Station	+	Dist	Date			Coordinates
	Sheet 2 of 4					
(55) TD-93-D-1	99-00-41	3300.[illegible]	6/10	4.5 @ [illegible] 7.0 911; 3.0 R20 0.8 928; 2.1 R31 [illegible] 380		N 489539.31; E 732338.20 ✓
(56) TD 93 D-2-6	74-15-55	2417.770	6/10	0.2 @ 1032; 0.4 @ 1051; 0.6 @ 1100	1.0 1151; 1.0 1156; 1.0 1155; 1.0 1151	N 490558.29; E 731638.93 ✓
(57) TD 93 E-5	59-11-36	2058.120	6/10	2.0 1141; 3.7 101; 4.0 111	4.2 117; 4.7 133; 5.0 147	N 490919.52; E 730895.03 ✓ Heavy [illegible]
(58) TP 93-H-8	57-27-22	1921.255	6/10	7.8 307; 8.3 313		N 490902.39; E 730746.46 ✓
(59) TP 93-I-9	66-23-11	1921.050	6/10	9.0 351; 9.2 415	E 730885.64 →	N 490637.12; ~~E 730885.64~~ WW 6/28 ✓
(60) TP 93-J-10	62-13-31	1832.730	6/10	9.4 499; 9.3 508		N 490722.31; E 730744.36 ✓

*Note: Vertical control for this page is found on page 3 of the book.

A KAROL (1957) U.S.E. (EDM @ KAROL)

N 489906.12

E 729103.70

E.D.M. STATION "BASE" 1986 (BACKSITE)

N 490239.68

E 729111.32

Pt. Mass 11 June 1943

11 June 1943

Conditions [illegible]

Partly [illegible]

[illegible]

[illegible]

Description of Bm [illegible]

Bm [illegible] (1916) is a [illegible] set

vertically in [illegible] of [illegible]

[illegible] of [illegible] of [illegible] of shine

[illegible] from head on North

end of [illegible] Bm is [illegible] 3.7 ft below

top of block 3.7 ft below top of

of block [illegible] (USN)

Elevation 13.70 MLLW

Note: Bm [illegible] is missing

M Kodiak Pt. Mass Pt. Borings

Location [illegible]

Vertical Control for vicinity of Sdg Pt. Mass Pt

Sta	BS	HI	(−) FS	Elev.	Desc.
BM [illegible] 36	4.01	17.71		13.70	Standard disk over [illegible]
			9.75	7.96	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]	
[illegible]	15.79	[illegible]		7.96	See above
BM [illegible]			3.04	13.71	(13.70) ✓
Σ BS	14.80	Σ FS	14.79		

Note: [illegible] elevation [illegible] of permanent

mark [illegible] of BM [illegible] (1916).

The [illegible] is on 0.47 ft.

7.96
−0.47
7.49

@ [illegible] 7.49 ft.

To [illegible]

[illegible] 8.6

W.W. ✓

Boston Univ Mass June '93 ⊠ Kedd II + Master (EDM @) (5) Fisher - Barnes (BACK SITE) (4) 11

EDM @ Sol. Pt. Mass Port 86 SOG. PT MASSPORT 86 ⊠ ULTRAMAR 86.

0°00'00" Ultramar (86) N 503581.218 N 504909.019

∠s RH to Fisher - Barnes E 722164.079 E 722990.322

Station | ∠ | Dist. | Date | Tides | | Coordinates | MTI #

(61) FD-93-F7 | 08-23-49 | 1384.145 | 6/11 | 4.1 @ 8:40, 3.1 @ 9:03, 2.9 @ 9:18 | 3.2 @ 8:50, 1.8 @ 9:47 | N 504465.49, E 723367.25 ✓ | (61)

(62) FP-93-K-11 | 19-13-28 | 1478.355 | 6/14 | 11.6 @ 10:00, 13.0 @ 10:36 | | N 504499.15, E 723322.93 ✓ | (62)

(63) FD-93-G-8 | 10-15-30 | 1056.095 | 6/14 | 1.5 @ 2:21, 2.3 @ 2:50, 2.6 @ 3:02 | 2.9 @ 3:19, 3.3 @ 3:41 | N 504364.17, E 722872.80 ✓ | (63)

(64) FP-93-L-12 | 10-42-15 | 1171.015 | 6/14 | 13.4 @ 3:32, 5.1 @ 4:44 | 5.5 @ 4:58, 5.7 @ 5:05 | N 504310.54, E 723084.14 ✓ | (64)

(65) FD-93-H-9 | 04-02-26 | 838.325 | 6/15 | 8.0 @ 7:37, 8.1 @ 7:53, 8.2 @ 9:08 | 8.3 @ 8:27, 8.2 @ 8:48 | N. 504,259.99, E. 722,656.03 | (65)

(66) FP-93-T-13 | 00-36-47 | 723.410 | 6/15 | 7.1 @ 10:04, 7.0 @ 10:13 | | N. 504,191.30, E. 722,552.83 ✓ | (66)

(67) FP-93-S-14 | 09-33-21 | 718.380 | 6/15 | 6.6 @ 10:34 | | N. 504,119.68, E. 722,639.6068 ✓ | (67)

(68) FP-93-O-15 | 15-29-48 | 768.435 | 6/15 | 5.7 @ 11:06, 5.4 @ 11:16 | | N. 504,115.00, E. 722,744.34 ✓ | (68)

(69) FP-93-N-16 | 18-01-55 | 893.395 | 6/15 | 4.8 @ 11:37, 4.5 @ 11:51 | | N. 504,156.38, E. 722,847.70 ✓ | (69)

(70) FP-93-M-17 | 04-57-53 | 1219.040 | 6/15 | 3.7 @ 12:17, 3.5 @ 12:27 | | N. 504,556.61, E. 722,895.29 ✓ | (70)

(71) FP-93-Q-18 | 355-38-03 | 1133.655 | 6/15 | 2.5 @ 1:00, 1.7 @ 1:43 | 1.4 @ 1:56 | N. 504,586.54, E. 722,688.01 ✓ | (71)

(72) FP-93-R-19 | 359-27-46 | 967.255 | 6/15 | 1.2 @ 2:22, 1.4 @ 2:44 | | N. 504,907.32, E. 722,667.45 ✓ | (72)

R.W. 6/28/93

BOSTON HARBOR MA / MYSTIC RIVER 15TH JUNE 1993

M MILLER PROBES + BORINGS

F.D.22 @ △REVERE (1975) (49)

- LOCATION OF VERTICAL CONTROL -

00-00 ON ⊡ B.M#1 + PLUGS. (3)

* MEASURED DOWN FROM T.B.M. BOLT (ELEV. 10.17)

∡ RE. TO PROBES + BORINGS

TO WATER SURFACE DOWN 3.70 HAD TIDAL SET

SHEET: # 1 + 2 OF 2

T.G. CONNECT ∡ VIC. OF △REVERE (1975) @ WATER SURFACE 6.47

STATION	MTI #LING	∡	DIST.	DATE	TIDES	COORDINATES	
FD-93-K-10	(73)	101-10-27	1,080.725	6/15	3.9 @ 3:50 3.6 @ 4:22 4.4 5:04 5.7 @ 4:58 5.0 @ 5:20 3.3 @ 4:10 4.2 @ 4:49 5.1 @ 5:44	N. 505,785.50 E. 718,745.34	(73)
FD-93-L-11	(74)	92-23-47	1,097.210	6/16	6.2 @ 7:25 8.3 @ 8:17 7.[illegible] 8.4 @ 8:31	N. 505,906.09 E. 718,931.23	(74)

* NOTE; FOR DESCRIPTION OF T.B.M. BOLT

SEE REF BOOK REF # 2481 PG. 73

FD-93-I-12	(75)	143-32-27	3,921.515	6/16	7.3 @ 11:03 6.4 @ 11:49 5.8 @ 12:[illegible] 7.4 @ 11:05 6.5 @ 11:51 5.9 @ 12:[illegible] 7.1 @ 11:12 6.9 @ 11:58 4.8 @ 12:[illegible]	N. 505,156.94 E. 722,689.95	(75)
FD-93-J-13	(76)	148-58-57	3,445.495	6/16	4.0 @ 1:05 3.5 @ 1:18 3.0 @ 1:33	N. 504,814.73 E. 721,609.04	(76)
FP-93-X-20	(77)	150-21-25	3501.635	6/16	1.7 @ 2:35 1.6 @ 2:47	N. 504,727.42 E. 721,658.77	(77)
FP-93-Y-21	(78)	149-40-32	3681.110	6/16	1.3 @ 3:09 1.3 @ 3:26	N. 504,755.44 E. 721,841.11	(78)
FP-93-W-22	(79)	149-46-14	3280.715	6/16	1.9 @ 4:10	N. 504,780.11 E. 721,441.44	(79)
FP-93-V-23	(80)	147-41-51	3438.255	6/16	2.7 @ 4:59	N. 504,892.19 E. 721,605.82	(80)

* THIS B.M. description [illegible] book.

D.W. 6/28/92

BOSTON [illegible] 17 JUNE 1993 — M. K[illegible] — Probes + Borings

– LOCATION OF VERTICAL [illegible] –

– LEVEL RUN – Nelson Creek

STATION	B.S.	H.I.	F.S.	ELEV.	DESCRIPTION		
B.M. 1945	+17	17.33		15.16	PG.3 RH [illegible]	A.G.O. 1982	E.D.M @ AGO 1982
Water Surf			[illegible]	+.07	Water Surf	N 507910.31	
		[illegible]				E 730155.67	
[illegible]	15.85	19.92		4.07	" "		
B.M. [illegible]			4.78	15.14	" "	N.E. 92	BACKSITE
Σ BS (+)	20.02	Σ FS (−)	20.04	(15.16)	[illegible]	N 509570.74	(136)
	(136)	EDM @ N.E. 92				E 730315.64	
	(3)	0°00' on G.O. 1982					

∡ + Dist. to Probe + Boring

Station	∡		Dist	Date	Tide		Coordinate
FD-93-N-14	316-47-55	(137)	929.065	6/17		✓	N 508816.25 E 730857.77
FP-93-CCC-24	331-55-52	(138)	940.905	6/17		✓	N 508701.87 E 730676.71
FP-93-BBB-25	337-19-08	(139)	1072.615	6/17	6/17 14:08 50 107	✓	N 508595.93 E 730632.44
FP-93-EEE-21	310-44-17	(140)	978.940	6/17		✓	N 508867.06 E 730992.35
FP-93-DDD-27	322-48-02	(141)	958.605	6/17		✓	N 508755.12 E 730819.31

* Note: Description of all [illegible] 23 [illegible]

Boston Harbor / Mystic River — June 1993 — Kendall — Probes Bridge — 17

		LDM @ Revere 1975				(EDM E) A Revere 1975		(Backsite) Δ B.M #1 & Power	
		Δ B.M #1 & Power				N. 505032.20		N 506630.30	
						E 718170.42		E 715856.98	
		* Note Vertical Control is on pg 13 the book				+ Description is on pg 22 the book			
Station				Dist	Date			Coordinate	
FP-93-7-28	103-[illegible]		(81)	1360.075	6/17	15.939		N 505938.80 E 719184.26	✓
FP-93-[illegible]	99-17-35		(82)	1278.00	6/17	22.513		N 505953.03 E 719057.52	✓
FP-93-[illegible]	93-24-44		(83)	1179.195	6/17	29.438 / 45.631		N 505960.75 E 718897.15	✓
FP-93-JJ-31	105-46-34		(84)	1289.405	6/18	30.705		N 505953.87 E 719164.11	✓
FP-93-KK-32	107-24-10		(85)	1183.915	6/18	40.737		N 505860.95 E 719015.77	✓
FP-93-NN-33	104-30-44		(86)	1129.450	6/18	50.805		N 505770.97 E 719024.74	✓
FP-93-00-34	108-09-51		(87)	1194.395	6/18	57.829		N 505754.29 E 719121.76	✓
FP93-PP-35	111-25-53		(88)	1034.880	6/18	75.929		N 505611.06 E 719030.80	✓
FP93-YY-36	109-39-43		(89)	992.015	6/18	82.957 / 86.1003		N 505611.46 E 718976.52	✓
FP93-55-37	87-11-48		(90)	1034.990	6/18	88.1019 / 87.1124		N 505571.78 E 718934.14	✓

6/28/93

Mystic River

EDM @ [illegible]

[illegible]

[illegible]

[illegible] Depth [illegible]

Sta.	[illegible]	MTI'S FS	[illegible]	Date	Tide			Coordinates	
49. FP [illegible]	[illegible]	(91)	[illegible]	[illegible]	[illegible] 9.9 [illegible]	[illegible]		N 505[illegible]19.[illegible] E 718[illegible]	✓
FP-93-MM-38	100-33-1[illegible]	(92)	[illegible]	[illegible]	8.6 [illegible]			N 505546.85 E 718883.31	✓
FP-93-MM-39	10[illegible]	(93)	904.[illegible]	6/21	[illegible] 303			N 505597.16 E 718877.22	✓
FP-93-MM-40	[illegible]	(94)	[illegible]	[illegible]	[illegible] 63 [illegible]			N 505631.23 E 718916.04	✓
FP-93-MM-41	107-38-20	(95)	911.725	6/21	5.6 404 5.3 412			N 505688.10 E 718880.60	✓
FP-93-MM-42	99-51-05	(96)	1000.7[illegible]	6/21	48 423 49 432			N 505766.86 E 718892.06	✓
FP-93-MM-43	96-3[illegible]	(97)	1029.595	6/21	36 456 [illegible]			N 505858.94 E 718895.41	✓
FP-93-MM-44	96-16-51	(98)	1159.045	6/21	2[illegible] 516 21 [illegible]			N 505908.04 E 718[illegible]	✓
FP-93-MM-45	90-25-16	(99)	11[illegible]	6/21	[illegible] 1.556			N 505[illegible]8.15 E 718817.[illegible] .18	
FP-93-MM-4[illegible]	9[illegible]-19-1[illegible]	(100)	[illegible]	6/22	[illegible] 0.67[illegible]			N 505[illegible] E [illegible]	✓
FP-93-MM-47	91-[illegible]	(101)	8[illegible]	6/22	[illegible]	[illegible] 1.39[illegible]	[illegible]	N 505658.41 E 718741.41	✓

W.W. 6/28/93

Station	#	MTZ #s	Dist	Date	Note	Coordinates
FR-92-AP-A-48	92-41-21	102	452,530	6/22		N 505422.11 E 718701.12 ✓
FR-93-FF-49	92-21-[illegible]	103	992,970	6/22		N 505843.45 E 718740.84 ✓
FR-92-DD-50	91-51-[illegible]	104	[illegible]	6/22		N 505944.47 E 718750.90 ✓
FR-92-GG-51	91-47-4	105	[illegible]	[illegible]		N 505[illegible] 36 E [illegible] 82
FR-93-LL-52	91-21-13	106	[illegible]	[illegible]		N 505769.65 75 E 718829.78
FR-92-RR-53	99-41-17	107	940,080			N 505704.73 E 718827.27
FR-92-WW-54	104-91-39	108	915,420			N 505540.23 ✓ E 718808.24

W.W. ✓ 6/28/93

*Note: Vertical Control pg 13 this book, description [illegible]

[illegible] June 1912

Description [illegible]

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[illegible] with the [illegible]

plane [illegible] on the [illegible]

of the [illegible]

from the [illegible]

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b. Field Log of Test Boring in Rock

FIELD LOG OF TEST BORING IN ROCK

SITE BOSTON HARBOR HOLE NO. FD 93-1 PAGE ~~FWD~~ ONE

DATE	DEPTH FT. FROM	DEPTH FT. TO	RUN FT.	RUN REC'V'Y FT.	REC'V'Y %	DRILLING BEHAVIOR FEED	DRILLING BEHAVIOR WATER	DRILLING BEHAVIOR REASON FOR FOLL.	ACTUAL DRILLING TIME	BIT NO. SIZE AND TYPE	ADDITIONAL REMARKS
6/8/93	44.2	47.2	3.0	2.2	74				12 min	NWD 4 CORE DIAMOND	GRAY, thinly laminated slightly calcareous SHALE

TOTAL BED ROCK DRILLED 3.0 FEET

TOTAL BED ROCK RECOVERED 2.2 FEET

BED ROCK RECOVERY 74 PERCENT

DRILLER MIKE HAWKINS

INSPECTOR T.A.C.

NED FORM DEC 83 130

PREVIOUS EDITION OF THIS FORM MAY BE USED UNTIL EXHAUSTED

FIELD LOG OF TEST BORING IN ROCK

SITE BOSTON HARBOR HOLE NO. FD93-2-B PAGE TWO

DATE	DEPTH FT. FROM	DEPTH FT. TO	RUN FT.	RUN REC'V'Y FT.	REC'V'Y %	DRILLING BEHAVIOR: FEED	DRILLING BEHAVIOR: WATER	DRILLING BEHAVIOR: REASON FOR PULL	ACTUAL DRILLING TIME	BIT NO. SIZE AND TYPE	ADDITIONAL REMARKS
6/8/93	-44.9	-47.4	2.5	2.0	80				11½ min.	NWD4 CORE DIAMOND	GRAY, thinly laminated slightly calcareous SHALE

TOTAL BED ROCK DRILLED 2.5 FEET

TOTAL BED ROCK RECOVERED 2.0 FEET

BED ROCK RECOVERY 80 PERCENT

DRILLER MIKE HAWKINS

INSPECTOR TOM ELDRIDGE

NED FORM DEC 83 130

PREVIOUS EDITION OF THIS FORM MAY BE USED UNTIL EXHAUSTED

FIELD LOG OF TEST BORING IN ROCK

SITE BOSTON HARBOR HOLE NO. FO 93-11-L PAGE THREE

DATE	DEPTH FT. FROM	DEPTH FT. TO	RUN FT.	RUN REC'V'Y FT.	REC'V'Y %	DRILLING BEHAVIOR: FEED	DRILLING BEHAVIOR: WATER	DRILLING BEHAVIOR: REASON FOR PULL	ACTUAL DRILLING TIME	BIT NO. SIZE AND TYPE	ADDITIONAL REMARKS
6/16/93	-41.4	-42.4	1 FT.	1	100				22 MIN 27 MIN	NWD 4 CORE DIAMOND	GRAY, thinly laminated slightly calcareous SHALE
6/16/93	-42.4	-45.4	3 FT.	2'-11"	97						

TOTAL BED ROCK DRILLED 4 FEET

TOTAL BED ROCK RECOVERED 3-11" FEET

BED ROCK RECOVERY 98 PERCENT

DRILLER MIKE HAWKINS

INSPECTOR TOM ELDRIDGE

NED FORM DEC 83 130

PREVIOUS EDITION OF THIS FORM MAY BE USED UNTIL EXHAUSTED

FIELD LOG OF TEST BORING IN ROCK

SITE BOSTON HARBOR HOLE NO. FP93-30-BB PAGE FOUR

DATE	DEPTH FT. FROM	DEPTH FT. TO	RUN FT.	RUN REC'V'Y FT.	REC'V'Y %	DRILLING BEHAVIOR: FEED	DRILLING BEHAVIOR: WATER	DRILLING BEHAVIOR: REASON FOR PULL	ACTUAL DRILLING TIME	BIT NO. SIZE AND TYPE	ADDITIONAL REMARKS
6/18/93	-43.4	-45.0	1.6	1.6	100				15 min	NWD 4 CORE DIAMOND	GRAY, thinly laminated slightly calcareous SHALE

TOTAL BED ROCK DRILLED 1.6 FEET

TOTAL BED ROCK RECOVERED 1.6 FEET

BED ROCK RECOVERY 100 PERCENT

DRILLER MIKE HAWKINS

INSPECTOR TOM ELDRIDGE

NED FORM DEC 81 130

PREVIOUS EDITION OF THIS FORM MAY BE USED UNTIL EXHAUSTED

FIELD LOG OF TEST BORING IN ROCK

SITE BOSTON HARBOR HOLE NO. FP93-37-SS PAGE ~~TWO~~ FIVE

DATE	DEPTH FT. FROM	DEPTH FT. TO	RUN FT.	RUN REC'V'Y FT.	REC'V'Y %	DRILLING BEHAVIOR: FEED	DRILLING BEHAVIOR: WATER	DRILLING BEHAVIOR: REASON FOR POLL	ACTUAL DRILLING TIME	BIT NO. SIZE AND TYPE	ADDITIONAL REMARKS
6-18-93	-40.6	-42.6	2	1.83	92%				15 min.	NWD 4 CORE DIAMOND	GRAY, thinly laminated slightly calcareous SHALE

TOTAL BED ROCK DRILLED 2 FEET

TOTAL BED ROCK RECOVERED 1.83 FEET

BED ROCK RECOVERY 92 PERCENT

DRILLER MIKE HAWKINS

INSPECTOR TOM ELDRIDGE

NED FORM DEC 81 130

PREVIOUS EDITION OF THIS FORM MAY BE USED UNTIL EXHAUSTED

FIELD LOG OF TEST BORING IN ROCK

SITE BOSTON HARBOR HOLE NO. FP93-47-UU PAGE SIX

DATE	DEPTH FT. FROM	DEPTH FT. TO	RUN FT.	RUN REC'V'Y FT.	REC'V'Y %	DRILLING BEHAVIOR FEED	DRILLING BEHAVIOR WATER	DRILLING BEHAVIOR REASON FOR PULL	ACTUAL DRILLING TIME	BIT NO. SIZE AND TYPE	ADDITIONAL REMARKS
6/22/93	-41.5	-47.0	5.5	5'2"	94				22 min	NWD4 CORE DIAMOND	GRAY, thinly laminated slightly calcareous SHALE

TOTAL BED ROCK DRILLED 5.5 FEET

TOTAL BED ROCK RECOVERED 5.2 FEET

BED ROCK RECOVERY 94 PERCENT

DRILLER MIKE HAWKINS

INSPECTOR TOM ELDRIDGE

NED FORM DEC 83 130

PLEASE [illegible] OF ARE OBSOLETE [illegible] OF USE UNTIL EXHAUSTED