M60050.002195
MCAS EL TORO
SSIC # 5090.3

Chron No.: CTO-0142/0373

MEETING MINUTES

Meeting Subject: Site 24 Pilot Test Update	**Meeting Date:** April 22, 1998 **Meeting Time:** 10:00 AM **Meeting Place:** Conference Call **Meeting Notes Prepared By:** Patrick Brooks

Attendees: (*Part Time)

Navy	Bechtel	Other
Lynn Hornecker, SWDIV	Pat Brooks, CTOL Dan Eldredge	Herb Levine, U.S. EPA Tayseer Mahmoud, DTSC Theodore Johnson, DTSC Patricia Hannon, RWQCB Bill Sedlak, OHM

Additional Distribution:
Please See the Transmittal Sheet

Pat Brooks reviewed the field work that had been accomplished since the last Site 24 Update meeting. Lynn Hornecker was at the meeting for Bernie Lindsey, who could not attend. Glenn Kistner is on vacation. A map of TCE concentrations in the shallow groundwater unit was faxed to the technical team with the agenda. The map incorporates the HydroPunch groundwater sample results from the leading edge of the TCE hot spot. Also included were preliminary geologic cross sections that illustrates the TCE distribution at the leading edge of the TCE hot spot. The map includes potentiometric contours based on analysis completed for the Groundwater Monitoring Plan. Pat asked if the team had a chance to review the potentiometric contour map in San Francisco on April 16. They indicated that they had. When principal aquifer water levels are contoured, a large pressure depression is apparent centered around the North Lake well. The plan view map shows that the 50 µg/L contour extends off-Station and includes a formerly isolated 50 µg/L contour at 18_MCAS03. The 500 µg/L contour extends beneath the east-west runway to HydroPunch Location No. 5. The shift in migration from northwesterly to westerly appears to coincide with coarser-grained units characterized with the CPT rig.

The cross section maps show that the vertical TCE distribution at the upgradient end of the hot spot is characterized by higher concentrations near the water table and lover TCE concentrations with depth. Downgradient, near the Station boundary, the TCE concentrations near the water table are lower and increase with depth. This indicates that TCE is being drawn into deeper units in response to off-Station well pumping.

Pat indicated that he believed the collection and analysis of CPT/HydroPunch data (including the analysis of the potentiometric map) has satisfied the objective of characterizing the migration pathway from the shallow groundwater unit to the principal aquifer. The horizontal and vertical distribution of TCE in groundwater indicate that migration of TCE-contaminated water into deeper stratigraphic units is influenced by off-Station well pumping. Pat asked if the team concurred that the CPT/HydroPunch objective was satisfied, or if further sampling was necessary. The EPA, DTSC, and RWQCB all concurred that the CPT/HydroPunch objective was satisfied and that no further sampling was necessary.

Also included with the agenda were drawdown versus time plots for the aquifer tests at 24EX3, 24EX4, and 24EX5. The plots show that the most of the data used for estimating aquifer parameters occurs between startup and 10,000 minutes (7 days = 10,080 minutes). Based on a review of the data, Pat suggested that the aquifer tests at 24EX1 be shortened to one week for the constant-rate test and one week for the vacuum-enhanced test. The EPA, RWQCB, and DTSC concurred that the aquifer tests at 24EX1 should be shortened to one week each.

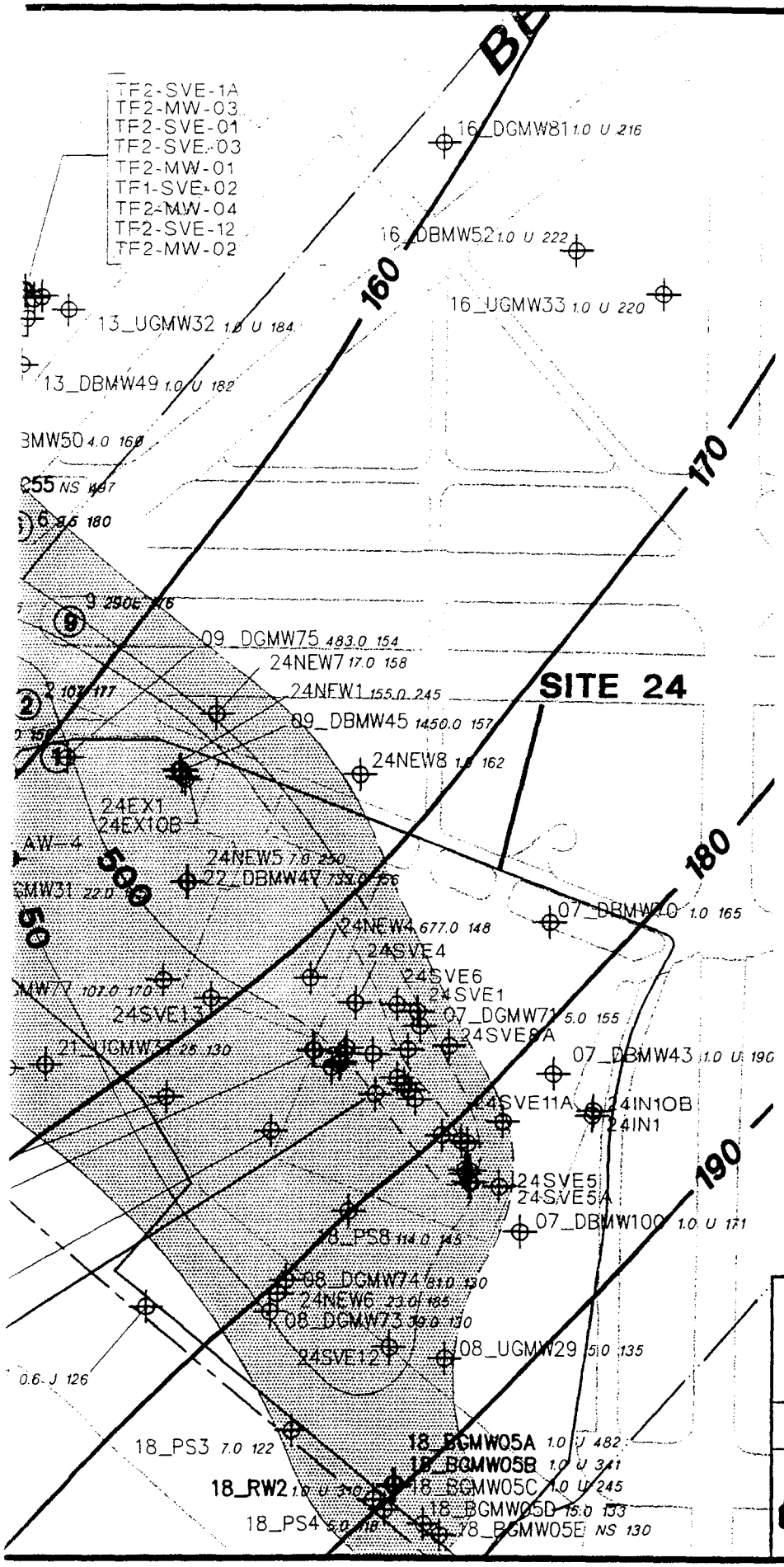
Well destruction at 24EX1OB is ongoing. The plan is to use the dual-tube percussion hammer rig to overdrill the washover casing and remove it. The guide rod can then be removed. As a form of insurance, the well will first be grouted and then overdrilling will begin without the aid of a guide rod.

The Plan of Action for Site 24 field work for the next two weeks included the following:

1. Present vacuum-enhanced test results from 24EX5 and 24IN2OB1.
2. Continue extraction at 24EX3 and 24IN1.
3. Complete destruction of observation well 24EX1OB.
4. Prepare for step-drawdown test at 24EX6.

Plan of Action - April 22 to May 6, 1998
Groundwater Remediation Pilot Testing - Site 24
MCAS El Toro

1. **Present vacuum-enhanced test results from 24EX5 and 24IN2OB1.**
2. **Continue extraction at 24EX3 and injection at 24IN1.**
3. **Complete destruction of well 24EX1OB.**
4. **Prepare for step-drawdown tests at 24EX6 and 24EX1.**



LEGEND

- ROAD
- FREEWAY
- MCAS EL TORO BOUNDARY
- STREAM OR WASH
- MONITORING WELL
- WATER SUPPLY WELL
- ⑦ HYDROPUNCH SAMPLE LOCATION
- 18_MCAS02-1 SHALLOW GROUNDWATER
- **18_MCAS02-4** PRINCIPAL AQUIFER

NORTH — N — TRUE

EXAMPLE DATA NEXT TO EACH WELL:

18_MCAS10 1.0 U 285

STATION-ID, CONCENTRATIONS, DATA FLAG, DEPTH TO TOP OF SCREEN

DATA FLAGS:
U – UNDETECTED
D – DILUTION
B – DETECTED IN LAB BLANK
J – ESTIMATED

TCE CONCENTRATIONS IN GROUNDWATER

- 5.0 TO 50.0 ug/L TCE
- 50.0 TO 500.0 ug/L TCE
- GREATER THAN 500.0 ug/L TCE
- 5 INFERRED ISOCONCENTRATION CONTOUR (ug/l
- 160 SHALLOW GROUNDWATER UNIT WATER LEVEL ELEVATION CONTOUR IN FEBRUARY 1997 (FEET MSL)

NOTES:

MONITORING WELL SAMPLES COLLECTED MARCH 1997
HYDROPUNCH SAMPLES COLLECTED BETWEEN JANUARY AND APRIL 1998

FOR MULTI-PORT CLUSTER WELL AND HYDROPUNCH LOCATIONS, THE HIGHEST CONCENTRATION WAS USED FOR CONTOURING THE PLUME.

SOURCES:
BASEMAP – JACOBS ENGINEERING
MARCH 1997 DATA – CAMP, DRESSER, & MCKEE

0 800 1,600
FEET

FOR DISCUSSION PURPOSES ONLY

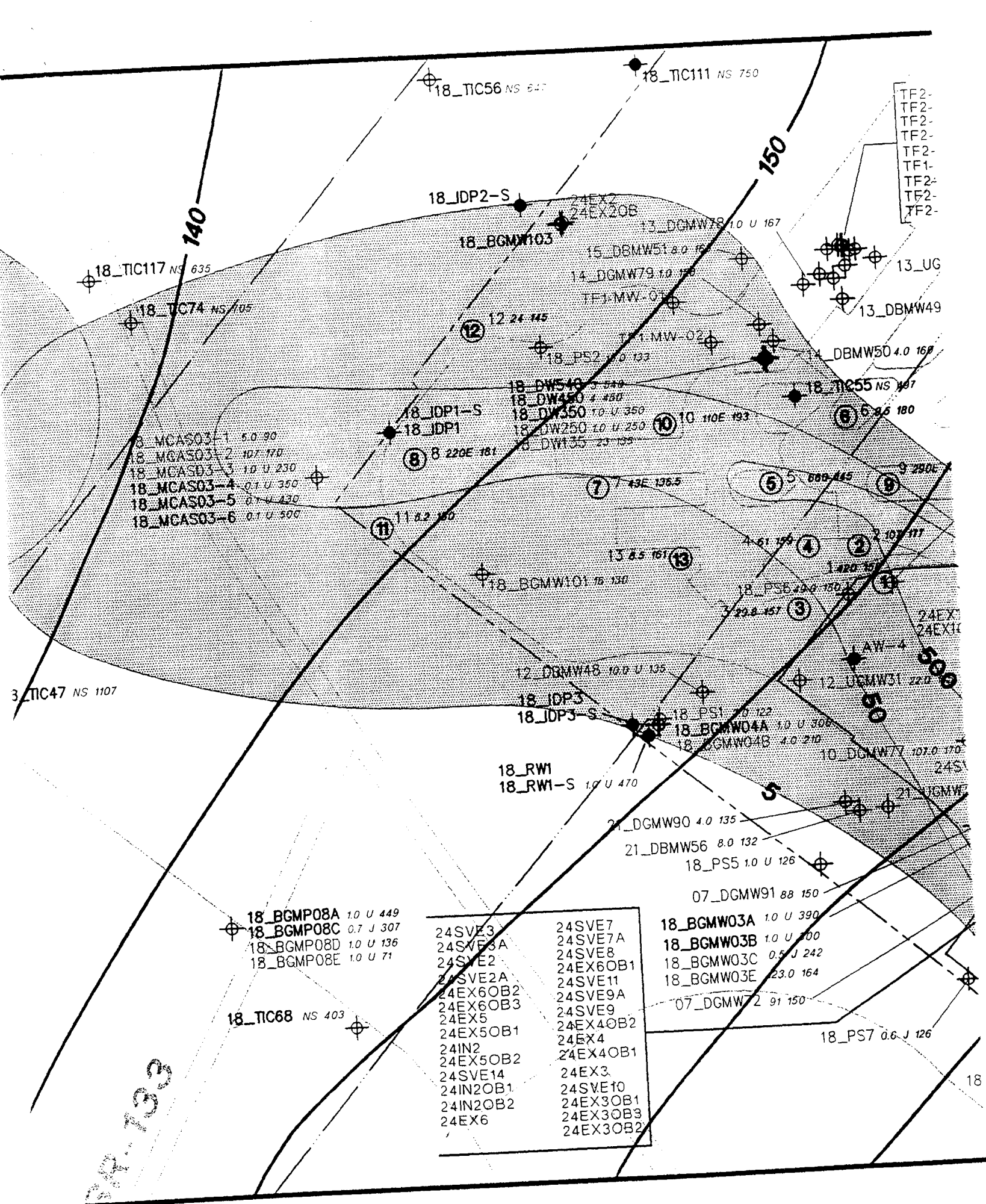
TCE Concentrations in Shallow and Principal Aquifer

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

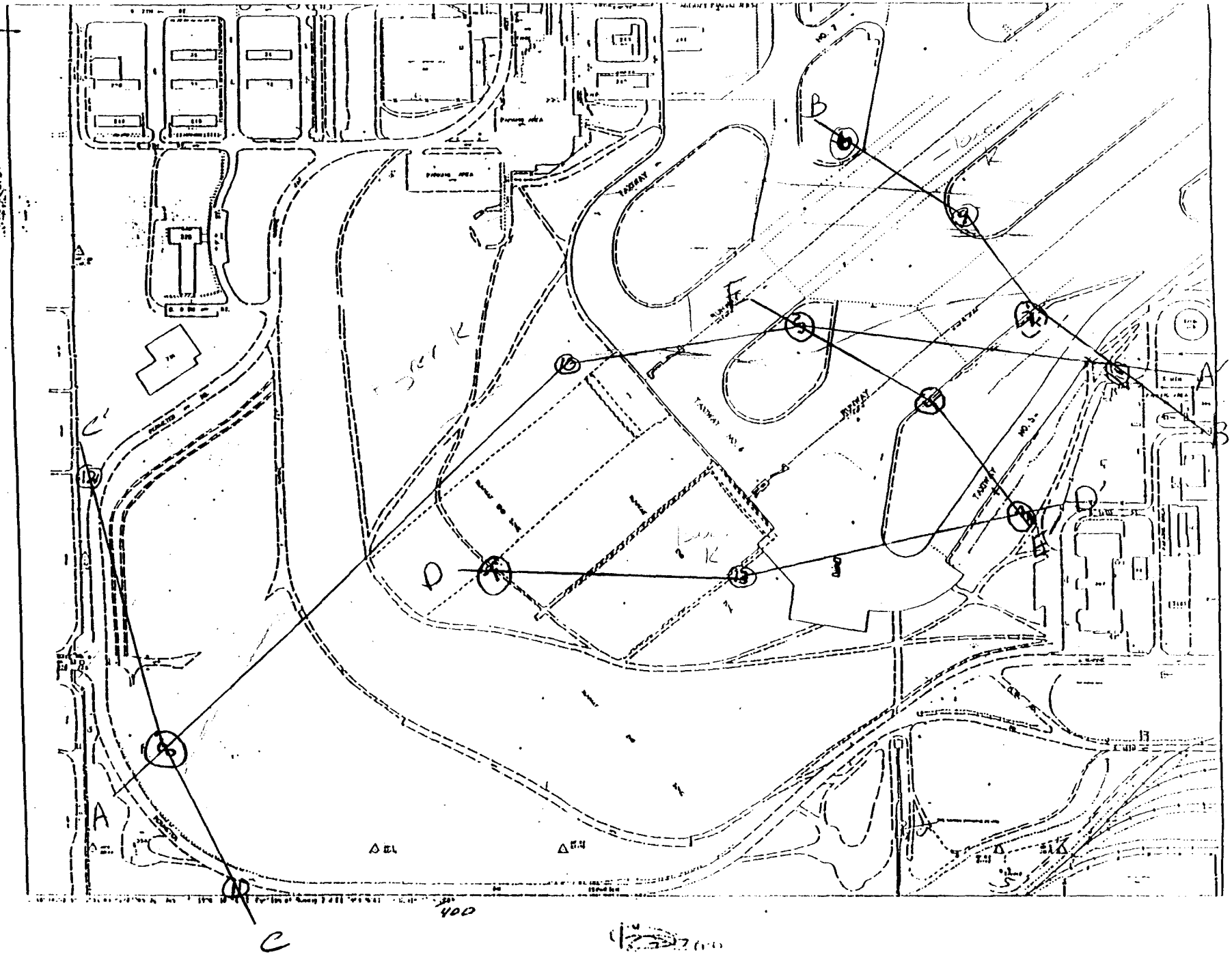
Date: 4/20/98
File No: 142H3157
Job No: 22214-142
Rev No: E

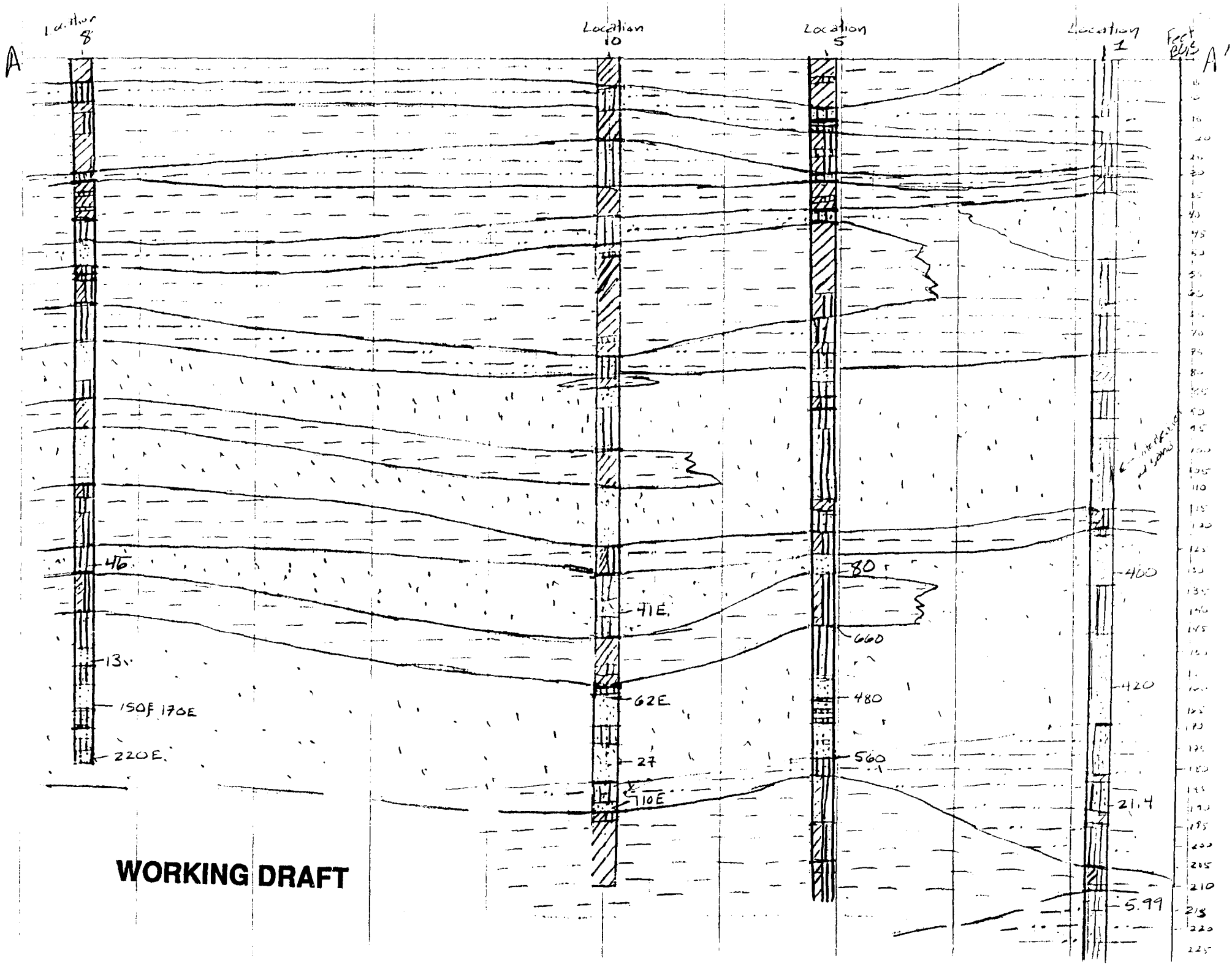
WORKING DRAFT

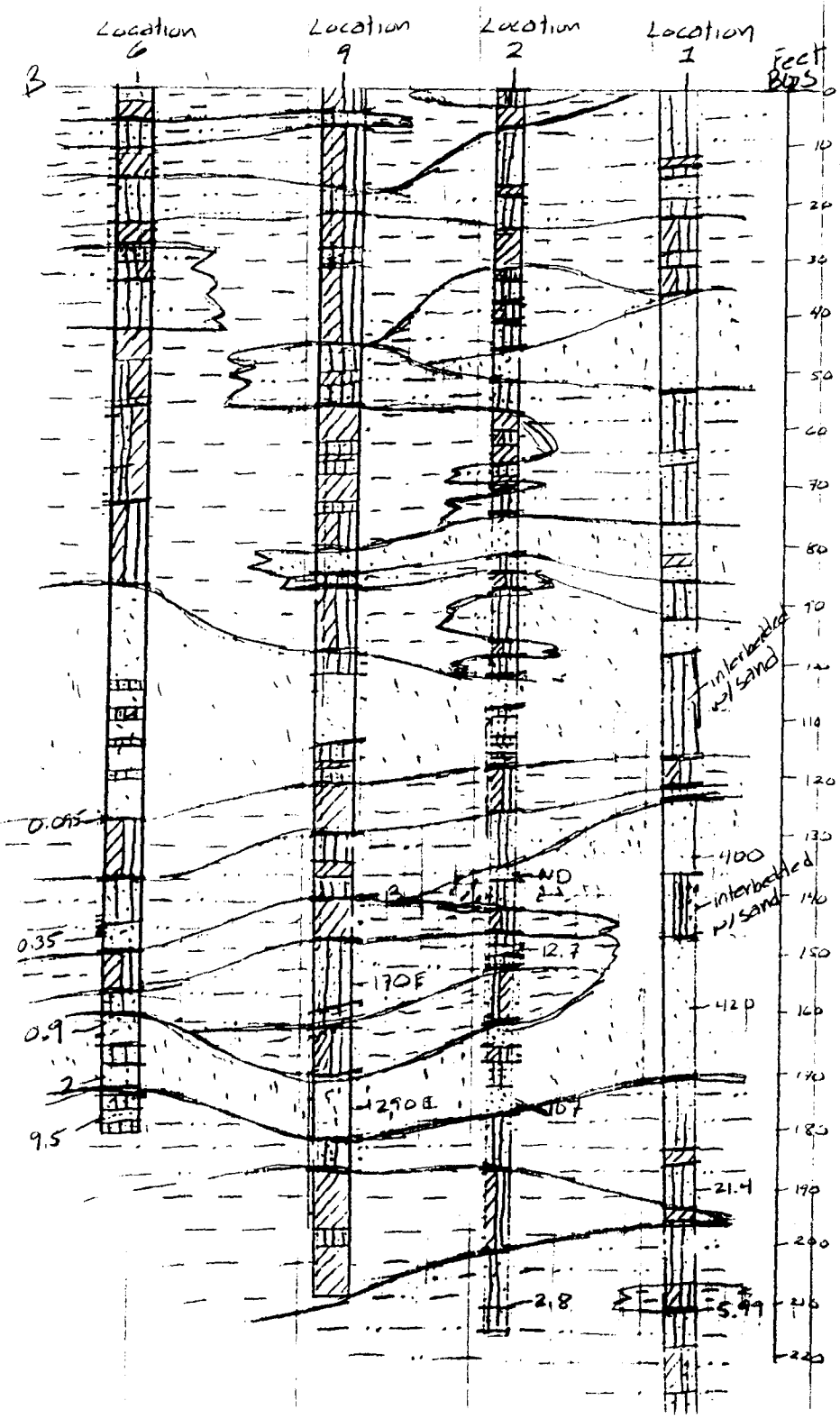


WORKING DRAFT

Cross-section locations & CPT locations.




A
A'
Location 8
Location 10
Location 5
Location 1
Feet MSL
46
41E
13
150 & 170E
220E
62E
27
10E
80
660
480
560
400
420
21.4
5.99
WORKING DRAFT



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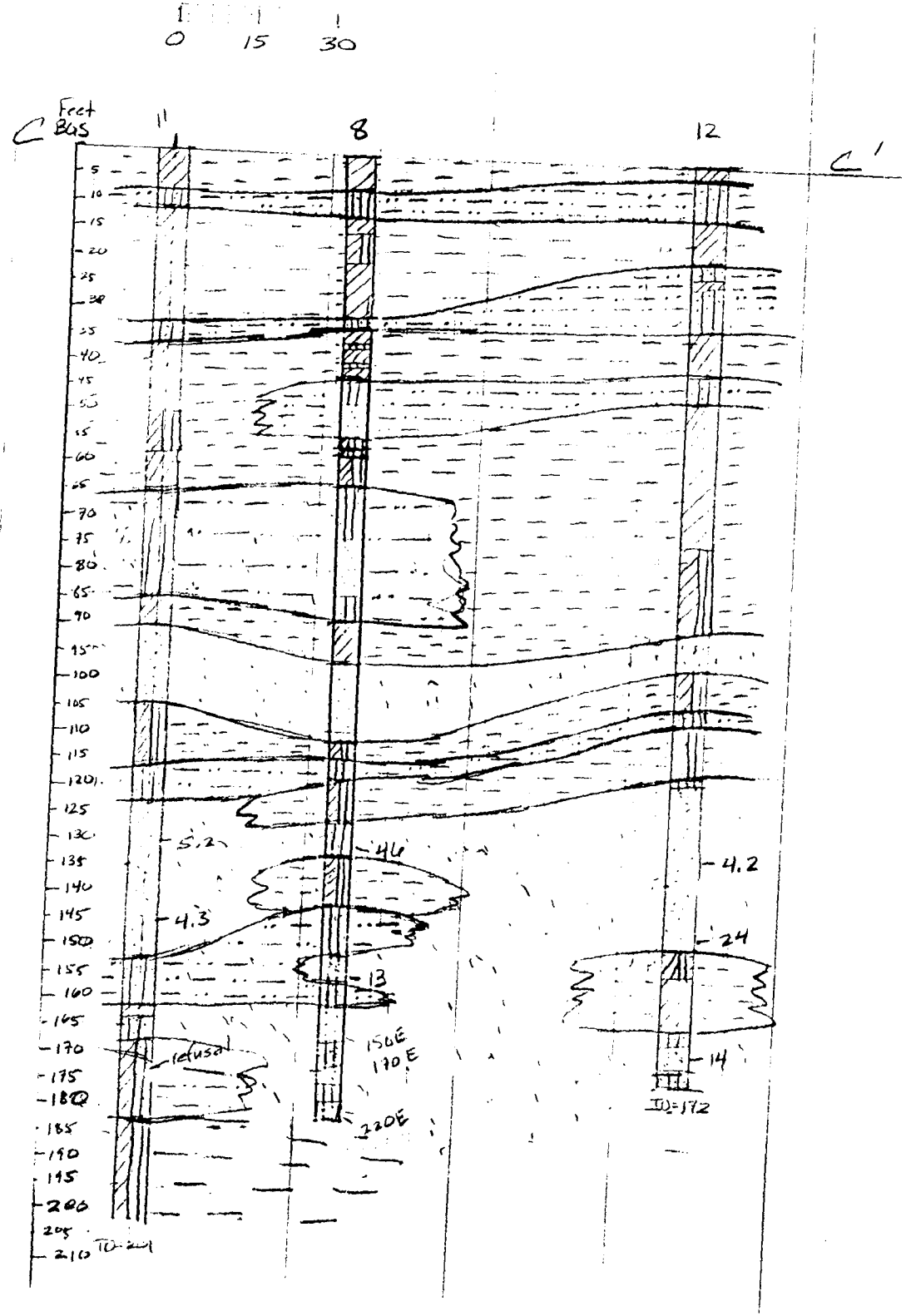
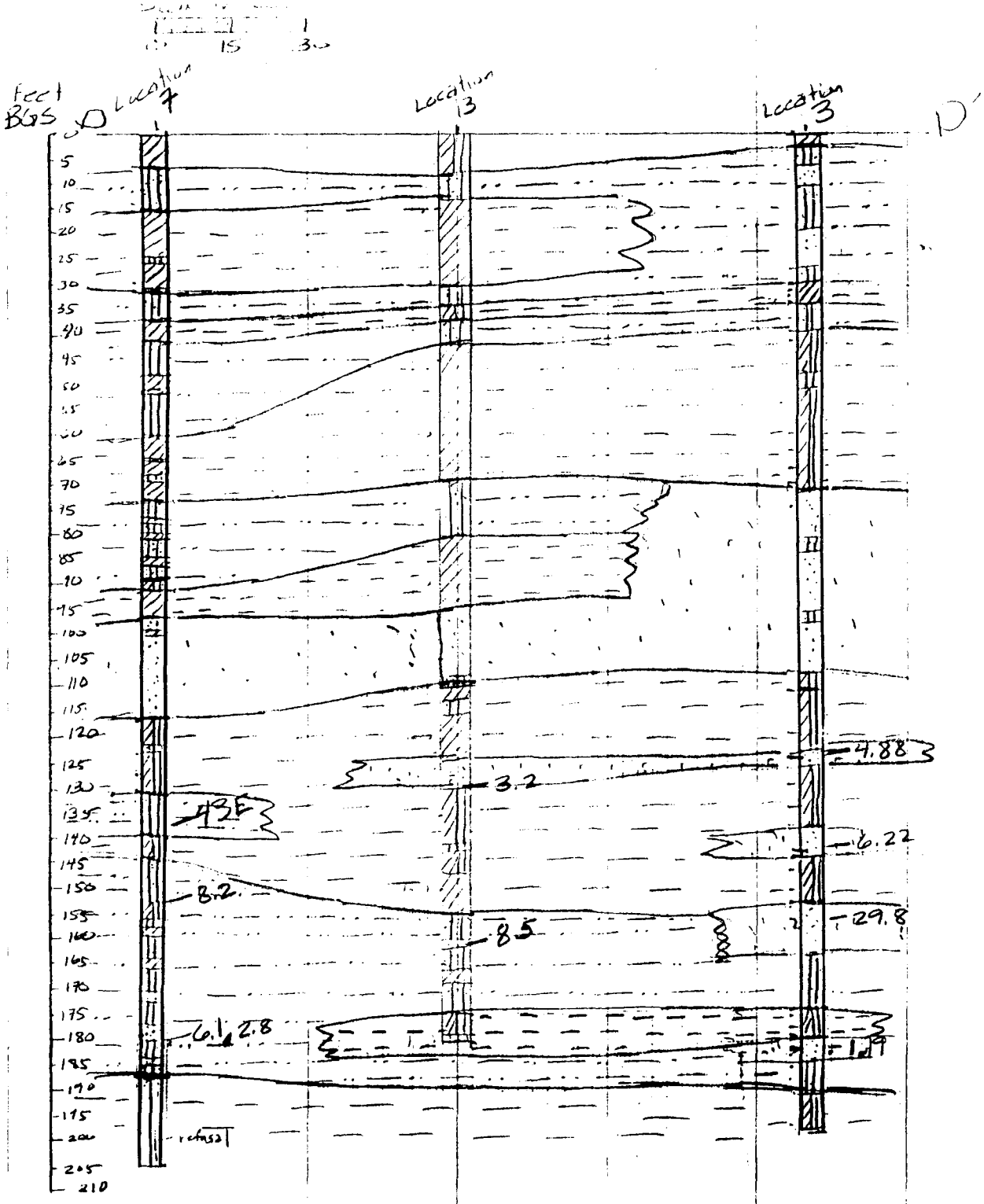
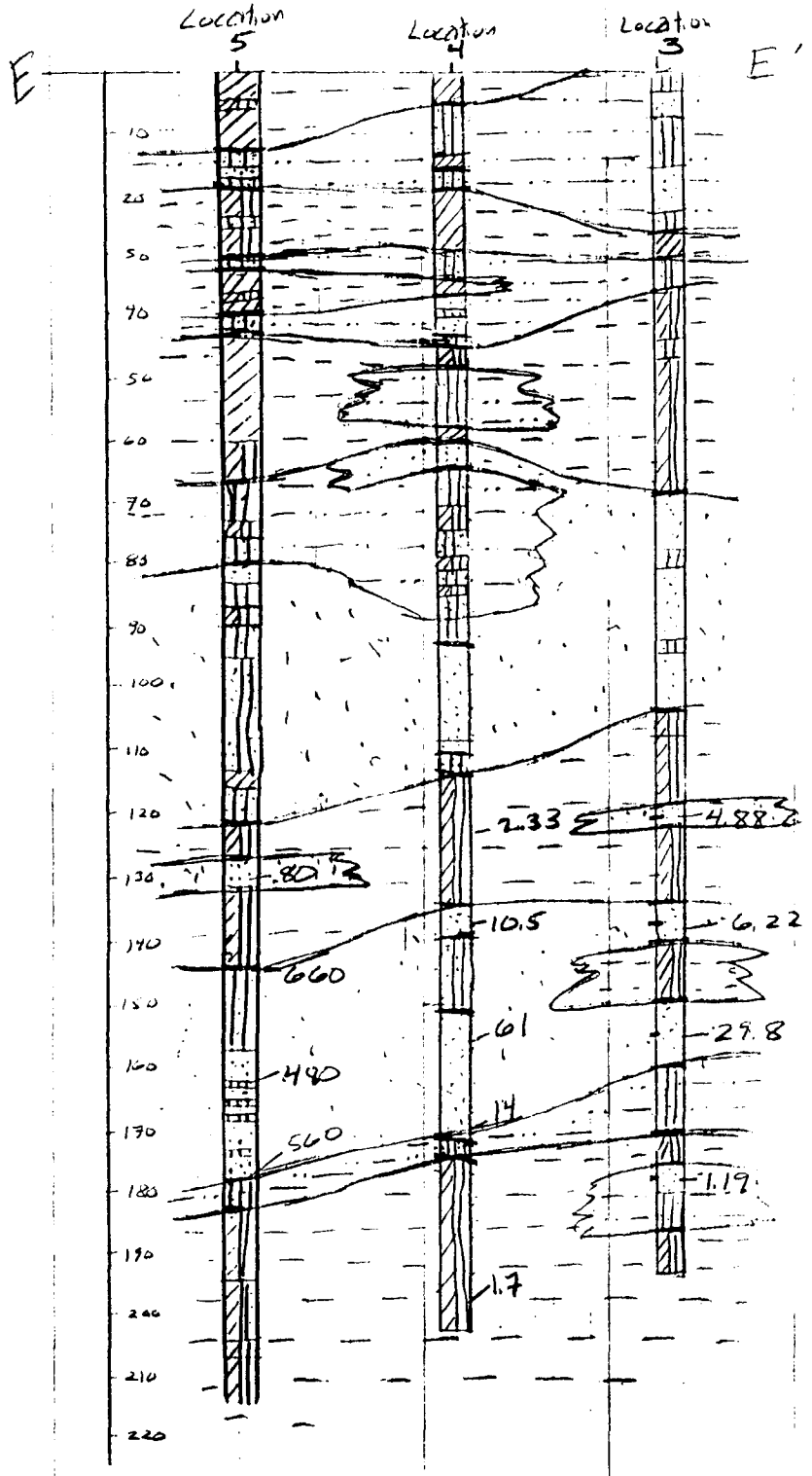




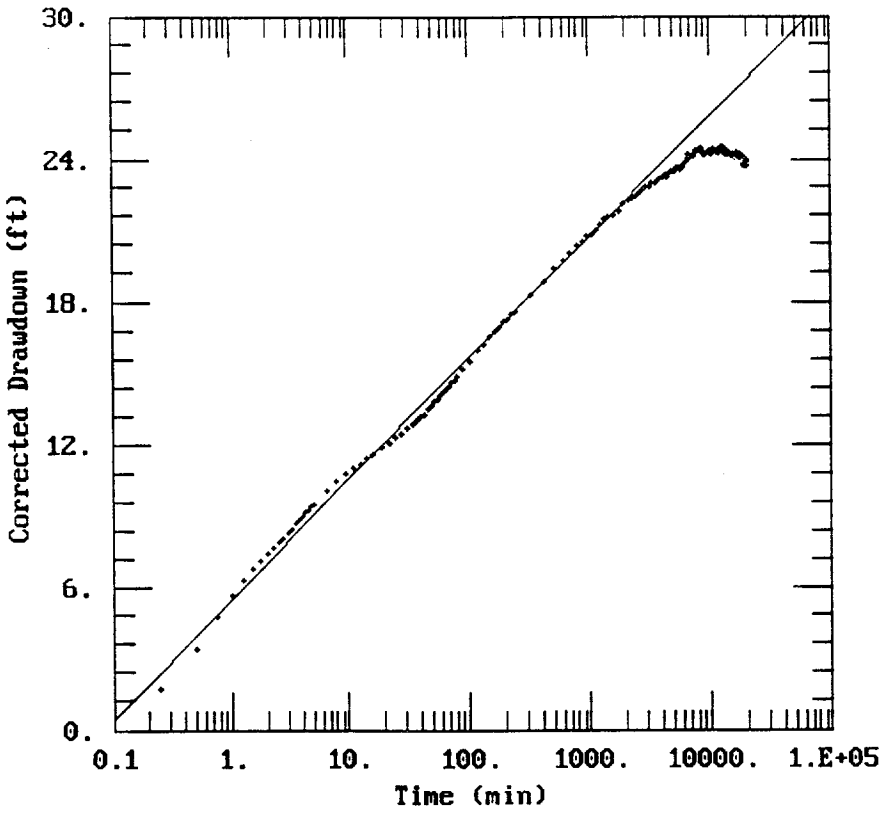


WORKING DRAFT

CLIENT: U.S. Navy, SWDIV

LOCATION: MCAS El Toro

EX3 Constant Rate Pumping Test No.7. EX3



DATA SET:
3EX3_PP.DAT
03/31/98

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Cooper-Jacob

TEST DATA:
Q = 2. ft^3/min
r = 0.5 ft
r_c = 0.5 ft
b = 100. ft

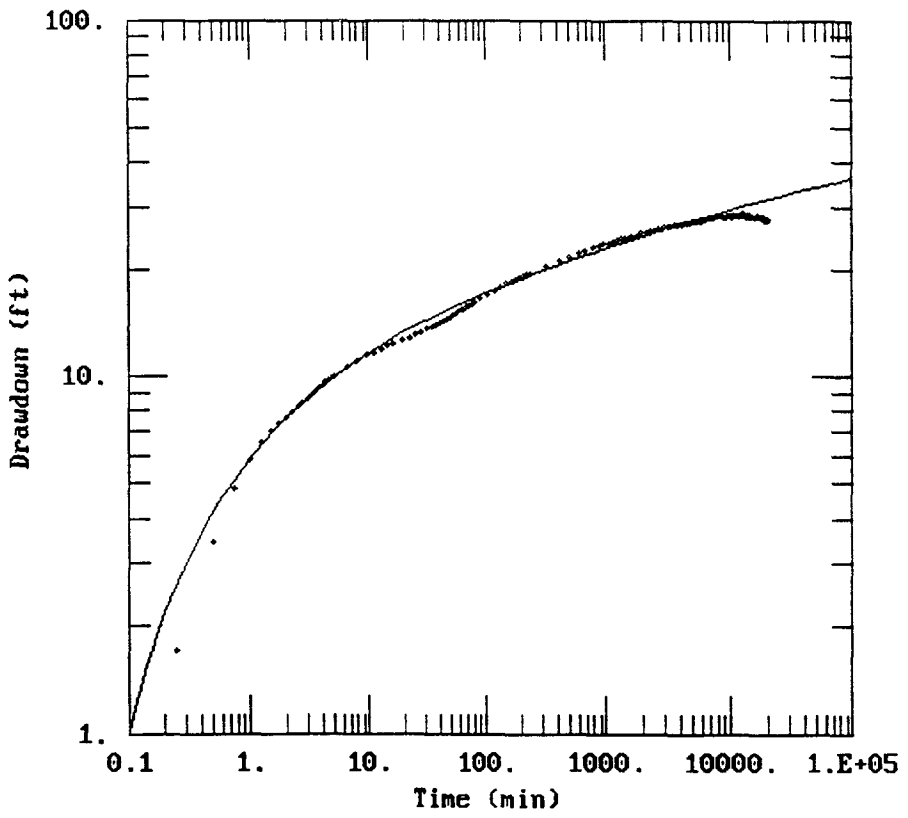
PARAMETER ESTIMATES:
T = 0.07196 ft^2/min
S = 0.05381

WORKING DRAFT

AQTESOLV

CLIENT: U.S. Navy, SWDIV	
LOCATION: MCAS El Toro	

EX3 Constant Rate Pumping Test No.7. EX3



DATA SET:
3EX3_PP.DAT
03/31/98

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Neuman

TEST DATA:
Q = 2. ft^3/min
r = 0.5 ft
r_c = 0.5 ft
b = 100. ft

PARAMETER ESTIMATES:
T = 0.05567 ft^2/min
S = 0.06386
Sy = 0.1
ß = 0.001

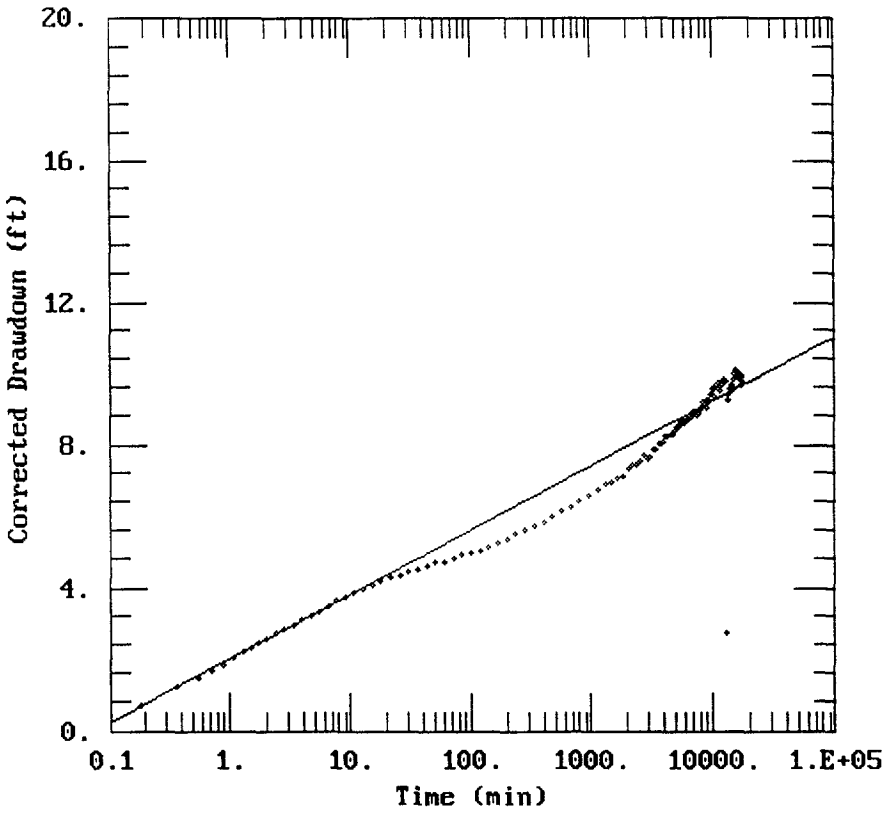
WORKING DRAFT

AQTESOLV

CLIENT: U.S. Navy, SWDIV

LOCATION: MCAS El Toro

EX4 Constant Rate Pumping Test, EX4



DATA SET:
EX4-5PP.DAT
03/31/98

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Cooper-Jacob

TEST DATA:
Q = 0.67 ft^3/min
r = 0.5 ft
r_c = 0.5 ft
b = 100. ft

PARAMETER ESTIMATES:
T = 0.0685 ft^2/min
S = 0.0439

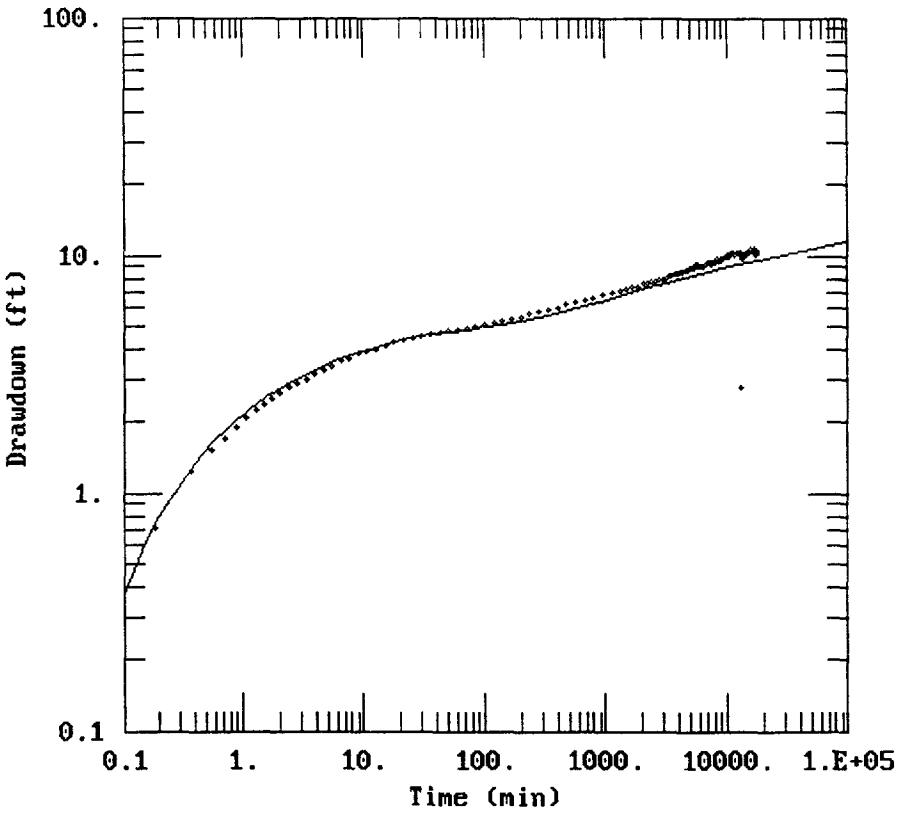
WORKING DRAFT

AQTESOLV

CLIENT: U.S. Navy, SWDIV

LOCATION: MCAS El Toro

EX4 Constant Rate Pumping Test, EX4



DATA SET:
EX4-5PP.DAT
03/31/98

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Neuman

TEST DATA:
Q = 0.67 ft^3/min
r = 0.5 ft
r_c = 0.5 ft
b = 100. ft

PARAMETER ESTIMATES:
T = 0.04934 ft^2/min
S = 0.05709
Sy = 1.08
ß = 0.004

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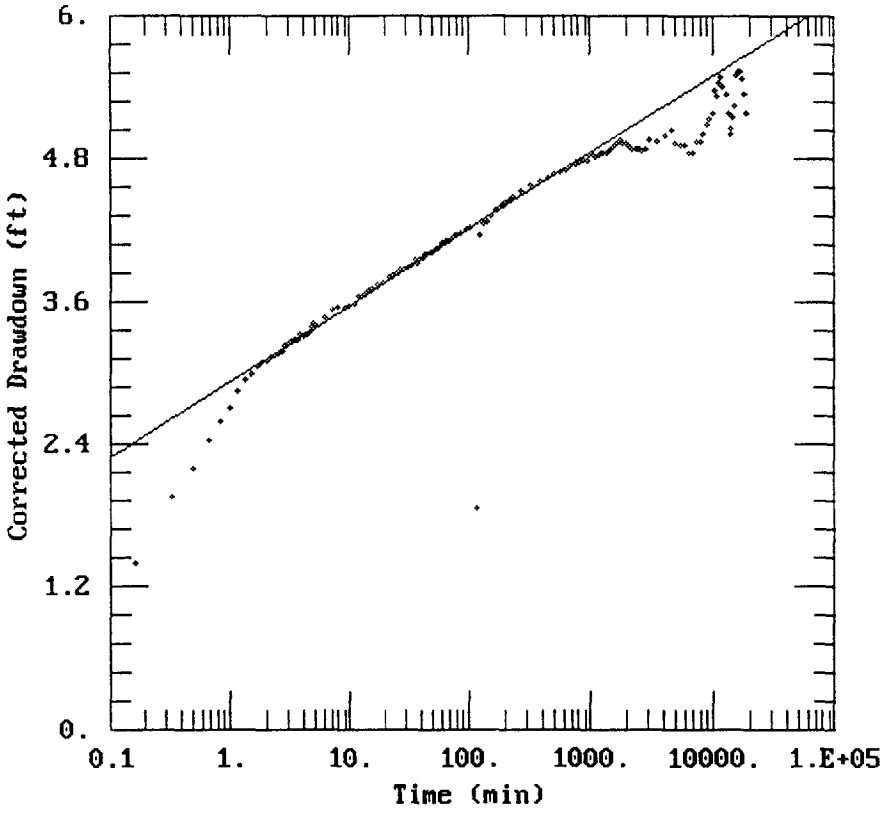
CLIENT: U.S. Navy SWDIV

LOCATION: MCAS El Toro

EX5 Constant Rate Pumping Test, EX5



DATA SET:
5EX5-PP.DAT
04/14/98

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Cooper-Jacob

TEST DATA:
Q = 5.34 ft^3/min
r = 0.5 ft
r_c = 0.5 ft
b = 100. ft

PARAMETER ESTIMATES:
T = 1.525 ft^2/min
S = 0.0003774

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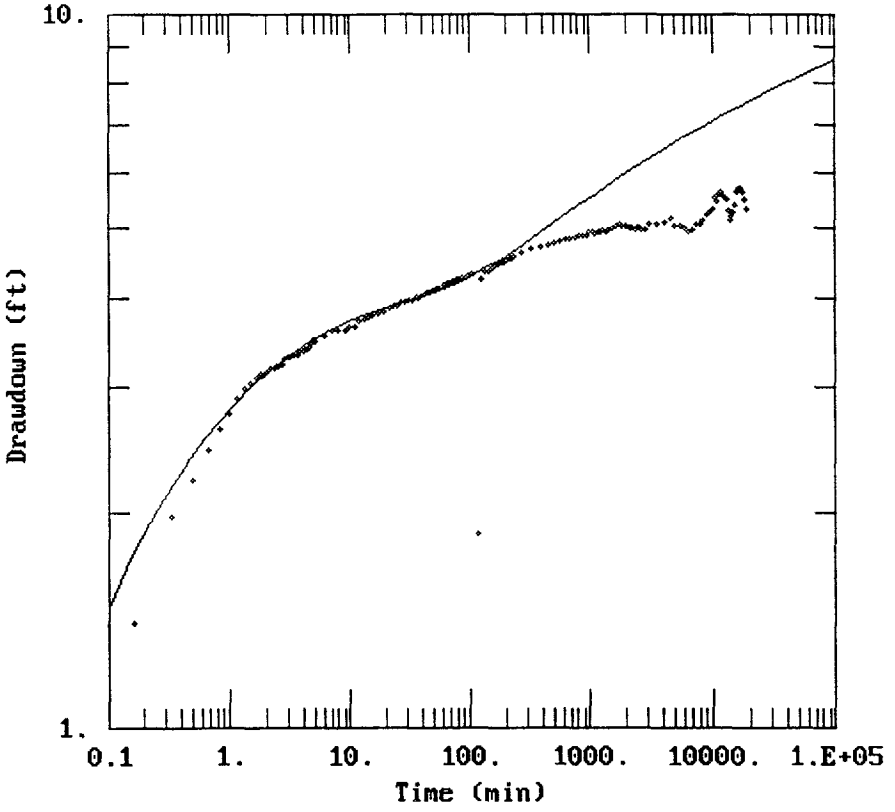
CLIENT: U.S. Navy SWDIV	
LOCATION: MCAS El Toro	

EX5 Constant Rate Pumping Test, EX5



DATA SET:
5EX5-PP.DAT
04/14/98

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Neuman

TEST DATA:
Q = 5.34 ft^3/min
r = 0.5 ft
r_c = 0.5 ft
b = 100. ft

PARAMETER ESTIMATES:
T = 0.6325 ft^2/min
S = 0.06183
Sy = 1.468
ß = 0.001

WORKING DRAFT

AQTESOLV

BECHTEL NATIONAL INC.

CLEAN II TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N-68711-92-D-4670 **Document Control No.:** CTO-0142/0373

File Code: 0208

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 57CS1.RS
Building 127, Room 112
1220 Pacific Highway
San Diego, CA 92132-5190

DATE: April 30, 1998
CTO #: 142
LOCATION: MCAS El Toro

FROM: B. Kown for
D. J. Tedaldi, Ph.D., P.E., Project Manager

DESCRIPTION: Meeting Minutes, Site 24 Pilot Test Update - DTD April 22, 1998

TYPE: ____ Contract Deliverable (Cost) ____ CTO Deliverable (Technical) X Other

VERSION: NA REVISION #: ____

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B. Lindsey, Code 56MC.BL (1C/1E)	T. Latas (1C/1E)	H. Levine, US EPA (1C/1E)
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