

SEQUOYAH FUELS CORPORATION
FACILITY ENVIRONMENTAL INVESTIGATION
FINDINGS REPORT
VOLUME III

Prepared by
Roberts/Schornick and Associates, Inc.
Environmental Consultants
Norman, Oklahoma
(405) 321-3895

July 31, 1991

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1/91, 3/91*

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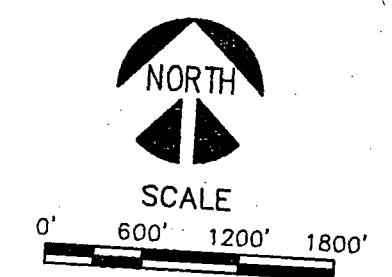
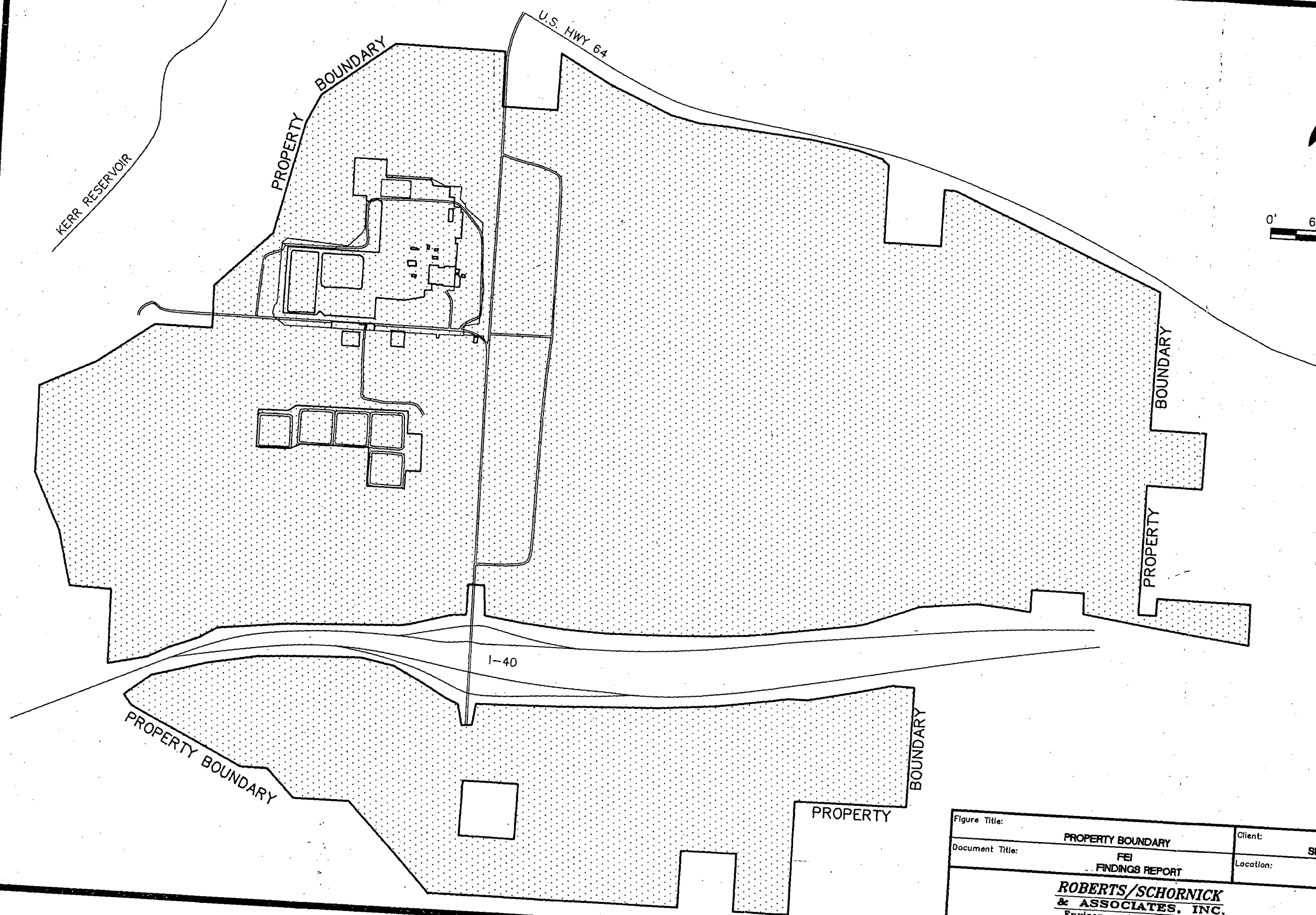


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				6/10/91	D.B.
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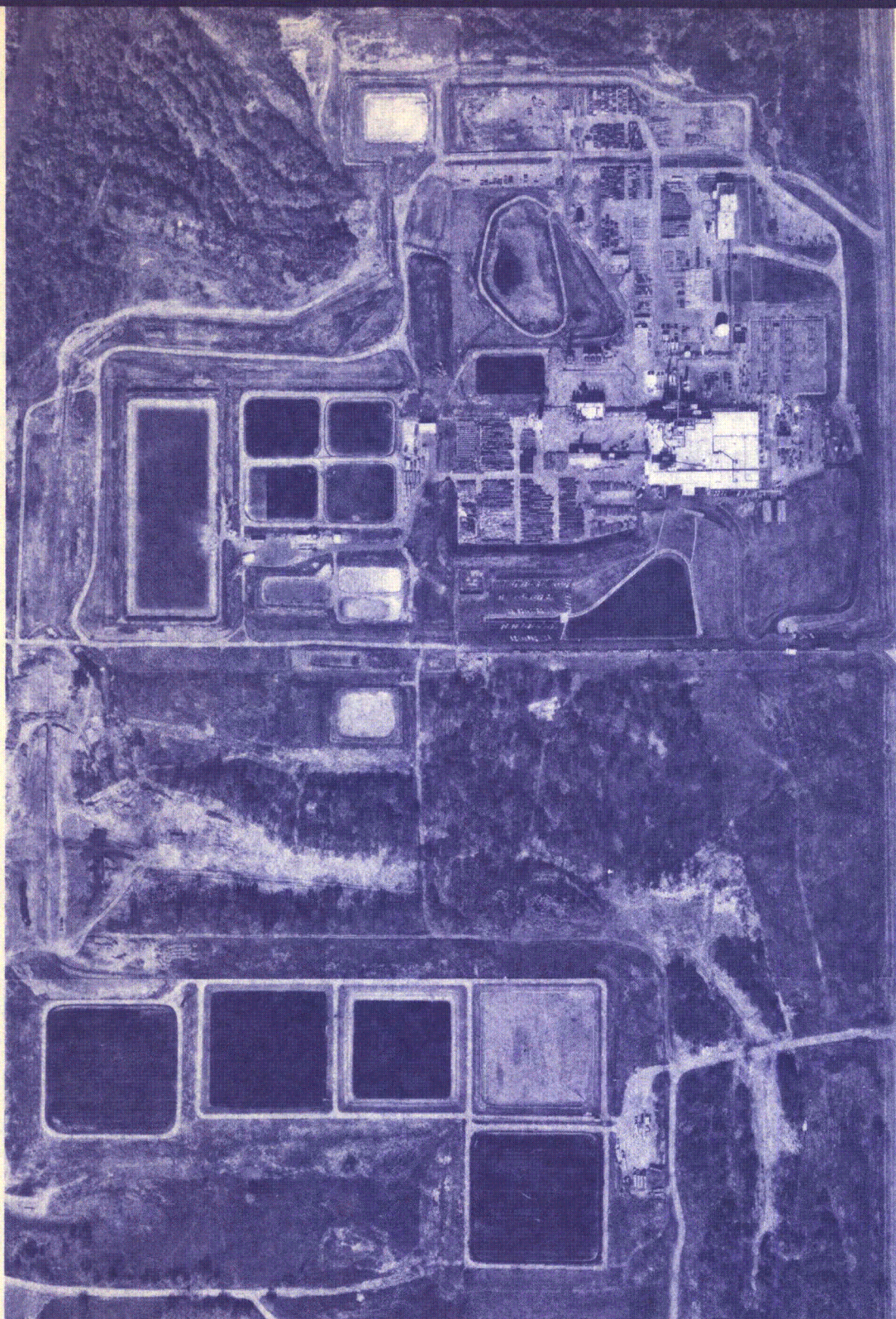
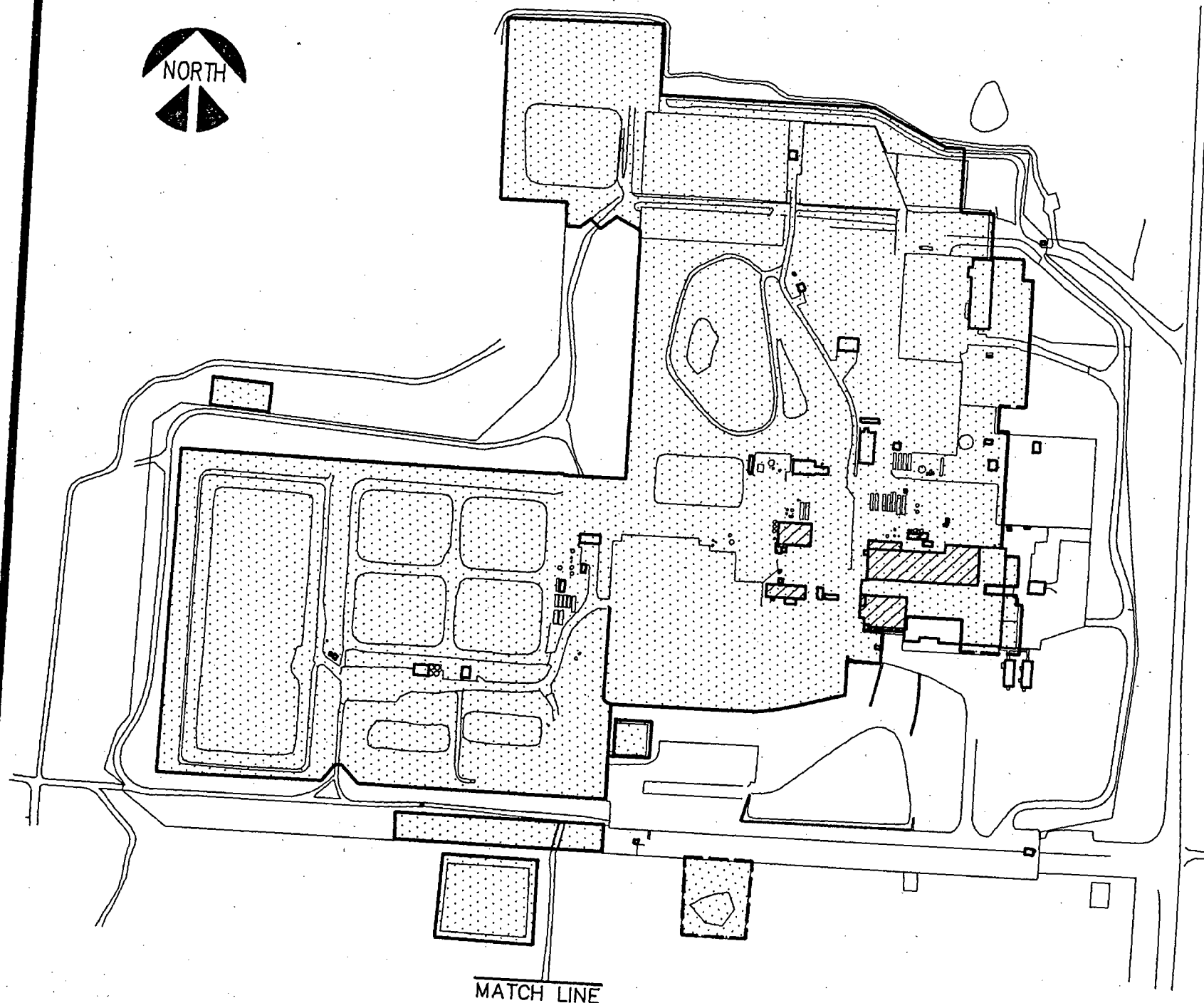




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			FIGURE NO.: 2		



-  CONTROLLED ACCESS AREA
-  RESTRICTED AREA

MATCH LINE

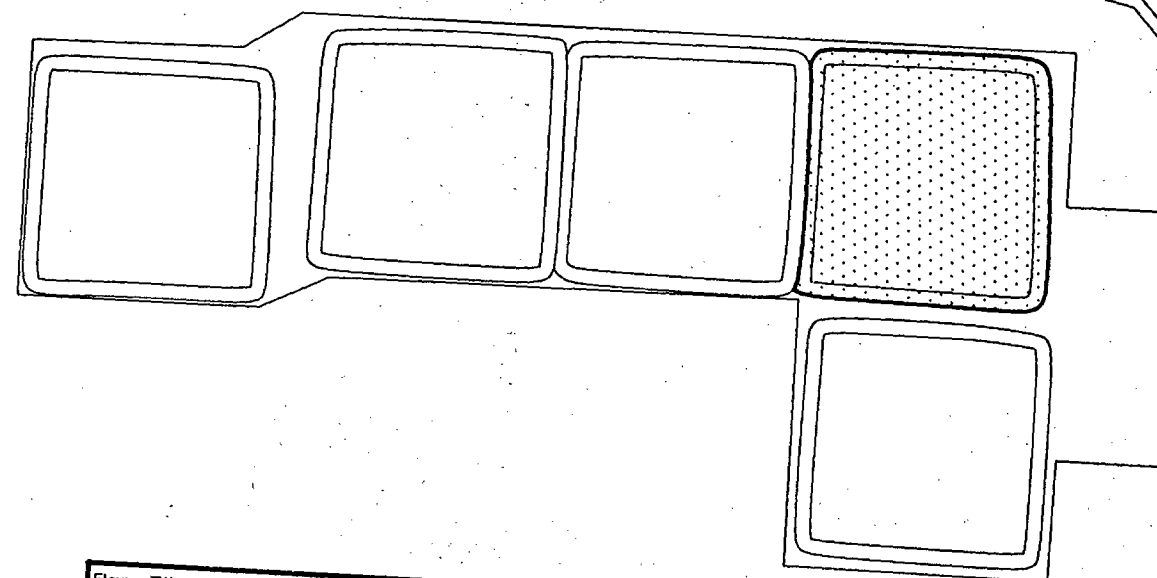
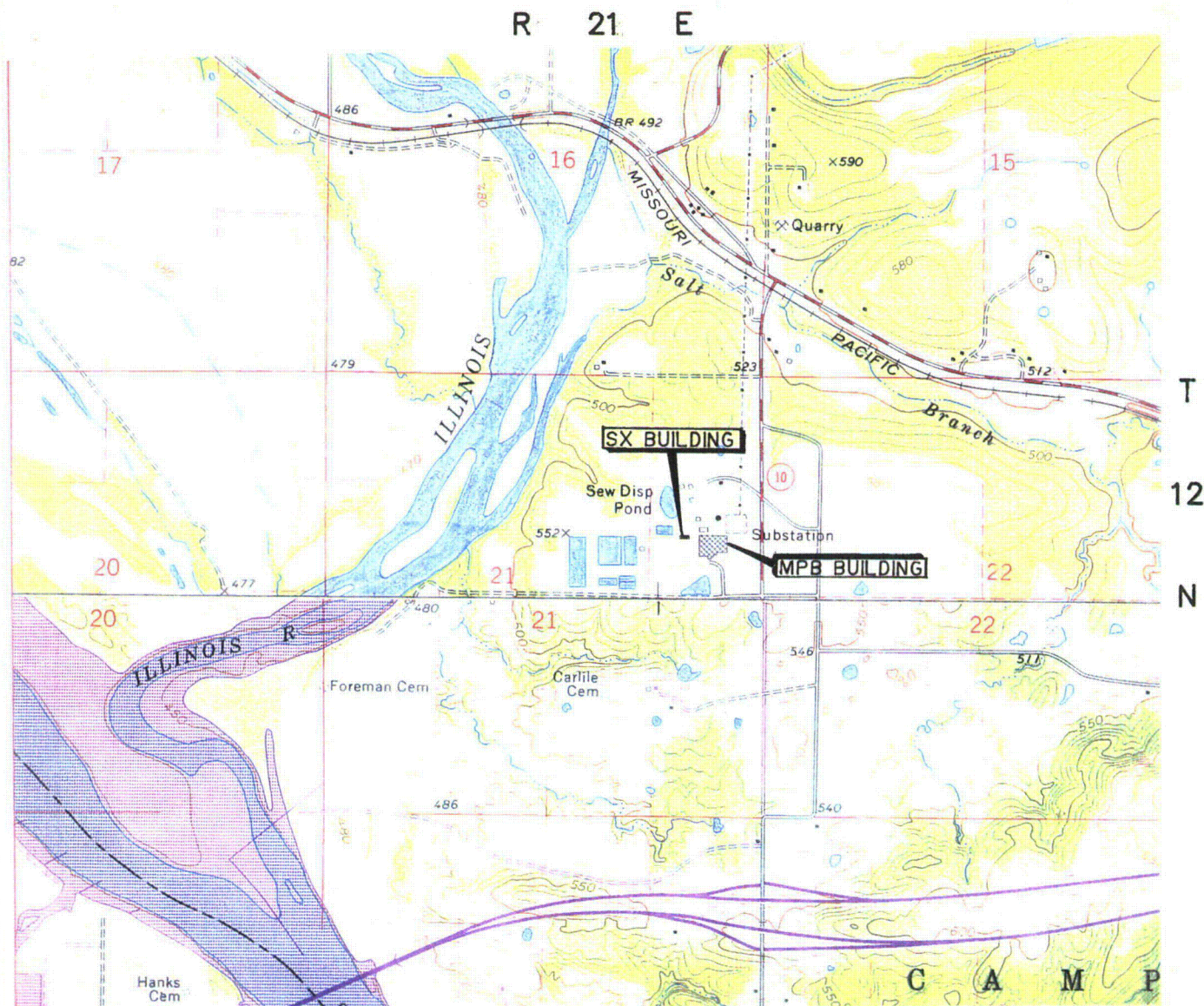
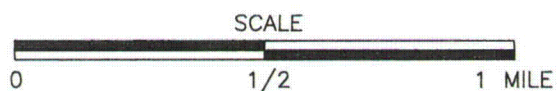


Figure Title: RESTRICTED AND CONTROLLED ACCESS AREAS		Client: SEQUOYAH FUELS CORPORATION	
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		DRAFTED BY: RML	
		PROJECT NO: 90067 N52	FIGURE NO.: 3



AFTER U.S.G.S. 7.5 MIN. TOPO. QUAD., GORE, OK., REVISED 1974



LOCATION MAP

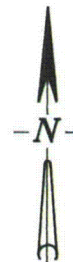
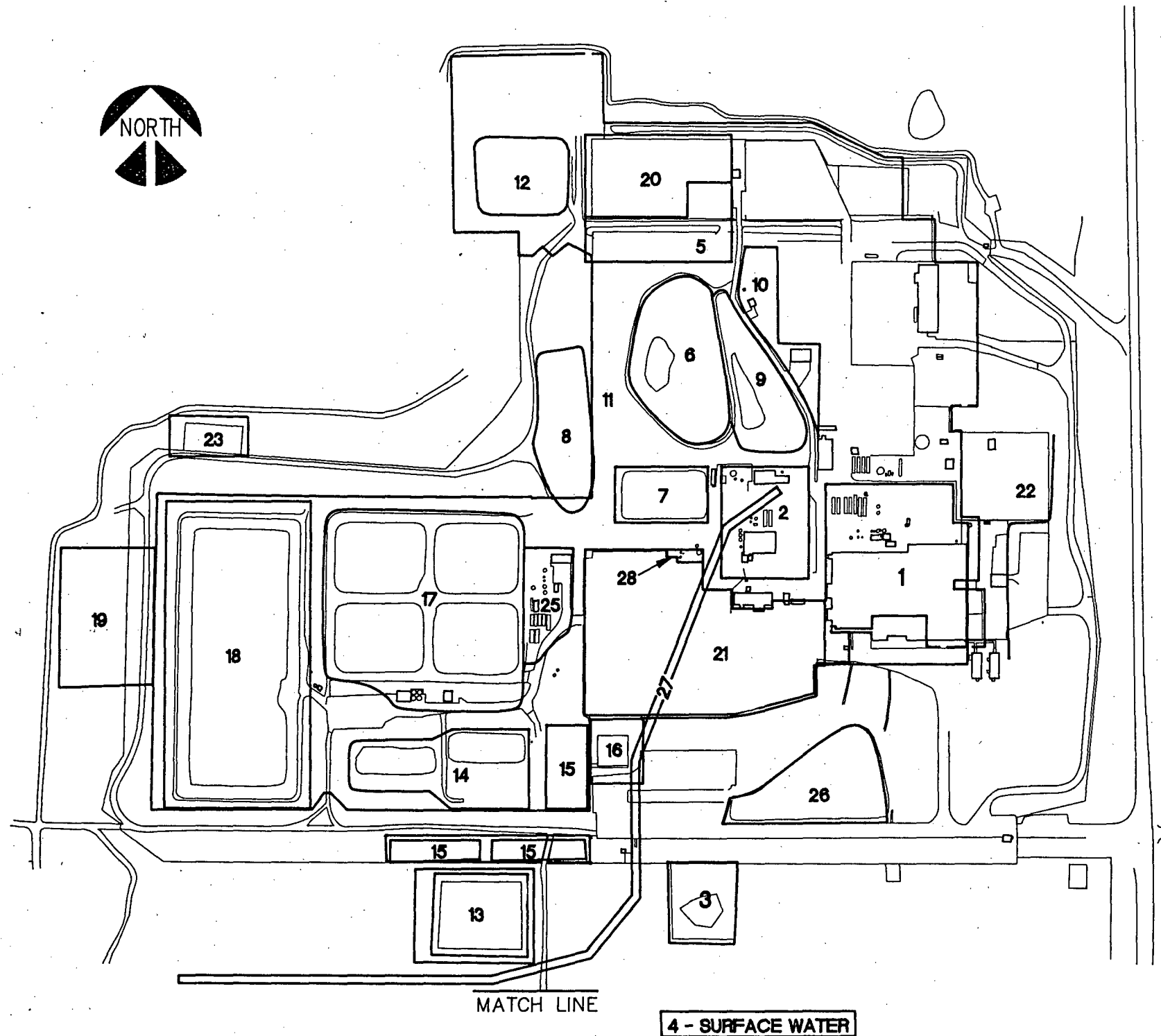


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		PROJECT NO:	90067 F01	DRAFTED BY: S.A.R.	
		FIGURE NO.:		5	



PAST AND PRESENT OPERATION UNITS

- 1 MAIN PROCESS BUILDING AREA
- 2 SOLVENT EXTRACTION AREAS
- 3 INITIAL LIME NEUTRALIZATION AREA (1970)
- 4 SURFACE WATER, ENTIRE FACILITY
- 5 CONSTRUCTION EQUIPMENT BURIAL AREA
- 6 EMERGENCY BASIN
- 7 SANITARY LAGOON
- 8 POND 1 SPOILS PILE
- 9 NORTH DITCH
- 10 ASH RECEIVERS, CONTAMINATED EQUIPMENT AREA
- 11 DRAINAGE AREAS AROUND EMERGENCY BASINS, SANITARY LAGOON INCINERATOR AND OLD RAFFINATE LINES
- 12 FLUORIDE SLUDGE BASIN #2
- 13 FLUORIDE SLUDGE STORAGE POND
- 14 FLUORIDE SETTLING BASINS
- 15 FLUORIDE SLUDGE BURIAL AREA
- 16 YELLOWCAKE SUMP AREA
- 17 CLARIFIER POND AREA
- 18 POND 2
- 19 DITCH, WEST OF POND 2
- 20 CONTAMINATED EQUIPMENT STORAGE
- 21 YELLOWCAKE STORAGE PAD
- 22 DITCH FROM UF₆ CYLINDER COOL DOWN AREA
- 23 CONTAMINATED SOIL FROM 1986 RELEASE
- 24 AMMONIUM NITRATE LINED PONDS
- 25 AREAS OF OPERATIONAL SPILLS
- 26 DECORATIVE POND
- 27 COMBINATION STREAM DRAIN
- 28 PRESENT LIME NEUTRALIZATION AREA

MATCH LINE

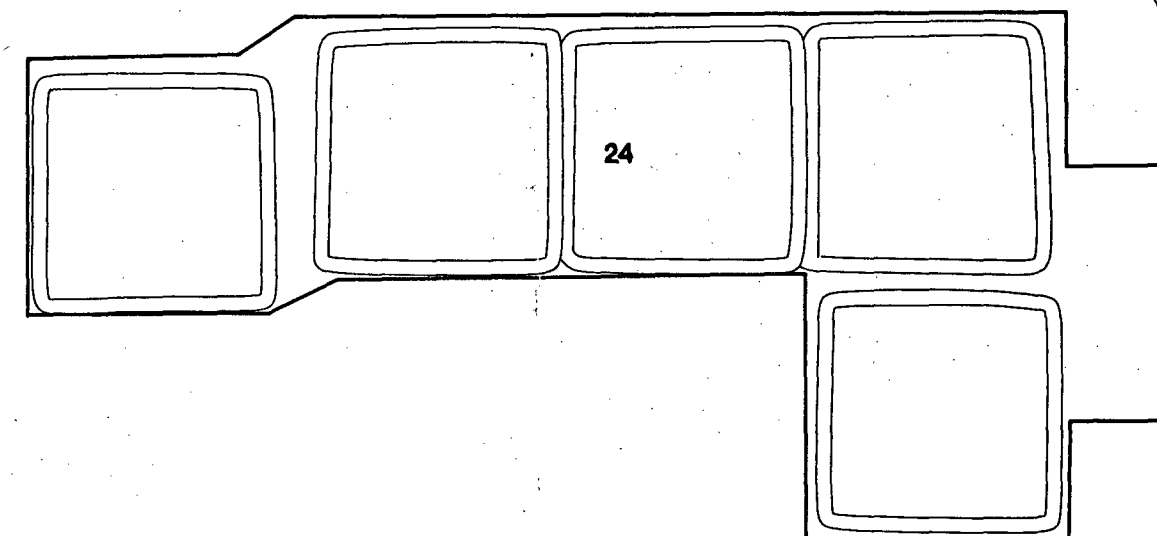


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		PROJECT NO: 90067 N54	DRAFTED BY: RML
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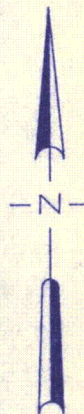
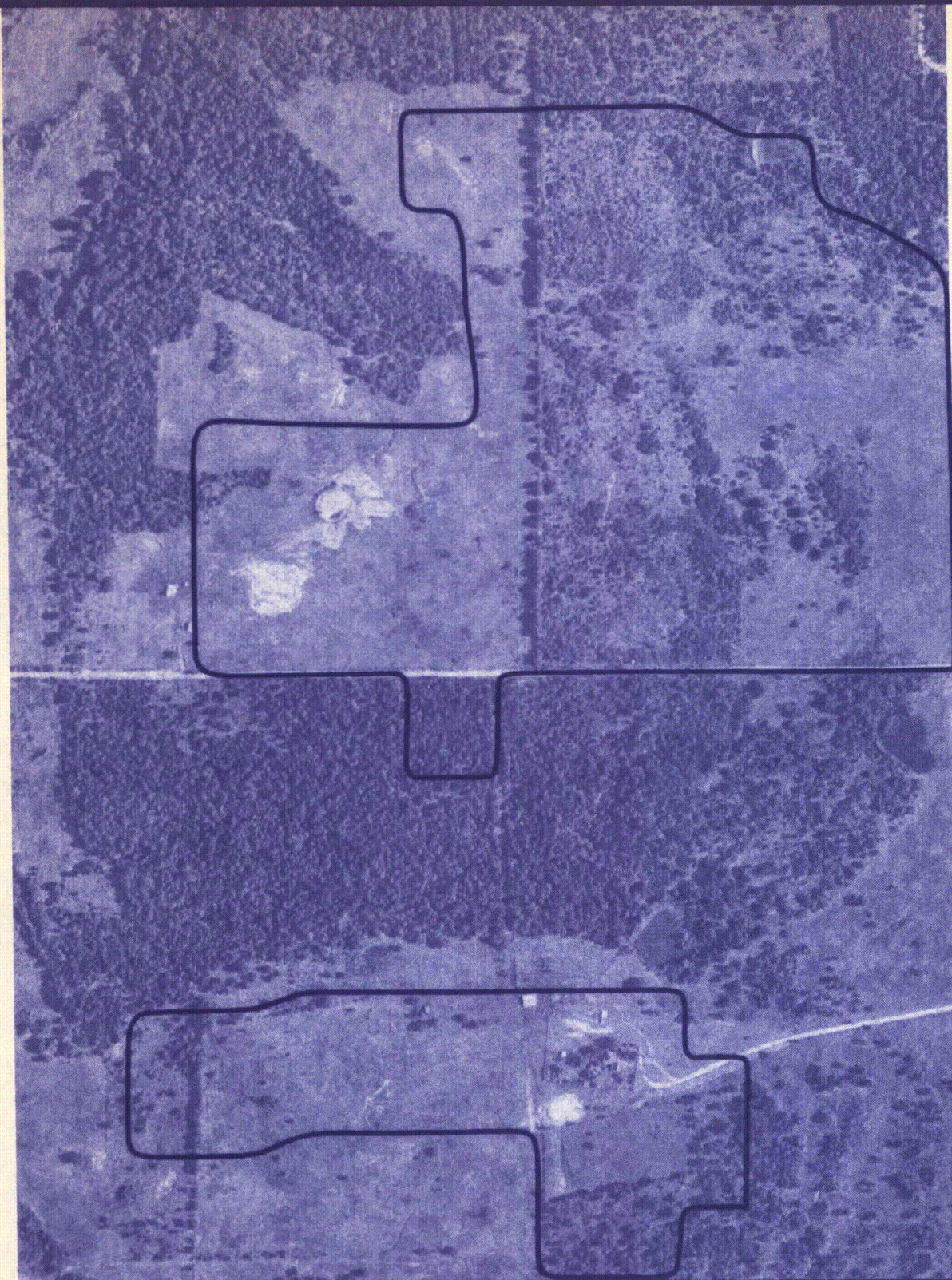


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		FIGURE NO.: 7	

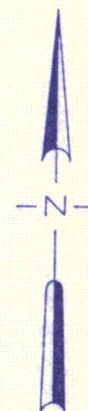
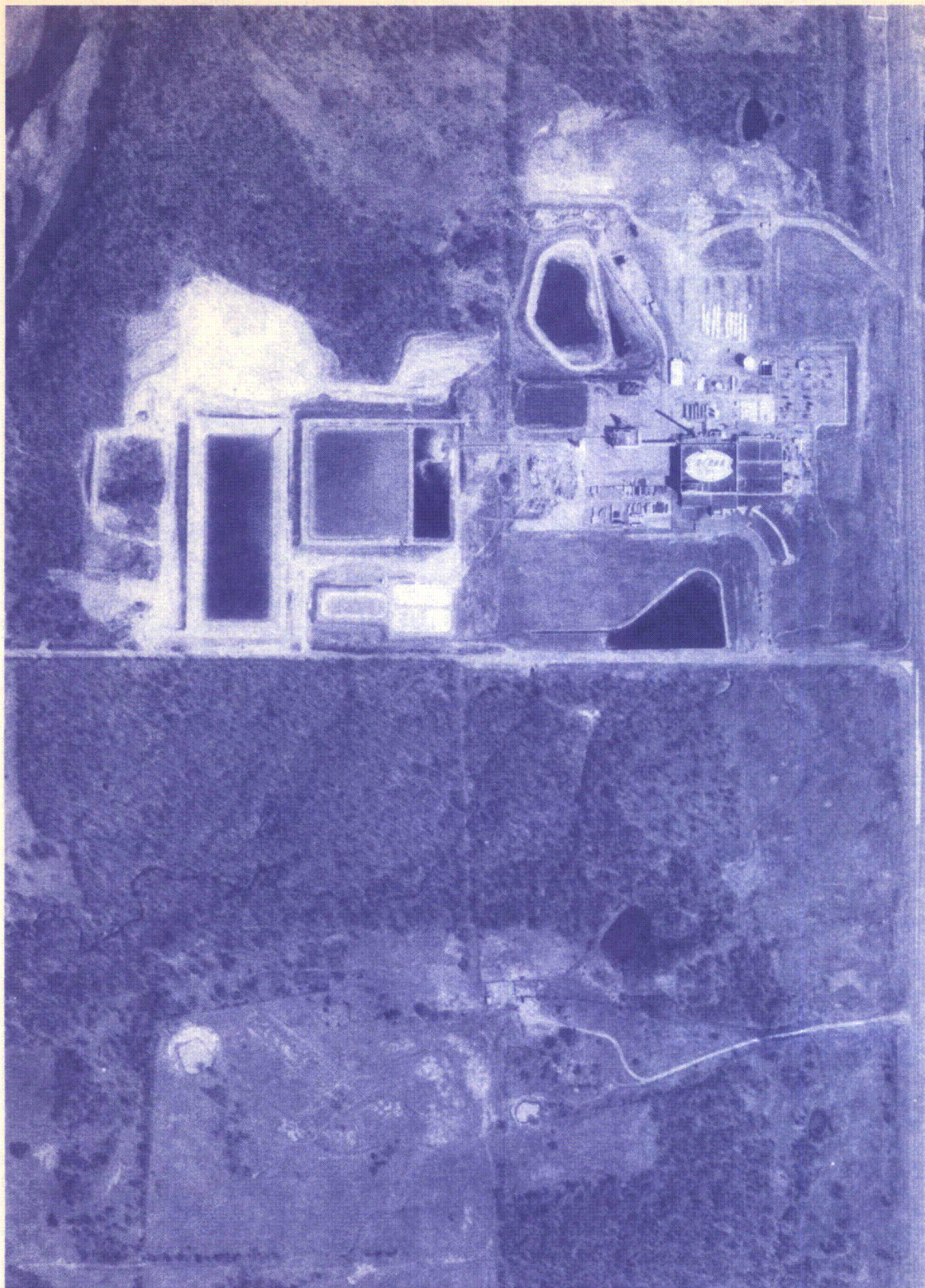


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		PROJECT NO: 90067 F02	DRAFTED BY: S.A.R.
		FIGURE NO.: 8	

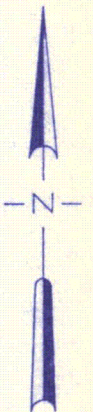
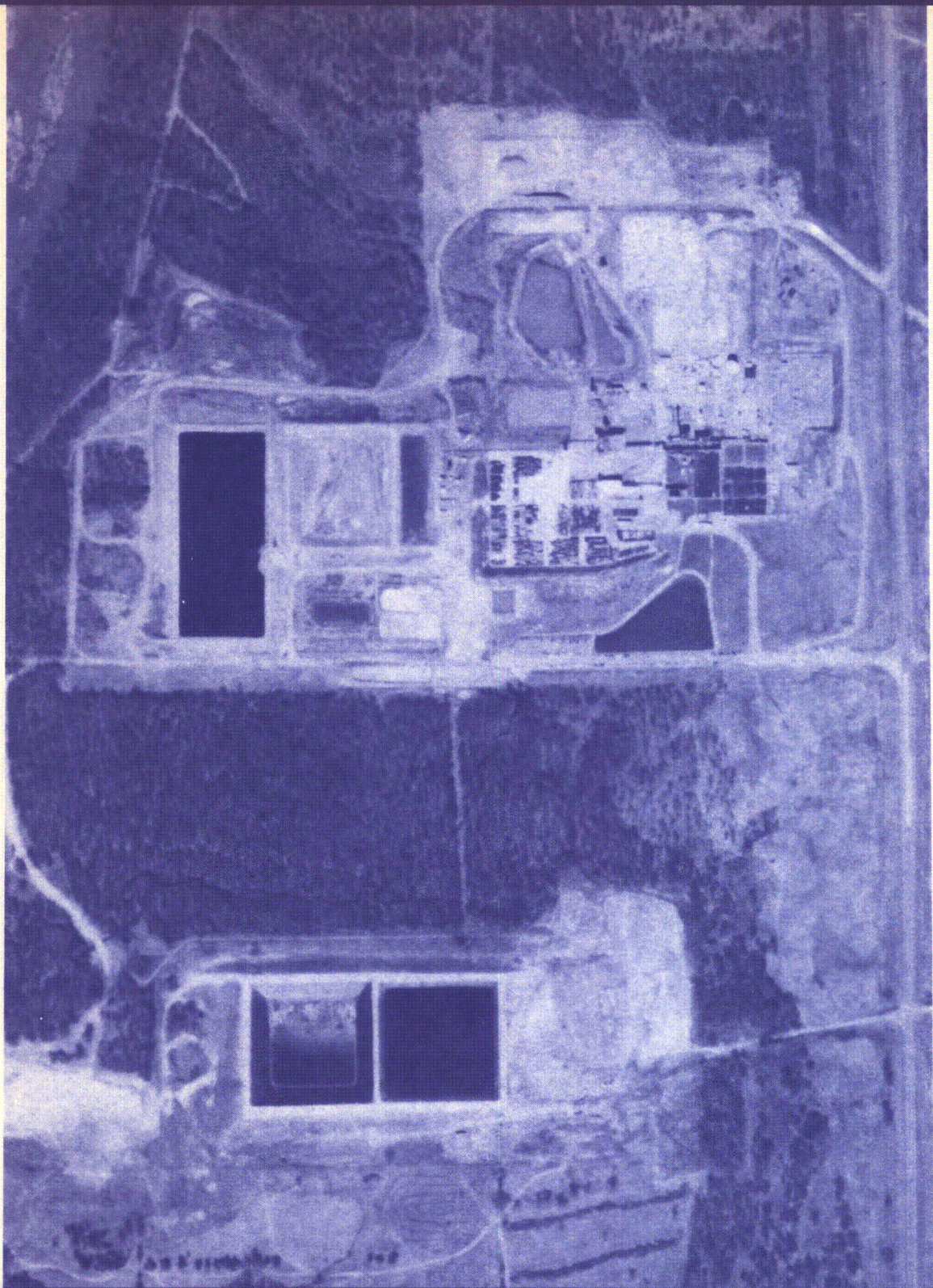


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		PROJECT NO:		DRAFTED BY: S.A.R.
		90067 F02	FIGURE NO.: 9	

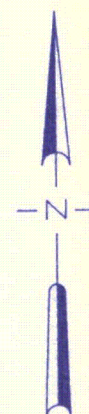
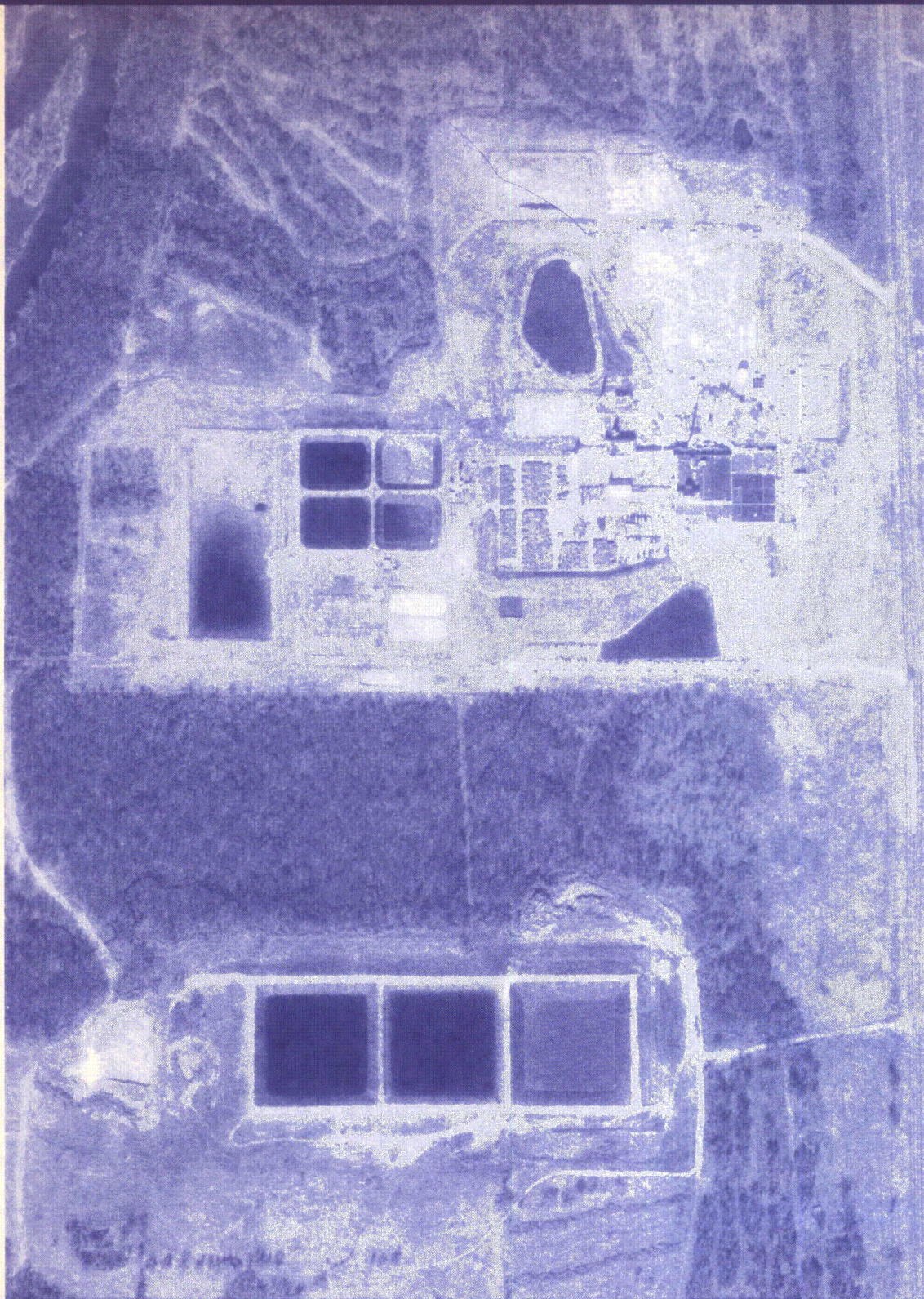


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		PROJECT NO: 90067 F02	DRAFTED BY: S.A.R.
		FIGURE NO.: 10	

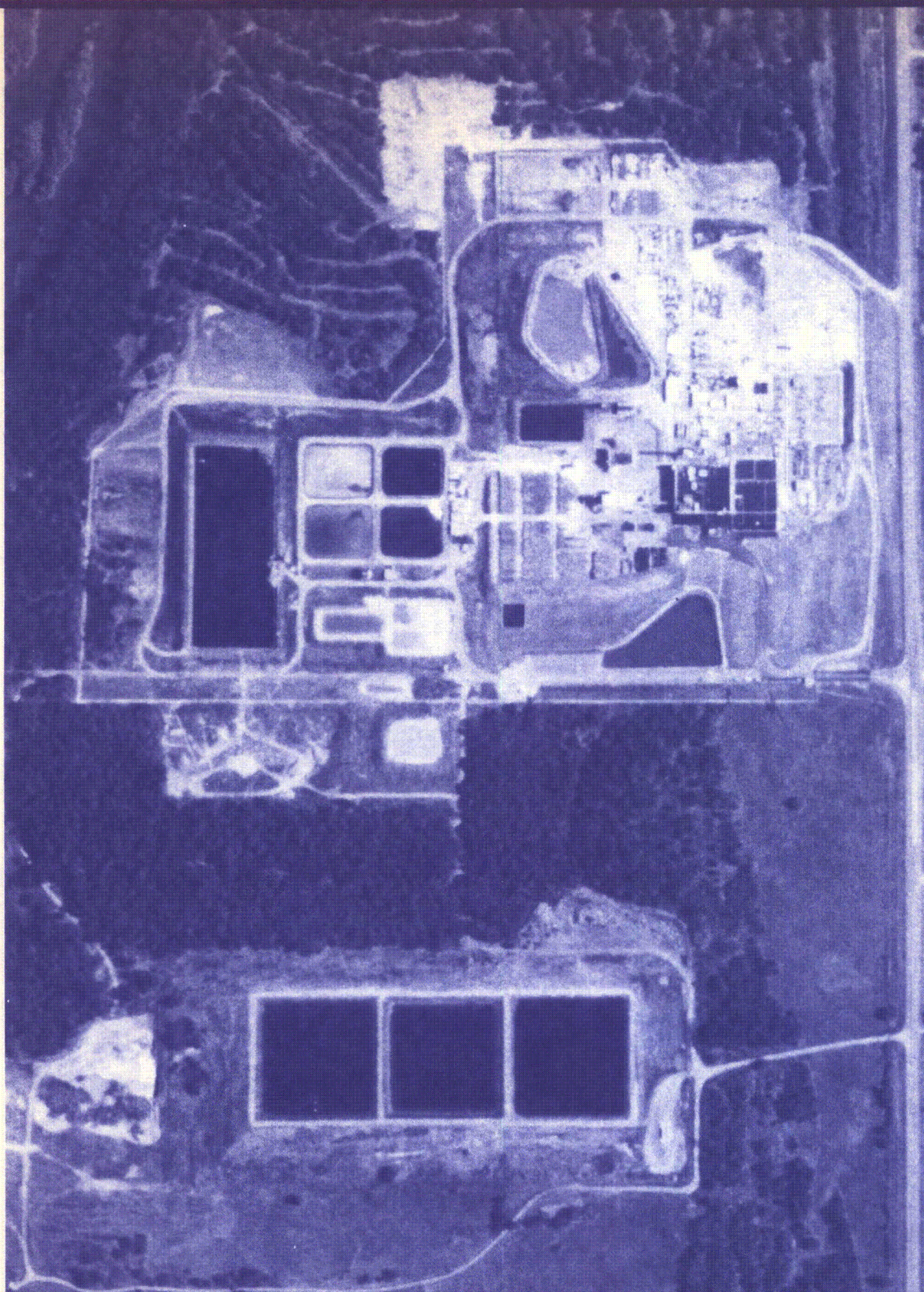
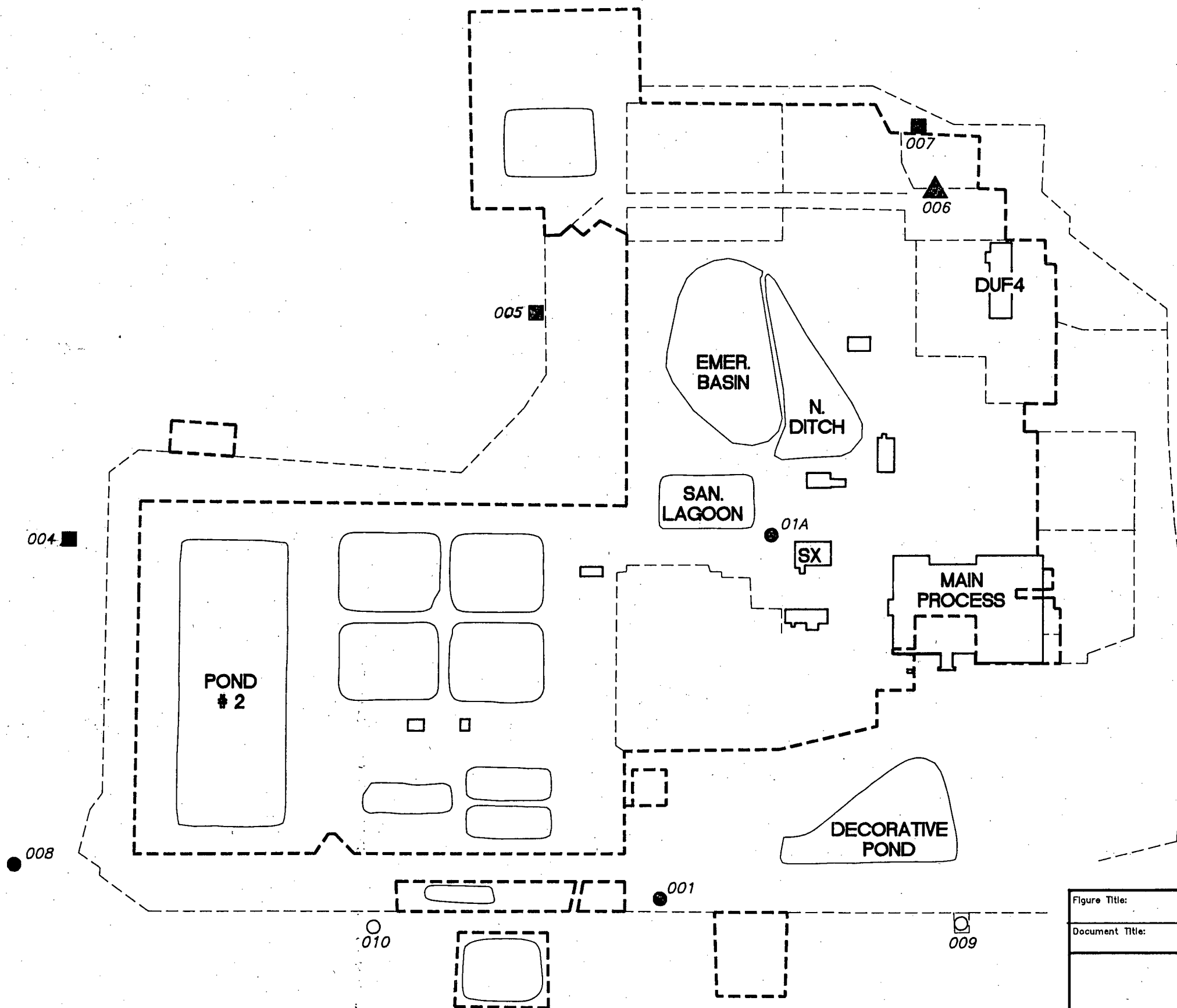
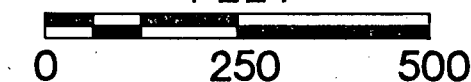


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			PROJECT NO:	90067 F02	DRAFTED BY: S.A.R.
			FIGURE NO.: 11		



SCALE
FEET



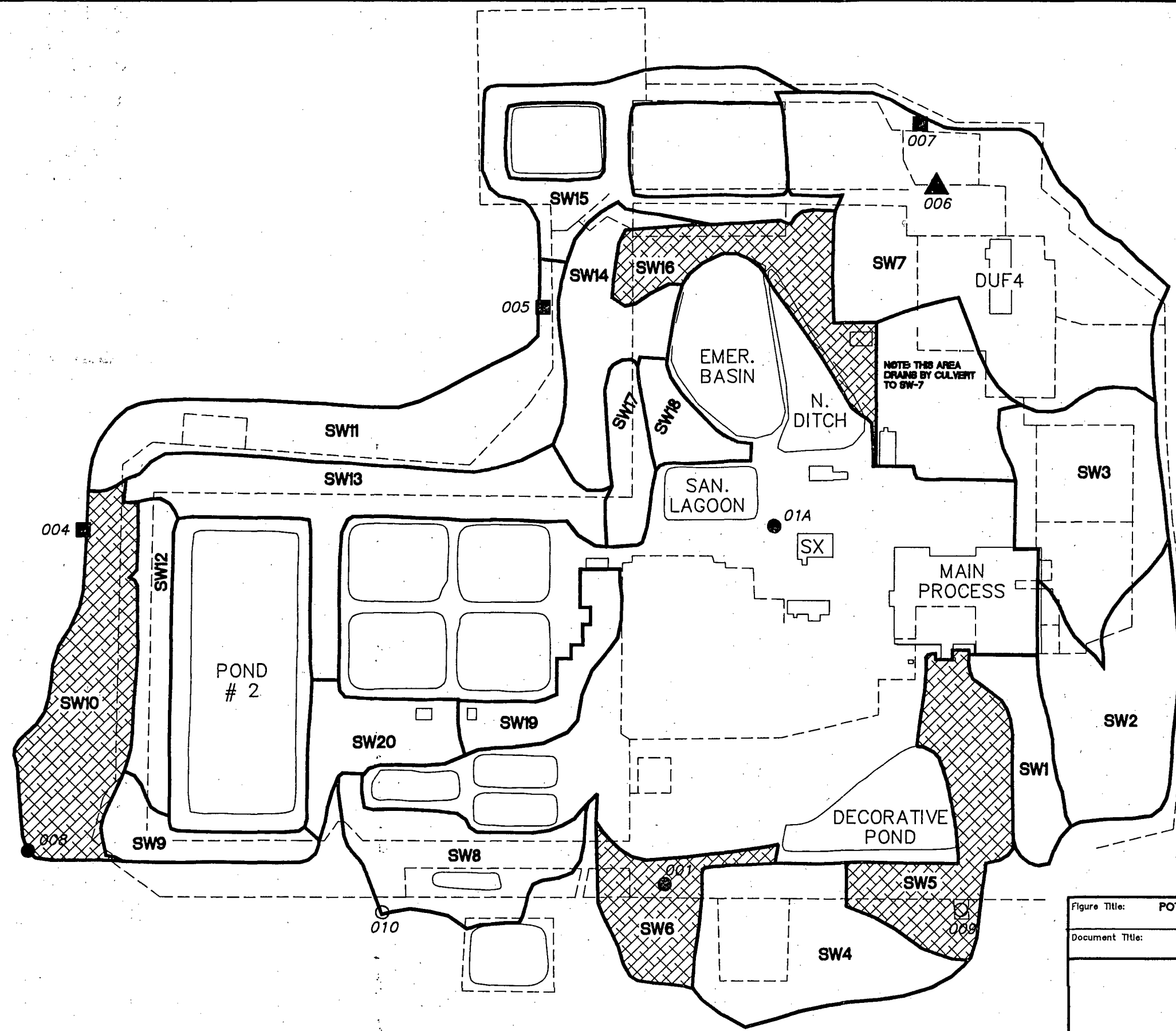
LEGEND

- 004 INACTIVE OUTFALL
- 008 OUTFALL REGULATED BY PERMIT
- ▲ 006 DISCONTINUED OUTFALL
- 009 SFC MONITORED OUTFALL
- RESTRICTED AREA BOUNDARY

NOTES:

1. INACTIVE = NO LONGER MONITORED
SINCE FLOW IS DIVERTED TO OUTFALL 008
2. DISCONTINUED = NO LONGER
REGULATED BY PERMIT
3. OUTFALLS 002 AND 003 ARE
OUTSIDE LIMITS OF THIS EXHIBIT

Figure Title:	LOCATION OF OUTFALLS	Client:	SENOYAH FUELS CORPORATION	
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		SCALE:	1" = 250'	CHECKED BY: PW
		PROJECT NO:	90067 N63	DRAFTED BY: RL,SL
		FIGURE NO.: 12		



SCALE
FEET



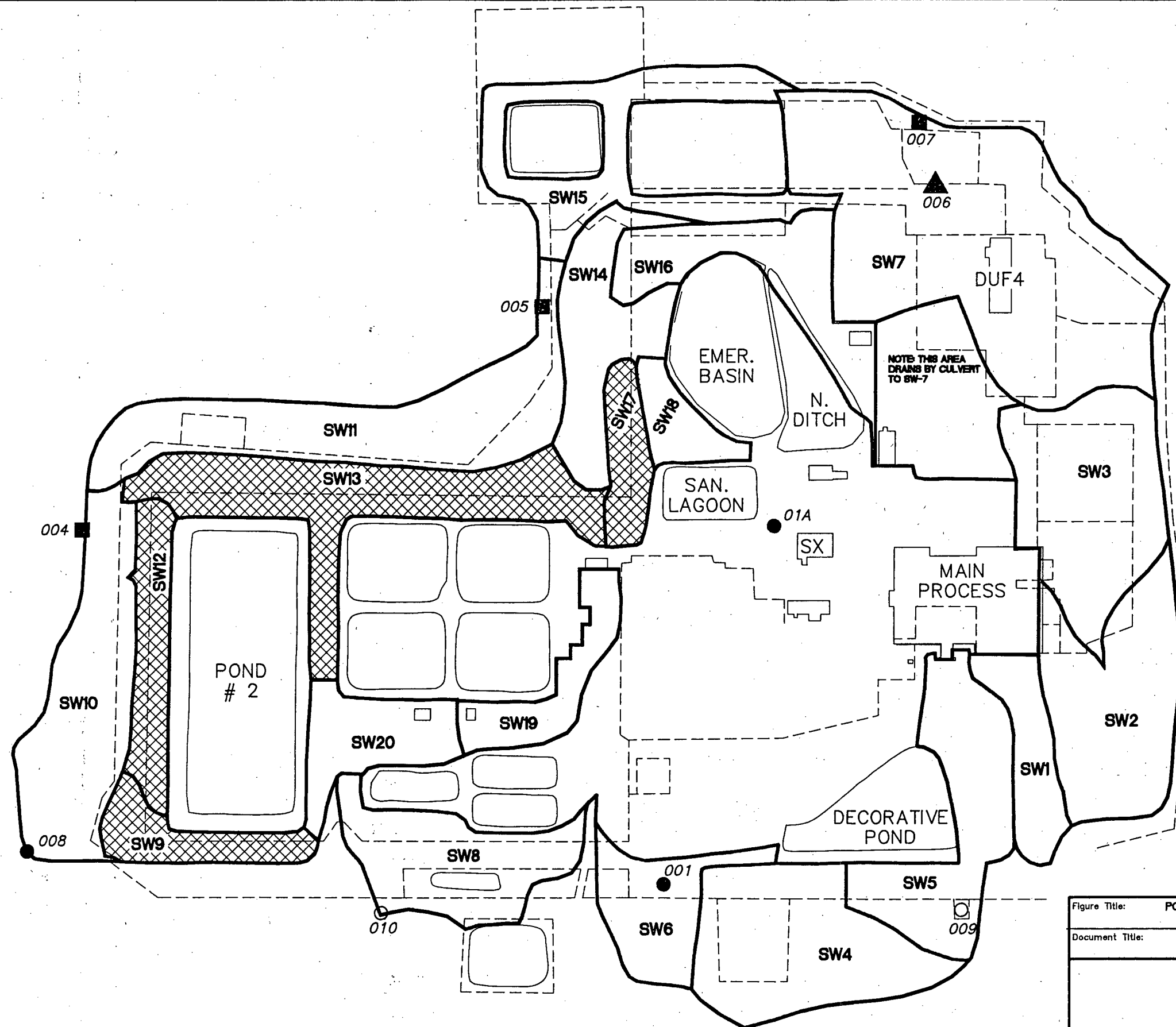
LEGEND

- 004 INACTIVE OUTFALL
- 008 OUTFALL REGULATED BY PERMIT
- ▲ 006 DISCONTINUED OUTFALL
- 009 SFC MONITORED OUTFALL
- FENCE
- DRAINAGE BASIN BORDER
- ▨ POTENTIAL SOURCE OF FLUORIDE
- SW3 DRAINAGE BASIN

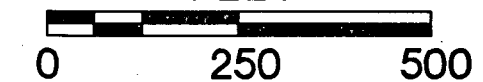
NOTES:

1. INACTIVE = NO LONGER MONITORED SINCE FLOW IS DIVERTED TO OUTFALL 008
2. DISCONTINUED = NO LONGER REGULATED BY PERMIT
3. OUTFALLS 002 AND 003 ARE OUTSIDE LIMITS OF THIS EXHIBIT

Figure Title: POTENTIAL SOURCE OF FLUORIDE DURING EVENT No. 1		Client: SEQUOYAH FUELS CORPORATION	
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		FIGURE NO.: 13	



SCALE
FEET

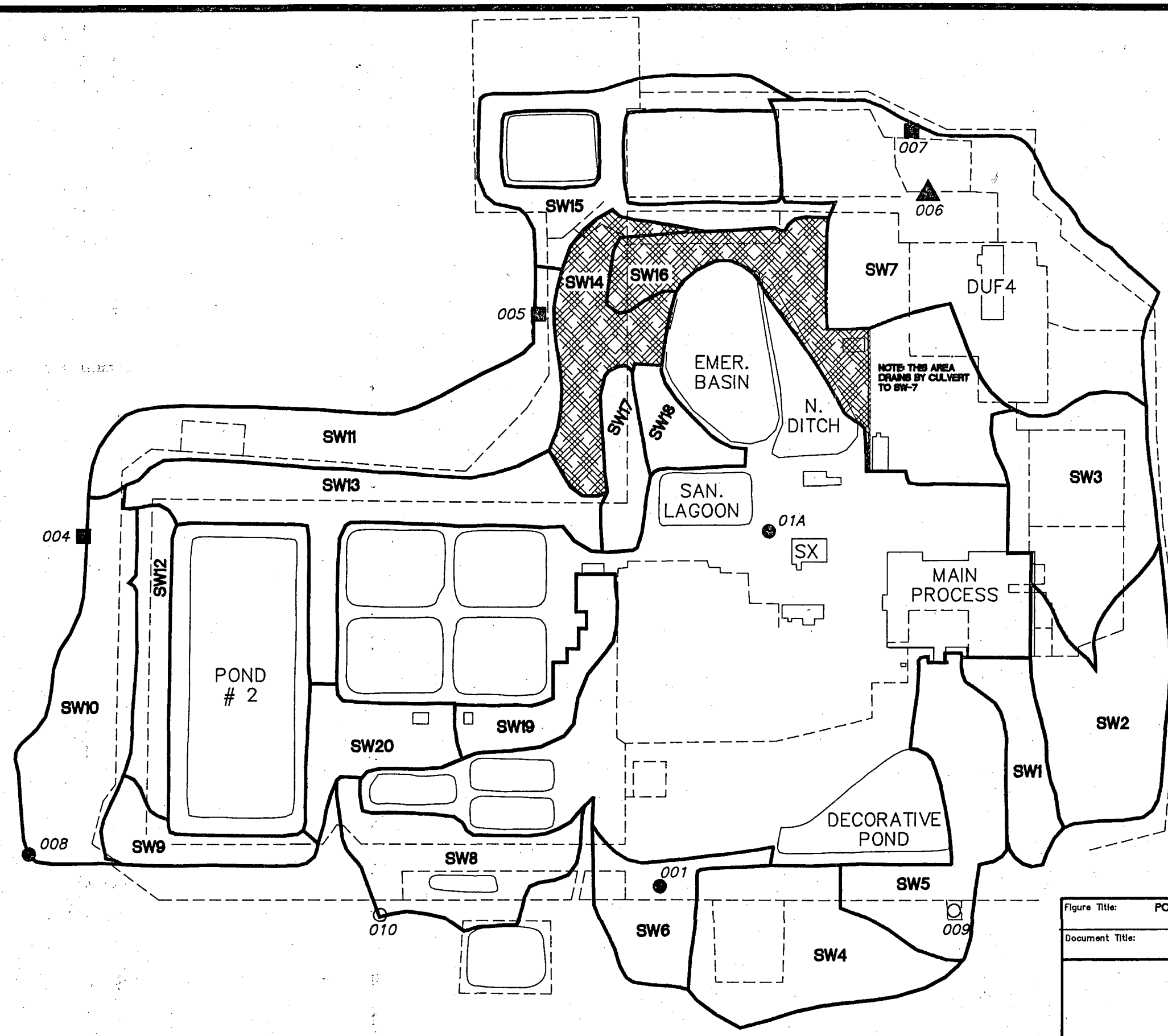


LEGEND

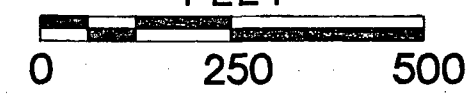
- 004 INACTIVE OUTFALL
- 008 OUTFALL REGULATED BY PERMIT
- ▲ 006 DISCONTINUED OUTFALL
- 009 SFC MONITORED OUTFALL
- FENCE
- DRAINAGE BASIN BORDER
- ▨ POTENTIAL SOURCE OF NITRATE
- SW3 DRAINAGE BASIN

- NOTES:
1. INACTIVE = NO LONGER MONITORED SINCE FLOW IS DIVERTED TO OUTFALL 008
 2. DISCONTINUED = NO LONGER REGULATED BY PERMIT
 3. OUTFALLS 002 AND 003 ARE OUTSIDE LIMITS OF THIS EXHIBIT

Figure Title: POTENTIAL SOURCE OF NITRATE DURING EVENT No. 1		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: JULY, 1991	PREPARED BY: JH
		SCALE: 1" = 250'	CHECKED BY: PW
		PROJECT NO: 90067 N76	DRAFTED BY: RL, SL
		FIGURE NO.: 14	



SCALE
FEET



LEGEND

- 004 INACTIVE OUTFALL
- 008 OUTFALL REGULATED BY PERMIT
- ▲ 006 DISCONTINUED OUTFALL
- 009 SFC MONITORED OUTFALL
- FENCE
- DRAINAGE BASIN BORDER
- ▨ POTENTIAL SOURCE OF URANIUM
- SW3 DRAINAGE BASIN

- NOTES:
1. INACTIVE = NO LONGER MONITORED SINCE FLOW IS DIVERTED TO OUTFALL 008
 2. DISCONTINUED = NO LONGER REGULATED BY PERMIT
 3. OUTFALLS 002 AND 003 ARE OUTSIDE LIMITS OF THIS EXHIBIT

Figure Title: POTENTIAL SOURCE OF URANIUM DURING EVENT No. 1		Client: SECUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: JULY, 1991	PREPARED BY: JH
		SCALE: 1" = 250'	CHECKED BY: PW
		PROJECT NO: 90067 N78	DRAFTED BY: RL, SL
		FIGURE NO.: 15	

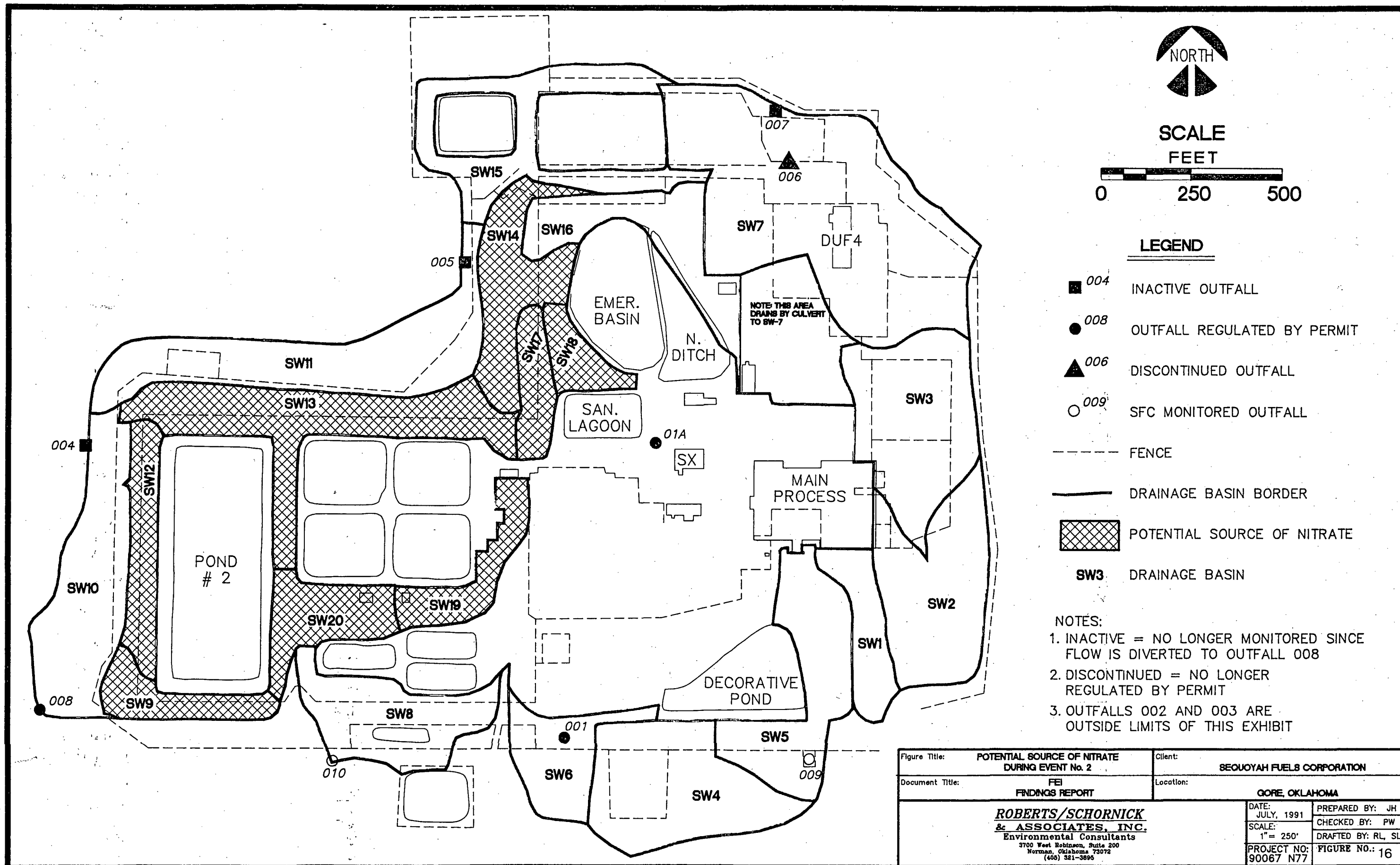
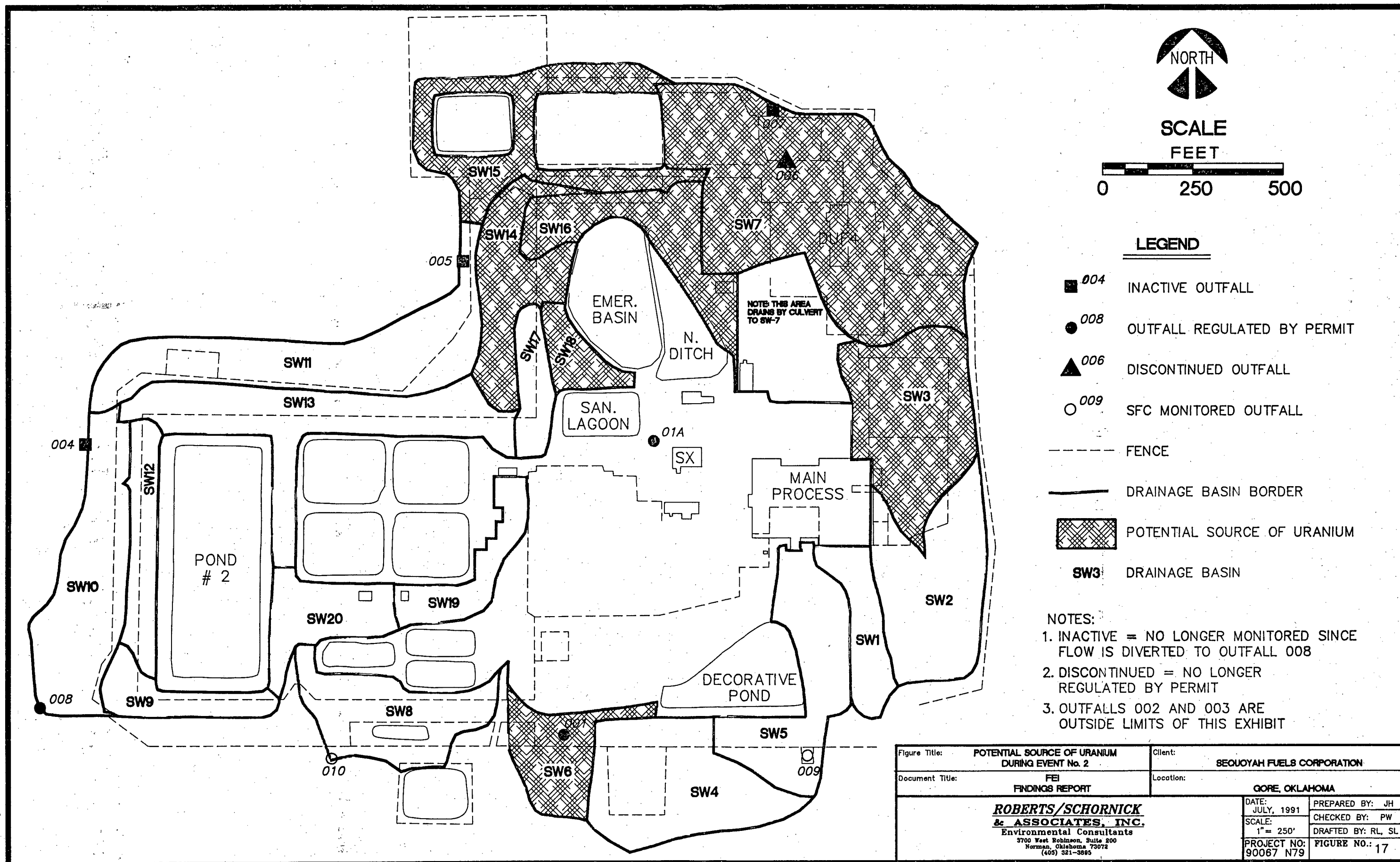
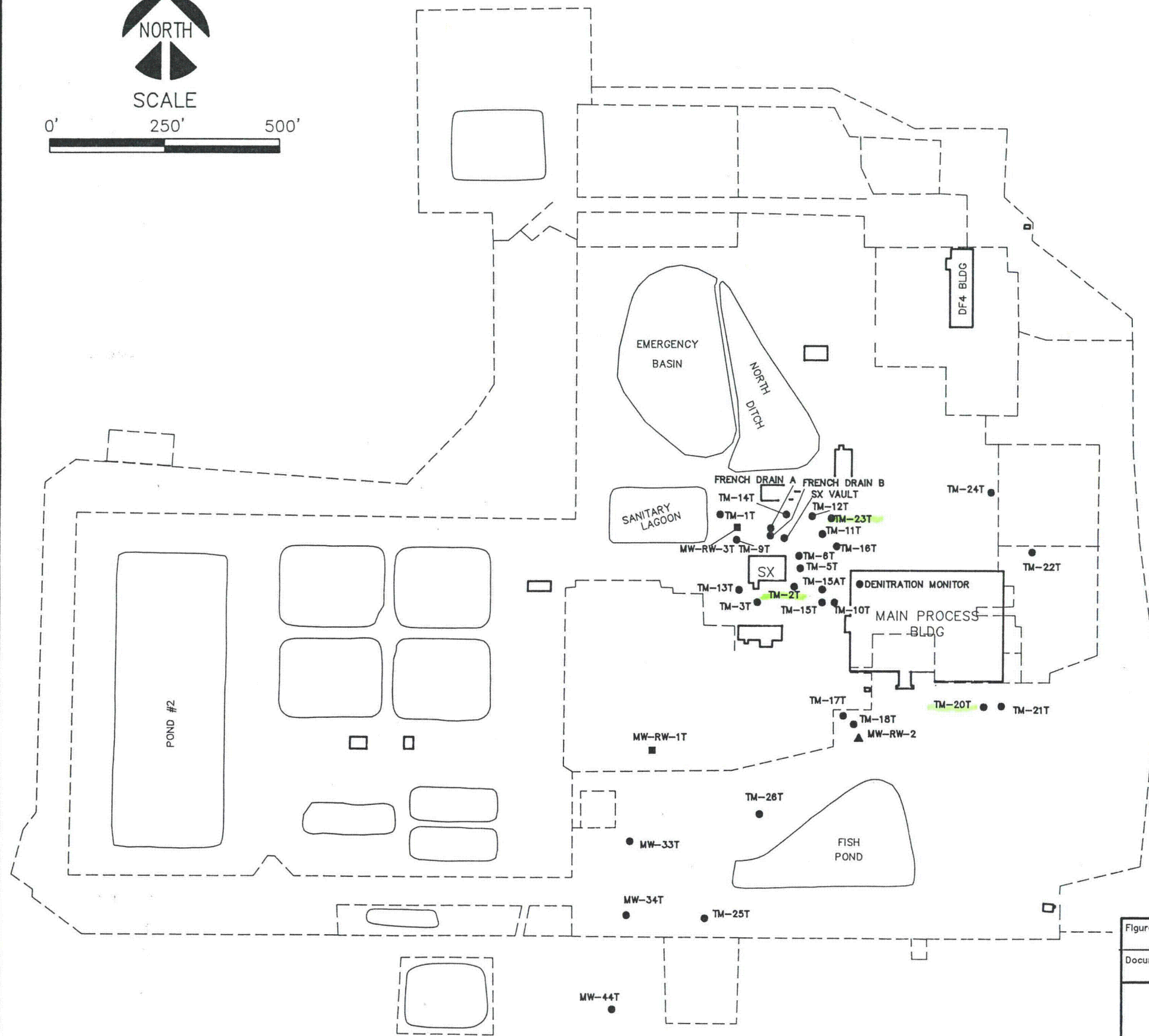
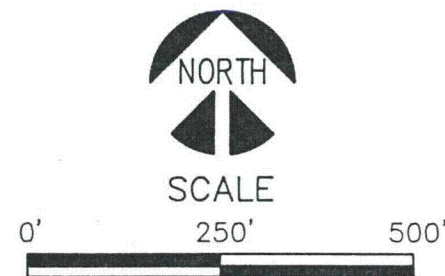


Figure Title:	POTENTIAL SOURCE OF NITRATE DURING EVENT No. 2	Client:	SEOUYAH FUELS CORPORATION	
Document Title:	FEI FINDINGS REPORT	Location:	GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE:	JULY, 1991	
		SCALE:	1" = 250'	
		PROJECT NO:	90067 N77	
		FIGURE NO.:	16	





LEGEND

- TM-15 TRENCH MONITOR STATION AND/OR RECOVERY MONITOR
- MW-RW-1T COMBINATION STREAM RECOVERY WELL
- ▲ MW-RW-2 GROUNDWATER RECOVERY WELL
- NO TRENCH MONITORS: 4,7,8, AND 19

Figure Title: LOCATION OF UTILITY MONITORS AND UTILITY TRENCH RECOVERY MONITORS/WELLS		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 S07	DRAFTED BY: RML
		FIGURE NO.: 18	

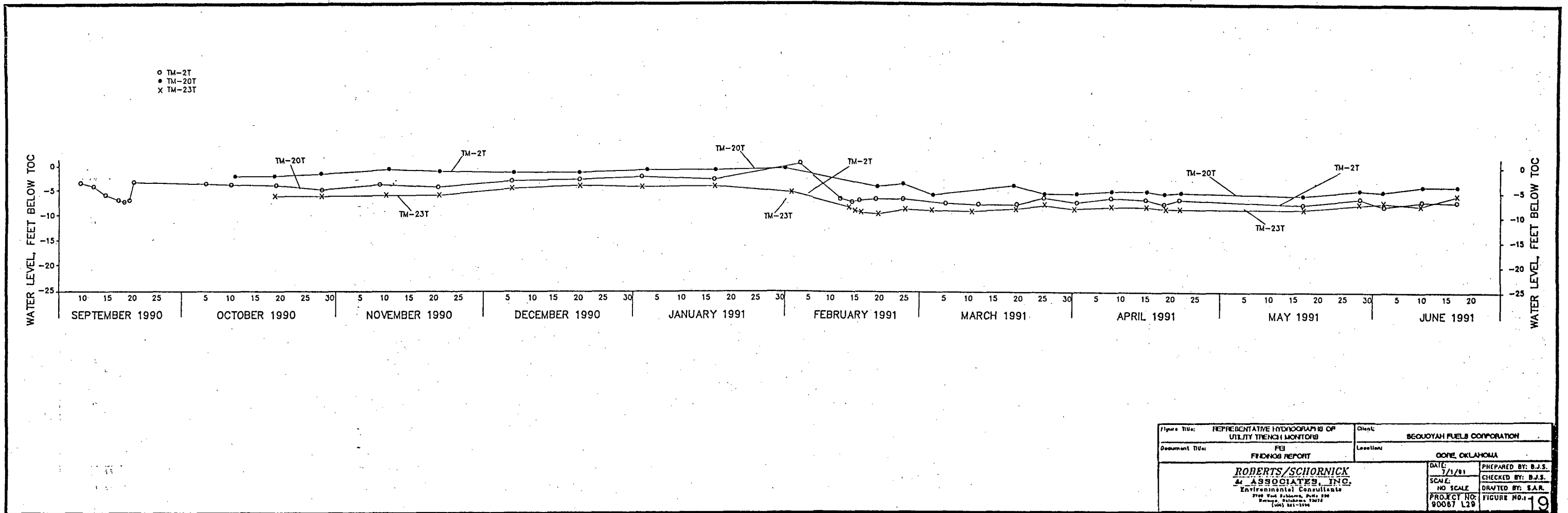
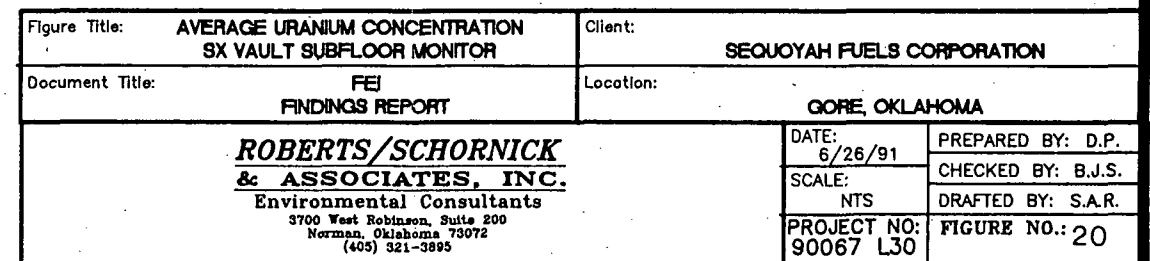
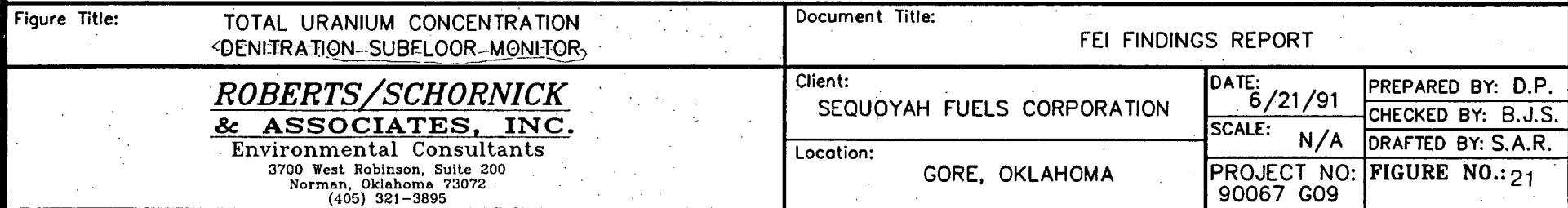


Figure Title:	REPRESENTATIVE HYDROGRAPH OF UTILITY TRENCH MONITORS	Client:	BEQUOYAH FUELS CORPORATION
Document Title:	FEI FINDING REPORT	Location:	COONE, OKLAHOMA
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 2700 West Oklahoma, Suite 200 Norman, Oklahoma 73072 (405) 821-1546		DATE:	7/1/91
		SCALE:	NO SCALE
		PROJECT NO:	90087 L29
		FIGURE NO:	19
		PREPARED BY:	B.J.S.
		CHECKED BY:	B.J.S.
		DRAFTED BY:	S.A.R.

TOTAL URANIUM CONCENTRATION (G/L)

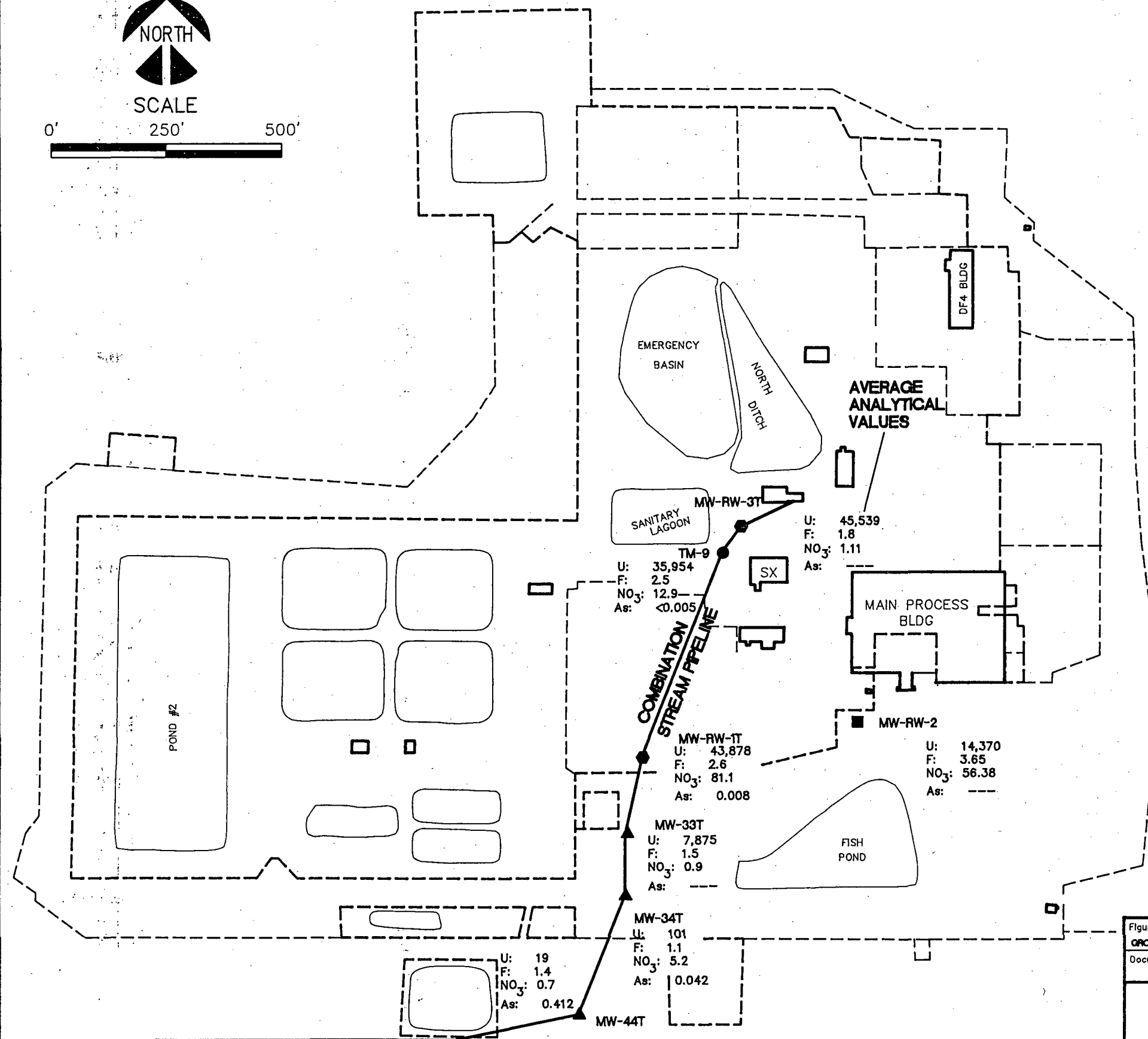






SCALE

0' 250' 500'



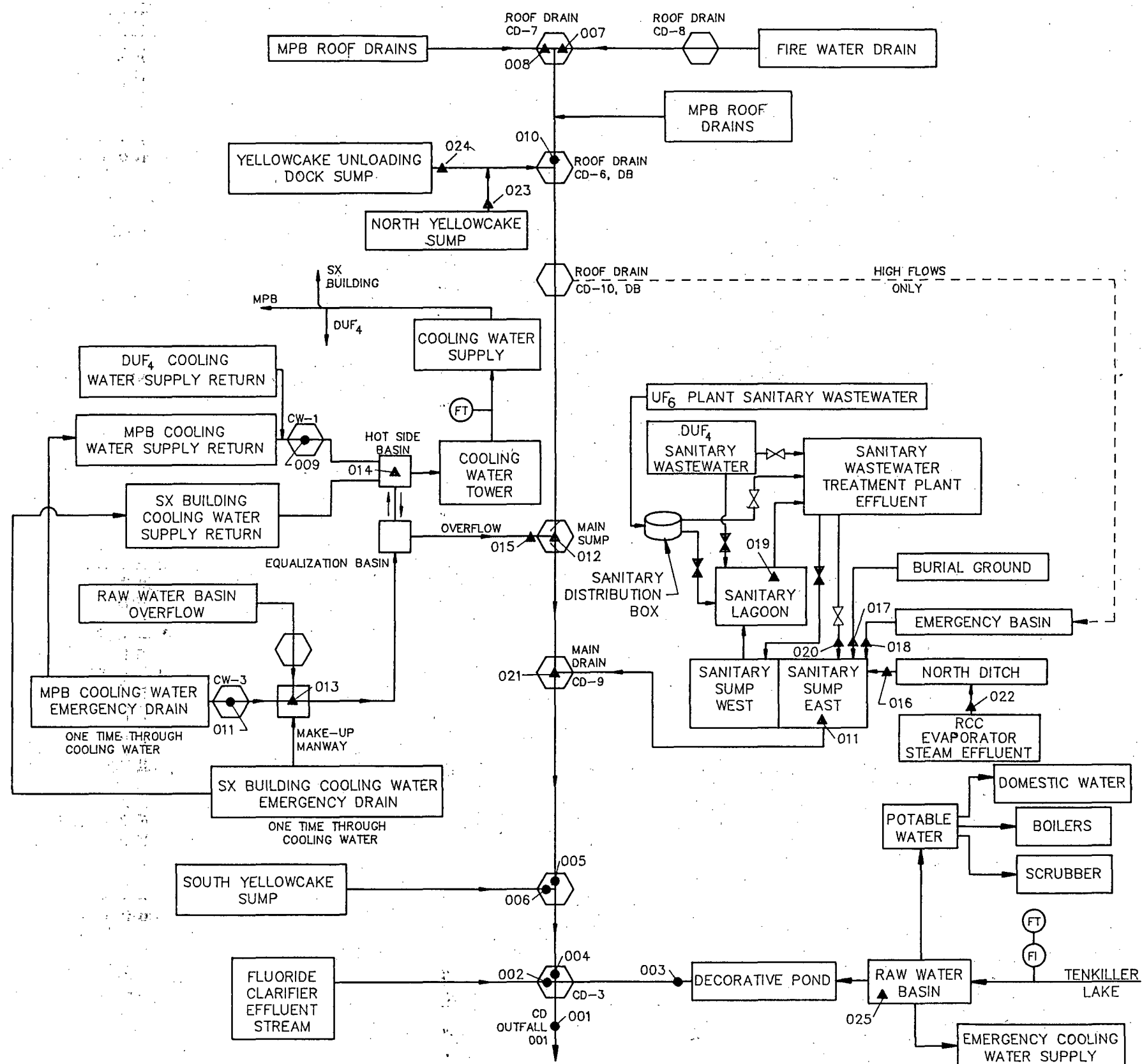
LEGEND

- MW-33T ▲ COMBINATION STREAM TRENCH BACKFILL MONITORING WELL
- TM-9 ● COMBINATION STREAM TRENCH BACKFILL MONITOR AND RECOVERY SUMP
- MW-RW-3T ● COMBINATION STREAM TRENCH BACKFILL RECOVERY WELL
- MW-RW-2 ■ GROUNDWATER RECOVERY WELL

KEY TO ANALYTICAL PARAMETERS SHOWN:

- U: TOTAL URANIUM, UG/L
- F: FLUORIDE, MG/L
- NO₃: NITRATE AS N, MG/L
- As: TOTAL ARSENIC, MG/L

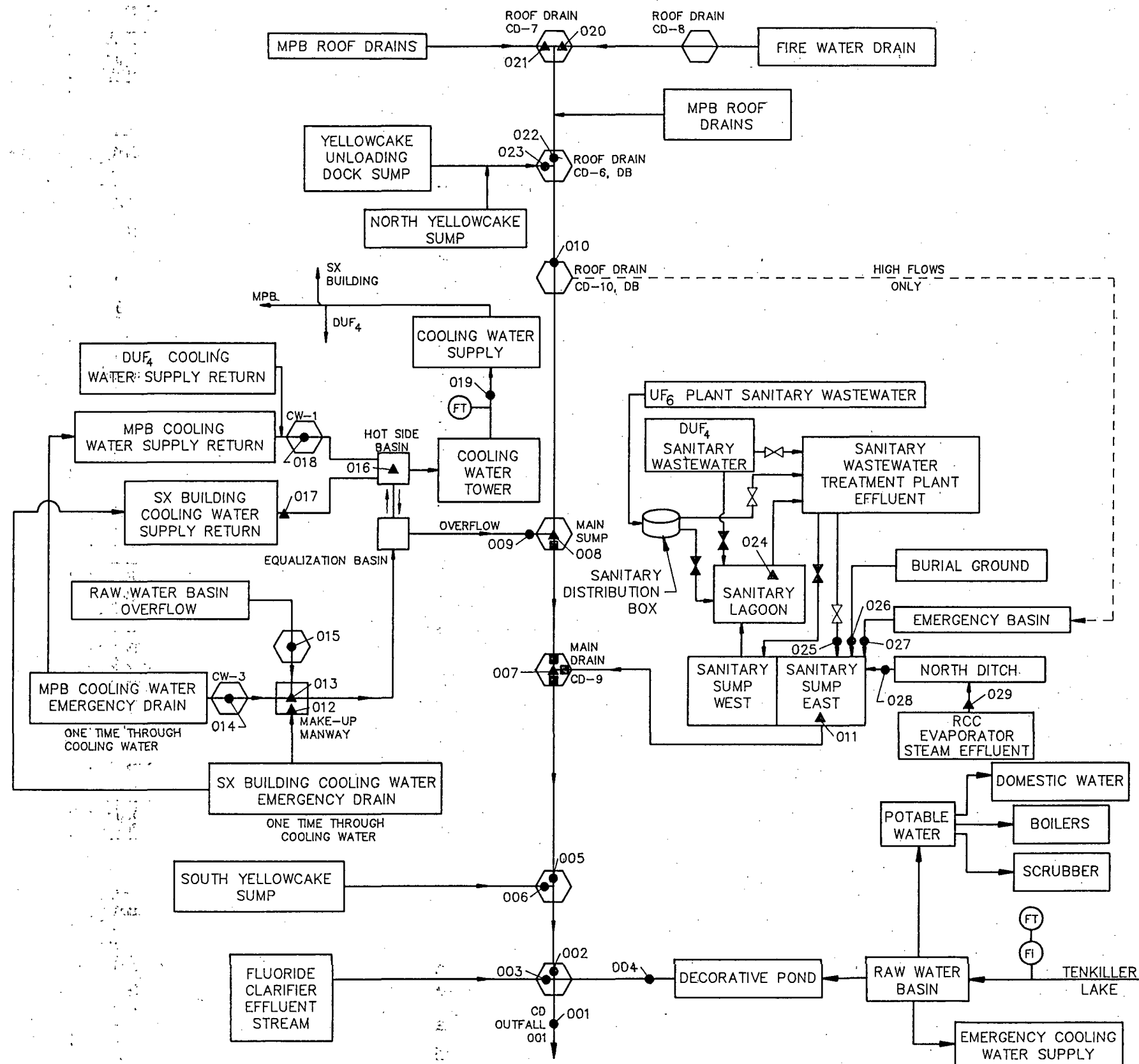
Figure Title: LOCATION OF COMBINATION STREAM TRENCH MONITORS, GROUNDWATER RECOVERY WELLS, AND AVERAGE ANALYTICAL VALUES		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 S10	DRAFTED BY: RML
		FIGURE NO.: 22	



LEGEND

- SAMPLE & FLOW MEASUREMENT
- ▲ SAMPLE ONLY
- X VALVE, NORMALLY OPEN
- ⌵ VALVE, NORMALLY CLOSED
- (FT) FLOW TOTALIZER
- (FI) FLOW INDICATOR
- CD COMBINATION DRAIN
- CW COOLING WATER
- MPB MAIN PROCESS BUILDING
- SX SOLVENT EXTRACTION BUILDING
- UF₆ URANIUM HEXAFLUORIDE
- DUF₄ DEPLETED URANIUM TETRAFLUORIDE

Figure Title: COMBINATION STREAM DRAIN INVESTIGATION SAMPLING/FLOW MONITORING SCHEMATIC, EVENT No. 1		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3896		DATE: MAY, 1991	PREPARED BY: EC
		SCALE: NO SCALE	CHECKED BY: PW
		PROJECT NO: 90067N64	DRAFTED BY: SL
			FIGURE NO.: 23



LEGEND

- SAMPLE & FLOW MEASUREMENT
- ▲ SAMPLE ONLY
- FLOW MEASUREMENT ONLY
- X VALVE, NORMALLY OPEN
- ⌵ VALVE, NORMALLY CLOSED
- ⊕ FLOW TOTALIZER
- ⊖ FLOW INDICATOR
- CD COMBINATION DRAIN
- CW COOLING WATER
- MPB MAIN PROCESS BUILDING
- SX SOLVENT EXTRACTION BUILDING
- UF₆ URANIUM HEXAFLUORIDE
- DUF₄ DEFLEATED URANIUM TETRAFLUORIDE

Figure Title: COMBINATION STREAM DRAIN INVESTIGATION SAMPLING/FLOW MONITORING SCHEMATIC, EVENT No. 2		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: MAY, 1991	PREPARED BY: EC
		SCALE: NO SCALE	CHECKED BY: PW
		PROJECT NO: 90067M87	DRAFTED BY: SL
		FIGURE NO.:	24

TOTAL URANIUM CONCENTRATION (UG/L)

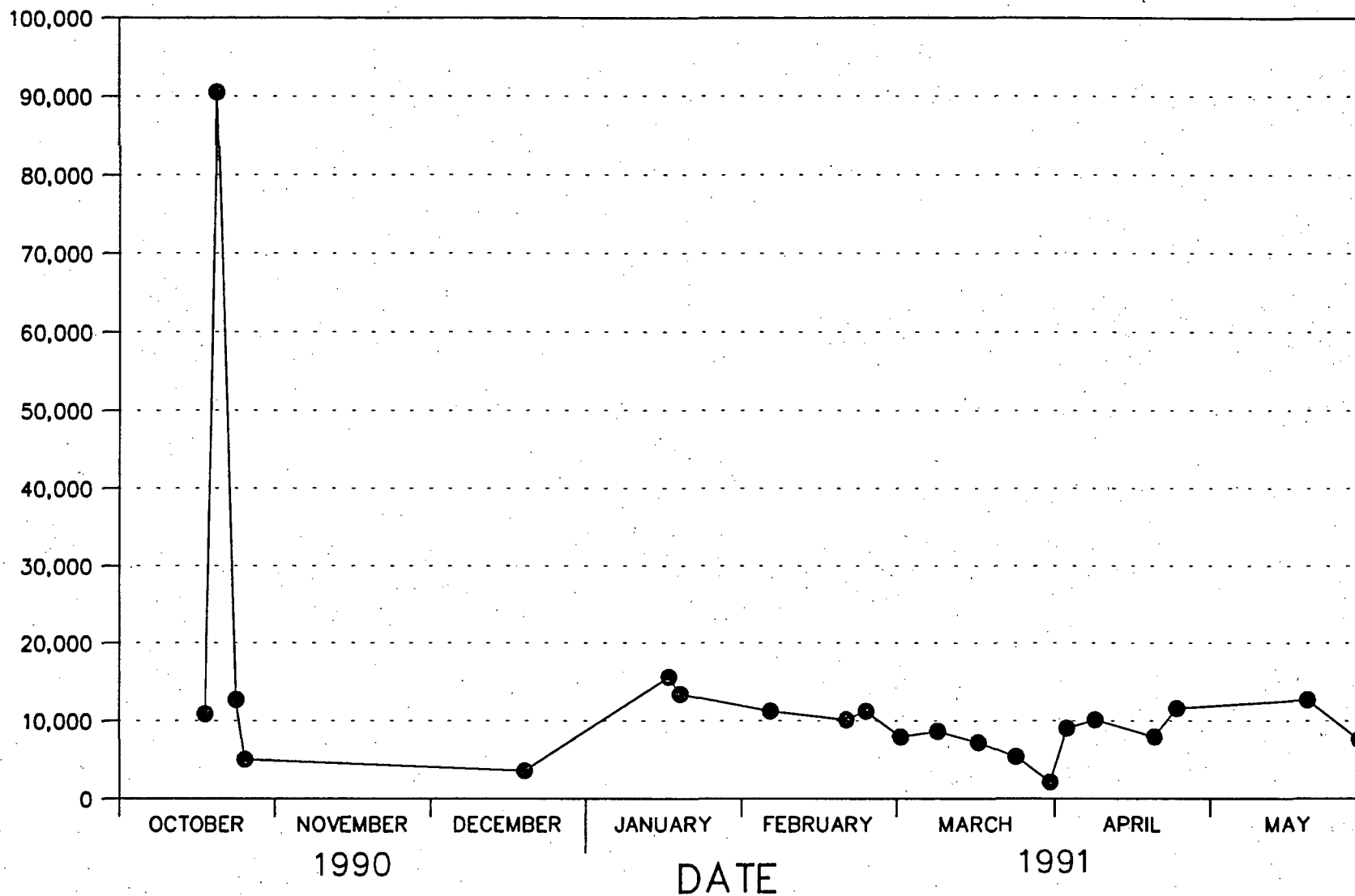


Figure Title: TOTAL URANIUM CONCENTRATION
IN UTILITY TRENCH WELL - MW-33T

Document Title: FEI FINDINGS REPORT

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client: SEQUOYAH FUELS CORPORATION
Location: GORE, OKLAHOMA

DATE: 6/21/91	PREPARED BY: D.P.
SCALE: N/A	CHECKED BY: B.J.S.
PROJECT NO: 90067 G01	DRAFTED BY: S.A.R.
	FIGURE NO.: 25

TOTAL URANIUM CONCENTRATION (UG/L)

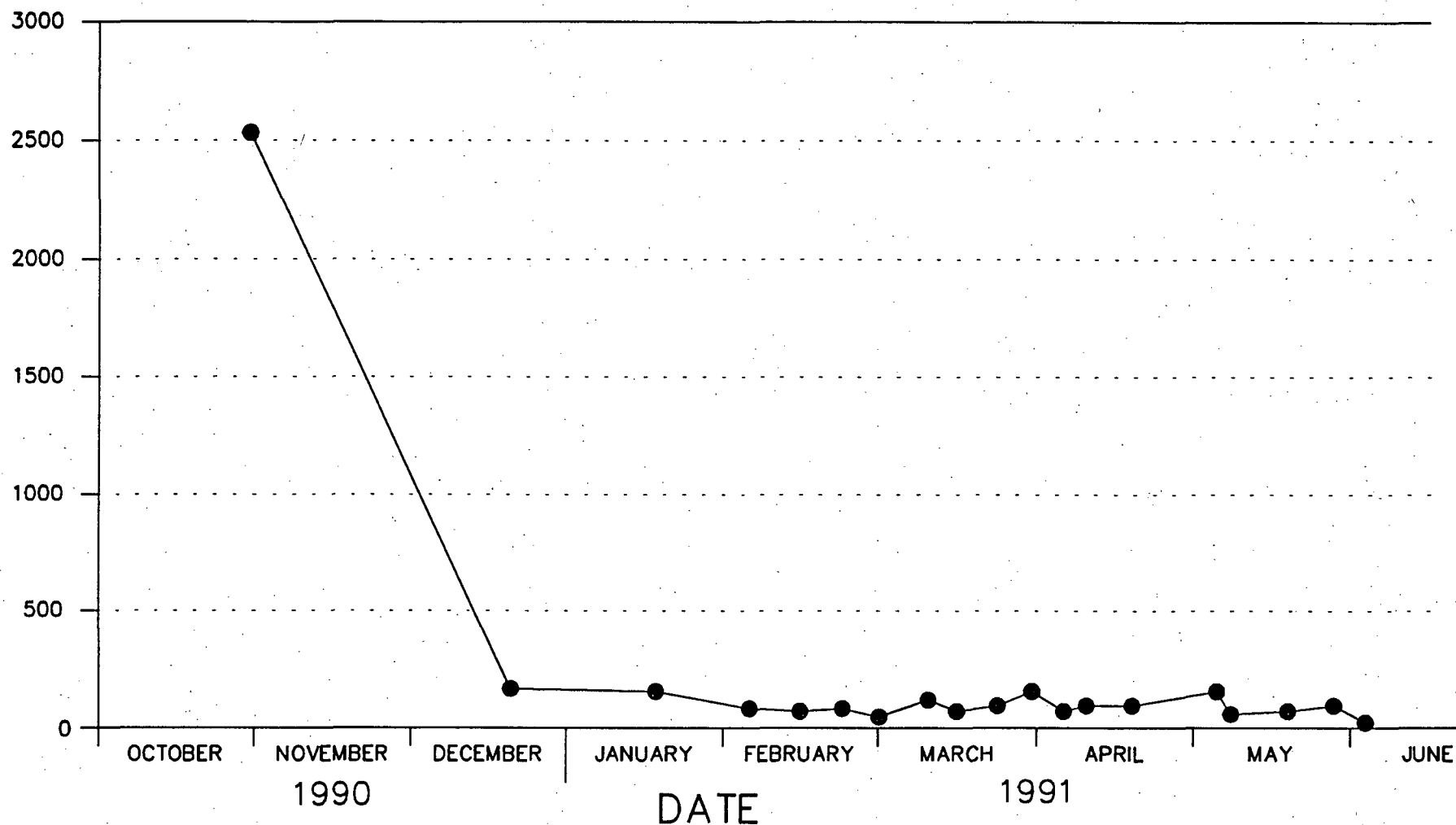


Figure Title: TOTAL URANIUM CONCENTRATION
IN UTILITY TRENCH WELL - MW-34T

Document Title: FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:
SEQUOYAH FUELS CORPORATION

Location:
GORE, OKLAHOMA

DATE:
6/21/91

SCALE: N/A

PROJECT NO:
90067 G02

PREPARED BY: D.P.

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

FIGURE NO.: 26

TOTAL URANIUM CONCENTRATION (UG/L)

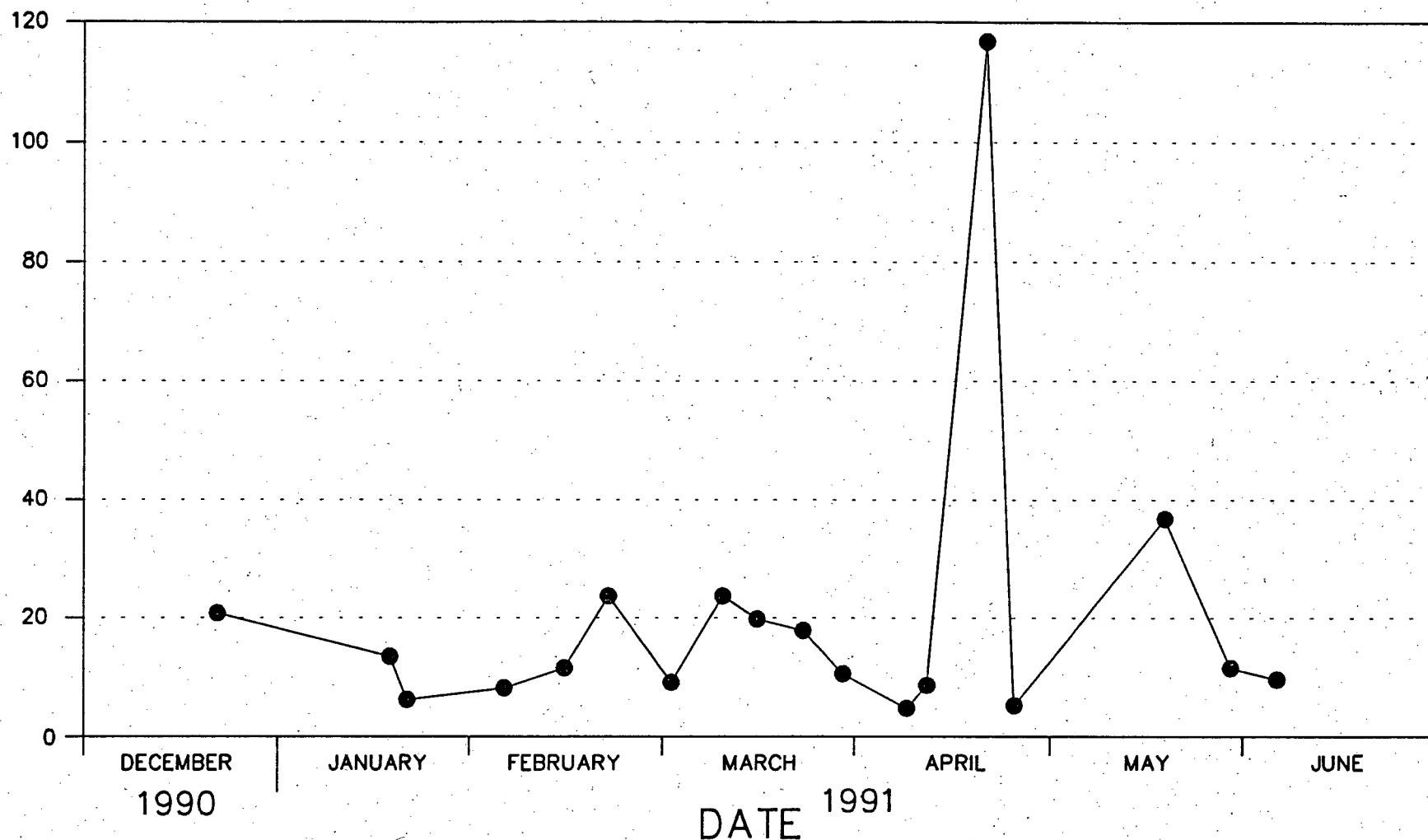


Figure Title: TOTAL URANIUM CONCENTRATION
IN UTILITY TRENCH WELL - MW-44T

Document Title: FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:
SEQUOYAH FUELS CORPORATION

Location:
GORE, OKLAHOMA

DATE:
6/21/91

SCALE: N/A

PROJECT NO:
90067 G06

PREPARED BY: D.P.

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

FIGURE NO.: 27

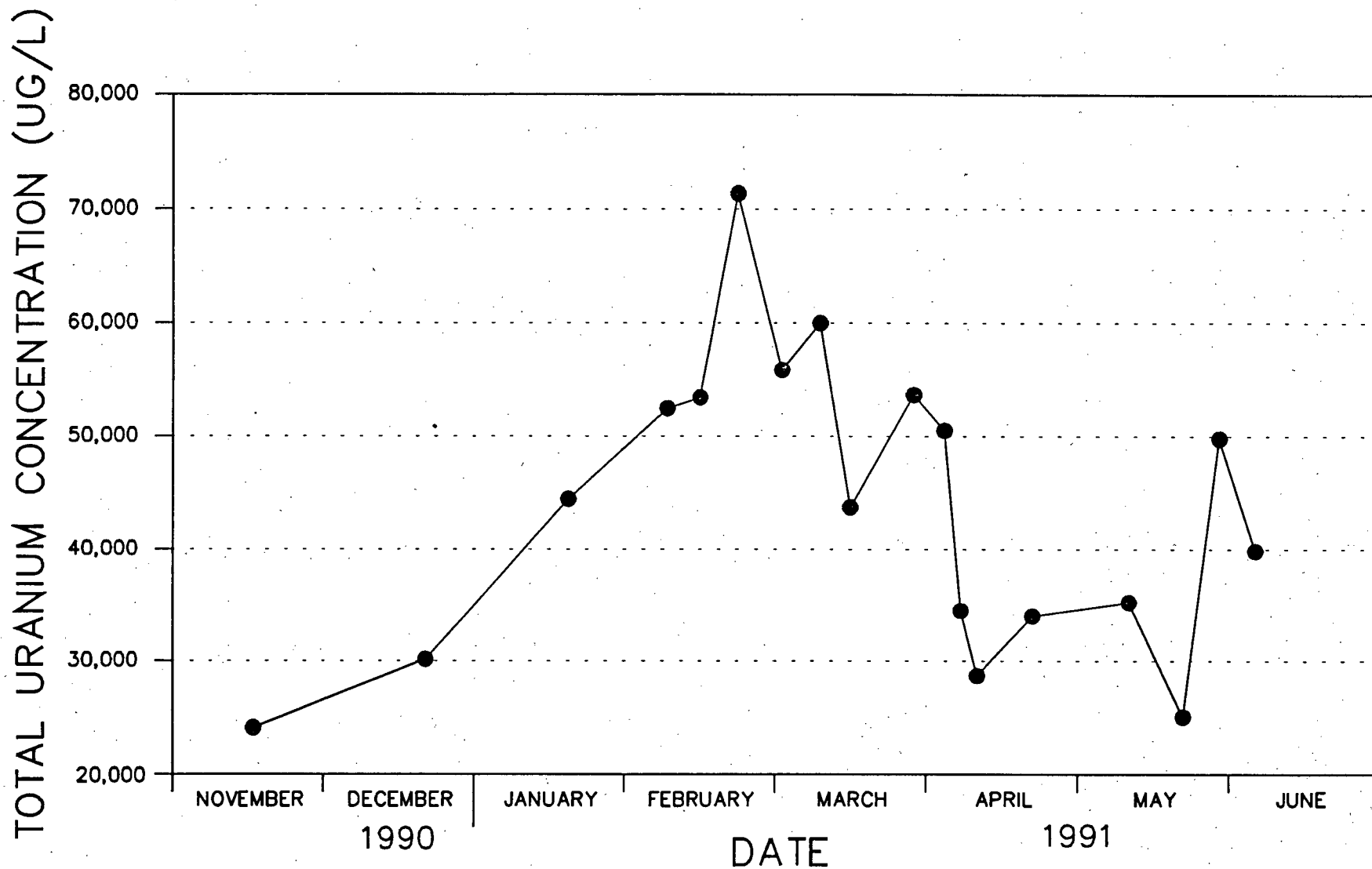


Figure Title: TOTAL URANIUM CONCENTRATION
IN UTILITY TRENCH WELL - MW-RW-1T

Document Title:

FEI FINDINGS REPORT

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
 Environmental Consultants
 3700 West Robinson, Suite 200
 Norman, Oklahoma 73072
 (405) 321-3895

Client:
SEQUOYAH FUELS CORPORATION

Location:
GORE, OKLAHOMA

DATE:
6/21/91

SCALE:
N/A

PROJECT NO:
90067 G04

PREPARED BY: D.P.
CHECKED BY: B.J.S.
DRAFTED BY: S.A.R.

FIGURE NO.: 28

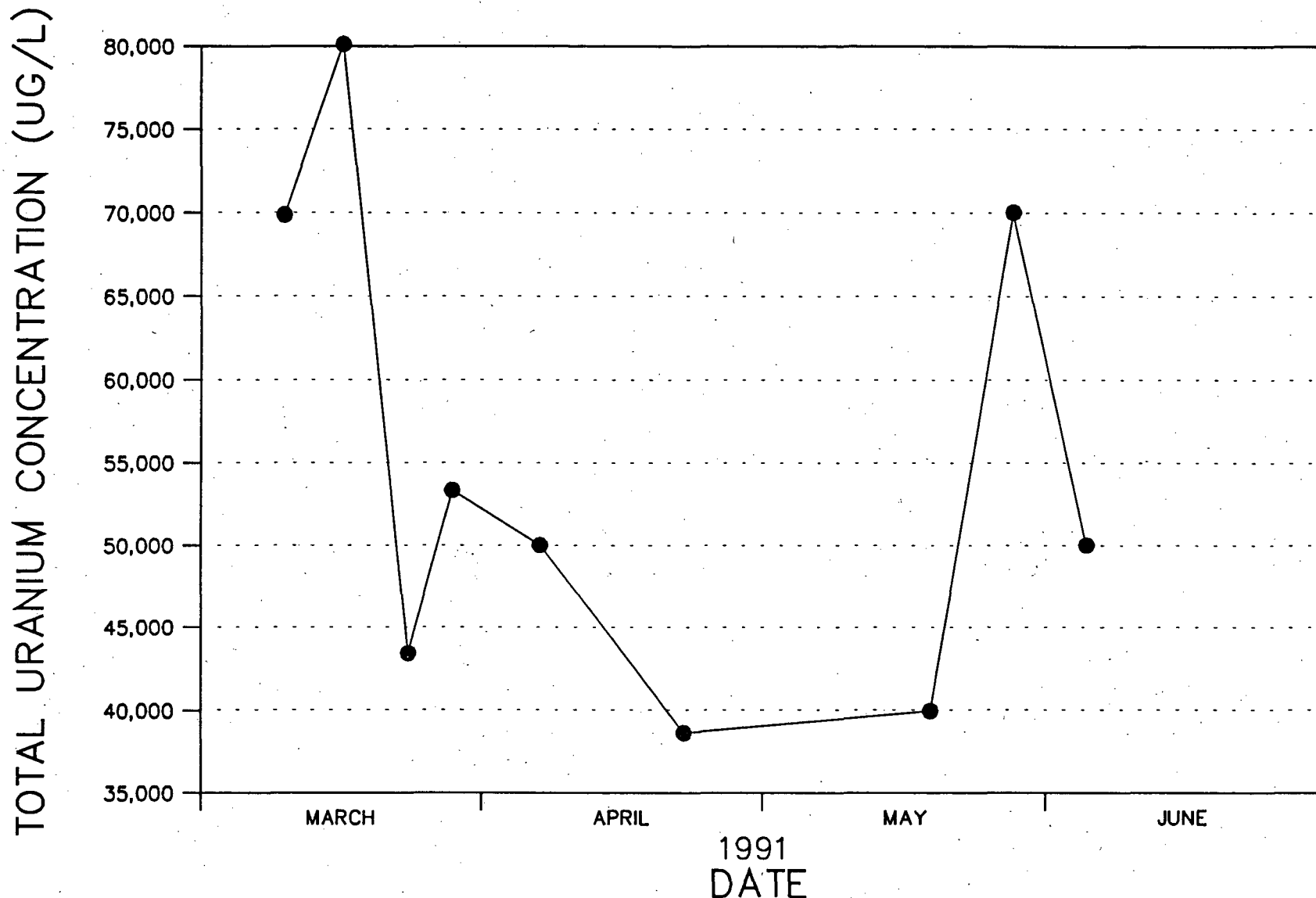


Figure Title: TOTAL URANIUM CONCENTRATION
IN UTILITY TRENCH WELL - MW-RW-3T

Document Title:

FEI FINDINGS REPORT

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:
SEQUOYAH FUELS CORPORATION

Location:
GORE, OKLAHOMA

DATE:
6/21/91

SCALE: N/A

PROJECT NO:
90067 G05

PREPARED BY: D.P.

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

FIGURE NO.: 29

TOTAL URANIUM CONCENTRATION (UG/L)

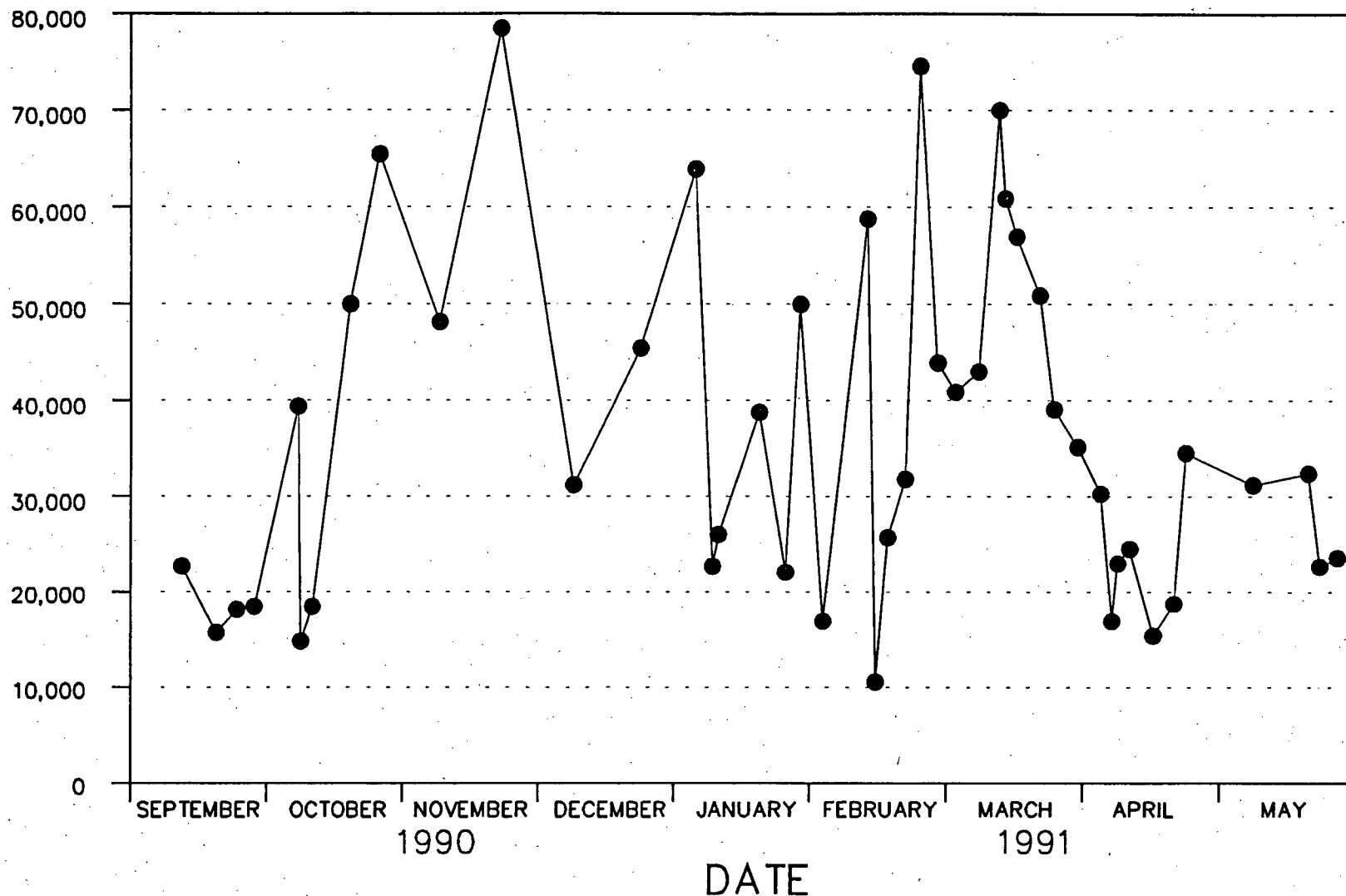


Figure Title: TOTAL URANIUM CONCENTRATION
IN UTILITY TRENCH MONITOR WELL - TM-9T

Document Title: FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:
SEQUOYAH FUELS CORPORATION

Location:
GORE, OKLAHOMA

DATE:
6/21/91
SCALE: N/A

PROJECT NO:
90067 G03

PREPARED BY: D.P.
CHECKED BY: B.J.S.
DRAFTED BY: S.A.R.

FIGURE NO.: 30

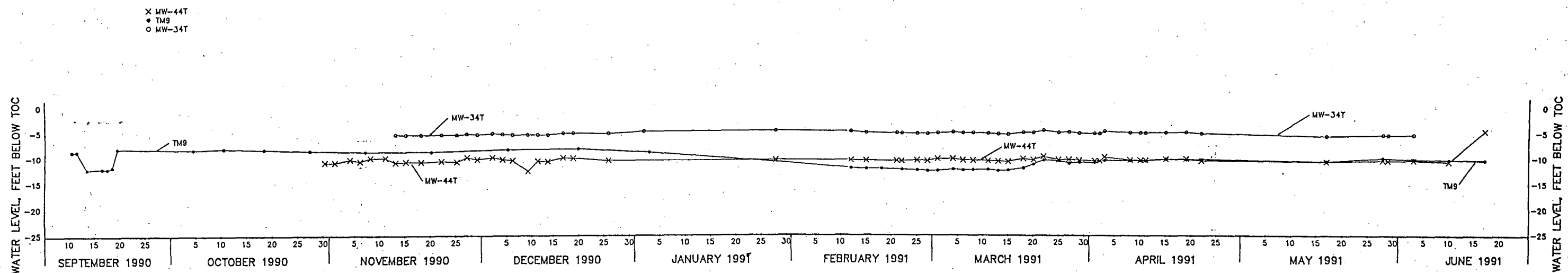


Figure Title: REPRESENTATIVE HYDROGRAPH OF COMBINATION STREAM TRENCH BACKFILL		Client: BEQUOTAH FUELS CORPORATION	
Document Title: FEI FIDRAC REPORT		Location: OORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 2100 Van Buren, Suite 100 Norman, Oklahoma 73061 (405) 211-3491		DATE: JULY, 1990	PREPARED BY: BJS
		SCALE: NO SCALE	CHECKED BY: BJS
		PROJECT NO: 90067 L10	DRAWN BY: SKL
		FIGURE NO. 31	

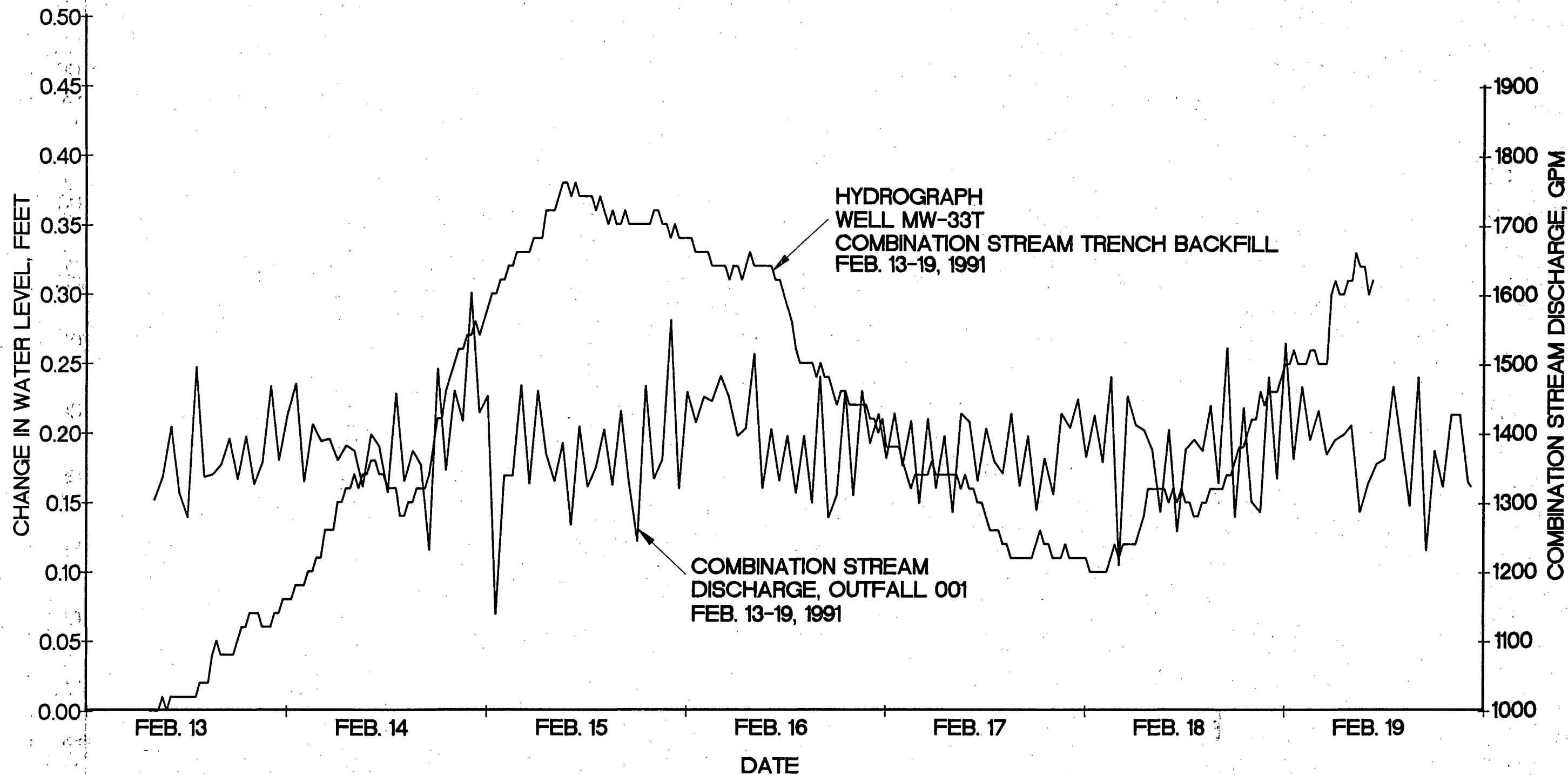


Figure Title: RELATIONSHIP BETWEEN 001 DISCHARGE AND TRENCH WELL MW-33T		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/25/91	PREPARED BY: SL
		SCALE: NTS	CHECKED BY: BJS
		PROJECT NO: 90067 S11	DRAFTED BY: SAR
			FIGURE NO.: 32

FLOW RANGE DURING EVENT NO.2
(11:00 a.m. - 3:15 p.m. APRIL 16, 1991)

MAXIMUM - 1540 GPM (11:20 a.m.)

MINIMUM - 1155 GPM (2:15 p.m.)

NOTE:

FLOW DATA PRESENTED ON THIS STRIP-
CHART IS A PERCENTAGE OF THE
MAXIMUM RECORDABLE FLOW (3500 GPM):

EXAMPLE: AT 11:20 a.m., THE FLOW
RATE IS

$$0.44 \times 3500 = 1540 \text{ GPM}$$

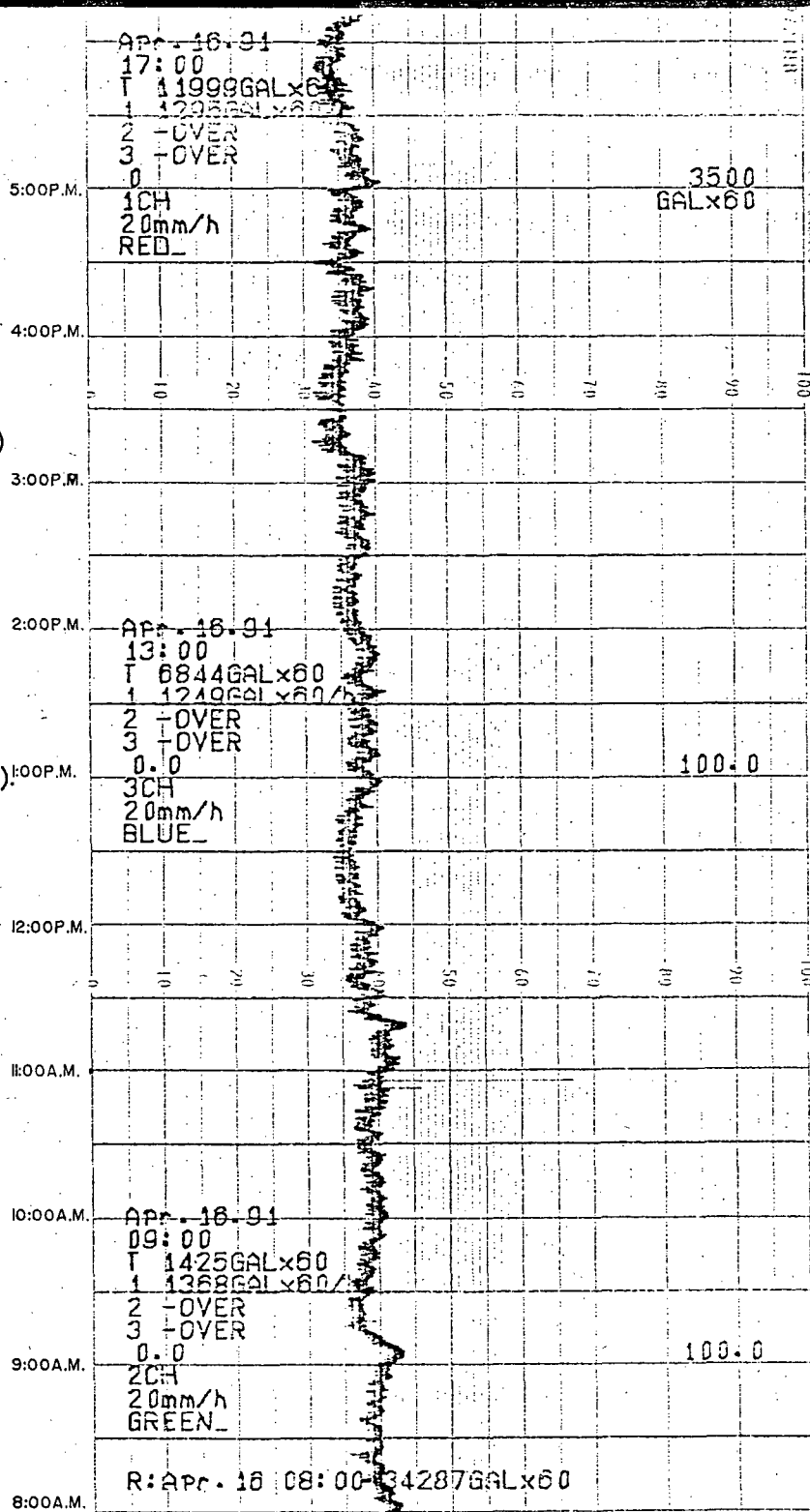


Figure Title: REAL-TIME FLOW MONITORING RESULTS,
OUT FALL 001, EVENT NO. 2 - APRIL 16, 1991

Client:

SEQUOYAH FUELS CORPORATION

Document Title:

FEI
FINDINGS REPORT

Location:

GORE, OKLAHOMA

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 7/1/91

SCALE: N/A

PROJECT NO: 90067 F04

PREPARED BY: E.C.

CHECKED BY: P.W.

DRAFTED BY: S.A.R.

FIGURE NO.: 33

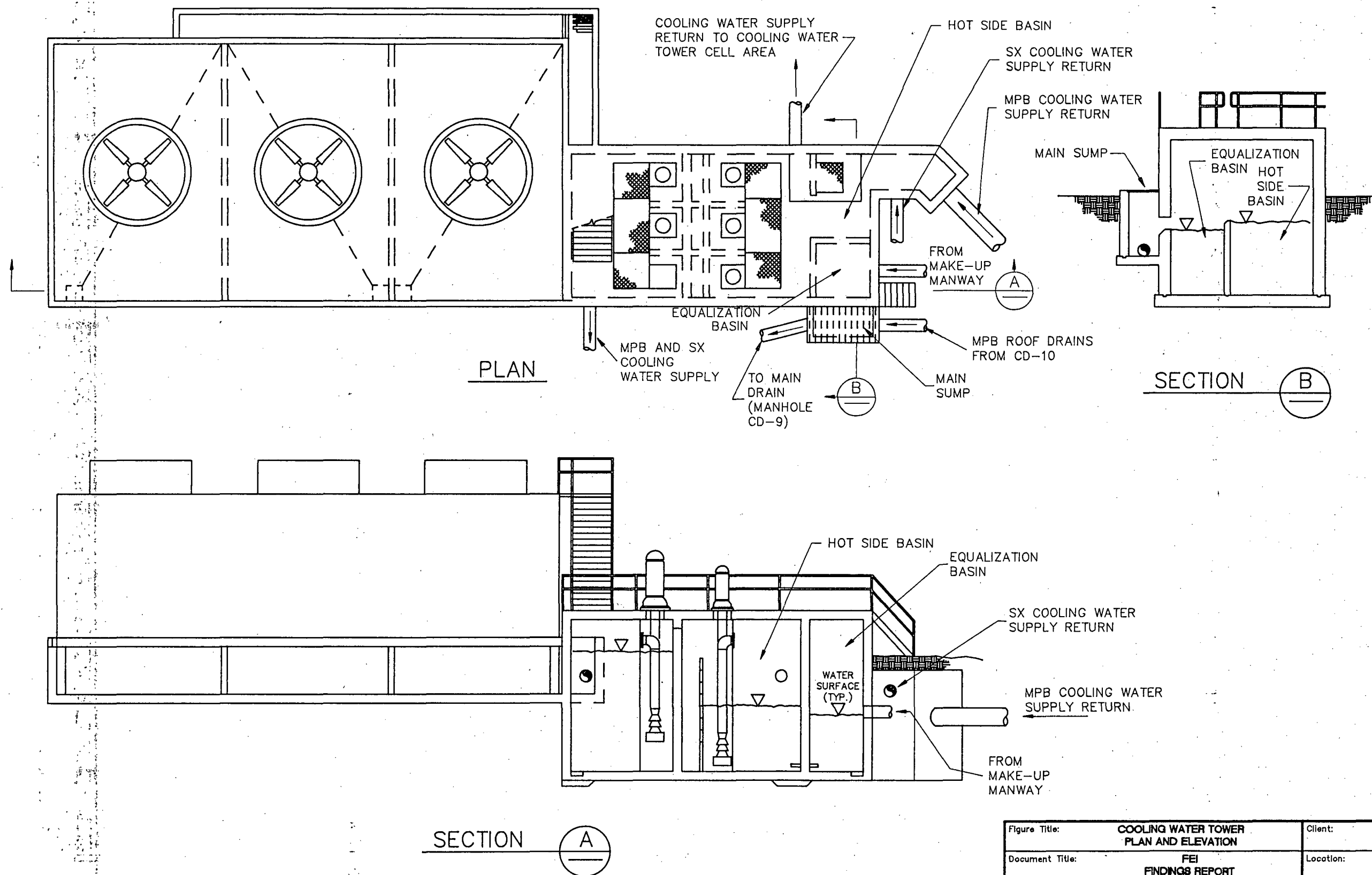
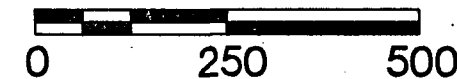


Figure Title: COOLING WATER TOWER PLAN AND ELEVATION		Client: SEOUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 2700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: JULY, 1991	PREPARED BY: EC
		SCALE: NO SCALE	CHECKED BY: PW
		PROJECT NO: 90067 L08	DRAFTED BY: BC
			FIGURE NO.: 34



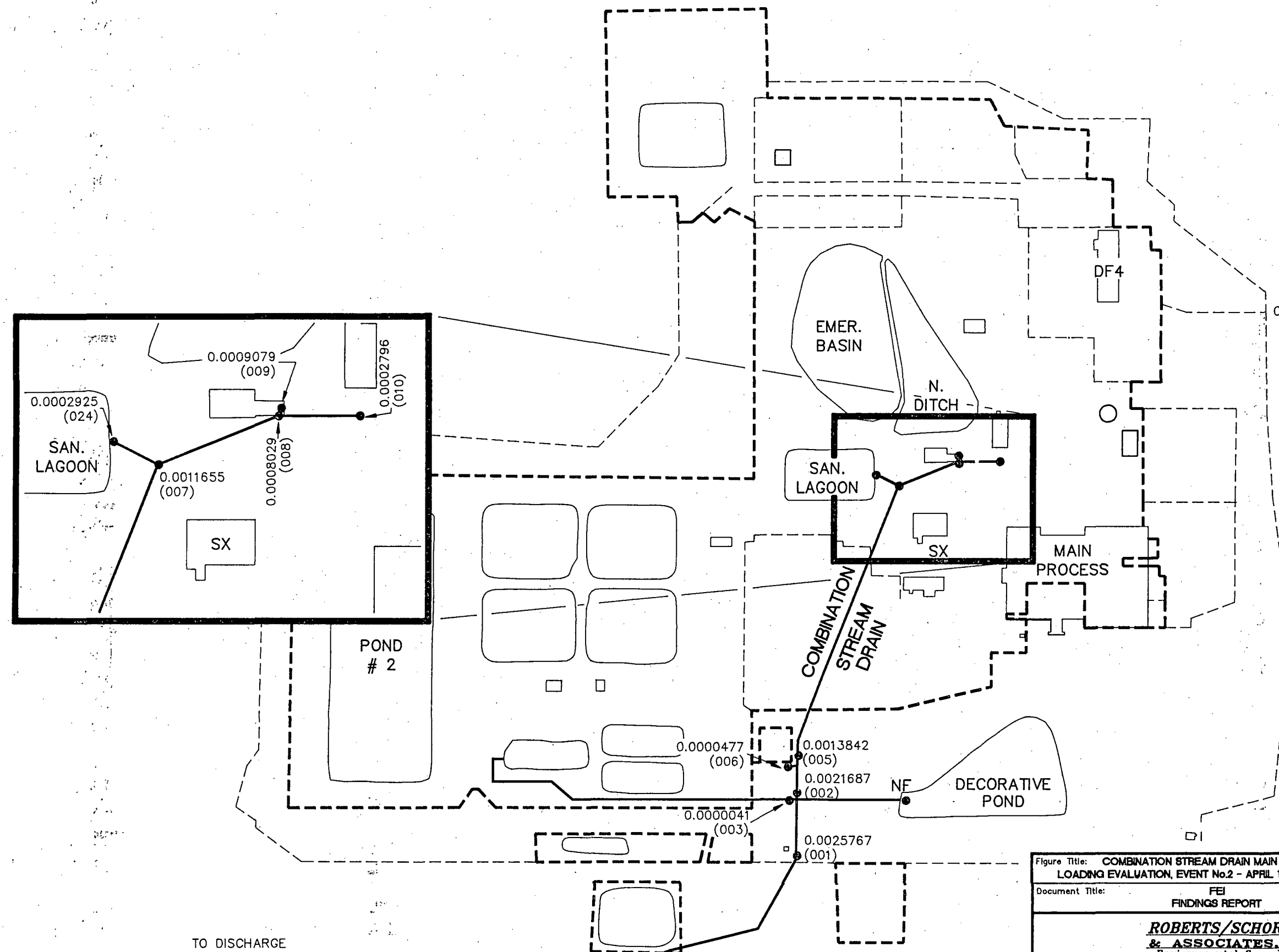
SCALE
FEET



0.0009079
(009) — URANIUM LOADING
(kg/min. URANIUM) FOR
CD MAIN TRUNK MONITORING
STATION 009
(SEE TABLE 24)

NF — NO FLOW

NOTE:
ALL SEGMENTS OF THE CD
ARE NOT DEPICTED IN
THIS FIGURE.



TO DISCHARGE
LOCATION WEST
OF FACILITY

Figure Title: COMBINATION STREAM DRAIN MAIN TRUNK
LOADING EVALUATION, EVENT No.2 - APRIL 16, 1991

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI
FINDINGS REPORT

Location: GORE, OKLAHOMA

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 521-3895

DATE: JULY, 1991	PREPARED BY: EC
SCALE: 1" = 250'	CHECKED BY: PW
PROJECT NO: 90067 L28	DRAFTED BY: RL,SL
	FIGURE NO.: 35



SCALE

0' 250' 500'

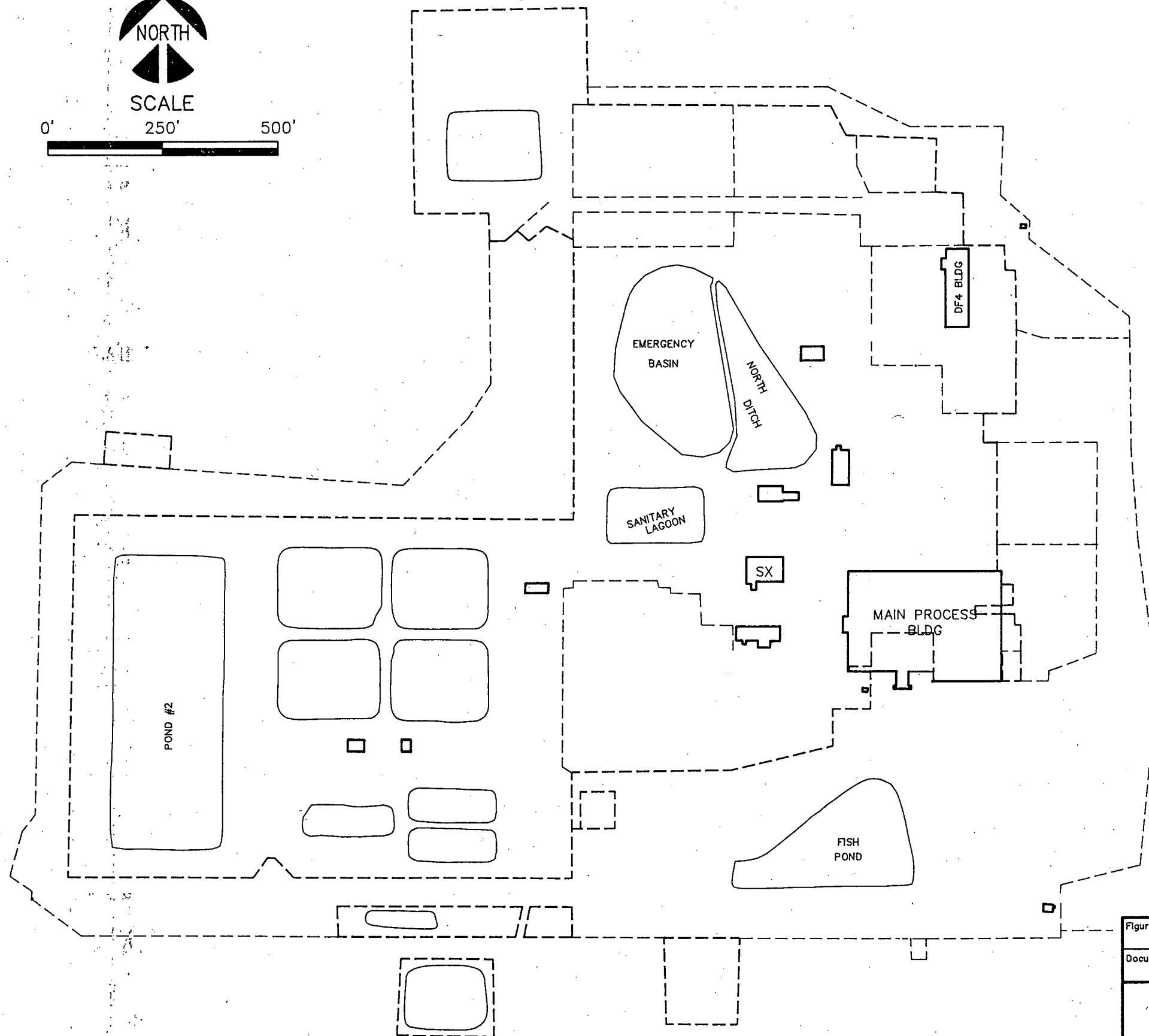
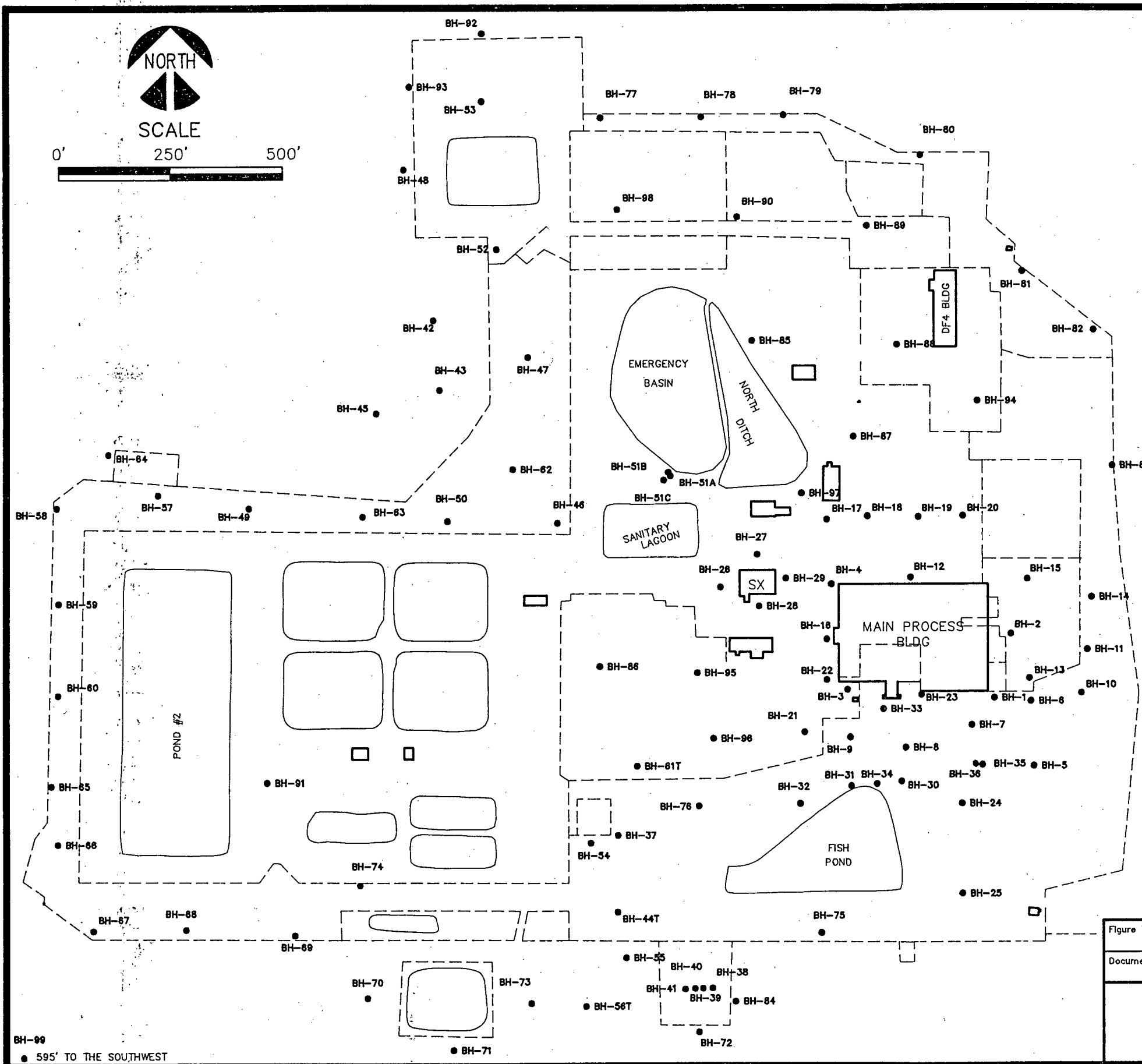


Figure Title:	FACILITY LAYOUT	Client:	SEQUOYAH FUELS CORPORATION	
Document Title:	FEI FINDINGS REPORT	Location:	GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE:	6/14/91	PREPARED BY: RL
		SCALE:	1"=250'	CHECKED BY: B.J.S.
		PROJECT NO:	90067 L39	DRAFTED BY: RML
		FIGURE NO.: 36		

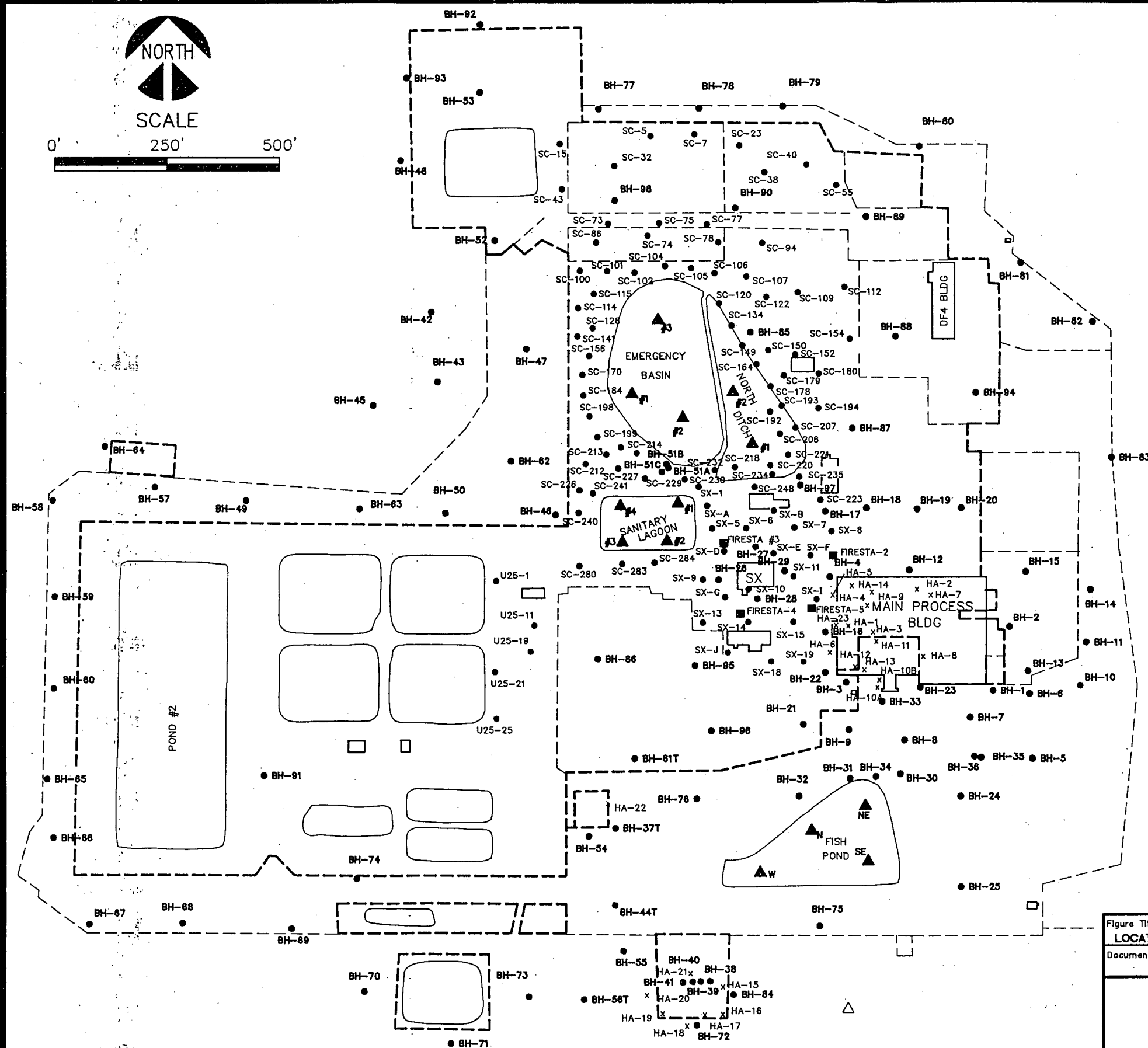


LEGEND

BH-62 ● LOCATION OF LITHOLOGICAL SOIL CHARACTERIZATION BORING

Figure Title: LOCATION OF LITHOLOGICAL CHARACTERIZATION BORINGS		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3893		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N89	DRAFTED BY: RML
		FIGURE NO.: 37	

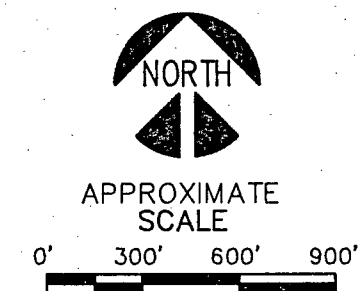
BH-99
● 595' TO THE SOUTHWEST



LEGEND

- SX-6
● BH-82
● SC-114
▲ #2
■ FIRESTA-2
x HA-8
- LOCATION OF CHEMICAL CHARACTERIZATION BORING
- SEDIMENT CHARACTERIZATION SAMPLE SITES
- FIRE STATION MONITORING PIPE
(NOTE: FIRESTA-2 LOCATION APPROXIMATE, REMOVED IN 1987)
- HAND AUGER BORING

Figure Title: LOCATION OF CHEMICAL CHARACTERIZATION BORINGS		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3886		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 S12	DRAFTED BY: RML
		FIGURE NO.: 38	



005-00 ● LOCATION OF 1986 SFC SOIL SAMPLE SITE

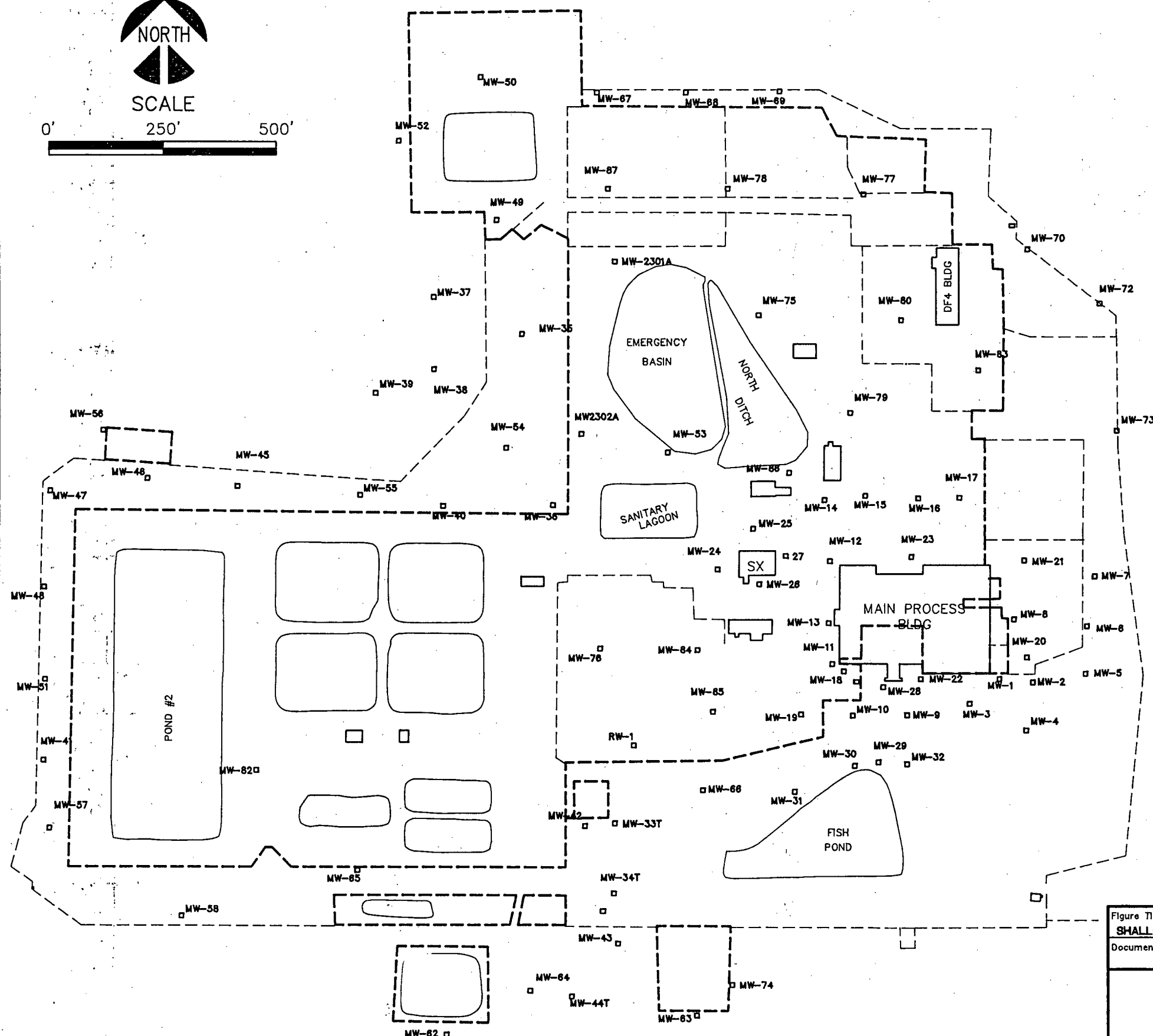
SFC-D □ LOCATION OF JUNE 10, 1991 NRC SOIL SAMPLE SITE

Figure Title:	STREAM SEDIMENT SAMPLING SITES	Client:	SEQUOYAH FUELS CORPORATION
Document Title:	FEI FINDINGS REPORT	Location:	GORE, OKLAHOMA
<p align="center"><u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895</p>		DATE: 6/28/91 SCALE: ~ 1" = 600' PROJECT NO: 90067 L26	PREPARED BY: RL CHECKED BY: B.J.S. DRAFTED BY: RML FIGURE NO.: 39



SCALE

0' 250' 500'



LEGEND

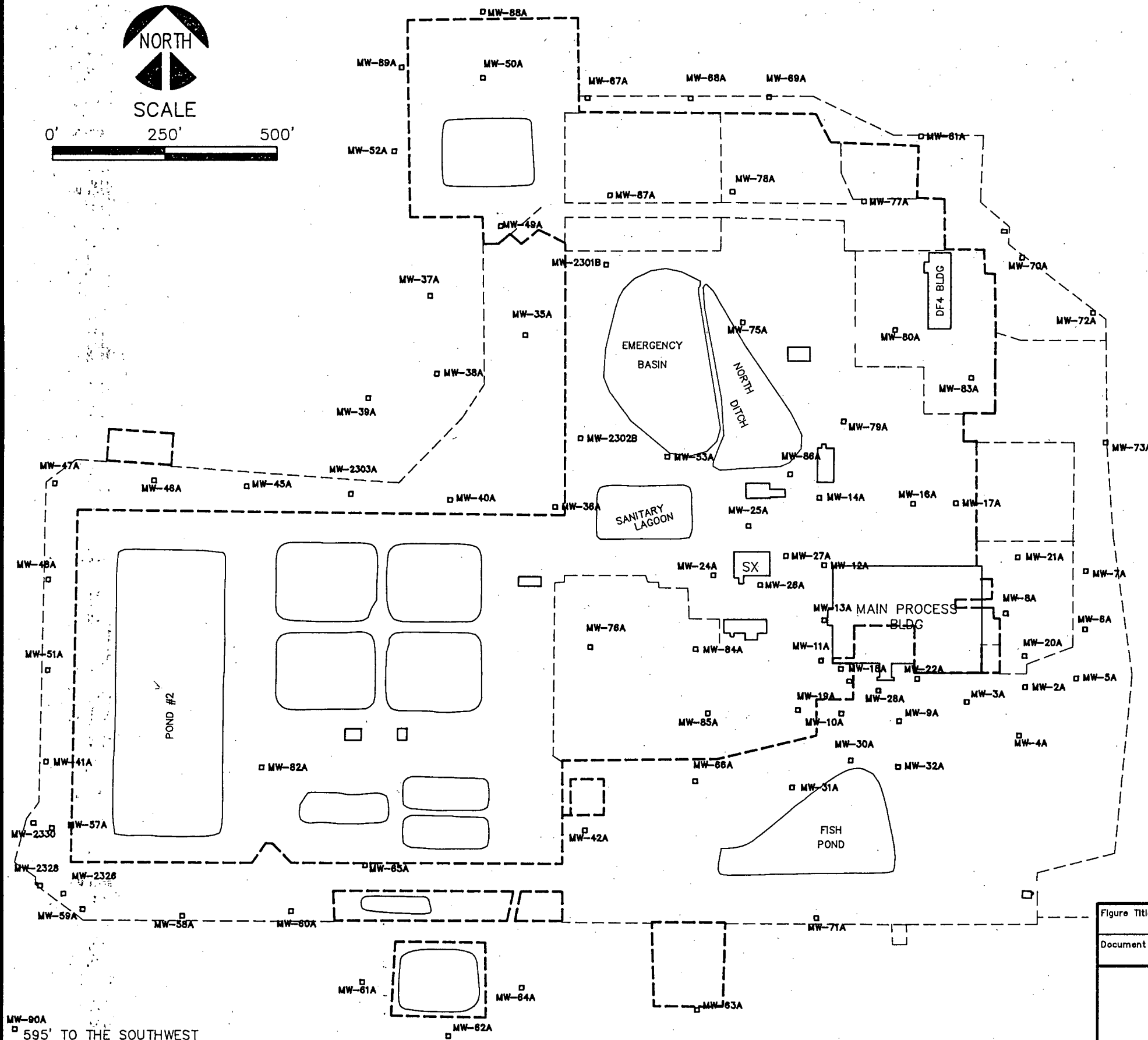
MW-72
□ LOCATION OF SHALLOW SHALE TERRACE DEPOSIT MONITOR WELL

Figure Title: LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELLS		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3595		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N88	DRAFTED BY: RML
		FIGURE NO.: 40	



SCALE

0' 250' 500'



LEGEND

MW-72A □ LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL

Figure Title: LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELLS		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 9700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3886		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N87	DRAFTED BY: RML
		FIGURE NO.: 41	

R 21 E

LEGEND:

- WATER WELL IN USE
- WATER WELL NOT IN USE
- ◆ REFUSED SFC SAMPLE REQUEST ON MAY 9-10, 1991
- ◆ UNABLE TO OBTAIN SAMPLE

OR: OFFSITE RESIDENT DOMESTIC WELL
SFC: OLD WATER WELL ON SEQUOYAH FUELS CORPORATION PROPERTY

T
12
N

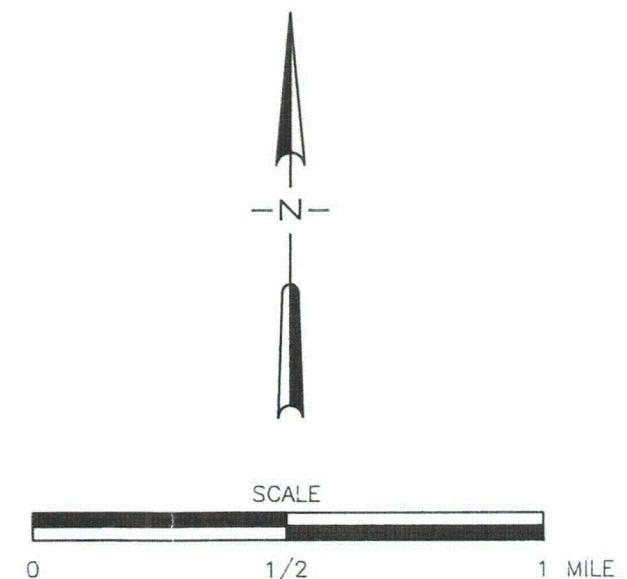
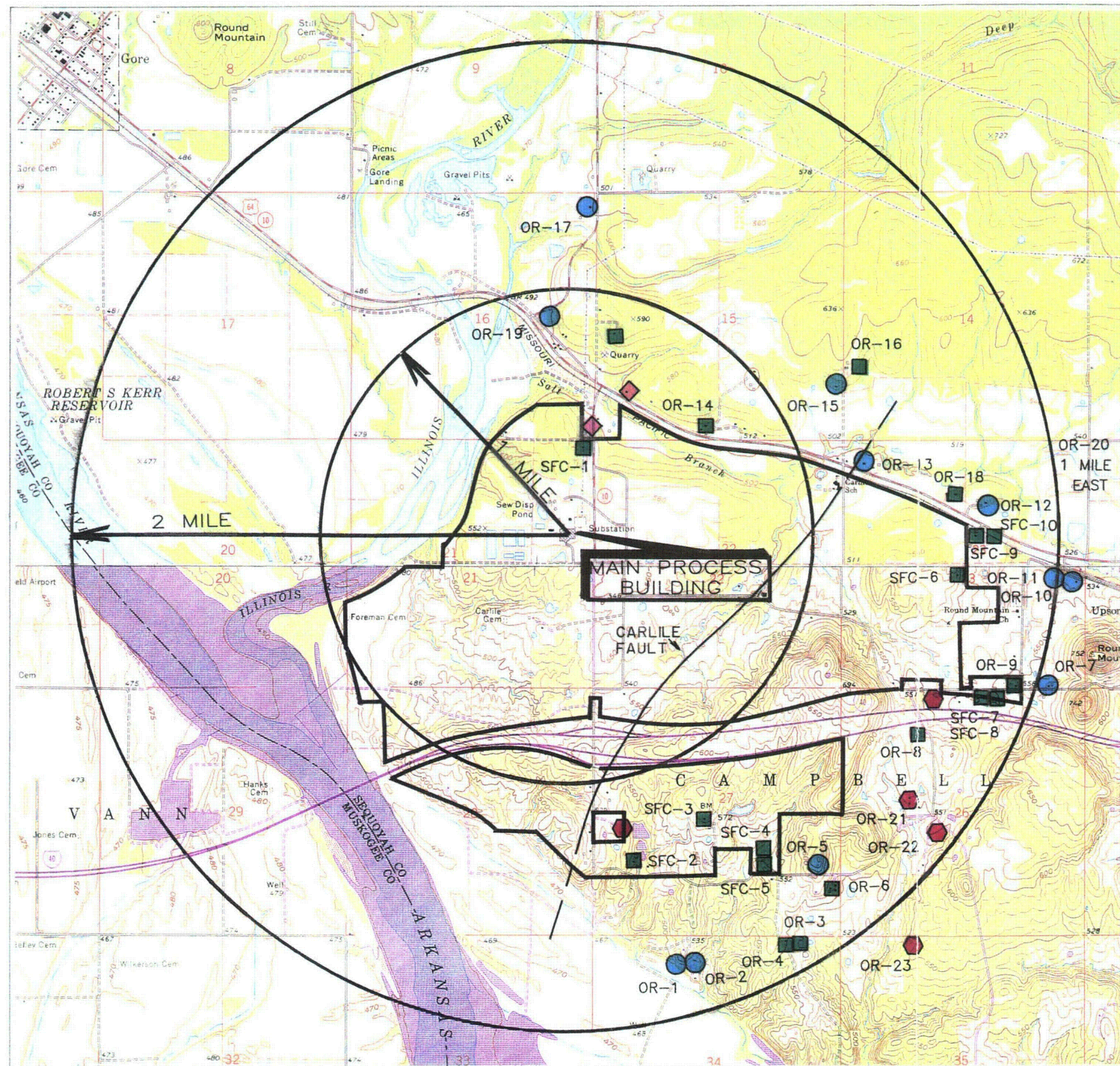
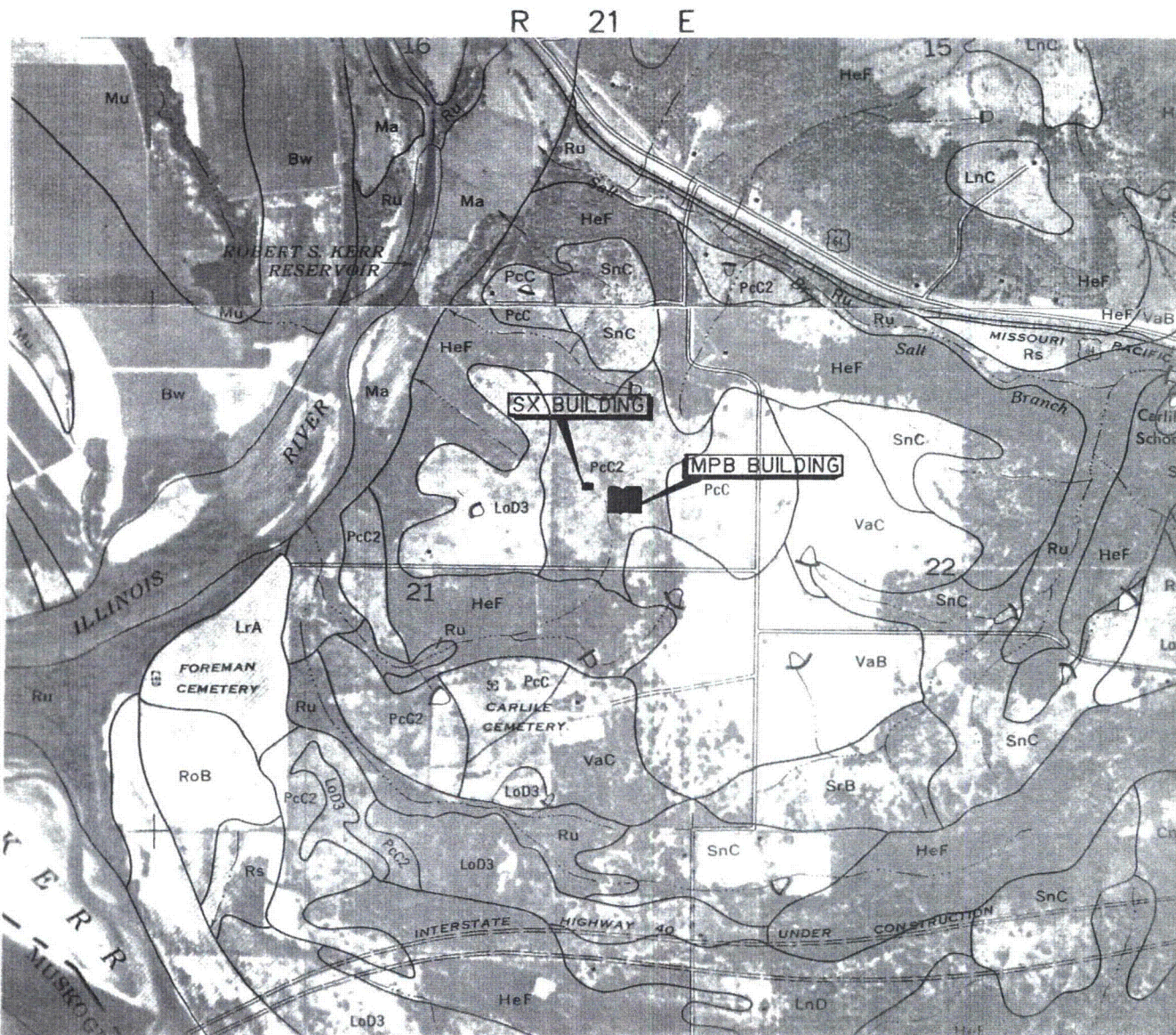


Figure Title:	MAP SHOWING LOCATIONS OF AREA WIDE WATER WELLS	Client:	SEQUOYAH FUELS CORPORATION	
Document Title:	FEI FINDINGS REPORT	Location:	GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE:	6/27/91	PREPARED BY: J.M.B.
		SCALE:	AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO:	90067 FO	DRAFTED BY: S.A.R.
		FIGURE NO.: 42		



AFTER U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE GORE, OKLAHOMA, REVISED 1974



AFTER E.J. ABERNATHY, 1965

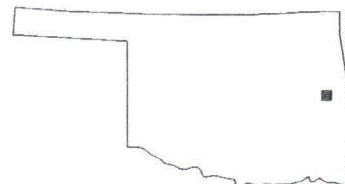
LEGEND:

- PcC2 Pickwick loam, 2-5% slopes, eroded
- PcC Pickwick loam, 3-5% slopes
- LoD3 Linker & Stigier soils, 2-8% slopes, severely eroded
- SnC Spiro silt loam, 2-5% slopes
- HeF Hector-Linker-Enders complex, 5-40% slopes
- VaB Vian silt loam, 1-3% slopes
- VaC Vian silt loam, 3-5% slopes
- Ma Mason silt loam

SCALE

0 1/2 1 MILE

OKLAHOMA



LOCATION MAP

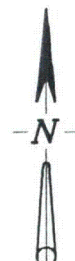
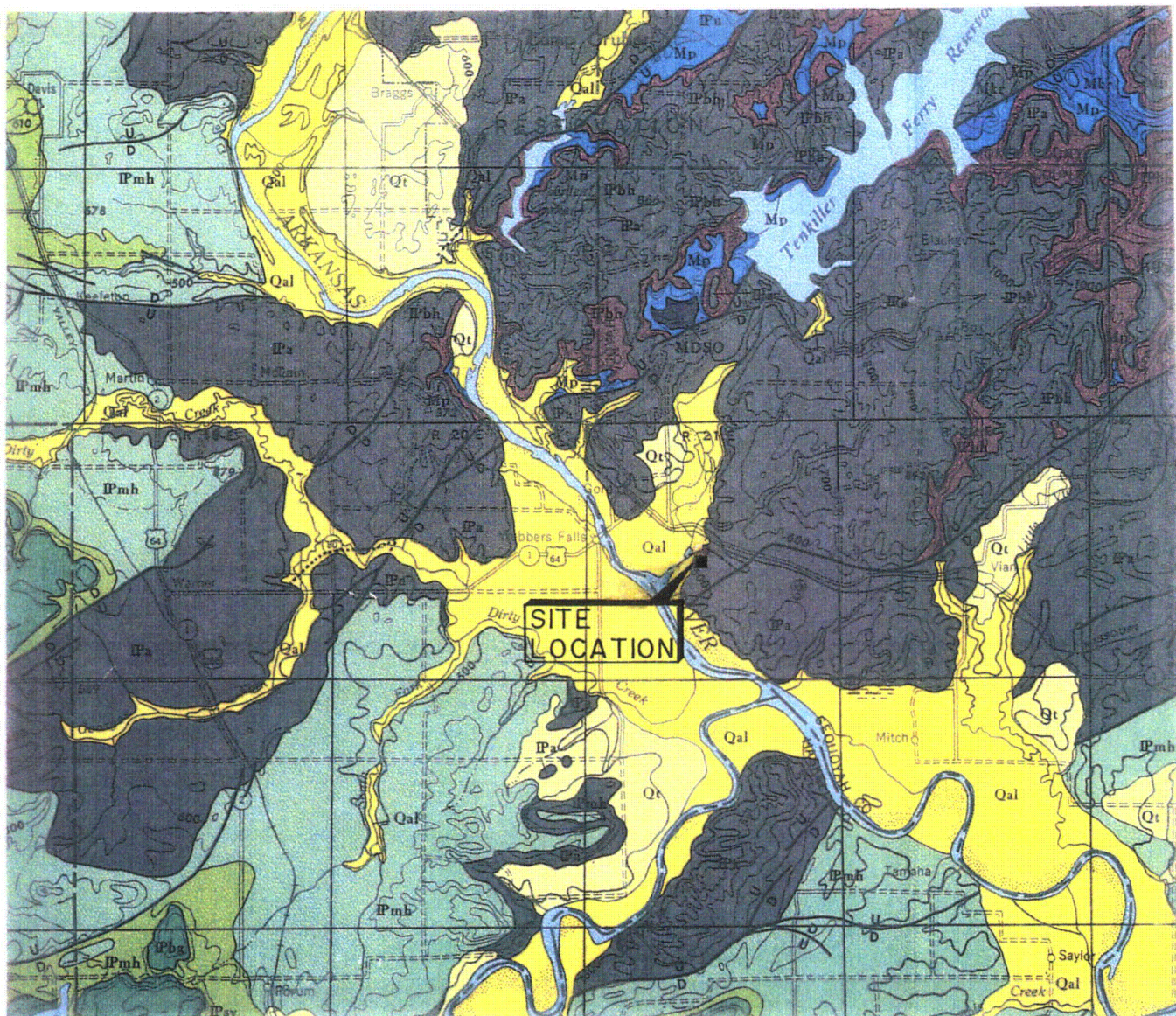
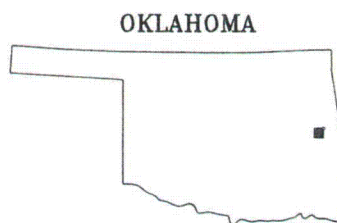
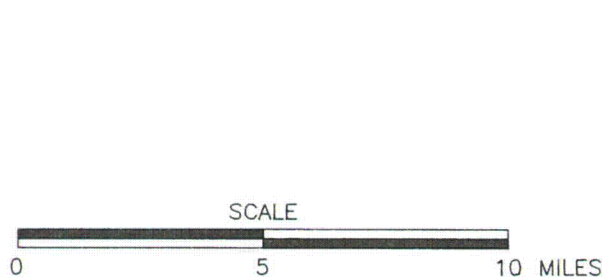


Figure Title: AREA SOILS MAP	Client: SEQUOYAH FUELS CORPORATION
Document Title: FEI FINDINGS REPORT	Location: GORE, OKLAHOMA
<p style="text-align: center;"><i>ROBERTS/SCHORNICK</i> & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895</p>	
DATE: 6/11/91 SCALE: AS SHOWN PROJECT NO: 90067 F03	PREPARED BY: W.E.P. CHECKED BY: B.J.S. DRAFTED BY: S.A.R. FIGURE NO.: 43



AFTER M.V. MARCHER, 1969



LOCATION MAP

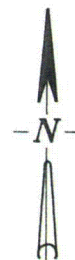


Figure Title: **GEOLOGICAL MAP**
SEE FIGURE 45 FOR EXPLANATION OF MAP

Client: **SEQUOYAH FUELS CORPORATION**

Document Title: **FEI FINDINGS REPORT**

Location: **GORE, OKLAHOMA**

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/11/91	PREPARED BY: W.E.P.
SCALE: AS SHOWN	CHECKED BY: B.J.S.
PROJECT NO: 90067 F04	DRAFTED BY: S.A.R.
FIGURE NO.: 44	

EXPLANATION

QUATERNARY

Qal

ALLUVIUM

Gravel, sand, silt, and clay. Yields large amounts of water of good quality along the Arkansas River and probably will yield moderate to large amounts along the Canadian River.

Qt

TERRACE DEPOSITS

Gravel, sand, silt, and clay. Yield moderate to large amounts of water of good quality locally along the Arkansas River; smaller amounts elsewhere.

IPhg

BOGGY FORMATION

Shale, sandstone, and coal; includes Bluejacket Sandstone Member at base. Yields limited amounts of water of poor quality.

IPsm	IPsv
	IPmh

SAVANNA, McALESTER, AND HARTSHORNE FORMATIONS

IPsv *Savanna Formation*, shale, sandstone, and coal. Yields limited amounts of water of poor quality.

IPmh *McAlester and Hartshorne Formations* (undifferentiated), shale, sandstone, and coal. Yield limited amounts of water of poor quality.

IPsm *Savanna and McAlester Formations* (undifferentiated; T. 15 N., Rs. 18, 19 E.), shale and minor sandstones. Yield limited amounts of water of poor quality.

PENNSYLVANIAN

AFTER M.V. MARCHER, 1969

Figure Title: REGIONAL STRATIGRAPHIC COLUMN
AND EXPLANATION FOR FIGURE 44

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

Location: GORE, OKLAHOMA

ROBERTS/SCHORNICK
& ASSOCIATES, INC.

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/11/91

PREPARED BY: W.E.P.

SCALE: AS SHOWN

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

PROJECT NO: 90067 F10

FIGURE NO.: 45

PENNSYLVANIAN

IPu	IPa
	IPbh

ATOKA, BLOYD, AND HALE FORMATIONS

- IPu Undifferentiated.
- IPa *Atoka Formation*, shale and sandstone. Yields limited amounts of water of poor quality.
- IPbh *Bloyd Formation*, shale and limestone; and *Hale Formation*, limestone and sandstone. Probably will yield only small amounts of water of fair to poor quality.

Mu	Mp
	Mkr

MISSISSIPPIAN ROCKS ABOVE CHATTANOOGA SHALE

- Mu Undifferentiated.
- Mp *Pitkin Formation*, limestone; *Fayetteville Formation*, shale and limestone; *Hindsville Formation*, limestone and shale; and *Moorefield Formation*, limestone.
- Mkr *Keokuk Formation*, chert; *Reeds Spring Formation*, chert and limestone; and *St. Joe "Group,"* limestone and marlstone.
- Yield small to moderate amounts of water of fair to good quality.

MDSQ

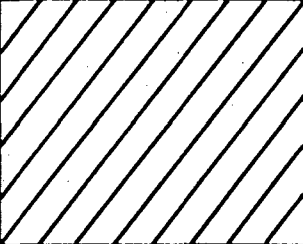
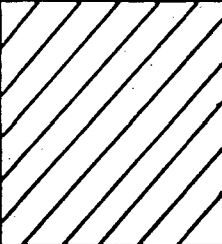
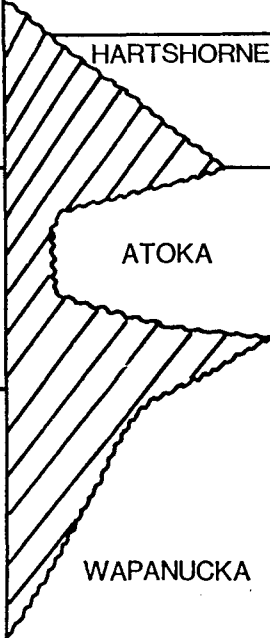

MISSISSIPPIAN, DEVONIAN, SILURIAN, AND ORDOVICIAN ROCKS, UNDIFFERENTIATED

- Mississippian and Devonian. *Chattanooga Shale*, shale.
- Devonian. *Sallisaw Formation*, limestone, sandstone, and chert; and *Frisco Formation*, limestone.
- Silurian. *Quarry Mountain Formation*, limestone; *Tenkiller Formation*, limestone; and *Blackgum Formation*, limestone and dolomite.
- Ordovician. *Sylvan Shale*, shale; *Fernvale Limestone*, limestone; *Fite Limestone*, limestone; *Tyner Formation*, shale, sandstone, dolomite, and limestone; *Burgen Sandstone*, sandstone and minor shales and limestones; and *Cotter Dolomite*, dolomite.
- Limestone, dolomite, and sandstone units may yield small to moderate amounts of water of fair to good quality; shale units probably will yield only limited amounts of water of poor to fair quality.

MISSISSIPPIAN, DEVONIAN,
SILURIAN, AND ORDOVICIAN

AFTER M.V. MARCHER, 1969

Figure Title: REGIONAL STRATIGRAPHIC COLUMN AND EXPLANATION FOR FIGURE 44 (CONT.)		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/11/91	PREPARED BY: W.E.P.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO: 90067 F10	DRAFTED BY: S.A.R.
		FIGURE NO.: 45 (CONT.)	

	NORTHEASTERN ARBUCKLE MOUNTAINS	FRONTAL OUACHITAS	ARKOMA BASIN	SOUTHWESTERN OZARK REGION	
				OKLAHOMA	ARKANSAS
DESMOINESIAN	McALESTER		McALESTER	McALESTER	
	HARTSHORNE		HARTSHORNE	HARTSHORNE	
ATOKAN	ATOKA	ATOKA	ATOKA	ATOKA	
MORROWAN		WAPANUCKA		McCULLY	BLOYD
		SPRINGER	UNION VALLEY	SAUSBEE	HALE

AFTER ZACHERY & SUTHERLAND, 1984

Figure Title: STRATIGRAPHIC RELATIONSHIP BETWEEN
ATOKA AND BOUNDING UNITS

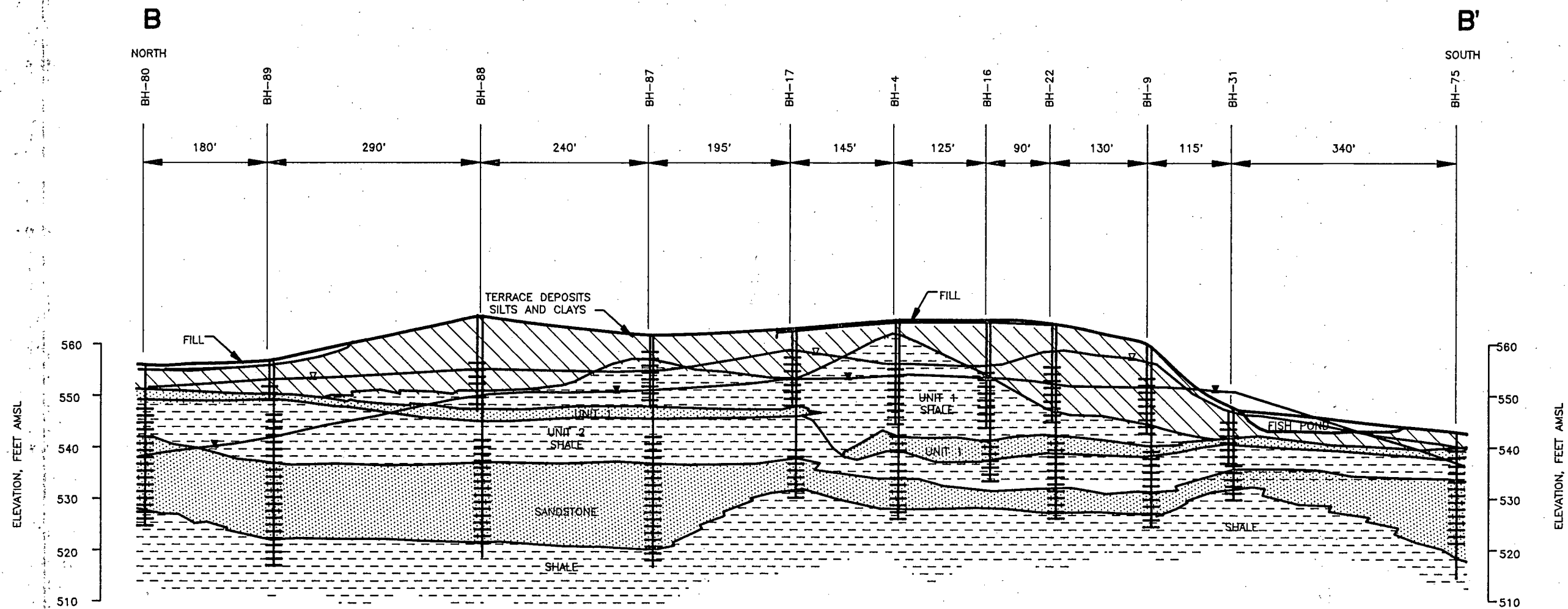
Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT



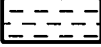


Location: GORE, OKLAHOMA

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
 Environmental Consultants
 3700 West Robinson, Suite 200
 Norman, Oklahoma 73072
 (405) 321-3895

DATE: 6/11/91	PREPARED BY: W.E.P.
SCALE: AS SHOWN	CHECKED BY: B.J.S.
PROJECT NO: 90067 F10	DRAFTED BY: S.A.R.
	FIGURE NO.: 46



LEGEND

-  SANDSTONE
-  TERRACE
-  SHALE
-  SHALEY SANDSTONE
-  SANDY SHALE

LINE OF SECTION SHOWN ON FIGURE

▼ GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/ SHALE, APRIL 18-19, 1991

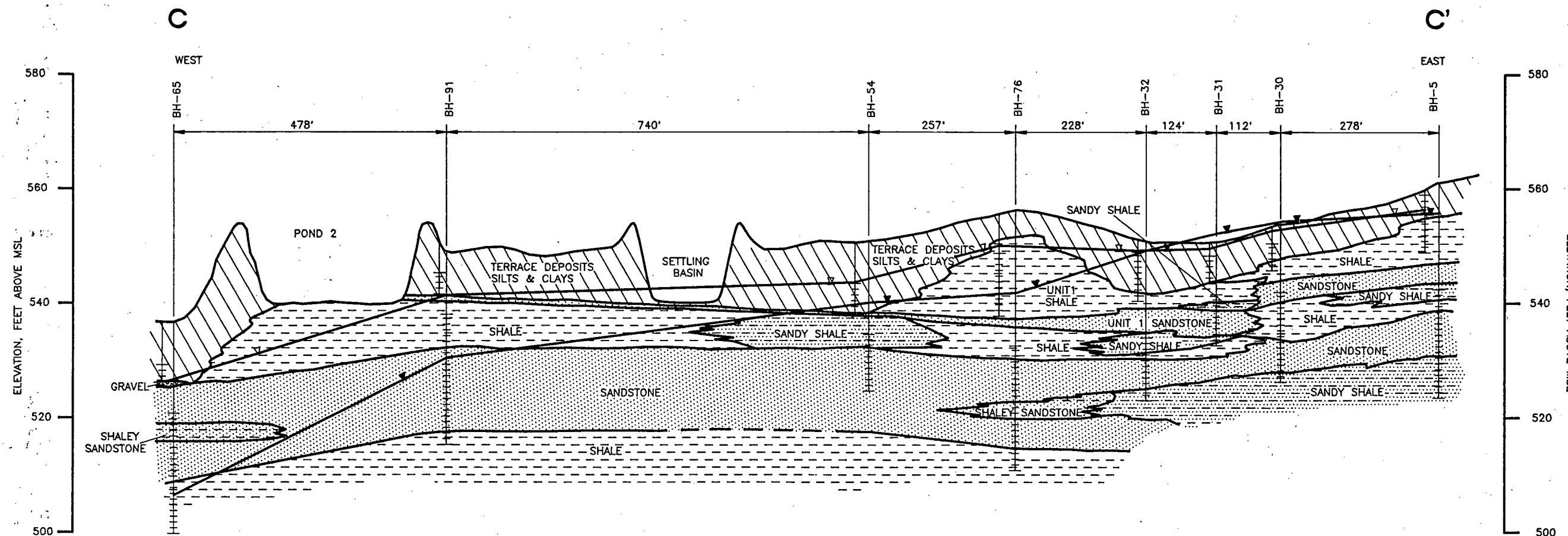
▲ GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW SHALE/TERRACE, APRIL 18-19, 1991

||||| MONITOR WELL SCREEN INTERVAL

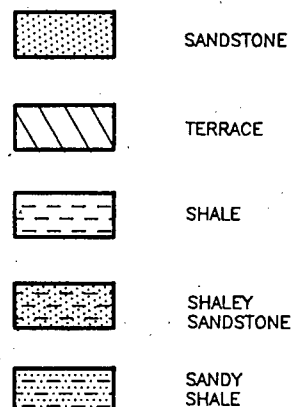
SCALE: VERTICAL 1"=22'
HORIZONTAL 1"=160'
VERTICAL EXAGGERATION x7.3

NOTE:
BASINS ARE APPROXIMATELY DEFINED BASED ON
NOVEMBER, 1990 AERIAL TOPOGRAPHIC MAP
AND OTHER EXISTING INFORMATION.

Figure Title: NORTH TO SOUTH GEOLOGICAL CROSS SECTION B-B'		Client: SEOUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: COPE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3695		DATE: JULY, 1991	PREPARED BY: BS
		SCALE: AS SHOWN	CHECKED BY: BS
		PROJECT NO: 90067 L17	DRAFTED BY: RL
			FIGURE NO.: 49



LEGEND:



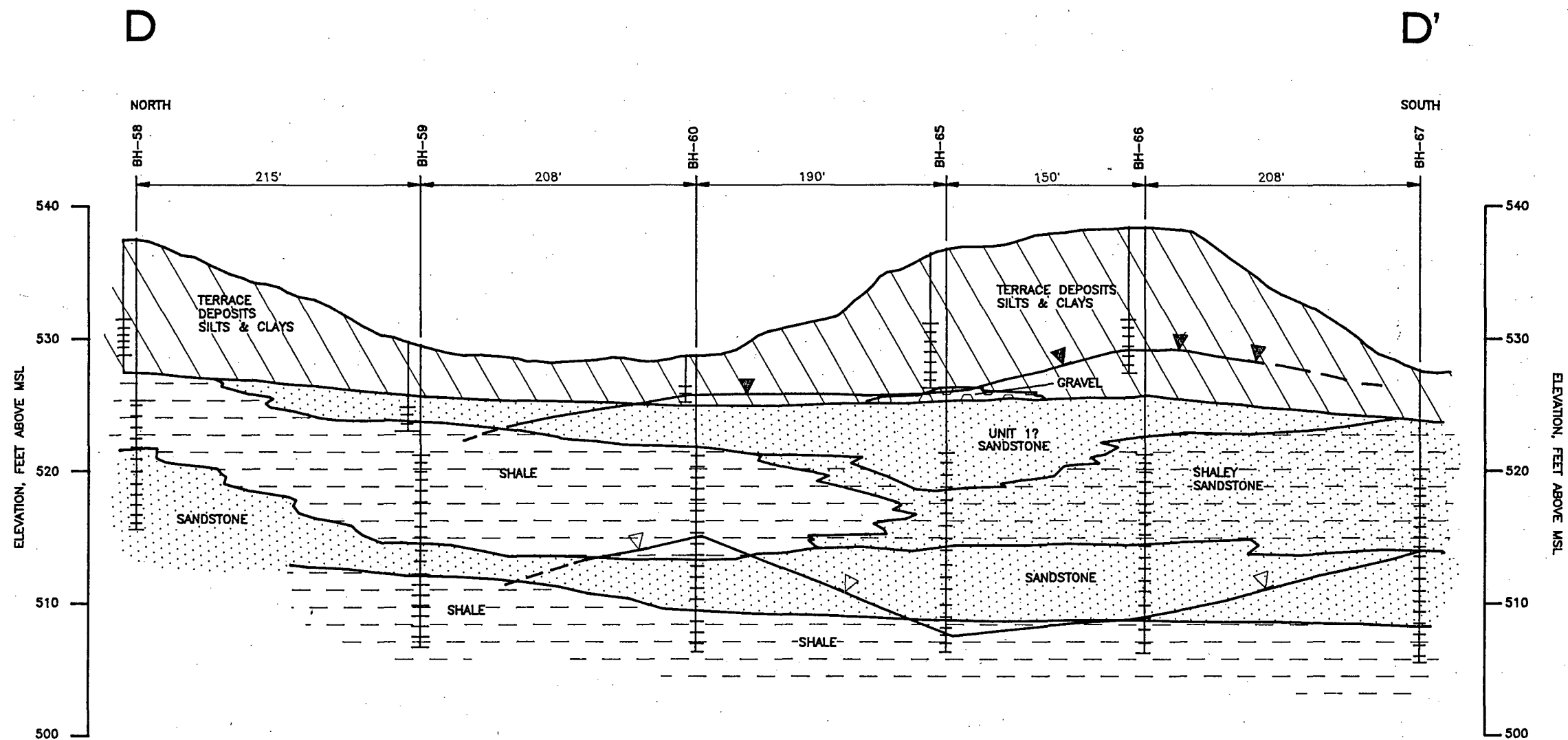
- ▽ GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/SHALE, APRIL 18-19, 1991
- ▽ GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW TERRACE/SHALE, APRIL 18-19, 1991
- ||||| MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL: 1"=20'
HORIZONTAL: 1"=200'
VERTICAL EXAGGERATION x10

LINE OF SECTION SHOWN ON FIGURE 54

NOTE:
BASINS ARE APPROXIMATELY DEFINED BASED ON
MOVEMBER, 1990 AERIAL TOPOTGRAPHIC MAP
AND OTHER EXISTING INFORMATION.

Figure Title: WEST TO EAST GEOLOGICAL CROSS-SECTION C-C'		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3595		DATE: 6/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L21	DRAFTED BY: C.C.G.
		FIGURE NO.: 50	



LEGEND:

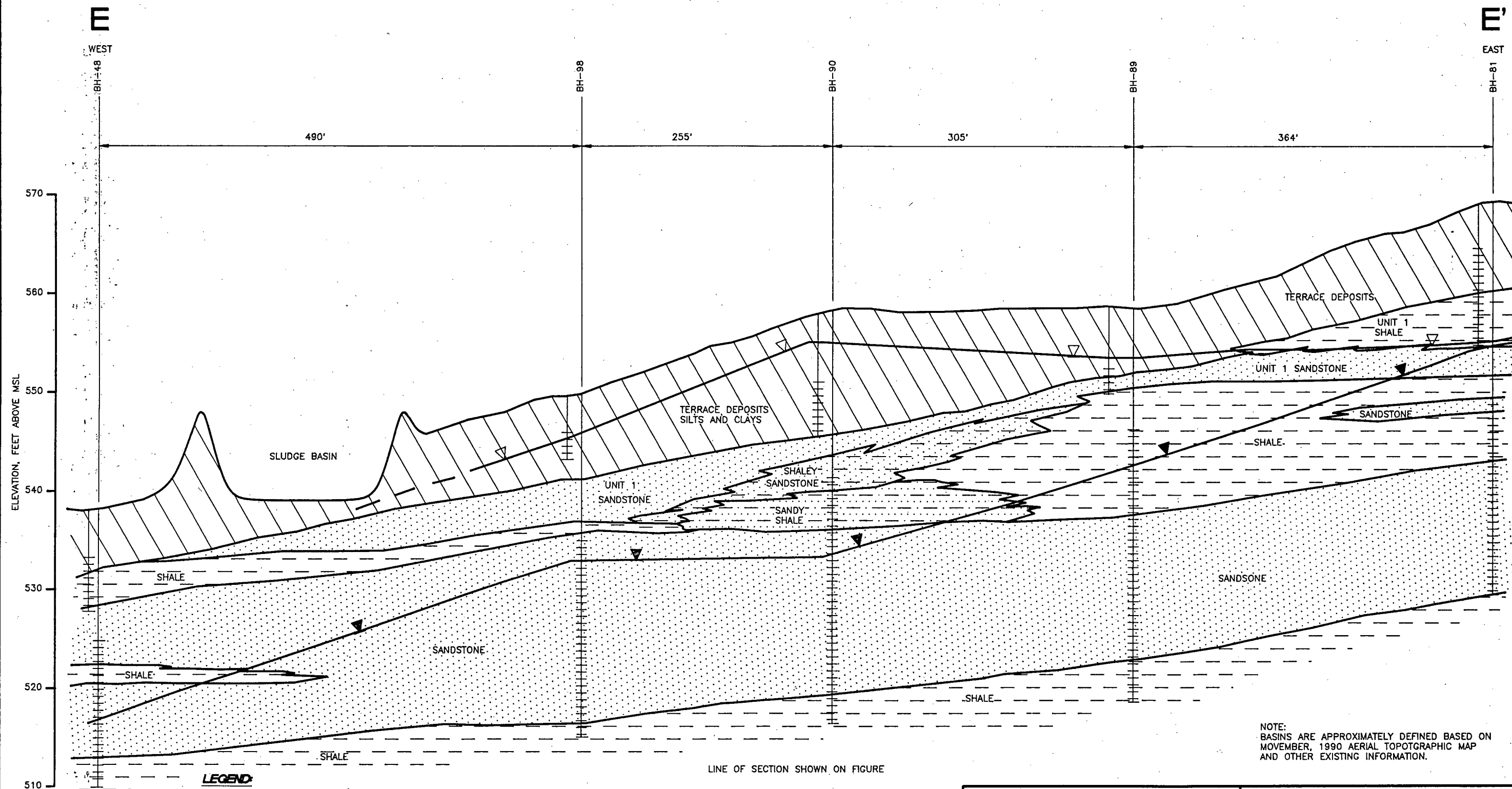
- SANDSTONE
- TERRACE
- SANDY SHALE
- SHALE
- SHALEY SANDSTONE

- GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/SHALE
APRIL 18-19, 1991
- GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW TERRACE/SHALE
APRIL 18-19, 1991
- MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL: 1"=10'
HORIZONTAL 1"=100'
VERTICAL EXAGGERATION x10

LINE OF SECTION SHOWN ON FIGURE 54

Figure Title:	NORTH TO SOUTH: GEOLOGICAL CROSS-SECTION D-D'	Client:	SEQUOYAH FUELS CORPORATION	
Document Title:	FEI FINDINGS REPORT	Location:	GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE:	6/24/91	PREPARED BY: B.J.S.
		SCALE:	AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO:	90067 L22	DRAFTED BY: C.C.G.
		FIGURE NO.:	51	



NOTE:
BASINS ARE APPROXIMATELY DEFINED BASED ON
MOVEMBER, 1990 AERIAL TOPOTGRAPHIC MAP
AND OTHER EXISTING INFORMATION.

- LEGEND**
- SANDSTONE
 - TERRACE
 - SANDY SHALE
 - SHALE
 - SHALEY SANDSTONE

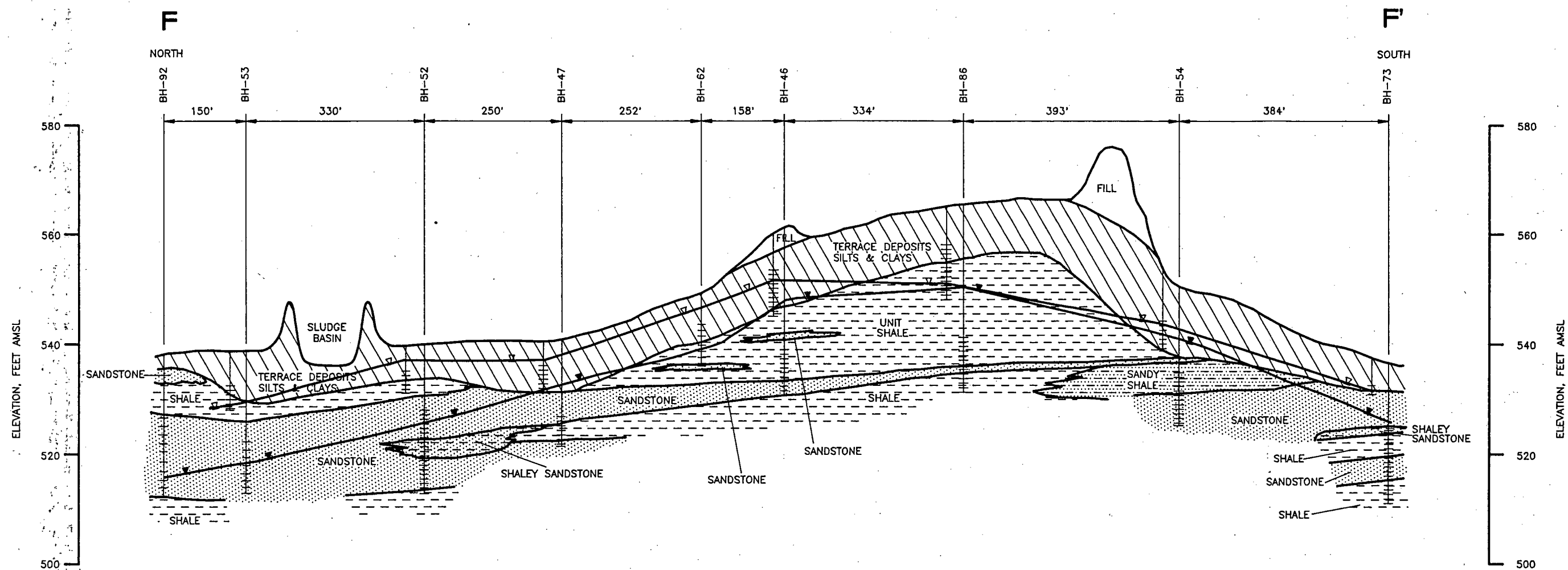
MONITOR WELL
SCREEN
INTERVAL

SCALE: VERTICAL: 1" = 10'
HORIZONTAL: 1" = 100'
VERTICAL EXAGGERATION X10

▼ GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE / SHALE, APRIL 18-19, 1991

▽ GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW TERRACE / SHALE, APRIL 18-19, 1991

Figure Title: WEST TO EAST GEOLOGICAL CROSS-SECTION E-E'		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3595		DATE: 6/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L23	DRAFTED BY: C.C.G.
		FIGURE NO.: 52	



LINE OF SECTION SHOWN ON FIGURE

LEGEND

- SANDSTONE
- TERRACE
- SHALE
- SHALEY SANDSTONE
- SANDY SHALE

- GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/ SHALE, APRIL 18-19, 1991
- GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW SHALE/TERRACE, APRIL 18-19, 1991
- MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL 1"=20'
HORIZONTAL 1"=200'
VERTICAL EXAGGERATION x10

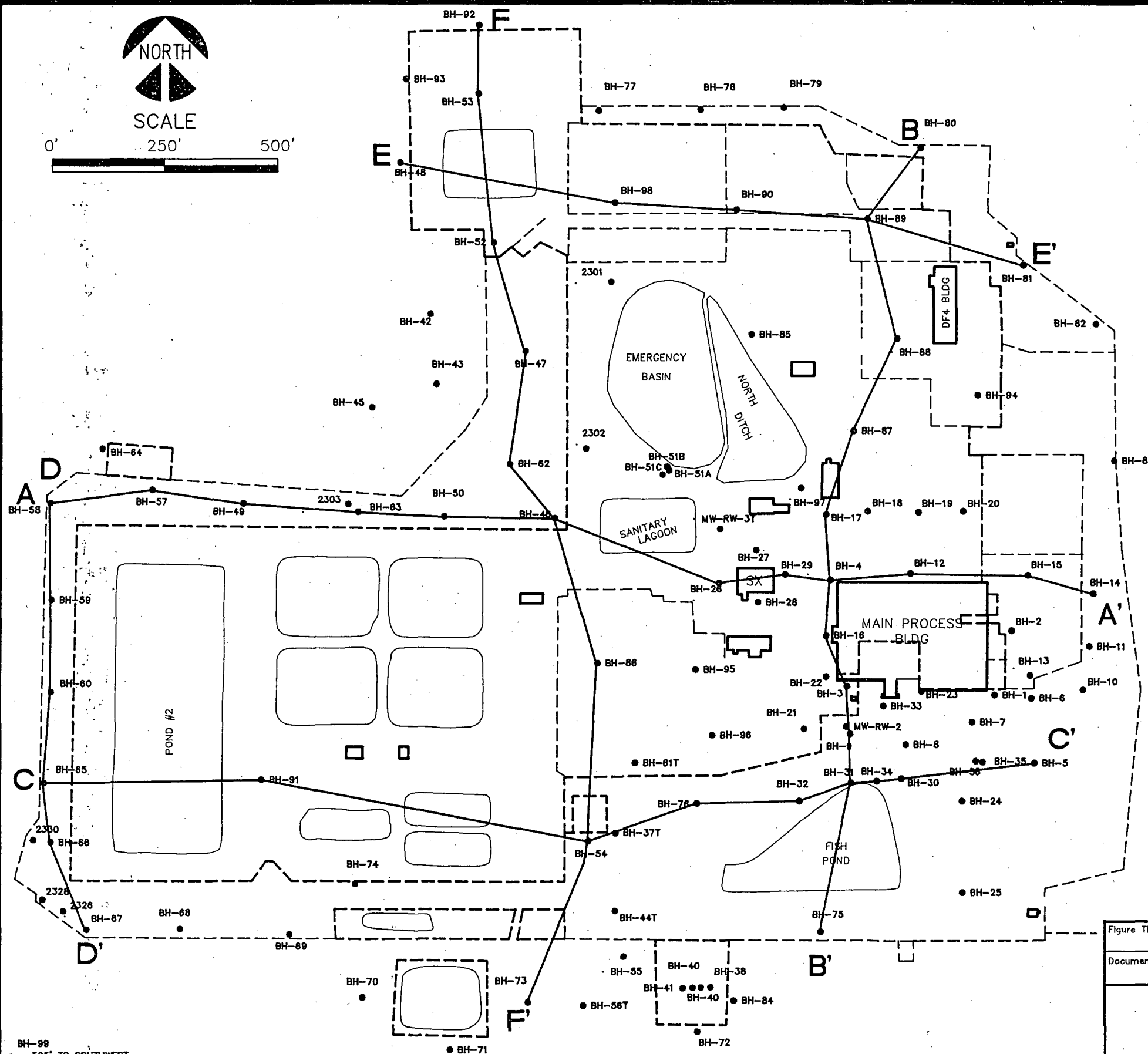
NOTE:
BASINS ARE APPROXIMATELY DEFINED BASED ON
MOVEMBER, 1990 AERIAL TOPOTGRAPHIC MAP
AND OTHER EXISTING INFORMATION.

Figure Title: NORTH TO SOUTH GEOLOGICAL CROSS-SECTION F-F'		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3886		DATE: 6/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L24	DRAFTED BY: C.C.G.
		FIGURE NO.: 53	



SCALE

0' 250' 500'



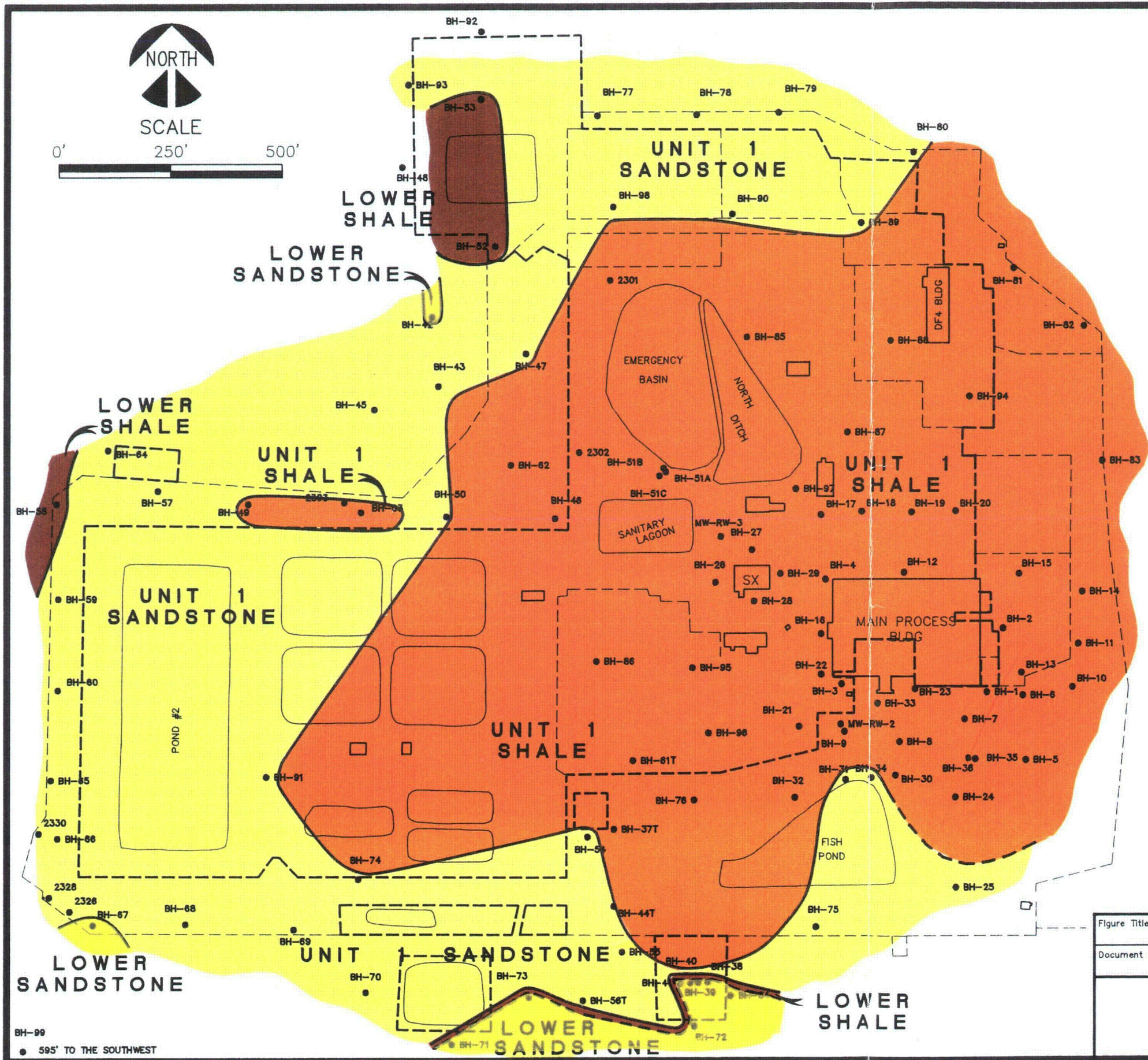
LEGEND

BH-82 • LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING

A—A' GEOLOGICAL CROSS SECTION LOCATION

BH-99
595' TO SOUTHWEST

Figure Title:	LINE OF GEOLOGICAL CROSS SECTIONS		Client:	SEQUOYAH FUELS CORPORATION	
Document Title:	FEI FINDINGS REPORT		Location:	GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895			DATE:	6/14/91	PREPARED BY: RL
			SCALE:	1"=250'	CHECKED BY: B.J.S.
			PROJECT NO: 90067 S06		DRAFTED BY: RML
			FIGURE NO.: 54		

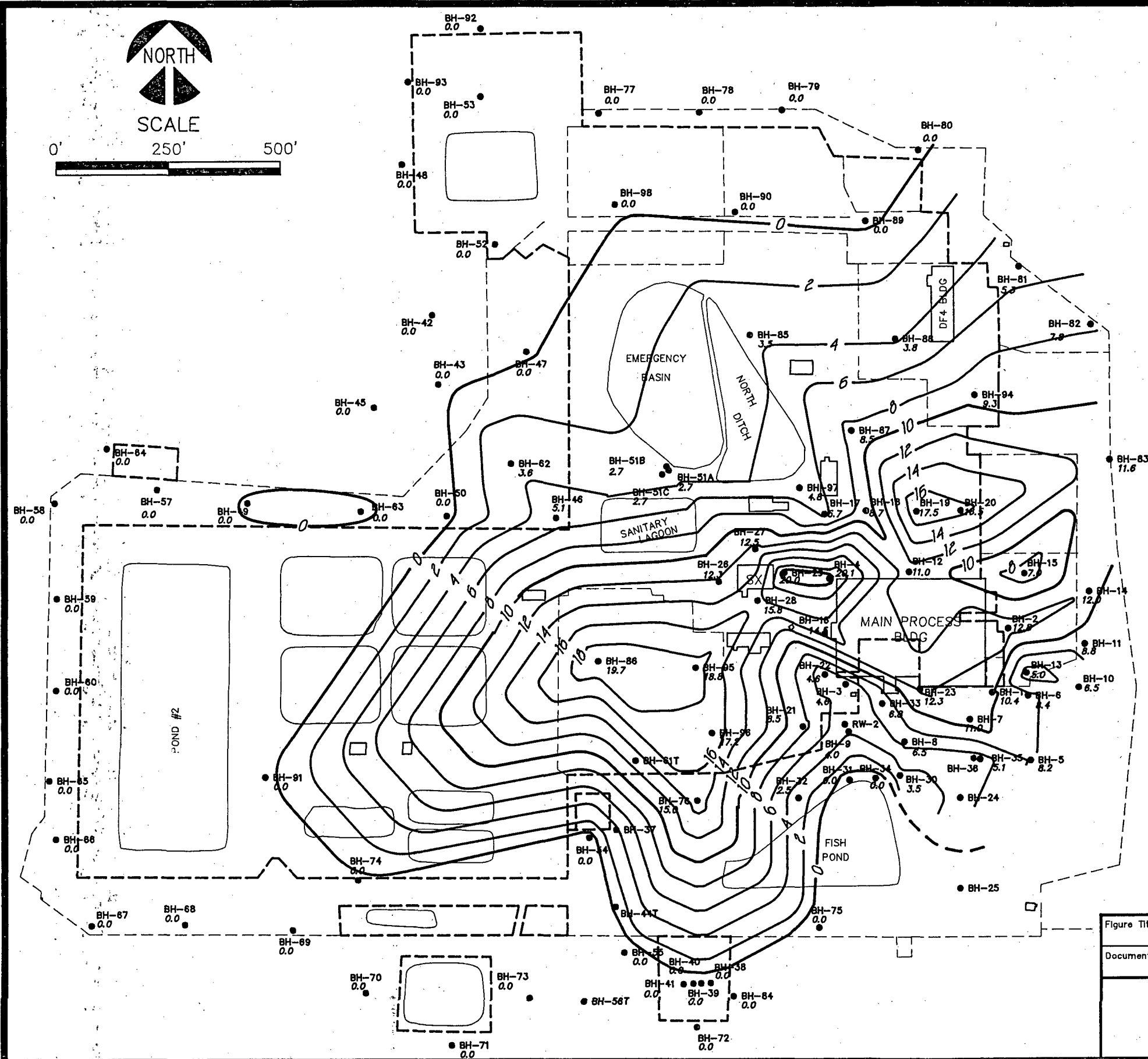
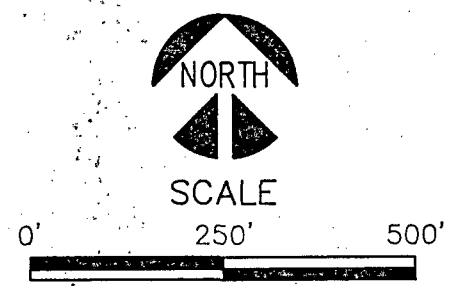


LEGEND

- BH-82 • LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING FEET AMSL
- GEOLOGICAL CONTACT, DASHED WHERE INFERRED
- UNIT 1 SHALE
- UNIT 1 SANDSTONE
- LOWER SHALE
- LOWER SANDSTONE

Figure Title: BEDROCK GEOLOGICAL MAP		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L20	DRAFTED BY: RML
		FIGURE NO.: 55	

BH-99
• 595' TO THE SOUTHWEST



LEGEND

- BH-82 7.8 LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING AND THICKNESS OF UPPERMOST UNIT 1 SHALE, FEET
- 2.0 CONTOUR OF THICKNESS OF UPPERMOST UNIT 1 SHALE, FEET

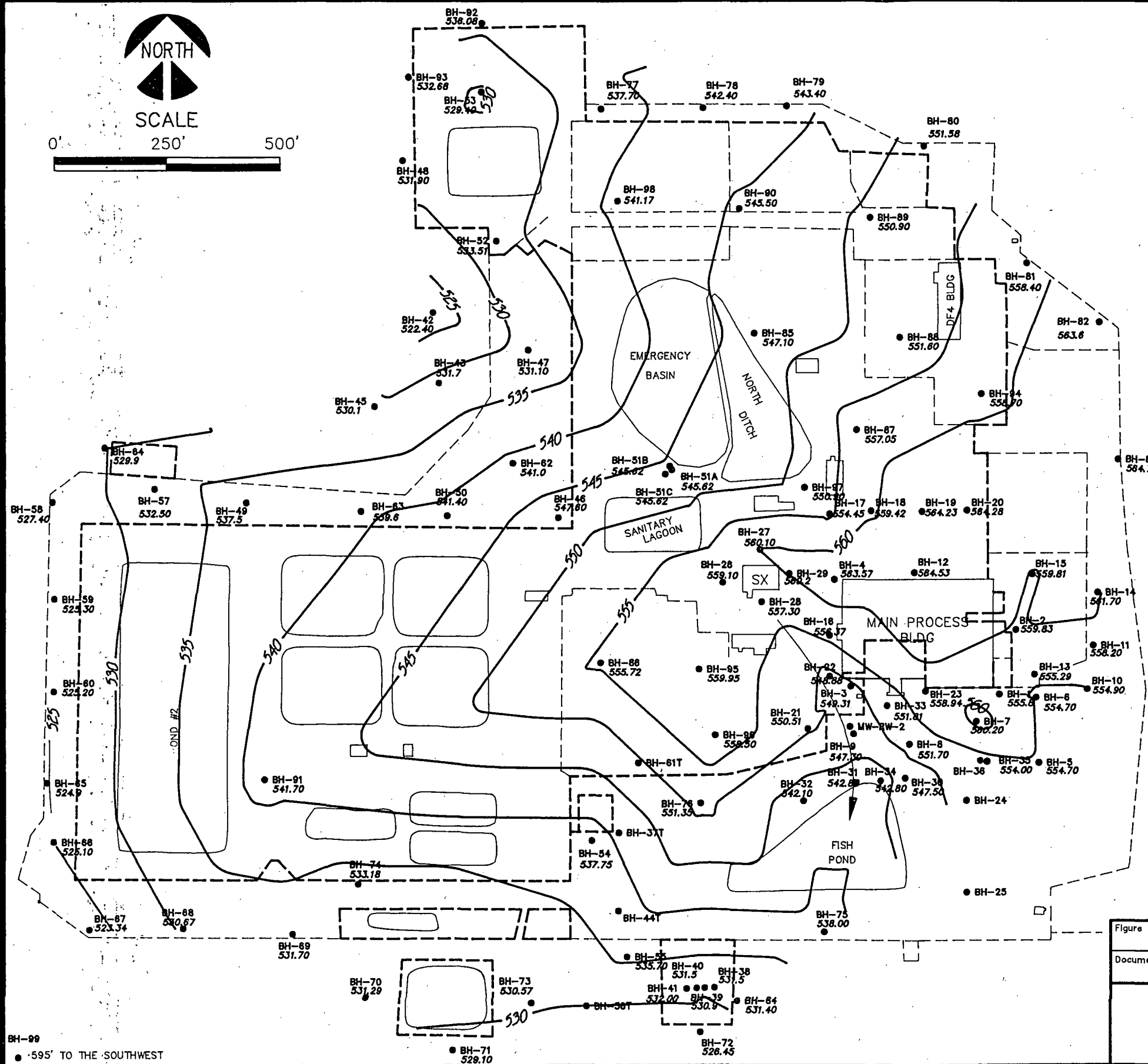
NOTES :
* CONTOUR INTERVALS ARE AT 2.0 FEET.

Figure Title: ISOPACH THICKNESS OF UPPERMOST UNIT 1 SHALE, FEET	Client: SEQUOYAH FUELS CORPORATION
Document Title: FEI FINAL FINDINGS REPORT	Location: GORE, OKLAHOMA
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3893	DATE: 6/14/91
	PREPARED BY: RL
	CHECKED BY: B.J.S.
	DRAFTED BY: RML
PROJECT NO: 90067 N81	FIGURE NO.: 56



SCALE

0' 250' 500'



LEGEND




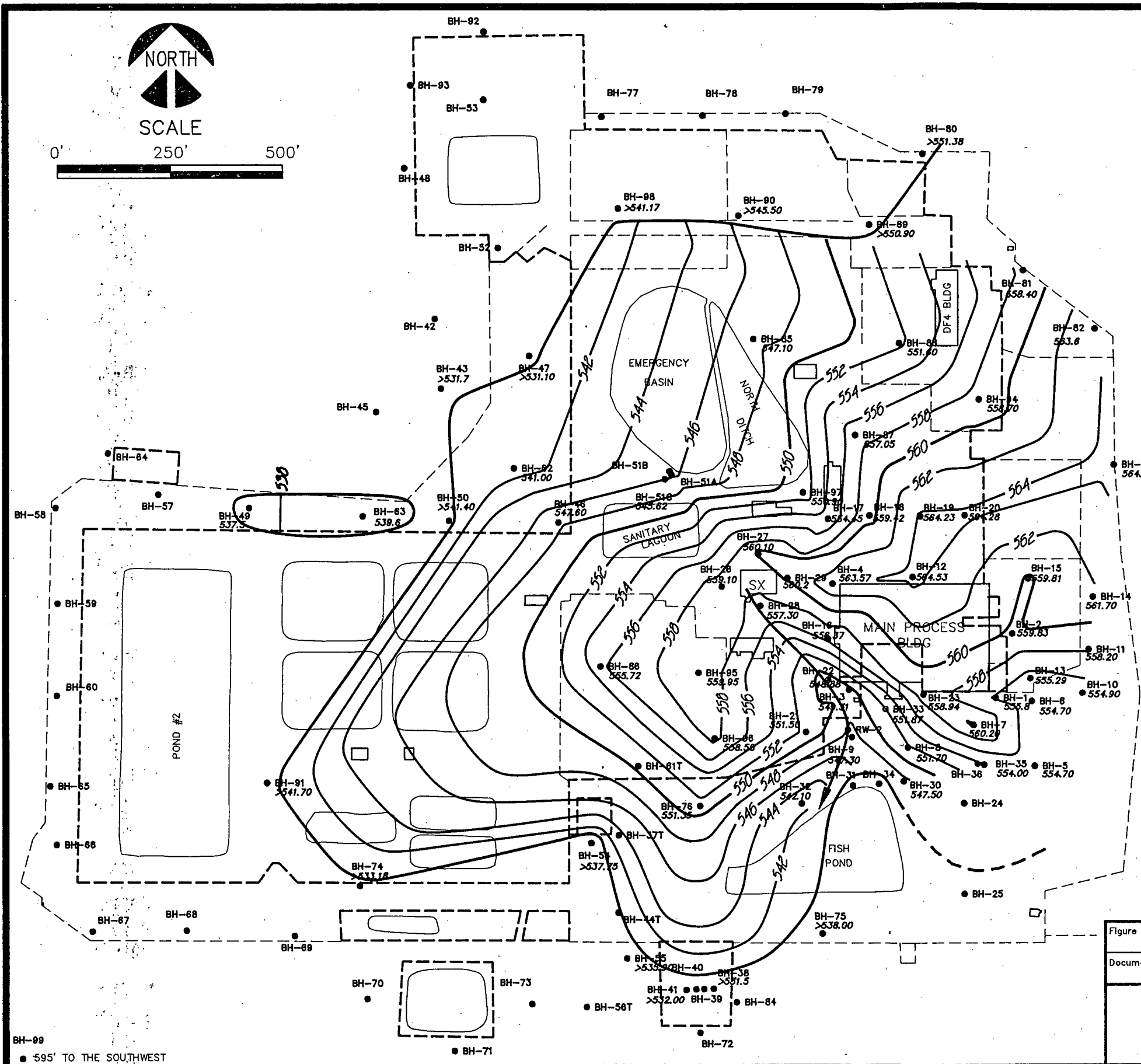
-  BH-82 • 563.6 LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING AND ELEVATION OF BEDROCK SURFACE, FEET AMSL
-  555 STRUCTURE CONTOUR SHOWING ELEVATION OF TOP OF BEDROCK SURFACE, FEET AMSL
- CONTOUR INTERVAL 5.0 FEET
-  POSSIBLE PALEOCHANNEL (EROSIONAL SURFACE ON BEDROCK)

Figure Title: STRUCTURE MAP SHOWING ELEVATION OF TOP OF BEDROCK SURFACE, FEET AMSL		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N82	DRAFTED BY: RML
			FIGURE NO.: 57

BH-99
• 595' TO THE SOUTHWEST



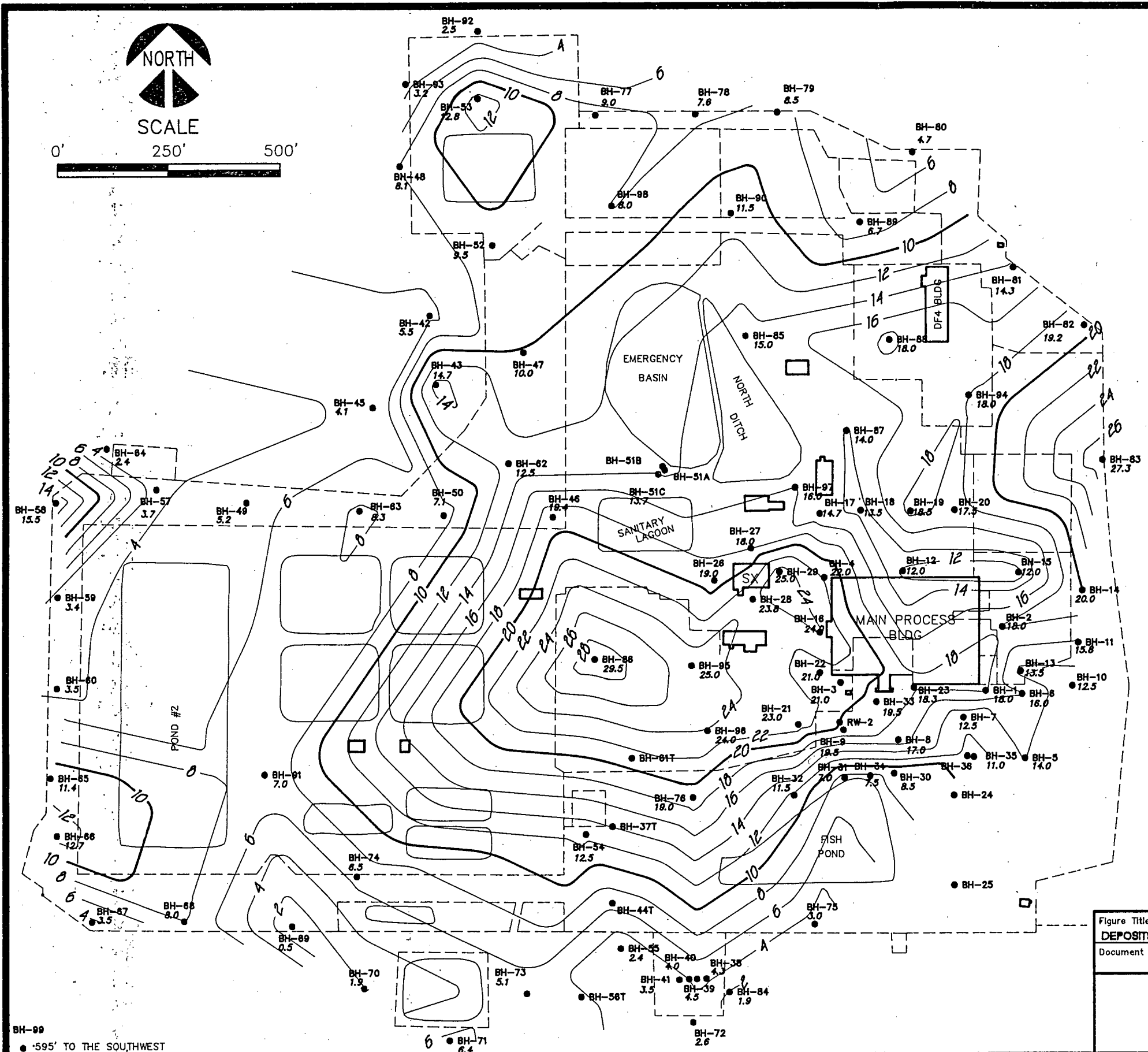
LEGEND

- BH-82 563.6 LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING AND ELEVATION OF TOP OF UNIT 1 SHALE, FEET AMSL
- 550 — STRUCTURE CONTOUR OF ELEVATION OF TOP OF UNIT 1 SHALE, FEET AMSL
- APPROXIMATE LIMIT OF UNIT 1 SHALE (CONTACT BETWEEN UNIT 1 SHALE AND UNIT 1 SANDSTONE, DASHED WHERE INFERRED).
- ↖ POSSIBLE PALEOCHANNEL (EROSIONAL SURFACE ON BEDROCK)

NOTES :
* CONTOUR INTERVAL AT 2.0 FEET.

Figure Title: STRUCTURE MAP SHOWING ELEVATION OF TOP OF UNIT 1 SHALE, FEET AMSL		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N83	DRAFTED BY: RML
		FIGURE NO.: 58	

BH-99
● 595' TO THE SOUTHWEST

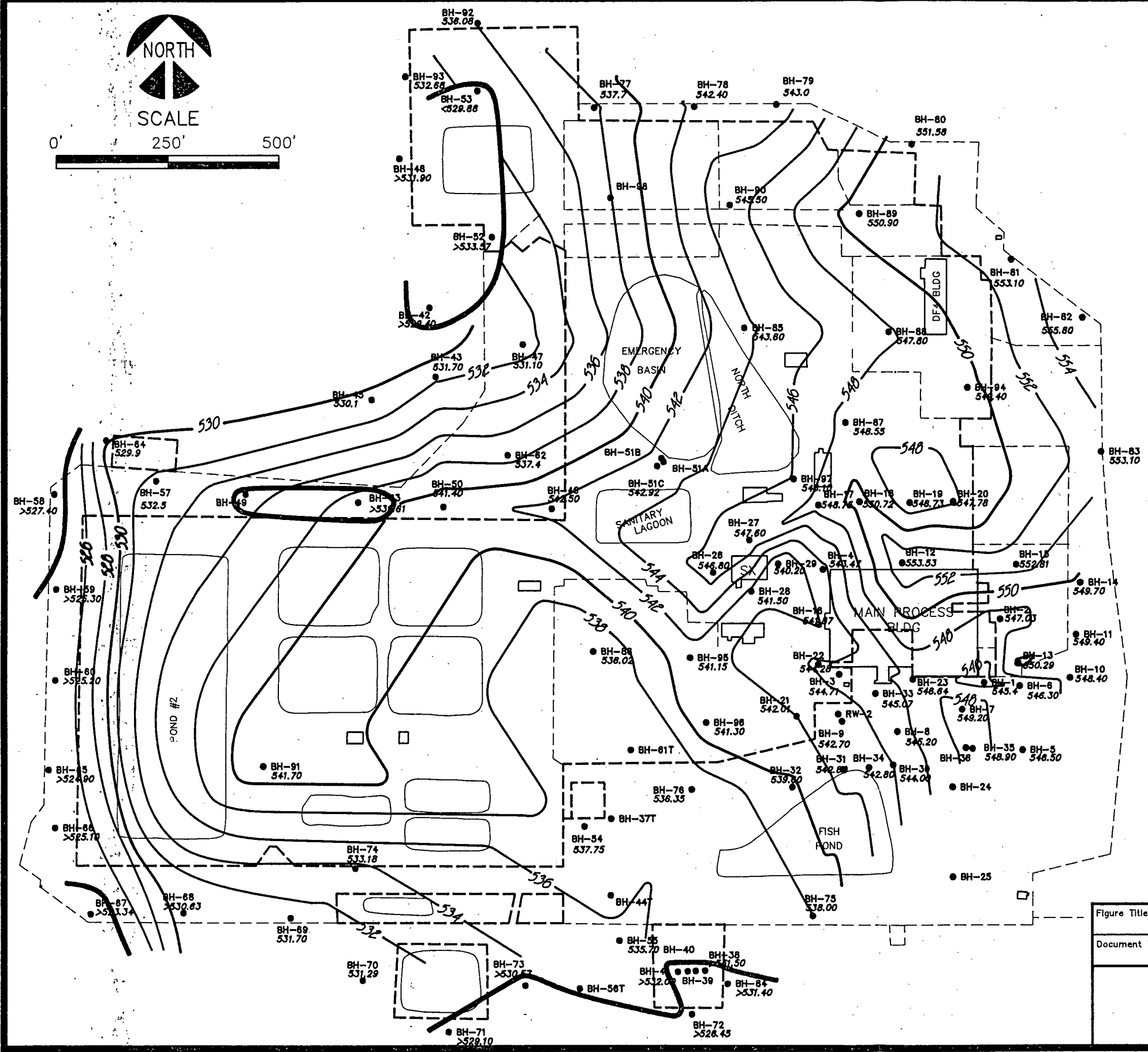


LEGEND

- BH-82 19.2 LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING AND THICKNESS OF TERRACE DEPOSITS/SHALE, FEET
- 12 CONTOUR OF THICKNESS OF TERRACE DEPOSITS/SHALE, FEET
- CONTOUR INTERVAL 2.0 FEET

BH-99
 • 595' TO THE SOUTHWEST

Figure Title: ISOPACH MAP SHOWING THICKNESS OF TERRACE DEPOSITS/SHALE WHICH OVERLIE UPPER SANDSTONE		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N86	DRAFTED BY: RML
			FIGURE NO.: 60



LEGEND

- BH-82 555.80 LOCATION OF LITHOLOGICAL CHARACTERIZATION BORING AND ELEVATION OF TOP OF UNIT 1 SANDSTONE, FEET AMSL
- 530 — STRUCTURE CONTOUR OF ELEVATION OF TOP OF UNIT 1 SANDSTONE, FEET AMSL
- APPROXIMATE LIMIT OF UNIT 1 SANDSTONE (CONTACT BETWEEN UNIT 1 SANDSTONE AND UNIT 2 SHALE, DASHED WHERE INFERRED).

NOTES :
* CONTOUR INTERVALS ARE AT 2.0 FEET.

Figure Title: STRUCTURE MAP SHOWING ELEVATION OF TOP OF UNIT 1 SANDSTONE, FEET AMSL		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N84	DRAFTED BY: RML
		FIGURE NO.: 61	

AGE	FORMATION	DEPTH INTERVAL (FEET)	THICKNESS (FEET)	LITHOLOGIC DESCRIPTION	
RECENT	RECENT FILL	0 - 17'	0 - 17'	Recent fill consisting of sand, silty sand, overlain by asphalt and concrete cover. Utility line trenches can be from 2-17 feet deep and consist of fine silty sand, overlain by silty clays. The sands typically surround the utility lines.	
QUATERNARY	TERRACE DEPOSITS	0 - 16.4'	0 - 15.5' (Ave. 7.7)	Laterally discontinuous deposits of gravelly silty clays, silty clays, sandy silty clays, clays and silt, overlain by gravelly sandy clays, clayey sandy silt, and clayey silt. Gravelly silty clay deposits range in thickness from approximately 3.4 feet to 15 feet thick. Silty clay deposits range from 0.6 feet to 9.4 feet thick.	
LOWER PENNSYLVANIAN	ATOKA	Shale Unit SH1	1.0 - 24.0	0 - 20.10' (Ave. 9.2')	Shale, dark grayish brown to dark gray, laterally continuous, fissile, silty.
		Sandstone Unit SA1	7' - 27.5'	0.4 - 12.5 (Ave 3.2)	Sandstone, Pale brown to dark gray, quartzose, very fine to medium grain, v. well cemented, laterally continuous.
		Shale Unit SH2	8 - 32.5	2.6 - 9.8 (Ave. 5.2)	Sandy Shale - Shale, Dark gray to light brownish gray, fissile, silty, contains minor laterally discontinuous silty sandstone beds, laterally continuous across site.
		Sandstone Unit SA2	12.5 - 38.0	3 - 10.3 (Ave. 5.0)	Sandstone, dark gray to very dark gray, quartzose, very fine grain, well cemented, laterally continuous across site.
		Shale Unit SH3	17.0 - >40.5	1' - 78.0' (Ave. 2.5)	Sandy Shale - Shale, very dark gray, sandy to silty, very fine grain quartz, organic. Laterally continuous across site.
		Sandstone Unit SA3	30.0 - 37.0	1.5' - 3.0' (Ave. 2.5)	Sandstone, Dark Gray, quartzose, very fine grain, very well cemented.
		Shale Unit SH4	27.5' - 35.5'	>4'	Shale- sandy shale, dark gray to very dark gray, very fine grain quartz, fissile to highly fractured.

Figure Title:

SITE SPECIFIC STRATIGRAPHIC COLUMN

Client:

SEQUOYAH FUELS CORPORATION

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Location:

Gore, Oklahoma

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405/321-3895

Drawn by:

ML

Scale:

NA

Checked by:

BJS

Date:

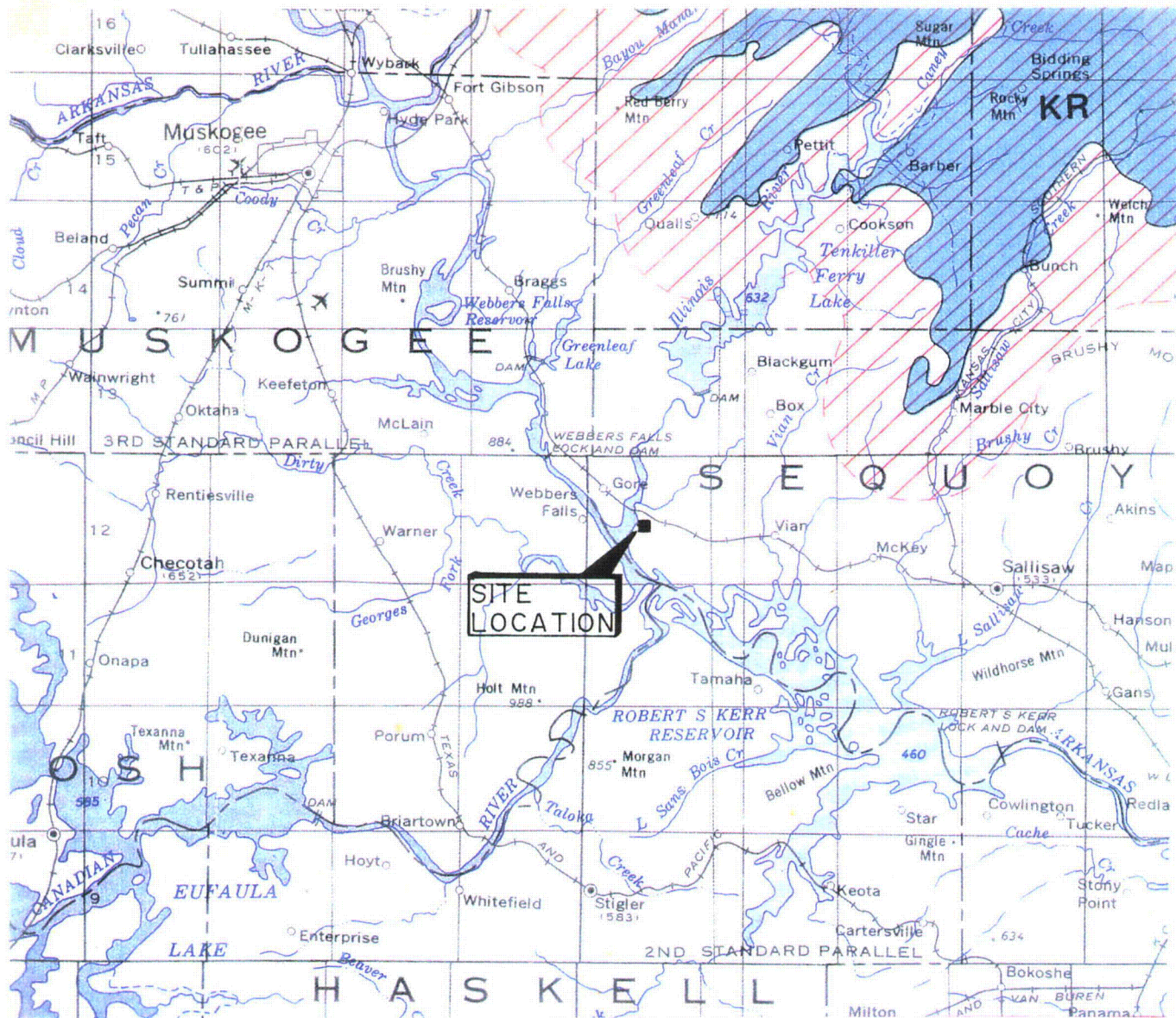
11-15-90

Project No.:

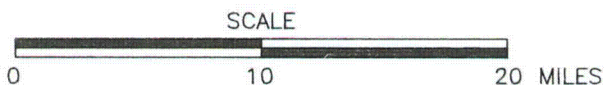
90067

Figure No.:

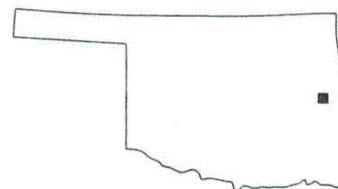
62



AFTER K.S. JOHNSON, 1983



OKLAHOMA



LOCATION MAP

Figure Title: MAP SHOWING PRINCIPAL BEDROCK
AQUIFERS AND RECHARGE AREAS
SEE FIGURE 64 FOR EXPLANATION OF MAP

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

Location: GORE, OKLAHOMA

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/11/91

PREPARED BY: W.E.P.

SCALE: AS SHOWN

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

PROJECT NO: 90067 F05

FIGURE NO.: 63

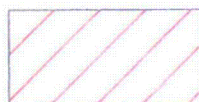
EXPLANATION

RECHARGE AREAS

Patterns of red lines on the map show known or potential recharge areas for the various bedrock aquifers.



Recharge Areas. This pattern shows areas that are known to be part of the recharge area for a bedrock aquifer: includes outcrops of the aquifer and of overlying porous and permeable rocks hydraulically connected with the aquifer.



Potential Recharge Areas. This pattern shows areas that may be part of the recharge area for a bedrock aquifer: includes areas where confining strata may contain pathways for downward movement of water to the aquifer, and safety zones (generally extending 4 miles beyond the known limits of the aquifer) that may overlie unknown extensions of the aquifer or rocks hydraulically connected with the aquifer.

BEDROCK AQUIFERS

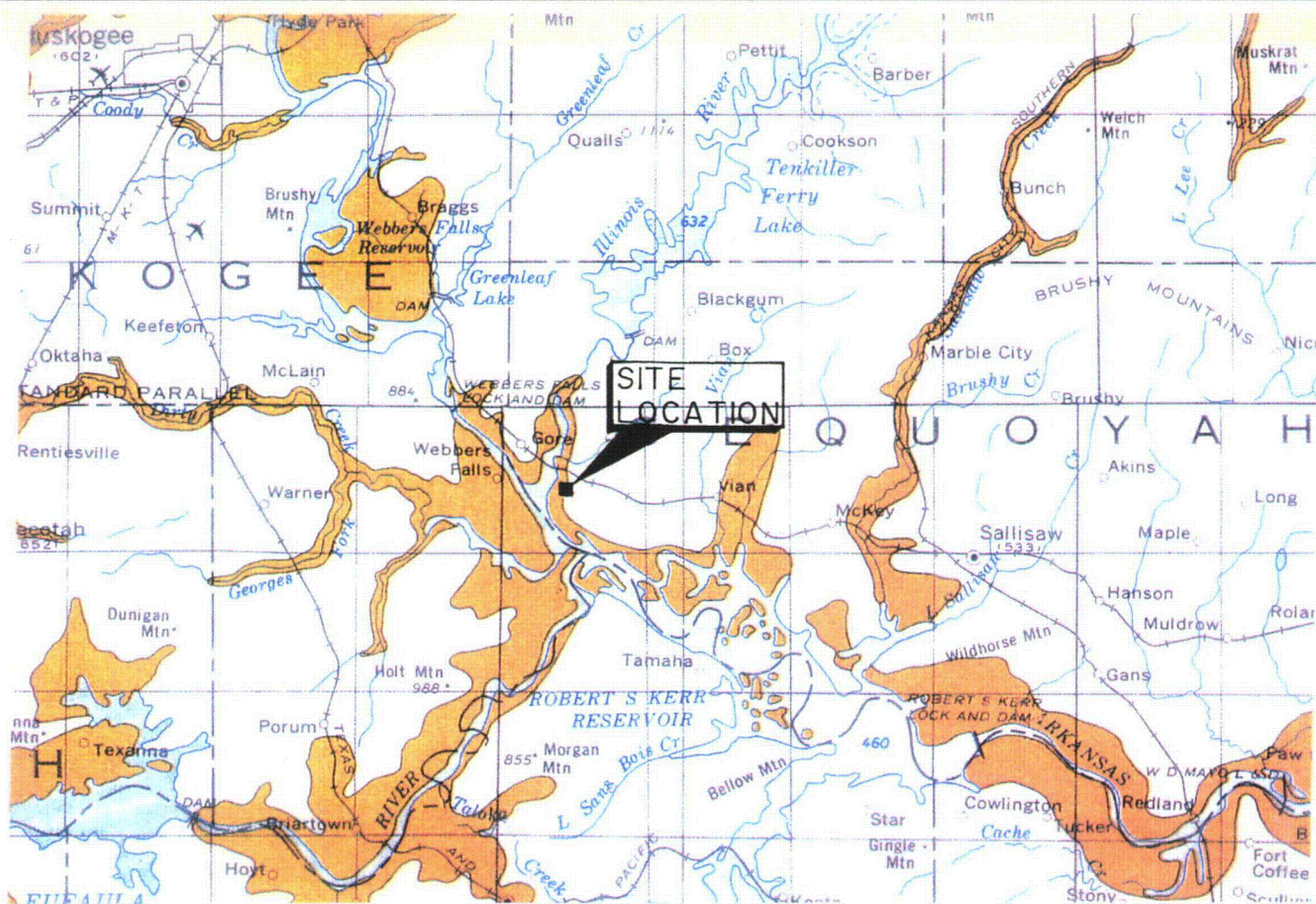
Colored areas on the map show distribution of bedrock aquifers, which are the rock units generally considered favorable or moderately favorable for development of ground-water resources. Bedrock aquifers are listed below by geologic age from oldest to youngest. References, listed at the end of each aquifer description, include Hydrologic Atlases (HA) and Other Reports that provide more detailed information. All references are given in the 4-page pamphlet that accompanies this map.

KR

Keokuk and Reeds Spring Formations (Mississippian in age). This northeastern Oklahoma unit, also referred to as the "Boone Formation" or "Boone Chert," consists of limestone and cherty limestone beds that locally are fractured or cavernous. Thickness ranges from 250 ft. in south to about 400 ft. in north. Wells consistently yield more than 3 gpm, and some yield as much as 50 gpm. Water is of good quality (generally less than 500 mg/L dissolved solids) although typically it is hard. Recharge areas include outcrops of aquifer and of overlying Mississippian limestones and shales above aquifer. Potential recharge areas include areas in northwest where aquifer underlies younger Pennsylvanian rocks; also areas that extend 4 miles west and south of aquifer limits. References: HA-1, HA-2; also Other Reports 33, 38, 44, 49, 51, 61.

AFTER K.S. JOHNSON, 1983

Figure Title: EXPLANATION FOR FIGURE 63		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/11/91	PREPARED BY: W.E.P.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		PROJECT NO: 90067 F09	DRAFTED BY: S.A.R.
		FIGURE NO.: 64	

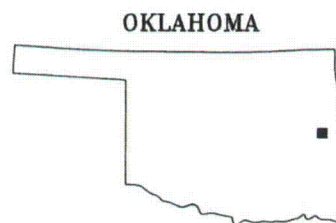
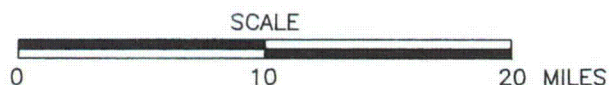


EXPLANATION



Alluvium and Terrace Deposits (Quaternary in age). Unconsolidated deposits of sand, silt, clay, and gravel that occur along or adjacent to modern and ancient rivers and streams. Thickness generally ranges from 10 to 50 ft. (locally as much as 100 ft.). Wells generally yield 10 to 500 gpm of water (locally several thousand gpm), and most water is of good quality (less than 1,000 mg/L). Recharge areas are essentially the same as distribution of the alluvium and terrace deposits.

AFTER K.S. JOHNSON, 1983



LOCATION MAP

Figure Title: MAP SHOWING PRINCIPAL ALLUVIAL AND TERRACE AQUIFERS

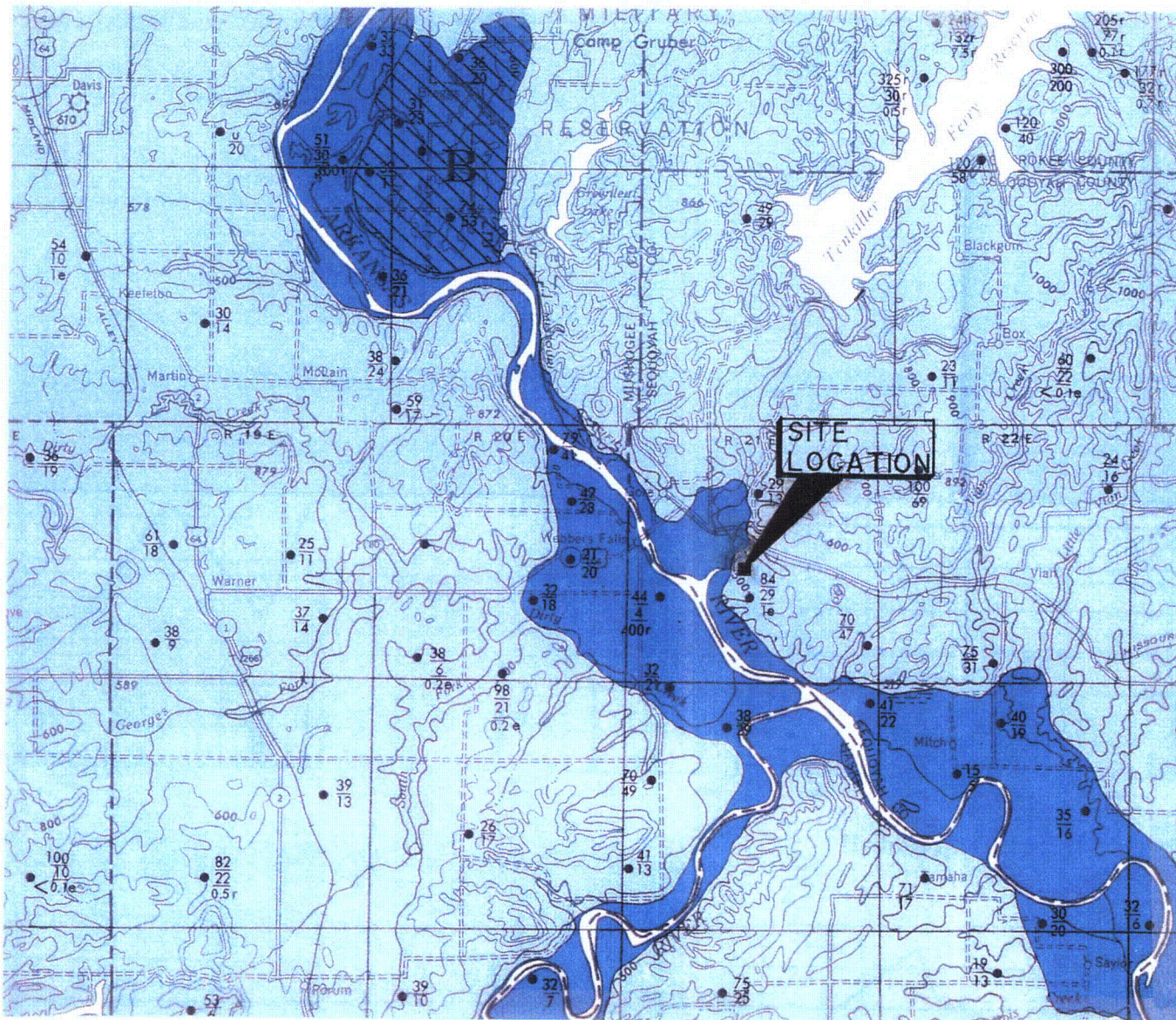
Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

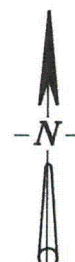
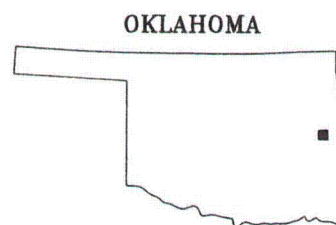
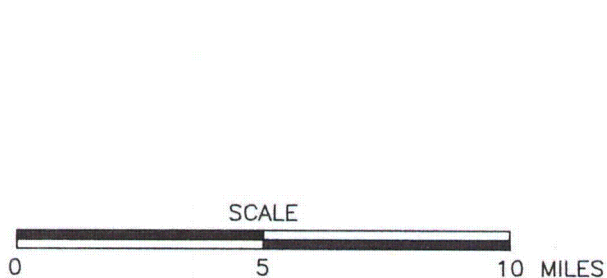
Location: GORE, OKLAHOMA

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DATE: 6/11/91	PREPARED BY: W.E.P.
SCALE: AS SHOWN	CHECKED BY: B.J.S.
PROJECT NO: 90067 F06	DRAFTED BY: S.A.R.
	FIGURE NO.: 65



AFTER M.V. MARCHER, 1969



LOCATION MAP

Figure Title: MAP SHOWING AVAILABILITY OF
GROUNDWATER
SEE FIGURE 67 FOR EXPLANATION OF MAP

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

Location: GORE, OKLAHOMA

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Environmental Consultants
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Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/11/91

PREPARED BY: W.E.P.

SCALE: AS SHOWN

CHECKED BY: B.J.S.

PROJECT NO: 90067 F08

DRAFTED BY: S.A.R.

FIGURE NO.: 66

EXPLANATION



Most favorable for ground-water supplies

This area includes alluvium along the Arkansas and Canadian Rivers and some terrace deposits along the Arkansas River. Wells in alluvium along the Arkansas River are reported to yield up to 900 gpm (gallons per minute); larger yields might be obtained locally. Alluvium along the Canadian River is untested, but yields comparable to those from alluvium of the Arkansas River probably could be obtained. Area A, shown by diagonal lines in Tulsa and Wagoner Counties, is underlain by terrace deposits, up to 60 feet thick, that are reported to yield as much as 125 gpm locally. Area B, shown by diagonal lines near Braggs, is also underlain by terrace deposits, up to 90 feet thick, that may yield up to 100 gpm.



Moderately favorable for ground-water supplies

This area is underlain by the Keokuk and Reeds Spring Formations and, in T. 13 N., R. 23 E., by rocks of pre-Mississippian age. Wells in the Keokuk and Reeds Spring Formations are reported to yield as much as 20 gpm and, locally, more. A few springs yield several hundred gallons per minute. Some of the limestones and sandstones, particularly the Burgen Sandstone in T. 13 N., R. 23 E., and in the vicinity of Qualls, are reported to yield up to 20 gpm.



Least favorable for ground-water supplies

The area is underlain by shale, siltstone, and sandstone of Pennsylvanian age and by terrace deposits mainly along the shores of Eufaula Reservoir. Most wells in the shale, siltstone, and sandstone yield only a fraction of a gallon per minute to a few gallons per minute. A few wells are reported to yield as much as 20 gpm. In local areas, terrace deposits along Eufaula Reservoir may yield 10 gpm or possibly more.



Spring

Number beside spring symbol is yield in gallons per minute.

e = estimated yield. Yield data obtained in 1966.

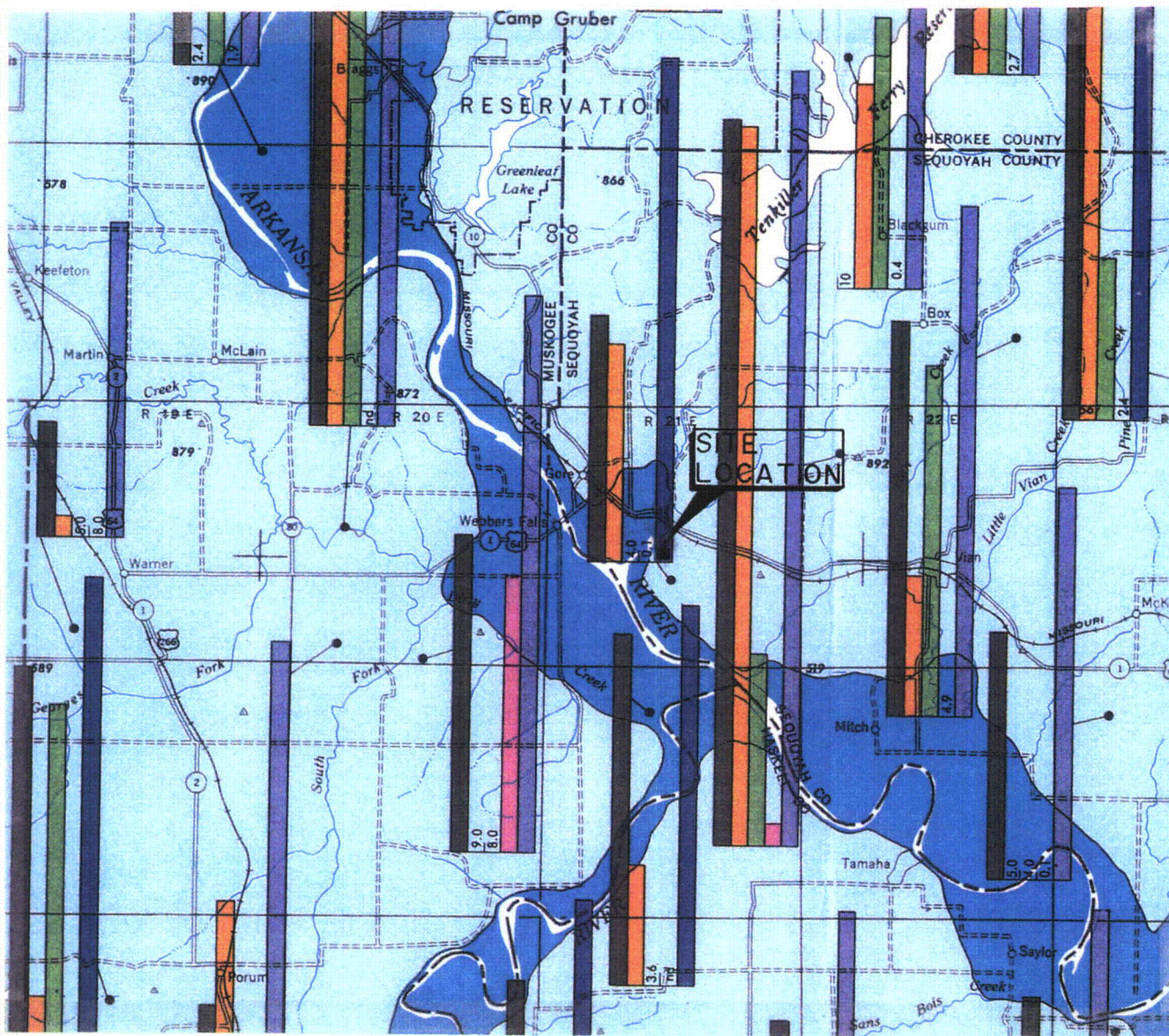


Well

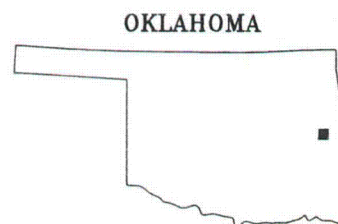
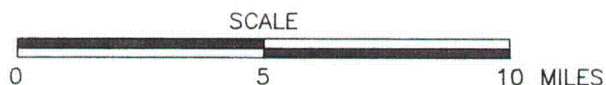
Upper number is depth of the well in feet; middle number is depth to water in feet below land surface in 1966 and 1967; lower number is yield of the well in gallons per minute. e = estimated value, r = reported value, f = flowing well, + = height of water level above ground level, u = unknown.

AFTER M.V. MARCHER, 1969

Figure Title: EXPLANATION FOR FIGURE 66	Client: SEQUOYAH FUELS CORPORATION									
Document Title: FEI FINDINGS REPORT	Location: GORE, OKLAHOMA									
<i>ROBERTS/SCHORNICK</i> & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">DATE: 6/11/91</td> <td style="width: 33%;">PREPARED BY: W.E.P.</td> <td style="width: 33%;">CHECKED BY: B.J.S.</td> </tr> <tr> <td>SCALE: AS SHOWN</td> <td colspan="2">DRAFTED BY: S.A.R.</td> </tr> <tr> <td>PROJECT NO: 90067 F09</td> <td colspan="2">FIGURE NO.: 67</td> </tr> </table>		DATE: 6/11/91	PREPARED BY: W.E.P.	CHECKED BY: B.J.S.	SCALE: AS SHOWN	DRAFTED BY: S.A.R.		PROJECT NO: 90067 F09	FIGURE NO.: 67	
DATE: 6/11/91	PREPARED BY: W.E.P.	CHECKED BY: B.J.S.								
SCALE: AS SHOWN	DRAFTED BY: S.A.R.									
PROJECT NO: 90067 F09	FIGURE NO.: 67									



AFTER M.V. MARCHER, 1969



OKLAHOMA

LOCATION MAP

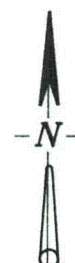


Figure Title: MAP SHOWING GENERAL CHEMICAL
QUALITY OF GROUNDWATER
SEE FIGURE 69 FOR EXPLANATION OF MAP

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

Location: GORE, OKLAHOMA

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3700 West Robinson, Suite 200
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(405) 321-3895

DATE: 6/11/91	PREPARED BY: W.E.P.
SCALE: AS SHOWN	CHECKED BY: B.J.S.
PROJECT NO: 90067 F07	DRAFTED BY: S.A.R.
	FIGURE NO.: 68

EXPLANATION

Chemical quality of water generally good to excellent

This area includes alluvium along the Arkansas and Canadian Rivers and some terrace deposits in Tulsa, Wagoner, and Muskogee Counties. Hardness is the most troublesome chemical characteristic; 90 percent of the water samples tested were hard or very hard. The total dissolved solids was low to moderate; less than 5 percent of the samples exceeded 500 ppm. Except at a few places, sulfate, chloride, and nitrate concentrations were low. Because of the low to moderate sodium and dissolved-solids contents, most of the water from these deposits is suitable for irrigation.

Summary of Available Chemical Data

	CONCENTRATION (PPM)			NUMBER OF ANALYSES
	MAXIMUM	MEDIAN	MINIMUM	
Hardness	640	255	26	44
Sulfate	198	32	0.0	44
Chloride	62	15	0.8	44
Nitrate	65	0.7	0.0	38
Total dissolved solids	702	335	86	44

Chemical quality of water generally fair to good

This area is underlain by the Keokuk and Reeds Spring Formations and older rocks. Hardness is the most troublesome chemical characteristic; 70 percent of the water samples tested were hard or very hard. Thirty-eight percent of the samples had a total dissolved solids content greater than 500 ppm. The sulfate, chloride, and nitrate contents are generally low, except locally.

Summary of Available Chemical Data

	CONCENTRATION (PPM)			NUMBER OF ANALYSES
	MAXIMUM	MEDIAN	MINIMUM	
Hardness	1,172	162	20	47
Sulfate	840	14	0.0	47
Chloride	840	16	0.2	47
Nitrate	62	2.2	0.0	47
Total dissolved solids	2,300	320	50	47

AFTER M.V. MARCHER, 1969

Figure Title: EXPLANATION FOR FIGURE 68

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

Location: GORE, OKLAHOMA

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DATE:	6/11/91	PREPARED BY:	W.E.P.
SCALE:	AS SHOWN	CHECKED BY:	B.J.S.
PROJECT NO:	90067 F09	DRAFTED BY:	S.A.R.
		FIGURE NO.:	69

Chemical quality of water generally poor to fair

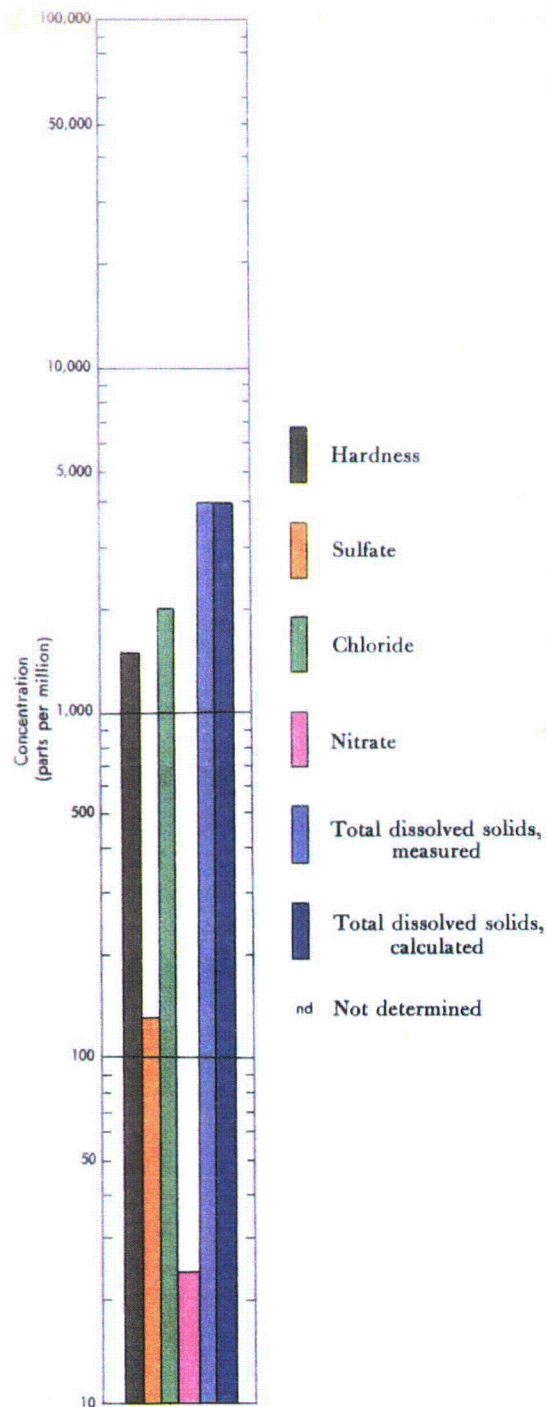
This area is underlain by shale, siltstone, and sandstone and some terrace deposits. Of the water samples tested, 57 percent contained more than 250 ppm sulfate, 10 percent contained more than 250 ppm chloride, and 53 percent contained more than 500 ppm total dissolved solids. Four samples contained more than 45 ppm nitrate; two of these were taken from wells that are apparently polluted. Water from sandstone is least highly mineralized, whereas that from shale, particularly shale that contains coal beds, is most highly mineralized.

Summary of Available Chemical Data

	CONCENTRATION (PPM)			NUMBER OF ANALYSES
	MAXIMUM	MEDIAN	MINIMUM	
Hardness	3,020	144	4.0	83
Sulfate	3,150	36	4.2	84
Chloride	715	44	2.0	84
Nitrate	82	1.6	0.0	82
Total dissolved solids	5,160	581	63	84

Well from which water sample was taken

Spring from which water sample was taken



Concentration of selected dissolved solids in water from wells and springs. Concentrations of 10 ppm or less are shown by numbers in the appropriate column of the graph.

AFTER M.V. MARCHER, 1969

Figure Title: EXPLANATION FOR FIGURE 68 (CONT.)

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI FINDINGS REPORT

Location: GORE, OKLAHOMA

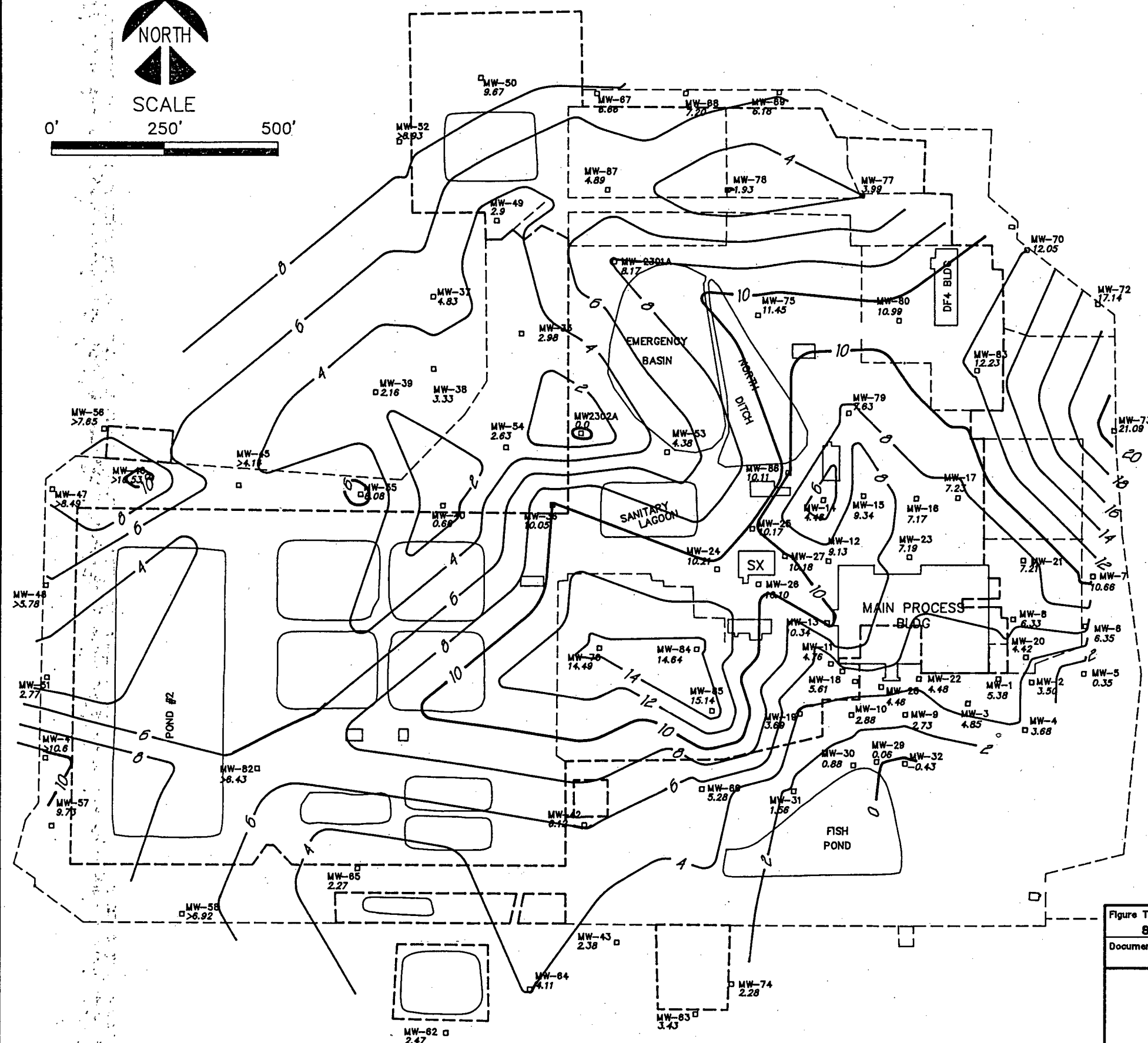
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PROJECT NO: 90067 F09	DRAFTED BY: S.A.R.
	FIGURE NO.: 69 (CONT.)



SCALE

0' 250' 500'



LEGEND

MW-72
7.14 LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND DEPTH TO GROUNDWATER, FEET FROM GROUND SURFACE, APRIL 18 AND 19, 1991.

-2.0- DEPTH TO GROUNDWATER CONTOUR, FEET FROM GROUND SURFACE, APRIL 18 AND 19, 1991.

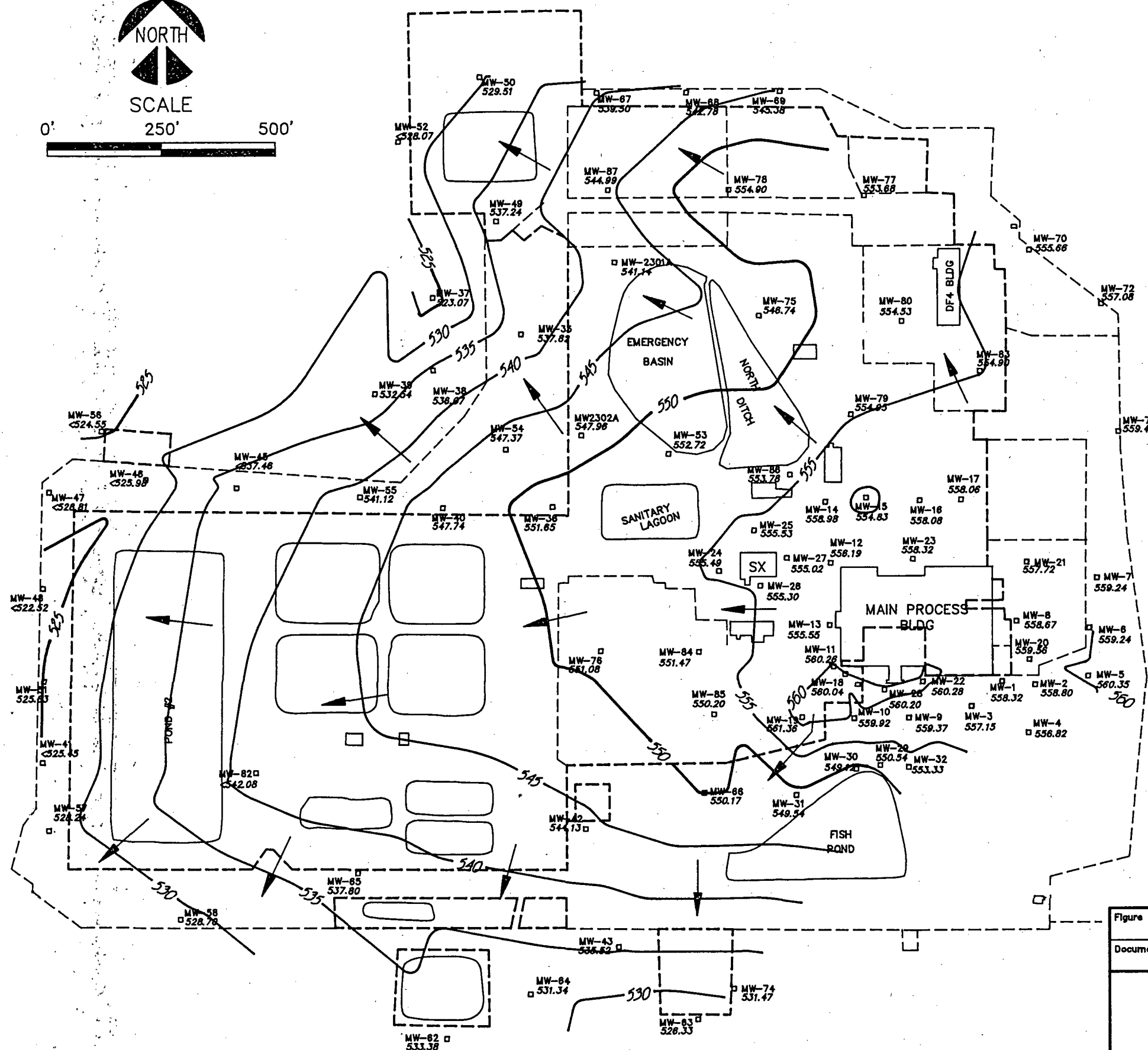
NOTES :
* CONTOUR INTERVALS ARE AT 2.0 FEET.

Figure Title:	DEPTH TO GROUNDWATER SHALLOW SHALE / TERRACE DEPOSITS, 4/18-19/91	Client:	SEQUOYAH FUELS CORPORATION
Document Title:	FBI FINDINGS REPORT	Location:	GORE, OKLAHOMA
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 881-3886		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L03	DRAFTED BY: RML
		FIGURE NO.:	71



SCALE

0' 250' 500'



LEGEND

MW-72
557.08 LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND GROUNDWATER ELEVATION, FEET AMSL, APRIL 18 AND 19, 1991.

— 550 — GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR, SHALLOW SHALE/TERRACE DEPOSITS, FEET AMSL, APRIL 18 AND 19, 1991.

→ DIRECTION OF GROUNDWATER FLOW

NOTES :

* CONTOUR INTERVALS ARE AT 5.0 FEET.

Figure Title: GROUNDWATER POTENTIOMETRIC SURFACE
SHALLOW SHALE/TERRACE DEPOSITS, 4/18-19/91

Document Title: FE
FINDINGS REPORT

Client: SEQUOYAH FUELS CORPORATION

Location: GORE, OKLAHOMA

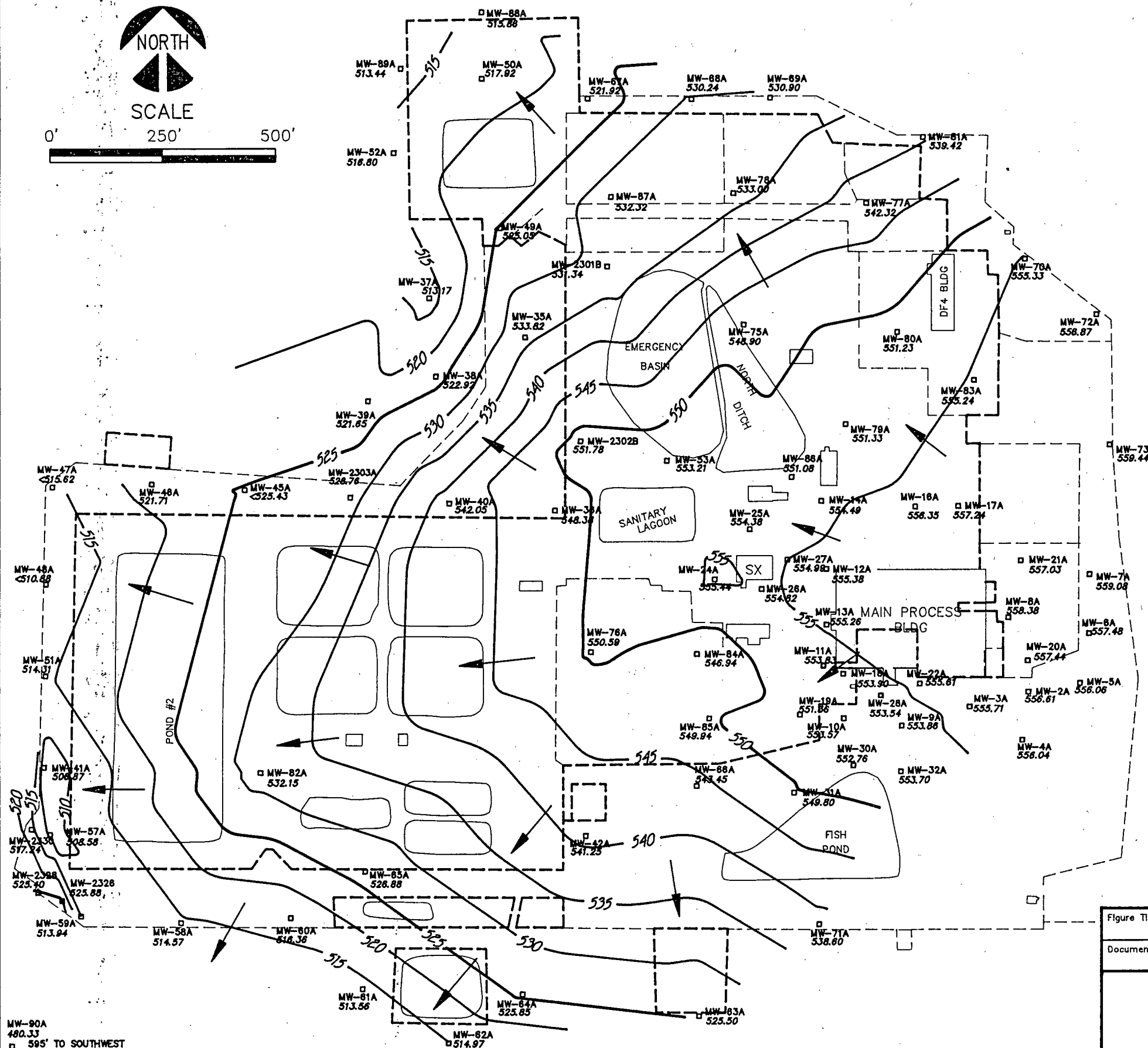
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Environmental Consultants
2700 West Robinson, Suite 200
Warrick, Oklahoma 73072
(405) 821-8245

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 L02	DRAFTED BY: RML
	FIGURE NO.: 72



SCALE

0' 250' 500'



LEGEND

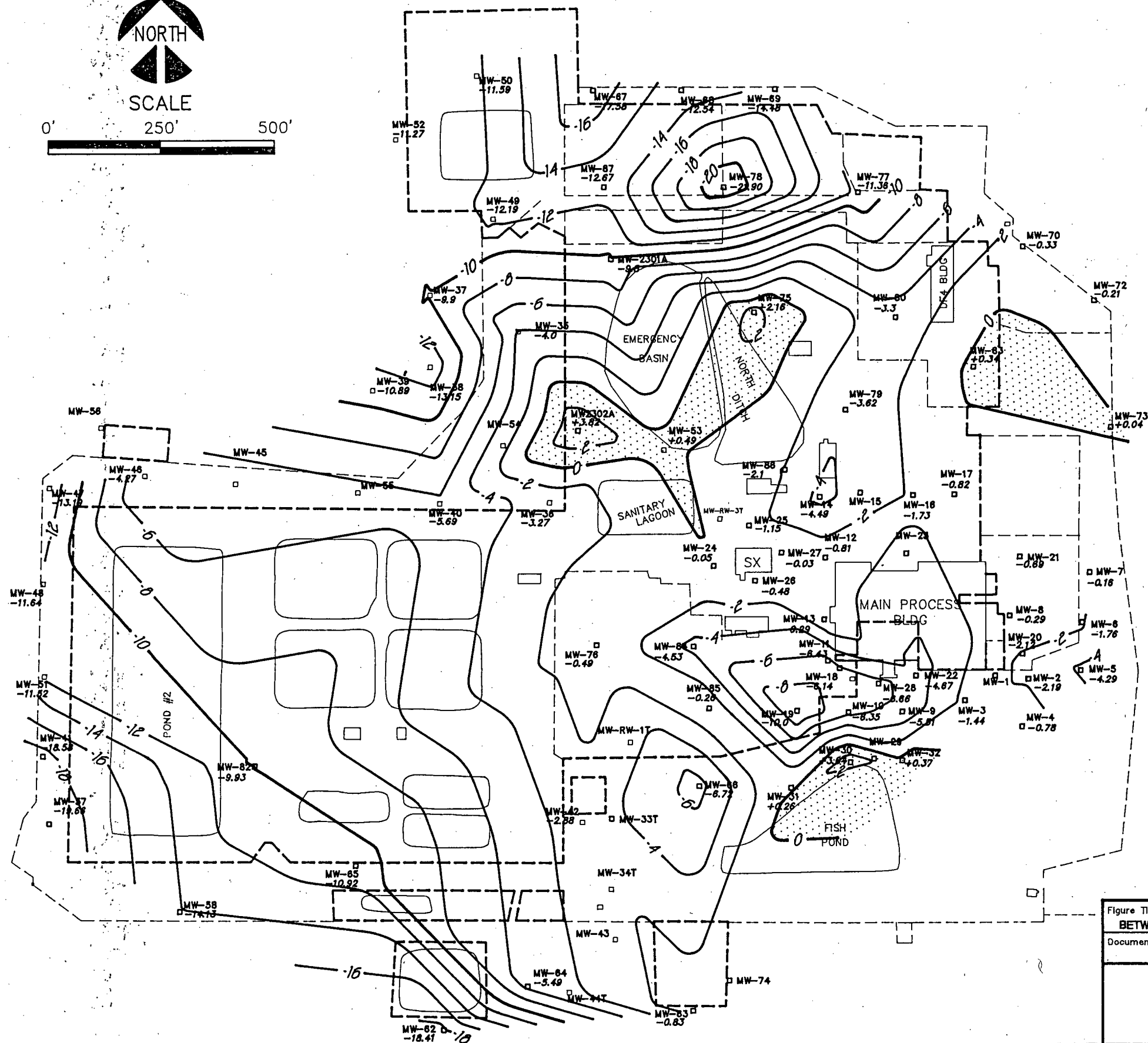
□ MW-72A 558.87
— 550 — LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND GROUNDWATER ELEVATION; FEET AMSL, APRIL 18 AND 19, 1991.

— 550 — GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR, DEEP SANDSTONE/SHALE UNIT, FEET AMSL, APRIL 18 AND 19, 1991.

→ DIRECTION OF GROUNDWATER FLOW

NOTE :
* CONTOURS INTERVALS ARE AT 5.0 FEET.

Figure Title: GROUNDWATER POTENTIOMETRIC SURFACE DEEP SANDSTONE/SHALE, 4/18-19/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L01	DRAFTED BY: RML
		FIGURE NO.:	73



LEGEND

MW-72
-0.21

LOCATION OF SHALLOW SHALE TERRACE DEPOSIT MONITOR WELL AND DIFFERENCE IN GROUNDWATER VERTICAL HYDRAULIC HEAD BETWEEN SHALLOW SHALE/TERRACE DEPOSITS AND DEEP SANDSTONE/SHALE GROUNDWATER SYSTEM. FEET APRIL 18 & 19, 1991

-4.0-

CONTOUR OF VERTICAL HYDRAULIC HEAD DIFFERENCE BETWEEN SHALLOW SHALE/TERRACE DEPOSITS AND DEEPER SANDSTONE/SHALE GROUNDWATER SYSTEMS, FEET APRIL 18 & 19, 1991

UPWARD GRADIENT AREA

- NOTES:
- * POSITIVE (+) NUMBERS INDICATES UPWARD GRADIENT.
 - * NEGATIVE (-) NUMBERS INDICATES DOWNWARD GRADIENT.
 - * CONTOUR INTERVAL AT 2.0 FEET.

Figure Title: DIFFERENCE IN VERTICAL HYDRAULIC HEAD BETWEEN SHALE AND SANDSTONE UNITS, 4/18-19/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 521-3883		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L04	DRAFTED BY: RML
		FIGURE NO.: 74	

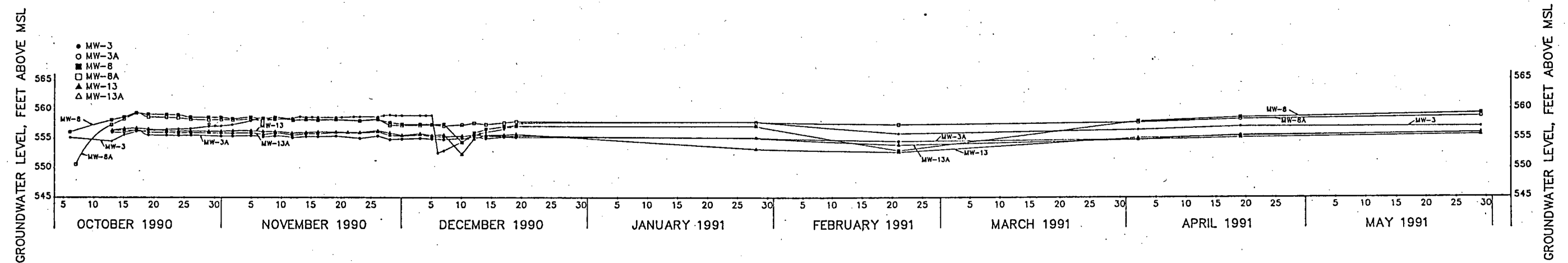


Figure Title:	REPRESENTATIVE WELL HYDROGRAPH	Client:	BEVOYAH FUELS CORPORATION
Document Title:	FB FINDINGS REPORT	Location:	CORE, OKLAHOMA
<u>ROBERTS/SCHORNICK & ASSOCIATES, INC.</u> Environmental Consultants 2700 West Oklahoma, Suite 200 Tulsa, Oklahoma 74112 (918) 481-2000		DATE:	JULY, 1991
		SCALE:	NO SCALE
		PROJECT NO:	90067 M47
		FIGURE NO.1	75
		PREPARED BY:	BJS
		CHECKED BY:	BJS
		DRAFTED BY:	SKL

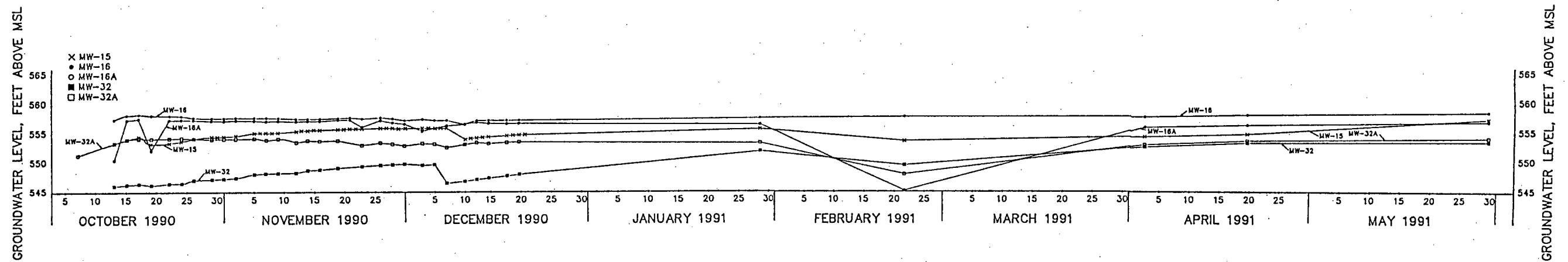
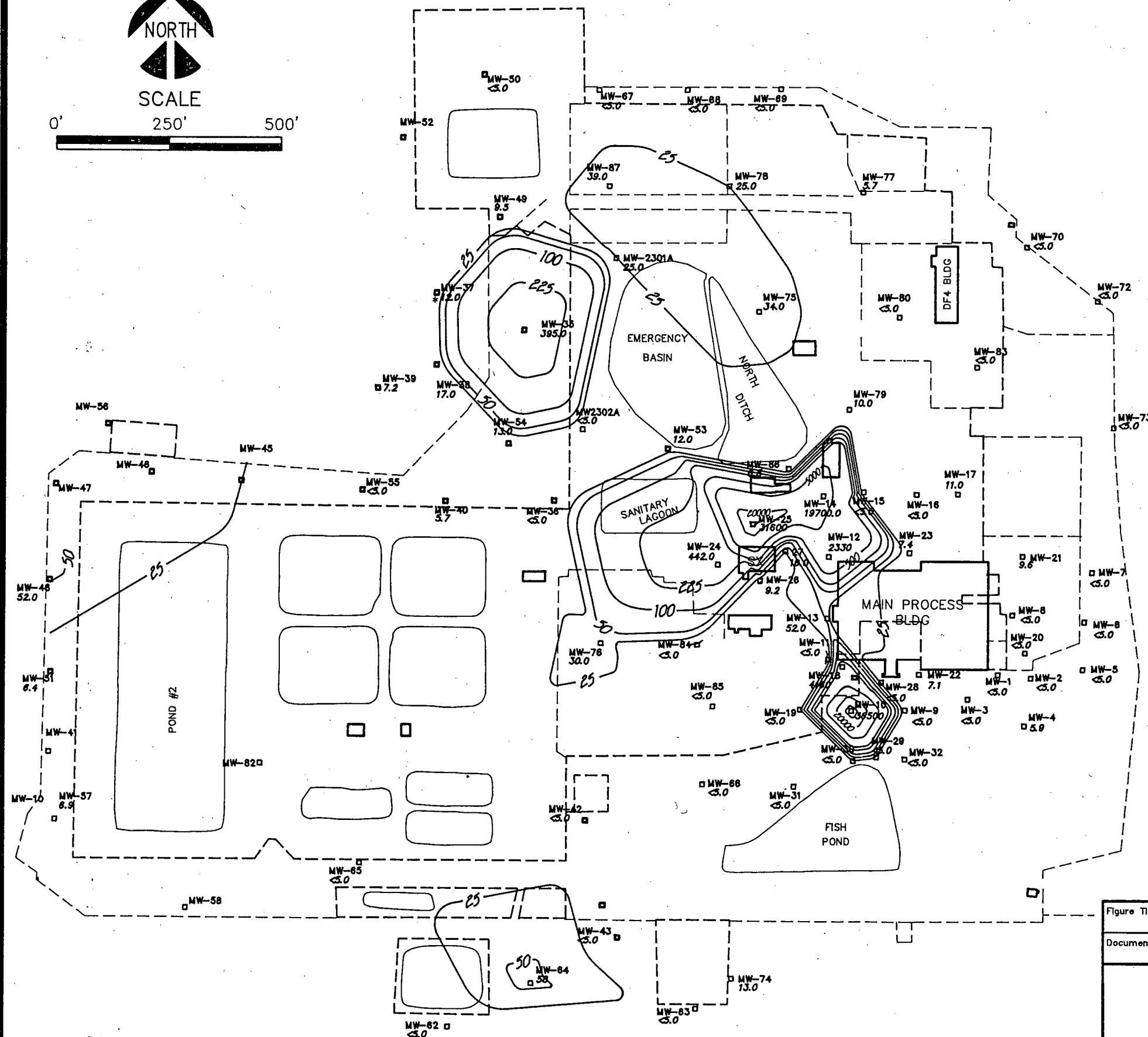


Figure Title:	REPRESENTATIVE WELL HYDROGRAPHS	Client:	BEQUOYAH FUELS CORPORATION
Document Title:	FBI FINDINGS REPORT	Location:	COORE, OKLAHOMA
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 2700 West Park Avenue, Suite 200 Norman, Oklahoma 73071 (405) 321-1000		DATE:	JULY, 1990
		SCALE:	NO SCALE
		PROJECT NO:	90067 M46
		FIGURE NO.:	76
		PREPARED BY:	BJS
		CHECKED BY:	BJS
		DRAFTED BY:	SKL



SCALE

0' 250' 500'



LEGEND

MW-72
3.0
LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND TOTAL URANIUM CONCENTRATION IN GROUNDWATER, UG/L, APRIL 23 TO MAY 17, 1991

— 10 — ISOPLETH OF TOTAL URANIUM CONCENTRATION IN GROUNDWATER, UG/L, APRIL 23 TO MAY 17, 1991

FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL IS 225 UG/L FOR URANIUM

NOTE:

* - DATA FROM WELLS MW-37, MW-48, MW-51, MW-64, AND MW-69 COLLECTED ON 3-26-91, 4-5-91, 3-26-91, 2-25-91, AND 2-5-91, RESPECTIVELY

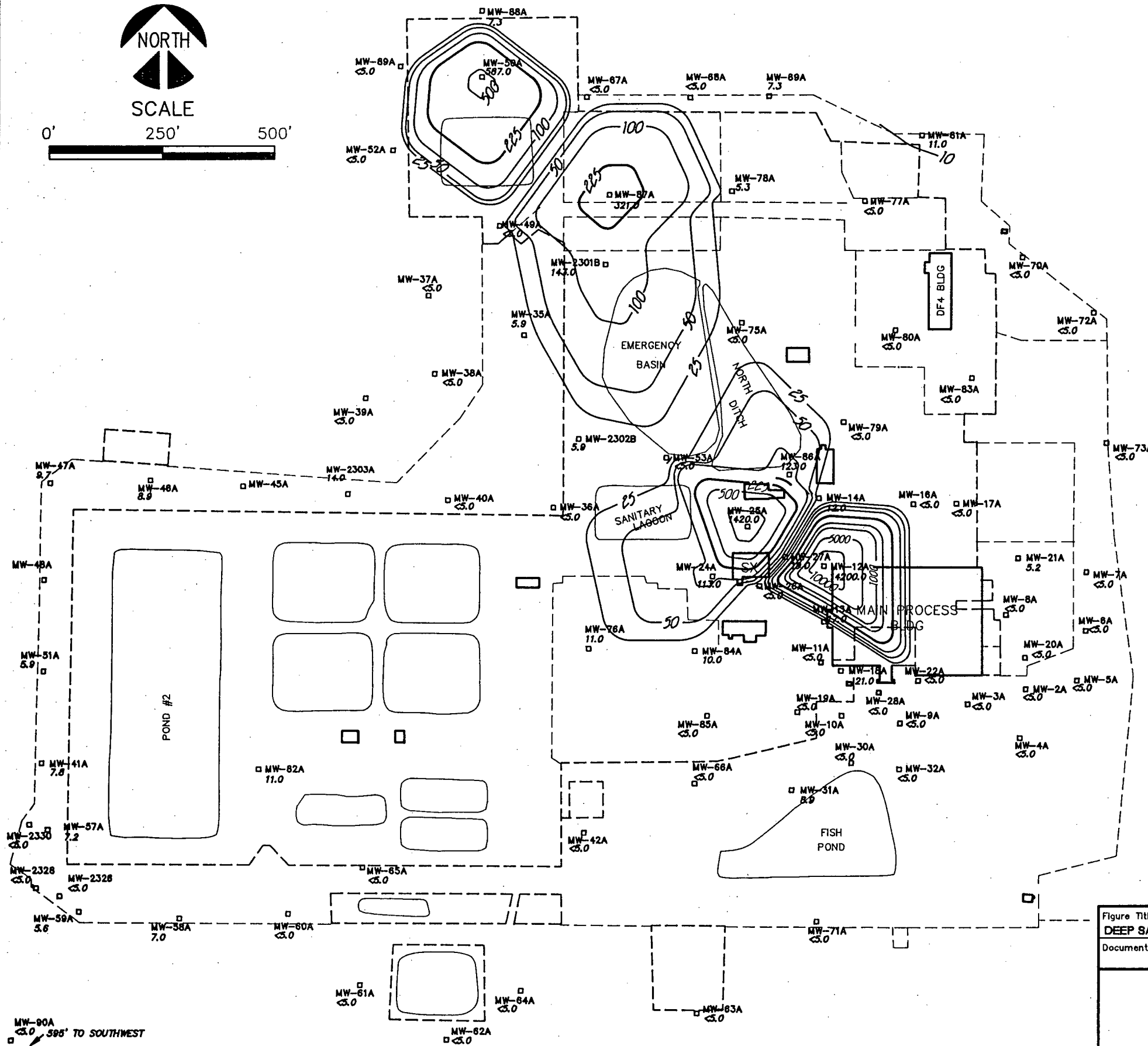
CONTOURS SHOWN:
25, 50, 100, 225,
500, 5000, 20,000, AND 30,000

Figure Title: ISOPLETH OF TOTAL URANIUM CONCENTRATION IN SHALE/TERRACE WELLS, 4/23-5/17/91		Client: SEOUYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N71	DRAFTED BY: RML
		FIGURE NO.: 77	



SCALE

0' 250' 500'



LEGEND

□ MW-72A
□ 225
— 225 —

LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND TOTAL URANIUM CONCENTRATION IN GROUNDWATER, UG/L, APRIL 23 TO MAY 17, 1991

ISOPLETH OF TOTAL URANIUM CONCENTRATION IN GROUNDWATER, UG/L, APRIL 23 TO MAY 17, 1991

FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL IS 225 UG/L FOR URANIUM

NOTE:
* - DATA FROM WELL MW-41A AND MW-47A
TAKEN ON 2-06-91 AND 12-27-90,
RESPECTIVELY

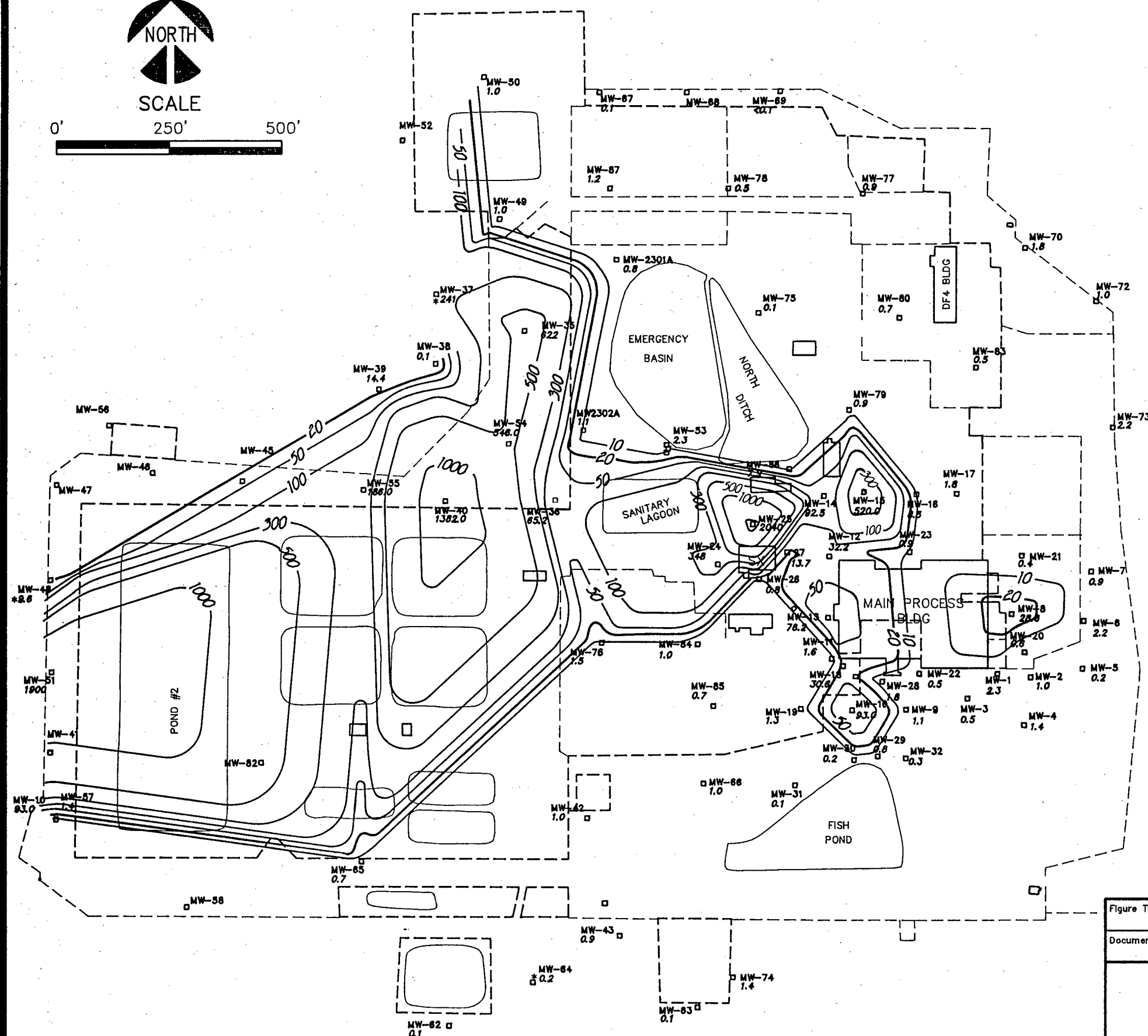
CONTOURS SHOWN: 25, 50, 100, 225, 500,
1000, 5000, 10,000, AND 15,000

Figure Title: ISOPLETH OF TOTAL URANIUM CONCENTRATION, DEEP SANDSTONE/SHALE GROUNDWATER, 4/23/5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N70	DRAFTED BY: RML
		FIGURE NO.: 78	



SCALE

0' 250' 500'



LEGEND

MW-72
1.0
— 10 — LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND NITRATE CONCENTRATION IN GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

ISOPLETH OF NITRATE CONCENTRATION IN SHALLOW SHALE/TERRACE GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL IS 20 MG/L FOR NITRATE AS N

NOTE:

* - DATA FROM WELL MW-37, MW-48, MW-51, MW-64, AND MW-69 TAKEN ON 3-26-91, 4-5-91, 3-26-91, 2-25-91, AND 2-25-91, RESPECTIVELY

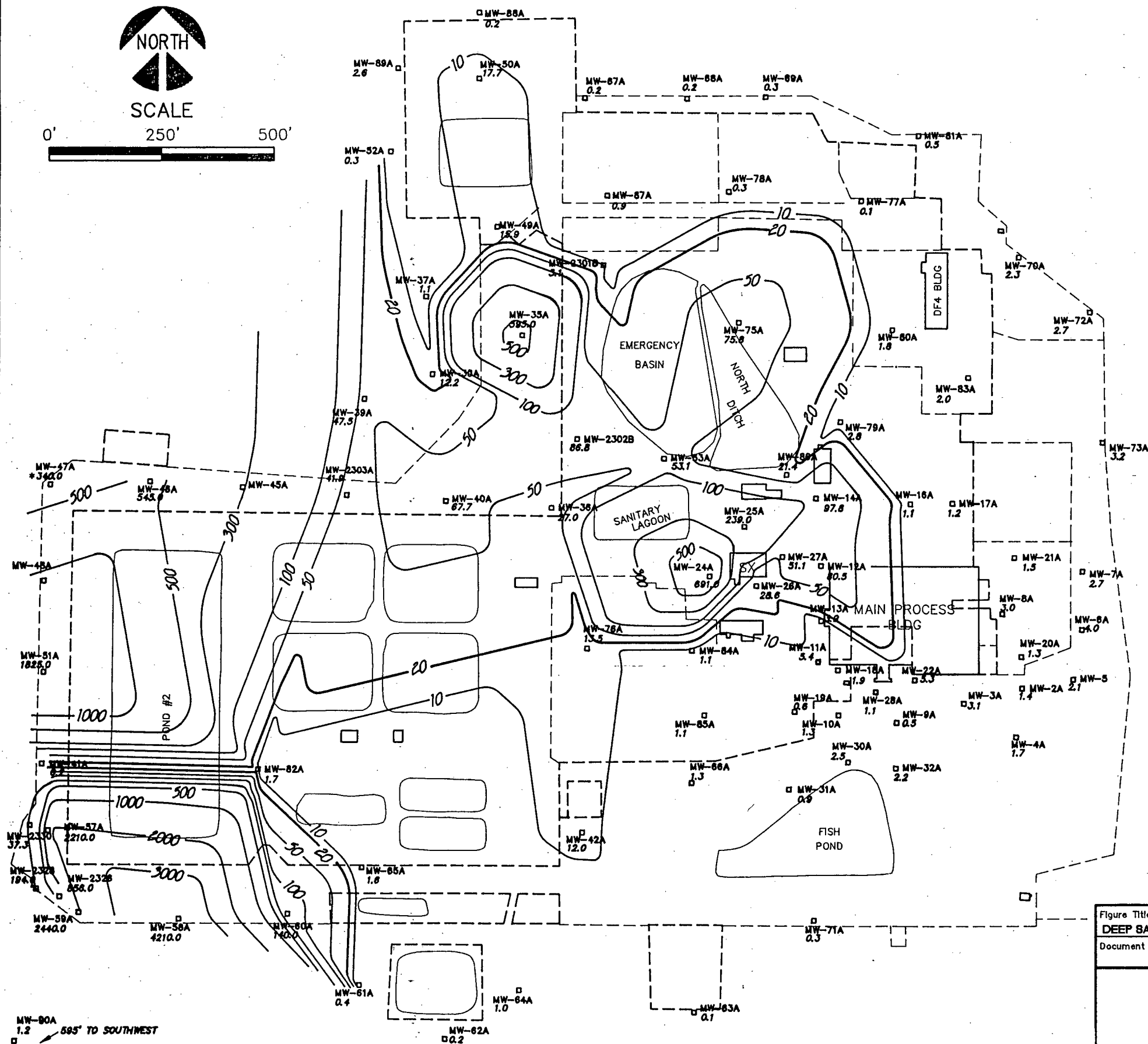
CONTOURS SHOWN: 10.0, 20, 50, 100, 300, 500, 1000, AND 2000

Figure Title: ISOPLETH OF NITRATE CONCENTRATION, SHALE/TERRACE GROUNDWATER, 4/23-5/17/91	Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT	Location: GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3896	DATE: 6/14/91	PREPARED BY: R
	SCALE: 1"=250'	CHECKED BY: B.J.
	PROJECT NO: 90087 N69	DRAFTED BY: RML
	FIGURE NO.: 7	



SCALE

0' 250' 500'



LEGEND

□ MW-72A
2.7 LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL
AND NITRATE CONCENTRATION IN GROUNDWATER,
MG/L, APRIL 23 TO MAY 17, 1991

— 10 — ISOPLETH OF NITRATE CONCENTRATION IN DEEP SANDSTONE/
SHALE GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

NOTE:

* — DATA FROM WELL MW-41A AND MW-47A TAKEN ON
2-06-91 AND 12-27-90, RESPECTIVELY. WELLS
MW-45A AND MW-48A DRY.

FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL IS
20 MG/L FOR NITRATE AS N

CONTOURS SHOWN: 10, 20, 50, 100, 300, 500,
1000, 2000, AND 3000

Figure Title: ISOPLETH OF NITRATE CONCENTRATION,
DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI
FINAL FINDINGS REPORT

Location: GORE, OKLAHOMA

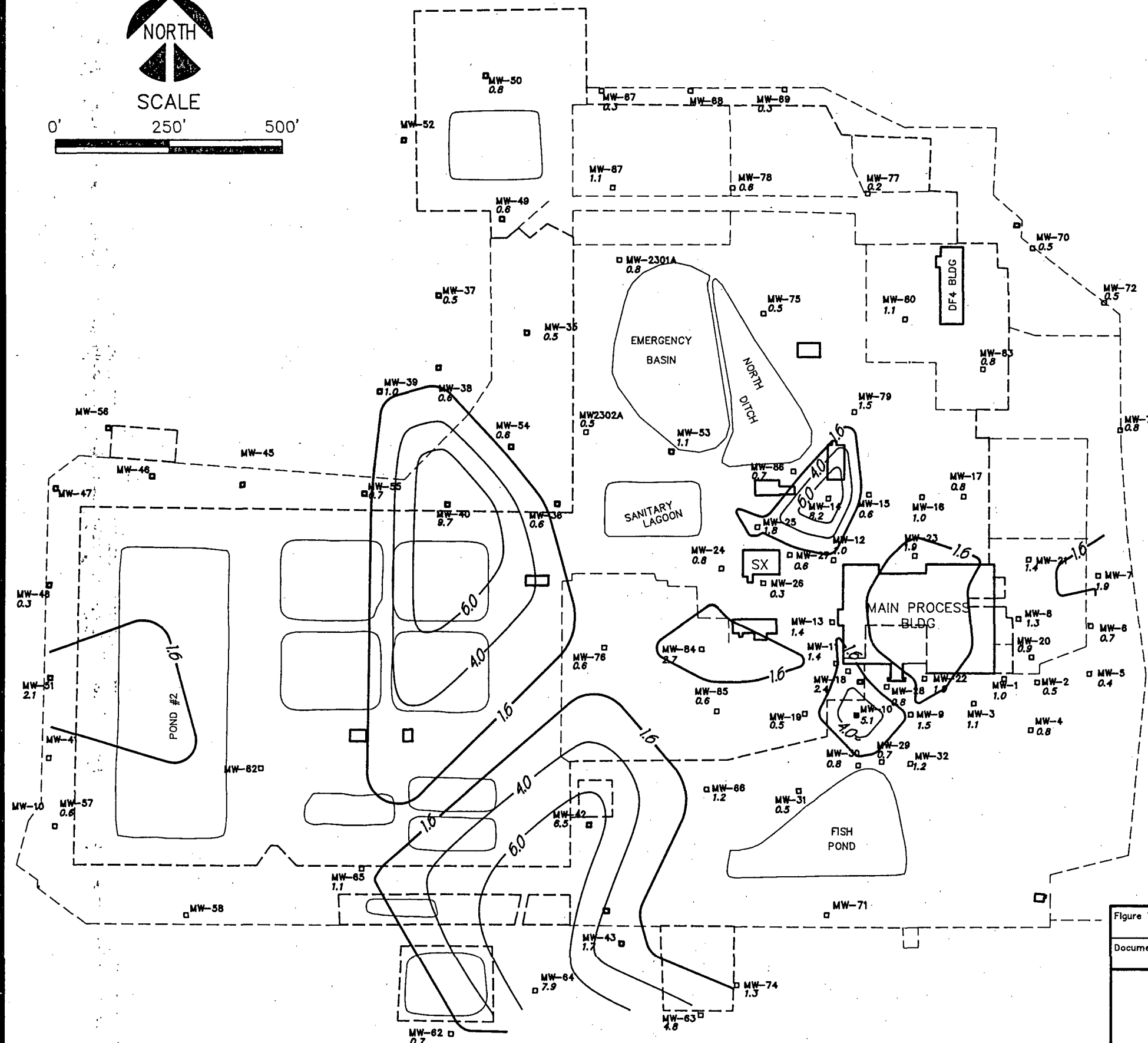
**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3896

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 N68	DRAFTED BY: RML
FIGURE NO.: 80	



SCALE

0' 250' 500'



LEGEND

— 4.0 — LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND FLUORIDE CONCENTRATION IN GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

NOTE:

— DATA FOR WELLS MW-37, MW-48, MW-51, MW-64, AND MW-69 COLLECTED ON 3-26-91, 4-5-91, 3-26-91, 2-25-91, AND 2-25-91, RESPECTIVELY

FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL FOR FLUORIDE IS 1.6 MG/L

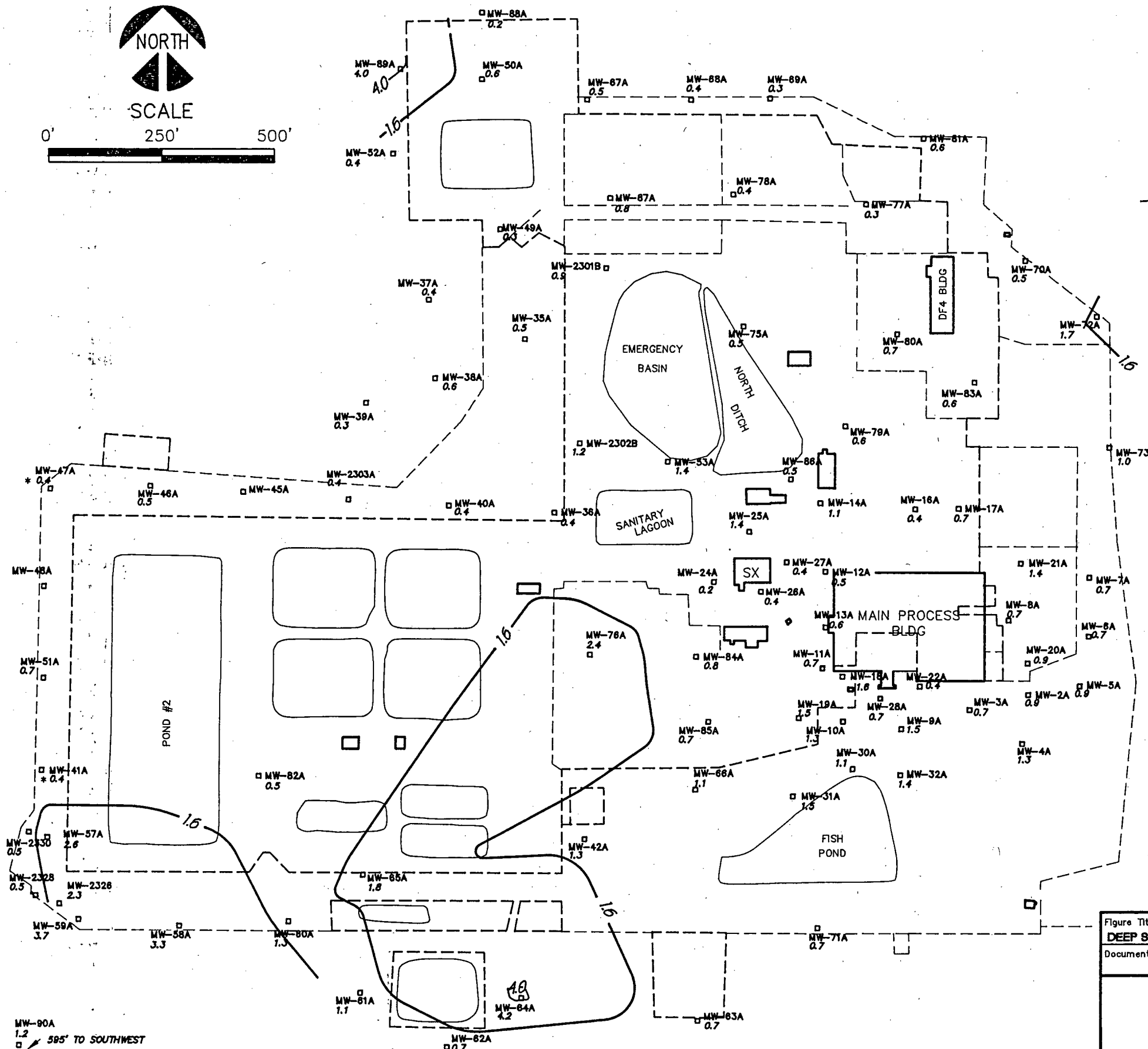
CONTOURS SHOWN: 1.6, 4.0, AND 6.0

Figure Title: ISOPLETH OF FLUORIDE CONCENTRATION, SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3386		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N73	DRAFTED BY: RML
		FIGURE NO.: 81	



SCALE

0' 250' 500'



LEGEND

□ LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND FLUORIDE CONCENTRATION IN GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

— 1.0 — ISOPLETH OF FLUORIDE CONCENTRATION OF GROUNDWATER IN DEEP SANDSTONE/SHALE GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

NOTE:

- * - DATA FOR WELL MW-41A TAKEN ON 2-06-91
- * - DATA FOR WELL MW-47A TAKEN ON 12-27-90
- WELLS MW-45A AND MW-48A DRY

FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL FOR FLUORIDE IS 1.6 MG/L

CONTOURS SHOWN: 1.6 AND 4.0

Figure Title: ISOPLETH OF FLUORIDE CONCENTRATION, DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91

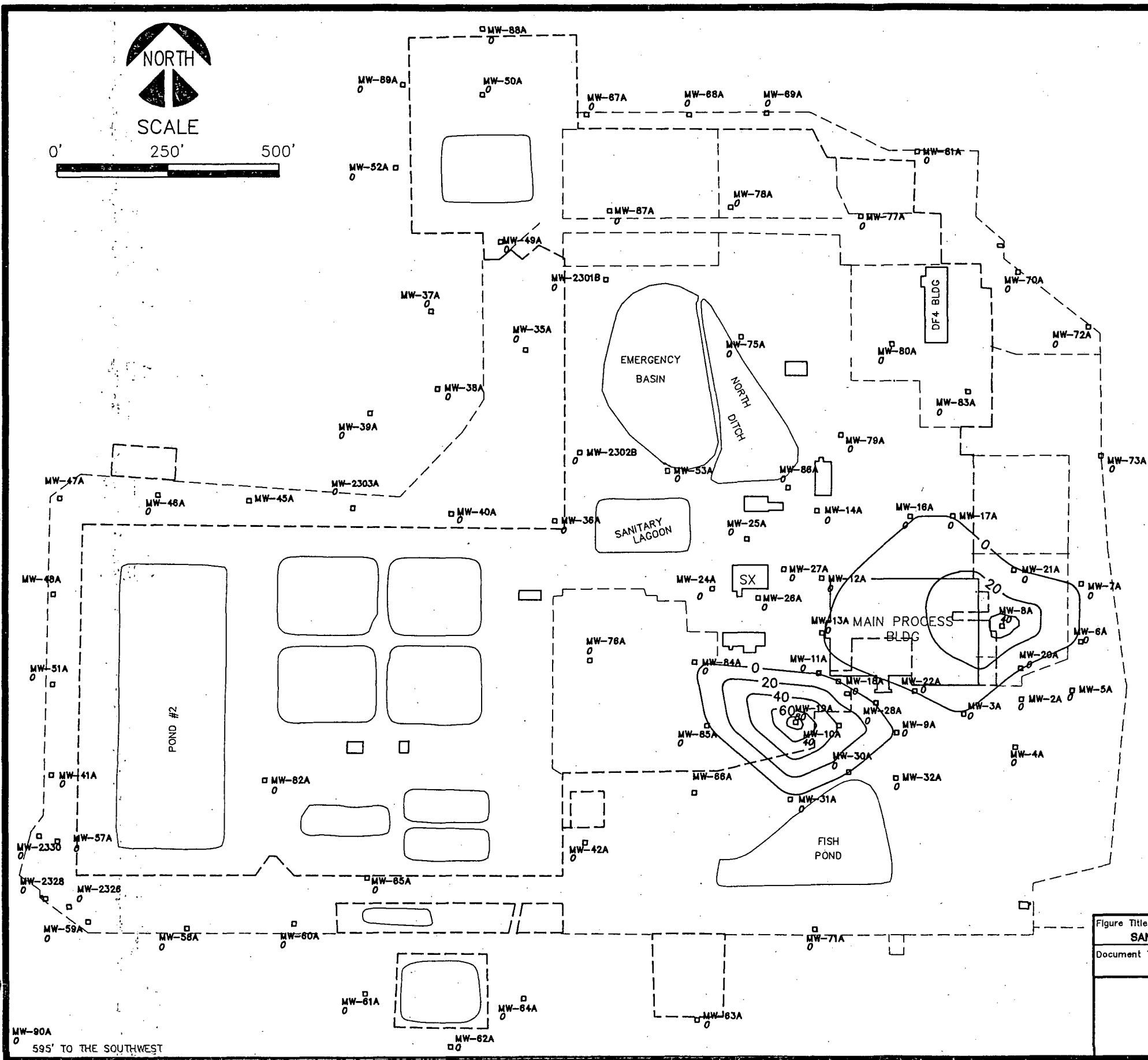
Document Title: FEI
FINAL FINDINGS REPORT

Client: SEQUOYAH FUELS CORPORATION

Location: GORE, OKLAHOMA

ROBERTS/SCHORNICK & ASSOCIATES, INC.
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 N72	DRAFTED BY: RML
FIGURE NO.: 82	



LEGEND

- LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND CARBONATE ALKALINITY VALUE, MG/L, APRIL 23 TO MAY 17, 1991
- ISOPLETH OF CARBONATE ALKALINITY AS CaCO₃, MG/L, DEEP SANDSTONE/SHALE GROUNDWATER, APRIL 23 TO MAY 17, 1991

NOTES :
 * CONTOUR INTERVALS ARE AT 20 MG/L

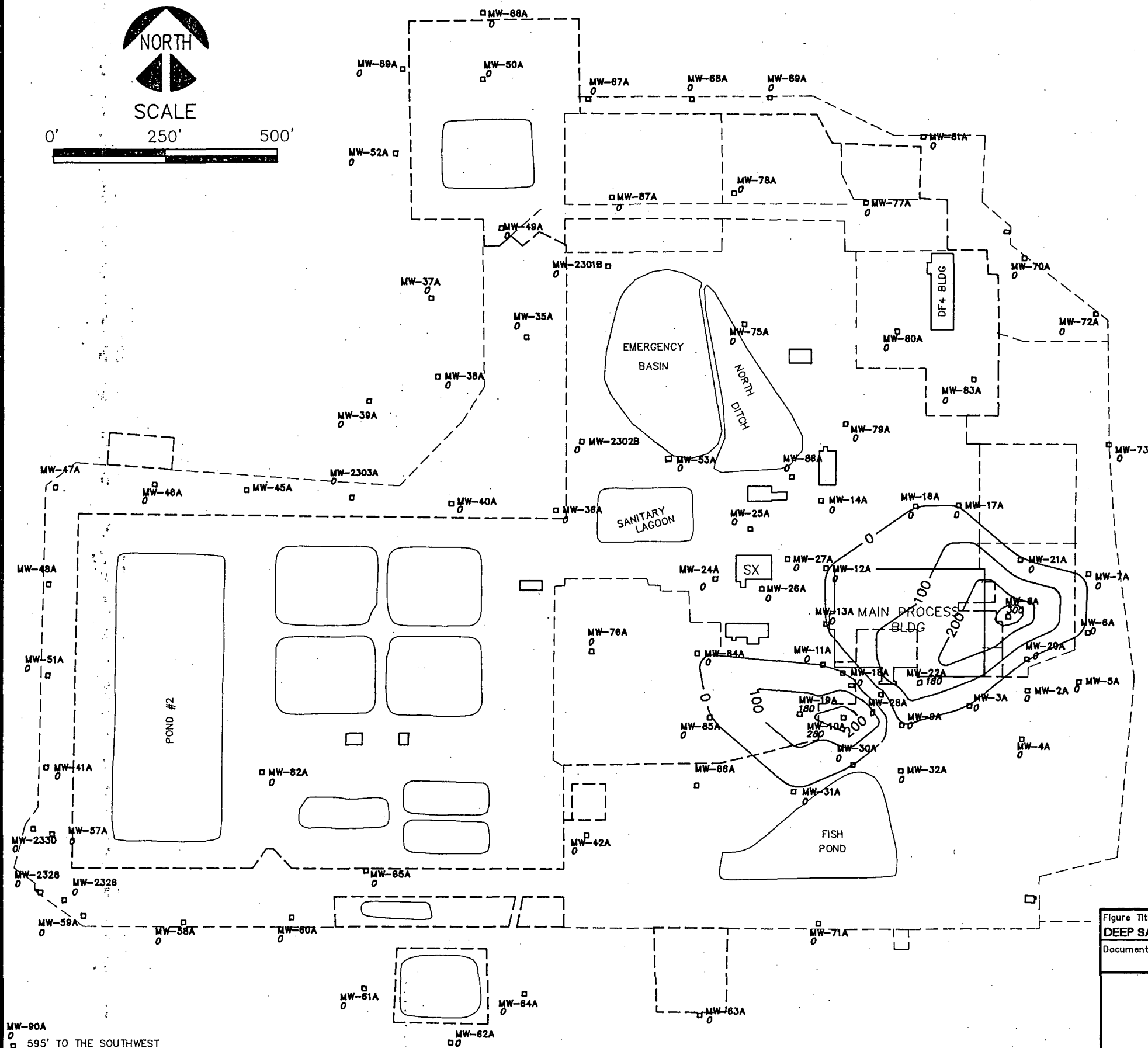
Figure Title: ISOPLETH OF CARBONATE ALKALINITY, SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3896		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N98	DRAFTED BY: RML
		FIGURE NO.: 83	

MW-80A
 595' TO THE SOUTHWEST



SCALE

0' 250' 500'



LEGEND

MW-72A
0

LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND HYDROXIDE ALKALINITY VALUE, MG/L, APRIL 23 TO MAY 17, 1991

— 100 — ISOPLETH OF HYDROXIDE ALKALINITY, MG/L, DEEP SANDSTONE/SHALE GROUNDWATER, APRIL 23 TO MAY 17, 1991

NOTES :

* CONTOUR INTERVALS ARE AT 100 MG/L

Figure Title: ISOPLETH OF HYDROXIDE ALKALINITY,
DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91

Document Title: FEI
FINDINGS REPORT

Client: SEQUOYAH FUELS CORPORATION

Location: GORE, OKLAHOMA

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3896

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 N99	DRAFTED BY: RML
	FIGURE NO.: 84

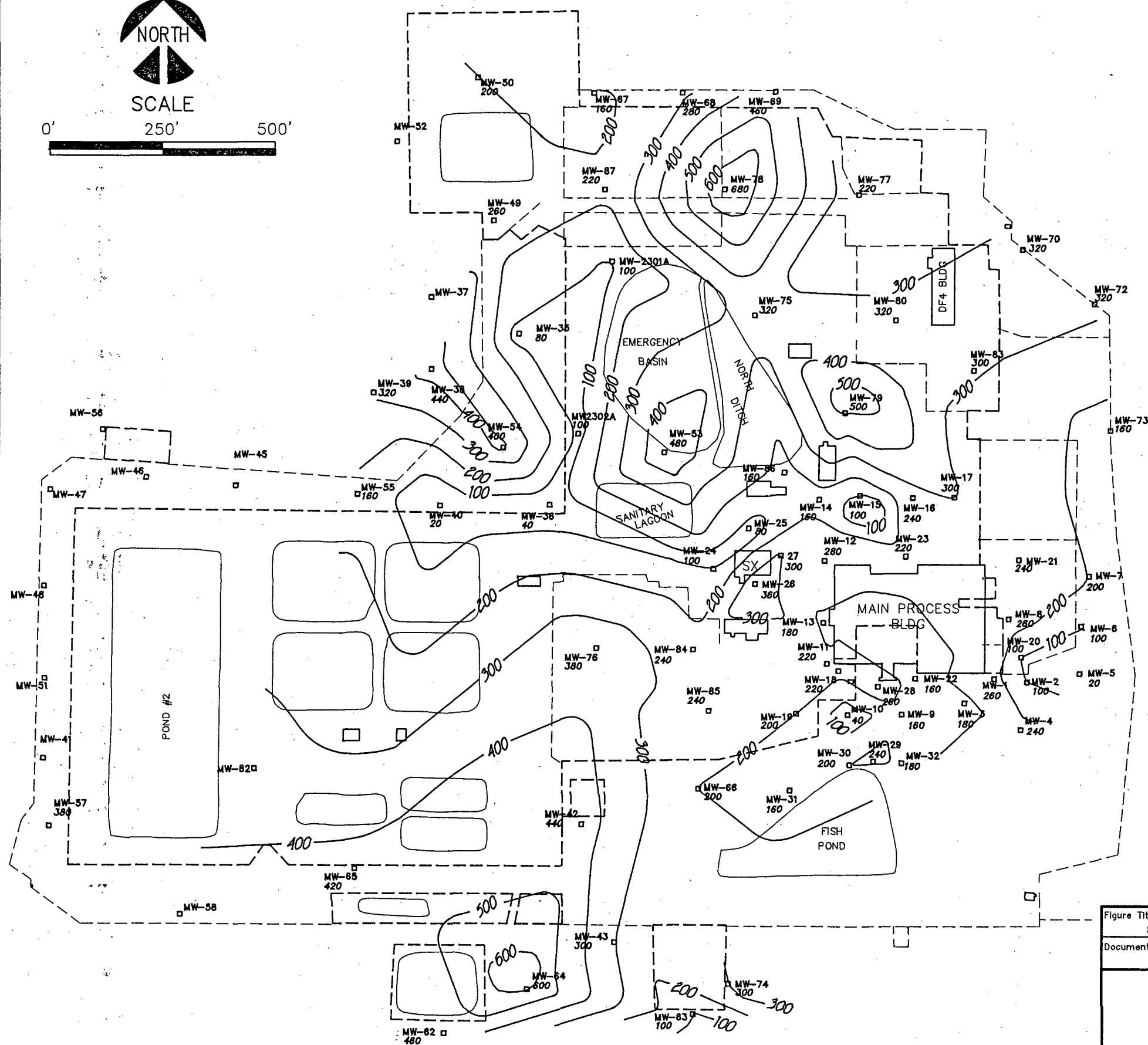
MW-90A
0

595' TO THE SOUTHWEST



SCALE

0' 250' 500'



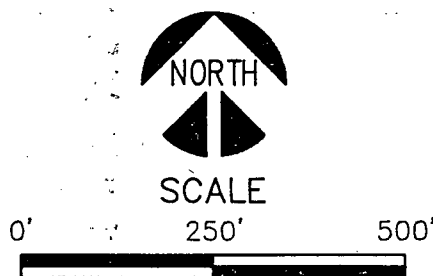
LEGEND

MW-72
320 LOCATION OF SHALLOW SHALE/TERRACE DEPOSIT MONITOR WELL AND BICARBONATE ALKALINITY VALUE, MG/L, APRIL 23 TO MAY 17, 1991

-300- ISOPLETH OF BICARBONATE ALKALINITY AS CaCO_3 , MG/L, SHALLOW SHALE/TERRACE DEPOSIT GROUNDWATER, APRIL 23 TO MAY 17, 1991

NOTES :
* CONTOUR INTERVALS ARE AT 100 MG/L.

Figure Title: ISOPLETH OF BICARBONATE ALKALINITY SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N93	DRAFTED BY: RML
		FIGURE NO.: 85	



MW-72A
280

—200—

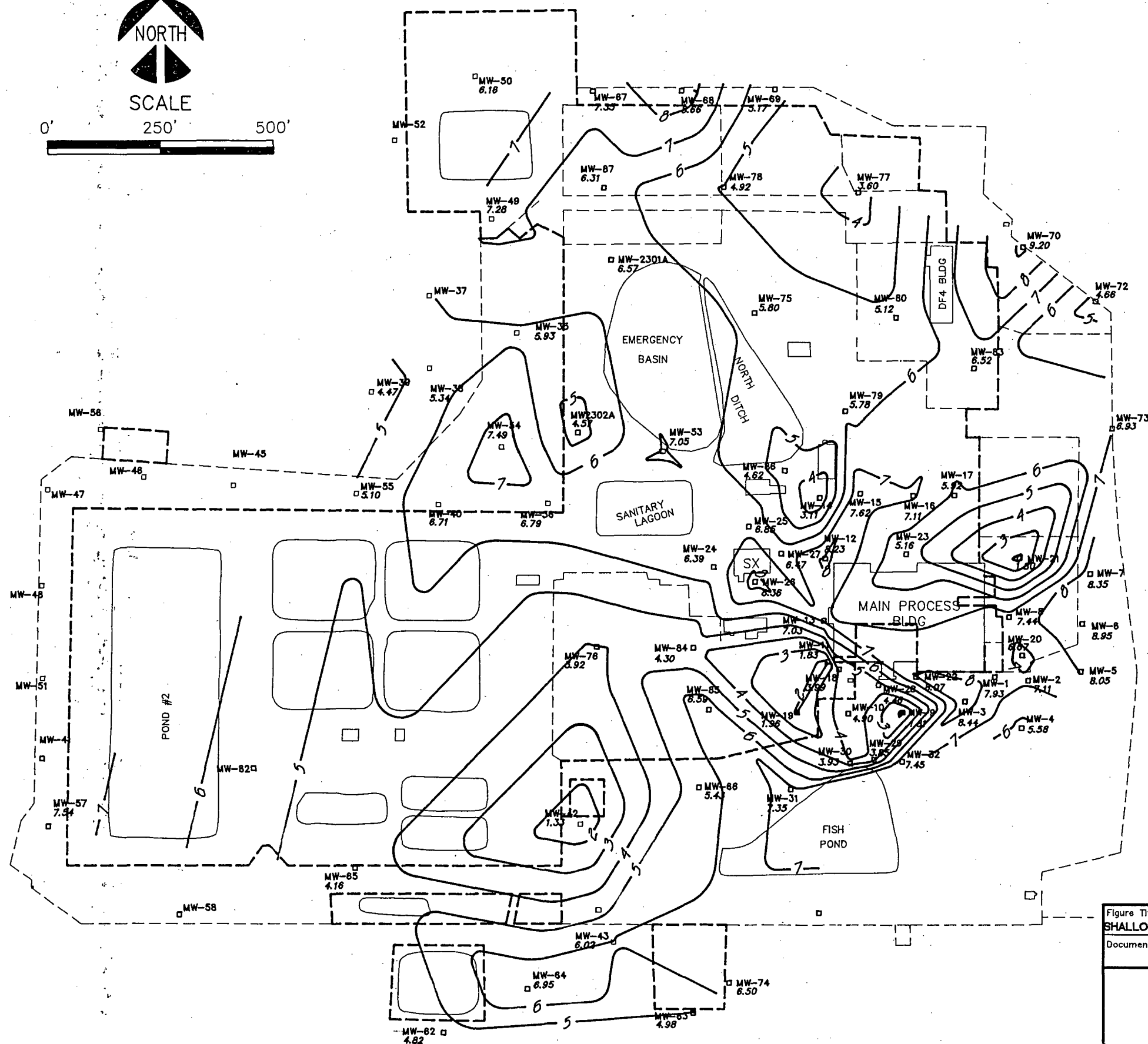
LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL
AND BICARBONATE ALKALINITY MG/L, APRIL 23 TO
MAY 17, 1991
ISOPLETH OF BICARBONATE ALKALINITY AS CaCO_3 , MG/L,
DEEP SANDSTONE/SHALE GROUNDWATER, APRIL 23 TO
MAY 17, 1991
CONTOUR INTERVAL IS 100 ,MG/L

Figure Title: ISOPLETH OF BICARBONATE ALKALINITY, SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91	Client: SECUYAH FUELS CORPORATION		
Document Title: FEI FINDINGS REPORT	Location: GORE, OKLAHOMA		
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895	DATE: 6/14/91	PREPARED BY: RL	
	SCALE: 1"=250'	CHECKED BY: B.J.S.	
	PROJECT NO: 90067 N97	DRAFTED BY: RML	
		FIGURE NO.: 86	



SCALE

0' 250' 500'



LEGEND

MW-72
4.66

LOCATION OF SHALLOW SHALE/TERRACE DEPOSIT MONITOR WELL AND DISSOLVED OXYGEN CONCENTRATION, MG/L, APRIL 23 TO MAY 17, 1991

- 3.0 - ISOPLETH CONTOUR OF DISSOLVED OXYGEN IN SHALLOW SHALE/TERRACE GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

CONTOUR INTERVAL IS 1.0 MG/L

Figure Title: ISOPLETH OF DISSOLVED OXYGEN,
SHALLOW SHALE/TERRACE GROUNDWATER, 4/23-5/17/91

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI
FINDINGS REPORT

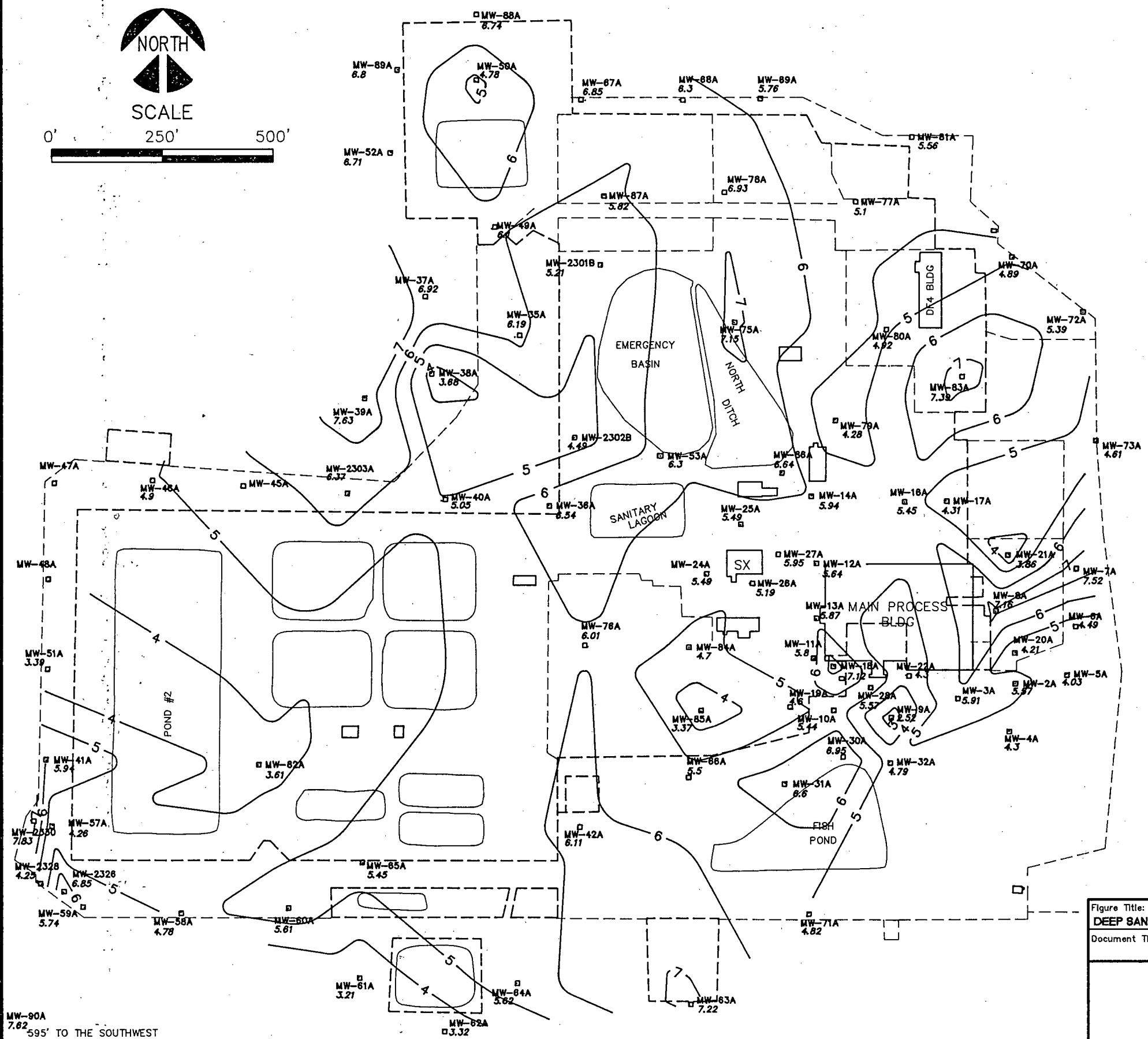
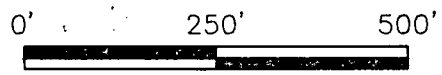
Location: GORE, OKLAHOMA

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3896

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 N92	DRAFTED BY: RML
	FIGURE NO.: 87



SCALE



LEGEND

- MW-72A 5.39 LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND DISSOLVED OXYGEN CONCENTRATION, MG/L, APRIL 23 TO MAY 17, 1991
- 5 ISOPLETH OF DISSOLVED OXYGEN IN DEEP SANDSTONE/SHALE GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

NOTES :
* CONTOUR INTERVALS ARE AT 1.0 MG/L

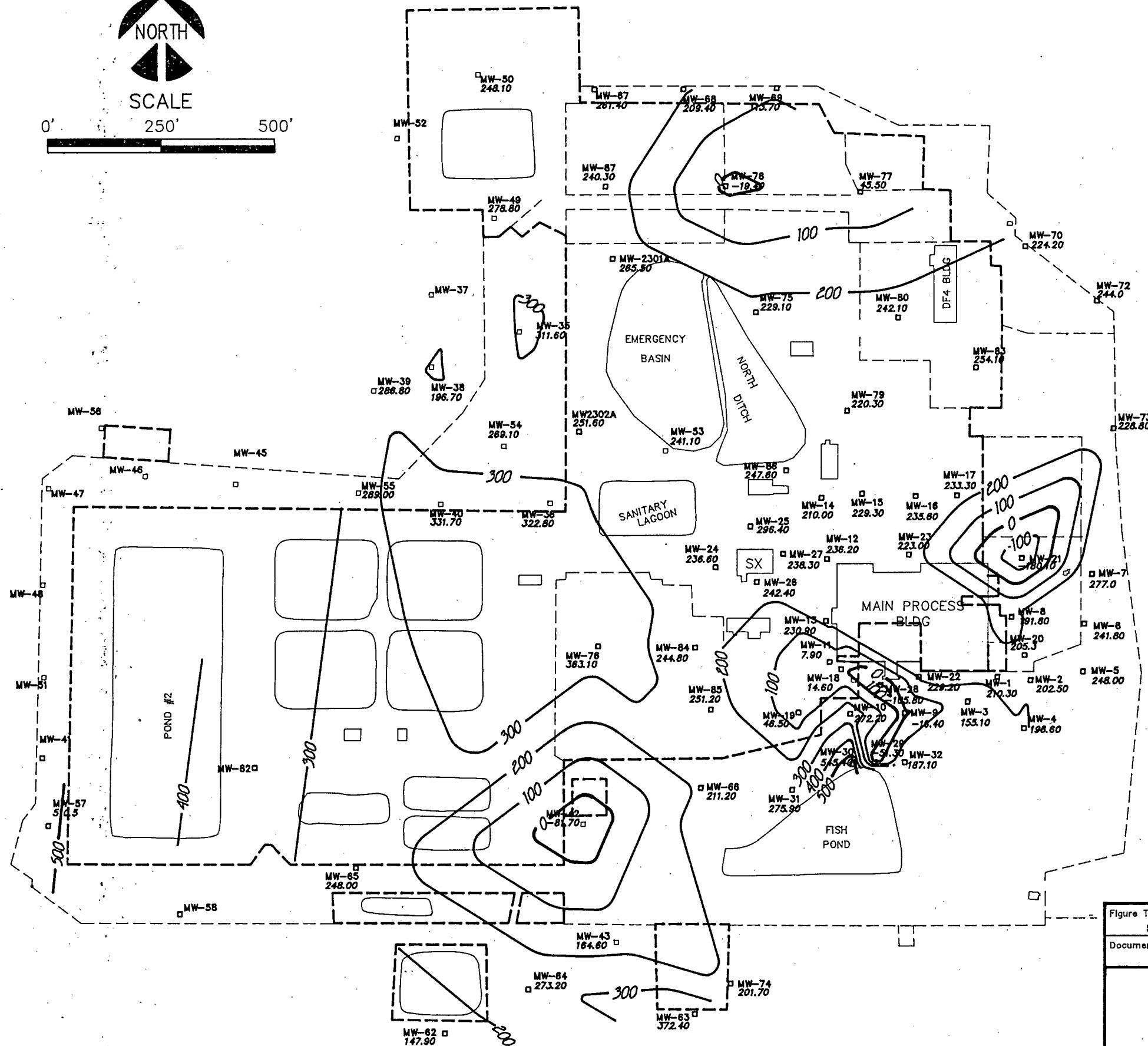
Figure Title: ISOPLETH OF DISSOLVED OXYGEN, DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N96	DRAFTED BY: RML
			FIGURE NO.: 88

MW-90A
7.62
595' TO THE SOUTHWEST



SCALE

0' 250' 500'



LEGEND

MW-72
244.0

LOCATION OF SHALLOW SHALE/TERRACE DEPOSIT MONITOR WELL
AND EH POTENTIAL, MV, APRIL 23 TO MAY 17, 1991

-100-

ISOPLETH CONTOUR OF EH POTENTIAL, MV, SHALLOW
SHALE/TERRACE GROUNDWATER, APRIL 23 TO MAY 17, 1991

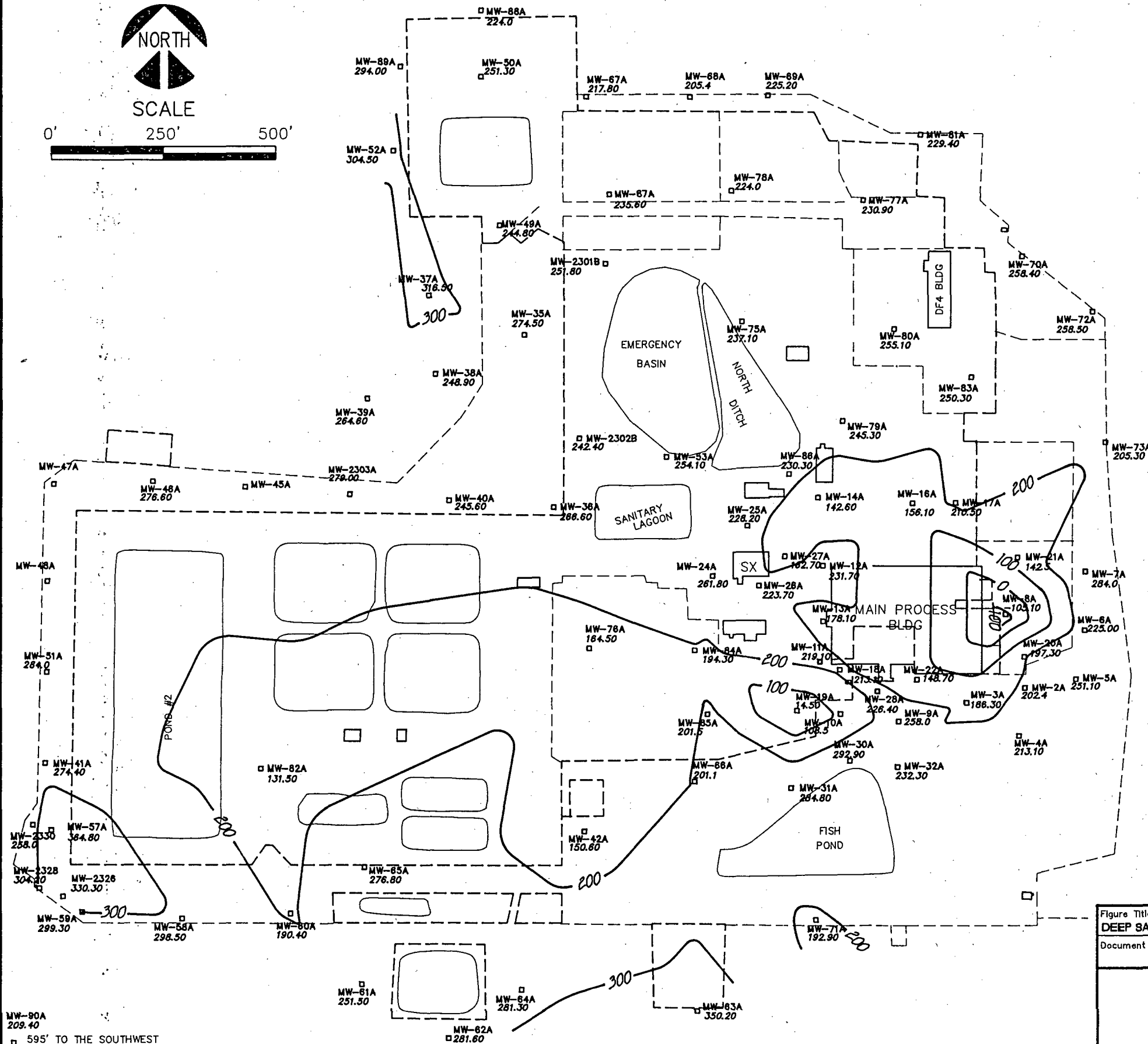
CONTOUR INTERVAL IS 100 MV

Figure Title: ISOPLETH OF EH POTENTIAL SHALLOW SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N91	DRAFTED BY: RML
		FIGURE NO.: 89	



SCALE

0' 250' 500'



MW-80A
209.40
595' TO THE SOUTHWEST

LEGEND

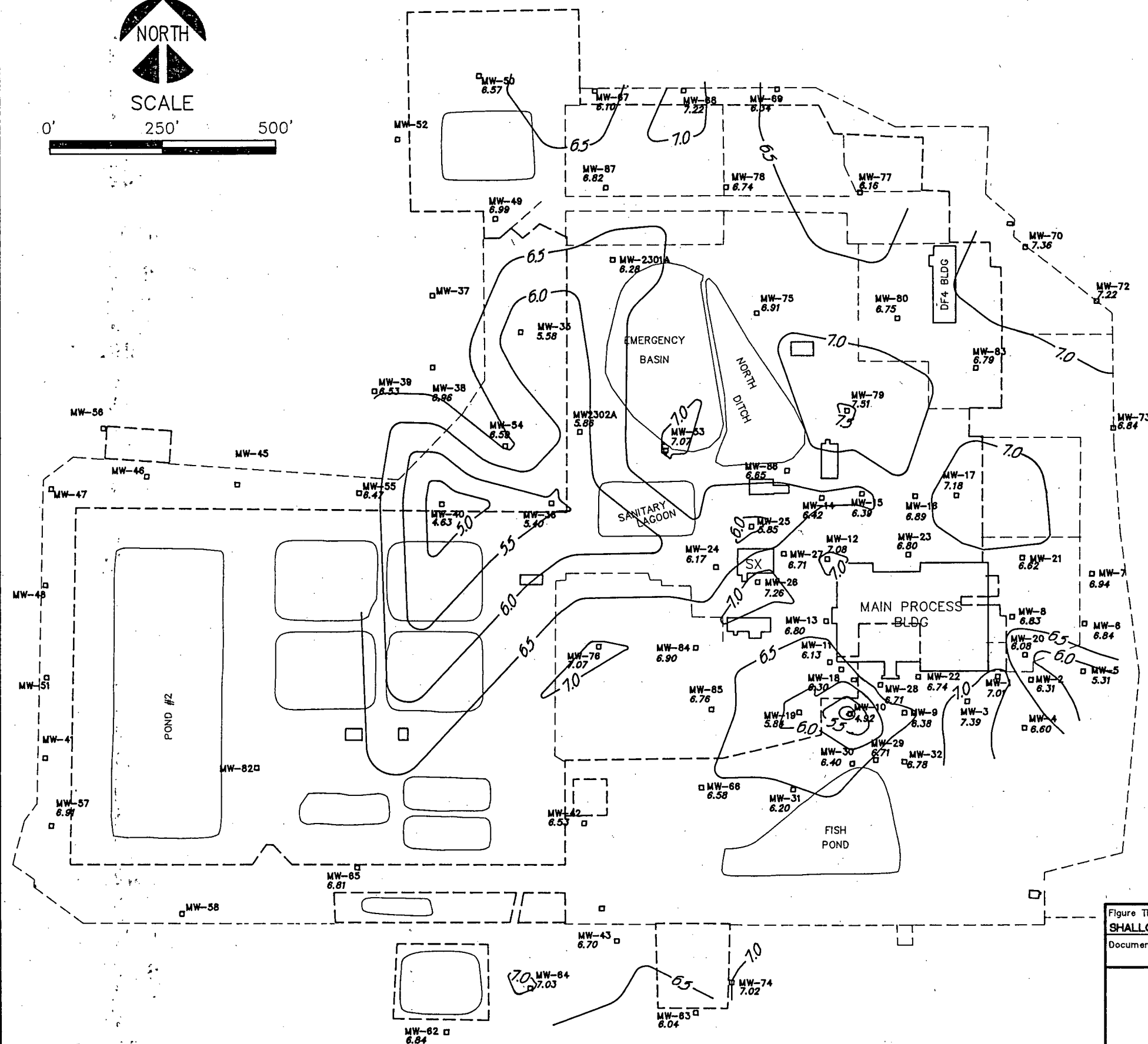
- MW-72A
258.40
- 100— ISOPLETH CONTOUR OF EH POTENTIAL, MV, DEEP SAND-
STONE/SHALE GROUNDWATER, APRIL 23 TO MAY 17, 1991.
- CONTOUR INTERVAL IS 100 MV

Figure Title: ISOPLETH OF EH POTENTIAL, DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N95	DRAFTED BY: RML
			FIGURE NO.: 90



SCALE

0' 250' 500'



LEGEND

MW-72
7.22

LOCATION OF SHALLOW SHALE/TERRACE DEPOSIT MONITOR WELL AND PH CONCENTRATION, APRIL 23 TO MAY 17, 1991

- 6.0 -

ISOPLETH CONTOUR OF PH CONCENTRATION IN SHALLOW SHALE/TERRACE GROUNDWATER, STANDARD UNITS, APRIL 23 TO MAY 17, 1991

CONTOUR INTERVAL IS AT 0.5 UNITS

Figure Title: ISOPLETH OF PH CONCENTRATION,
SHALLOW SHALE/TERRACE GROUNDWATER, 4/23-5/17/91

Client: SEQUOYAH FUELS CORPORATION

Document Title: FEI
FINDINGS REPORT

Location: GORE, OKLAHOMA

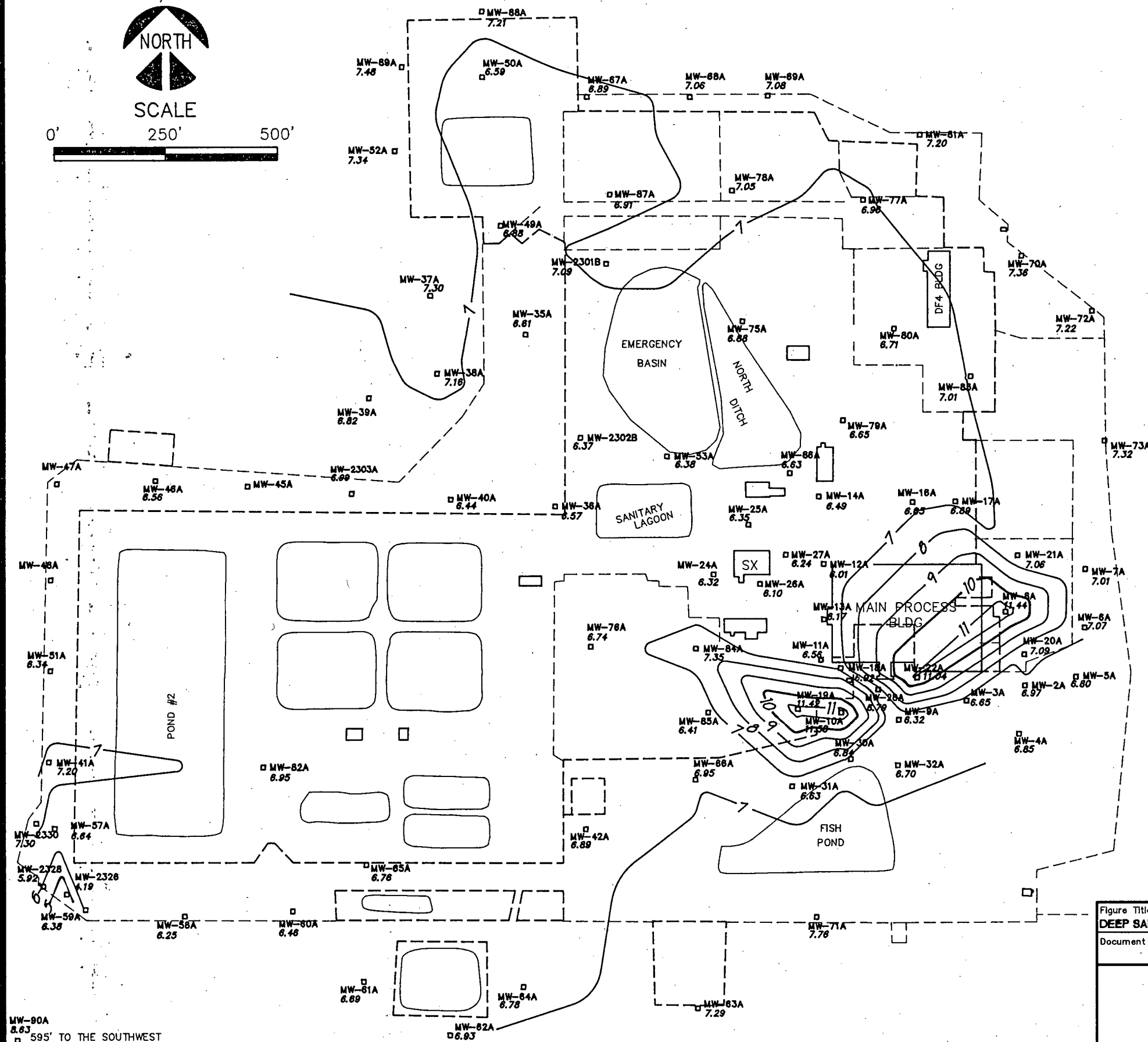
**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 N90	DRAFTED BY: RML
	FIGURE NO.: 92



SCALE

0' 250' 500'



LEGEND

□ MW-72A 7.22 LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND PH CONCENTRATION, APRIL 23 TO MAY 17, 1991

- 7 - ISOPLETH CONTOUR OF PH CONCENTRATION, STANDARD UNITS, APRIL 23 TO MAY 17, 1991

CONTOUR INTERVAL: 1.0 UNITS

Figure Title: ISOPLETH OF PH CONCENTRATION
DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91

Document Title: FEI
FINDINGS REPORT

Client: SEQUOYAH FUELS CORPORATION

Location: GORE, OKLAHOMA

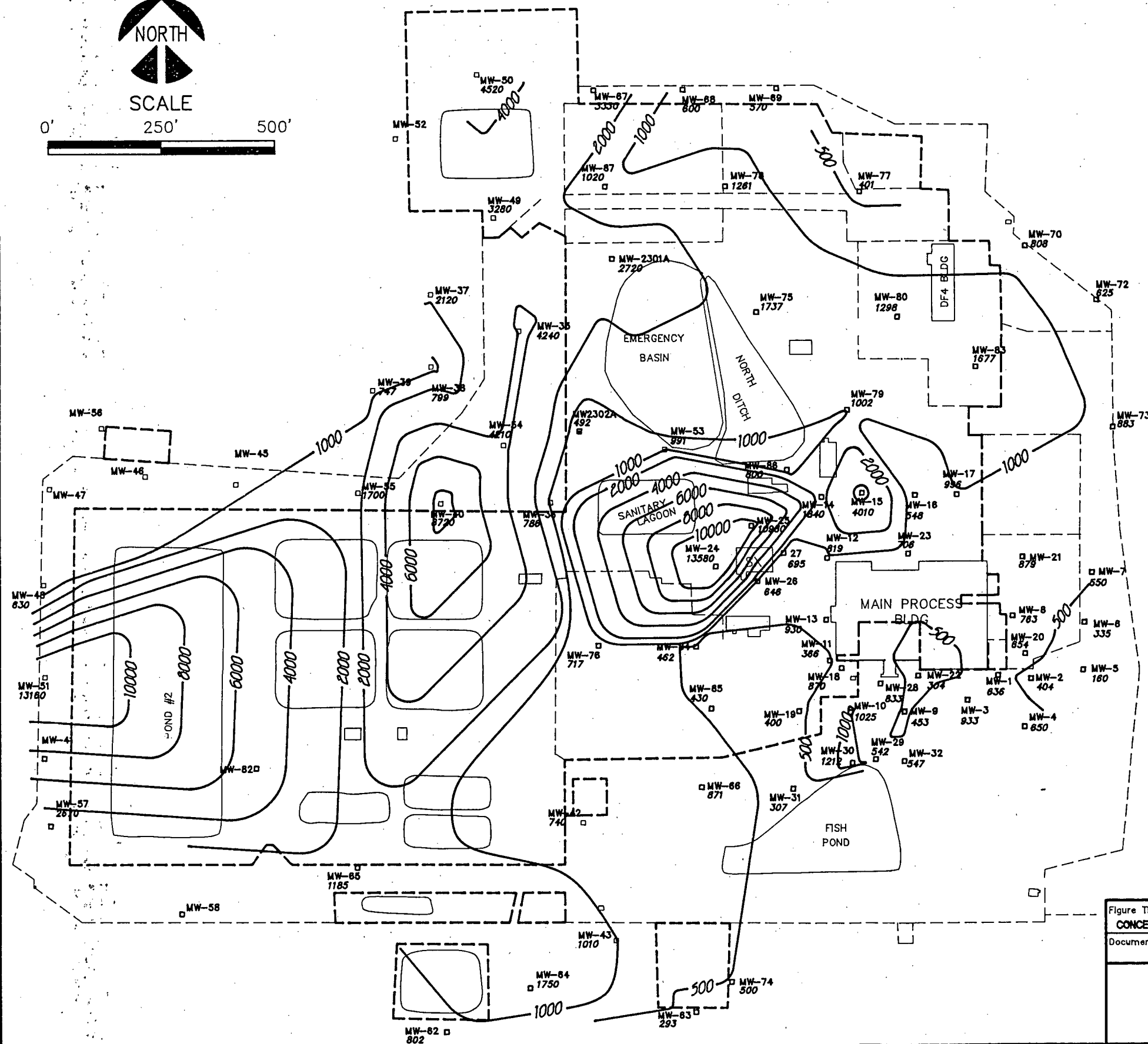
**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE: 6/14/91	PREPARED BY: RL
SCALE: 1"=250'	CHECKED BY: B.J.S.
PROJECT NO: 90067 N94	DRAFTED BY: RML
FIGURE NO.: 93	



SCALE

0' 250' 500'



LEGEND

□ MW-72 825
— 500 — LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND SPECIFIC CONDUCTANCE OF GROUNDWATER, UMHS/CM, APRIL 23 TO MAY 17, 1991

— 500 — ISOPLETH OF SPECIFIC CONDUCTANCE OF UPPERMOST SHALE/TERRACE DEPOSITS GROUNDWATER, UMHS/CM, APRIL 23 TO MAY 17, 1991

CONTOUR INTERVAL: 500, 1000, 2000, 4000, 6000, 8000, 10,000, AND 15,000

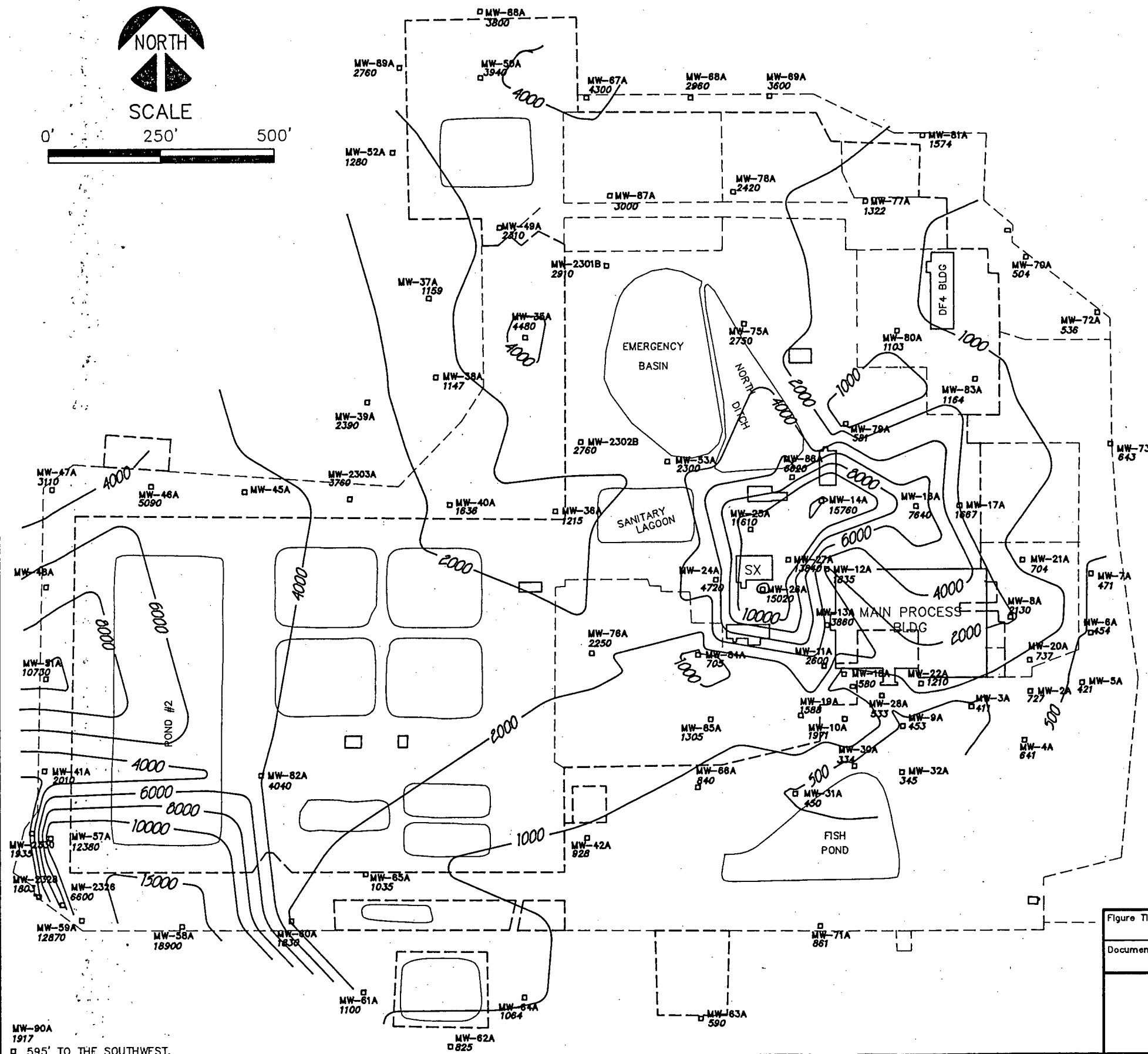
NOTE:
SPECIFIC CONDUCTANCE FOR WELLS MW-37, MW-55, MW-64, MW-68, MW-69, AND MW-74 TAKEN FROM FIELD MEASUREMENTS. SPECIFIC CONDUCTANCE FROM WELL MW-48 MEASURED ON 4-5-91. ALL OTHER LABORATORY DATA.

Figure Title: ISOPLETH OF SPECIFIC CONDUCTANCE CONCENTRATION IN SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N67	DRAFTED BY: RML
			FIGURE NO.: 94



SCALE

0' 250' 500'



LEGEND

□ MW-72A 536 LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL AND SPECIFIC CONDUCTANCE OF GROUNDWATER, UMHS/CM, APRIL 23 TO MAY 17, 1991

— 500 — ISOPLETH OF SPECIFIC CONDUCTANCE OF DEEP SANDSTONE/SHALE GROUNDWATER, UMHS/CM, APRIL 23 TO MAY 17, 1991

NOTES :

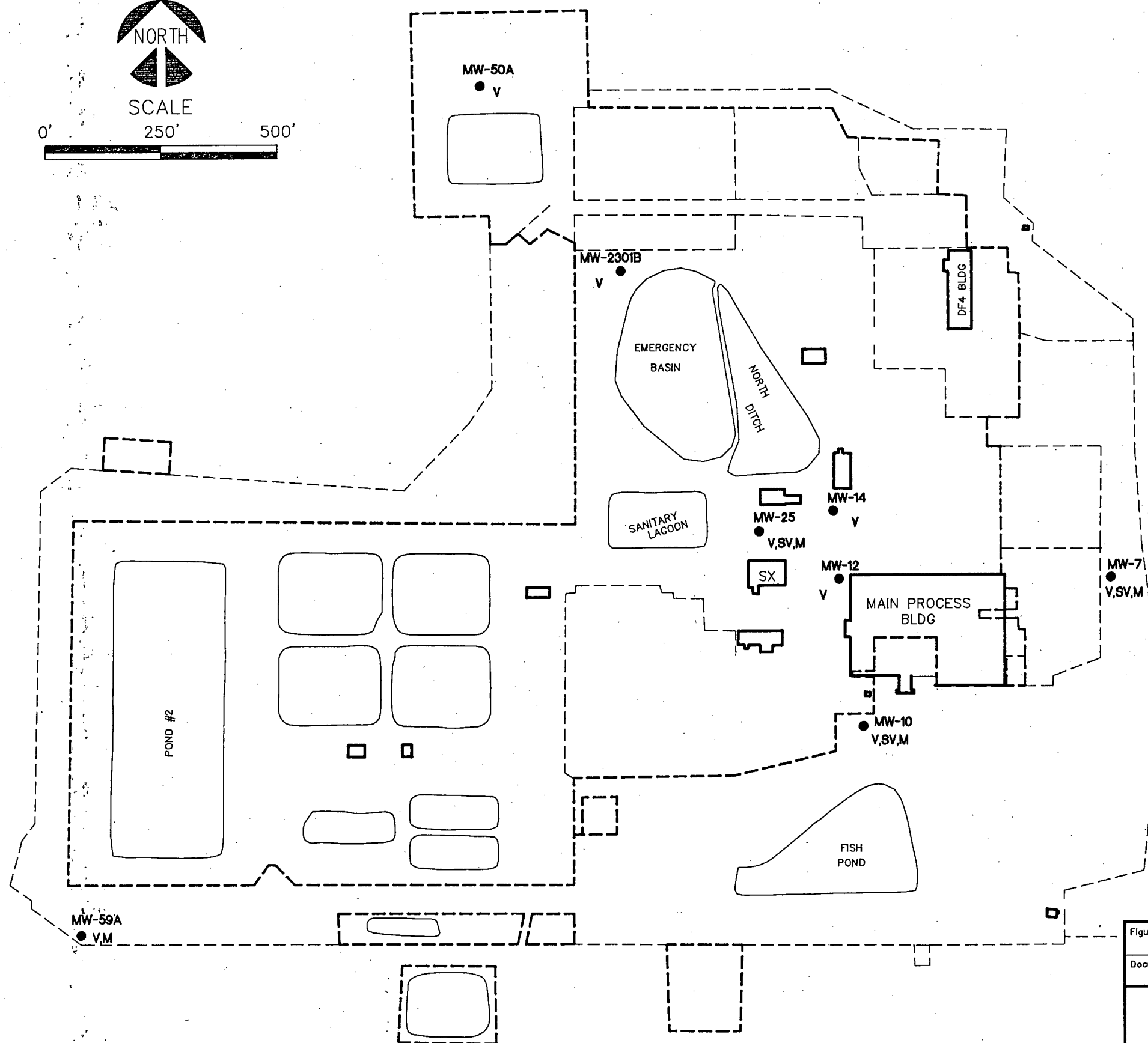
- * DATA FOR WELL MW-41A TAKEN ON 2/8/91.
- * DATA FOR WELL MW-47A TAKEN ON 12/27/90.
- * WELLS MW-45A AND MW-48A DRY.
- * CONTOURS SHOWN : 500, 1000, 2000, 4000, 6000, 8000, 10,000, AND 15,000.
- * ALL DATA IS LABORATORY DATA

Figure Title: ISOPLETH OF SPECIFIC CONDUCTANCE CONCENTRATION IN DEEP SANDSTONE/SHALE GROUNDWATER 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N66	DRAFTED BY: RML
		FIGURE NO.: 95	



SCALE

0' 250' 500'



LEGEND

GROUNDWATER ANALYSES CONDUCTED:

V: PRIORITY POLLUTANT VOLATILE ORGANIC ANALYSIS

SV: PRIORITY POLLUTANT SEMI-VOLATILE ORGANIC ANALYSIS

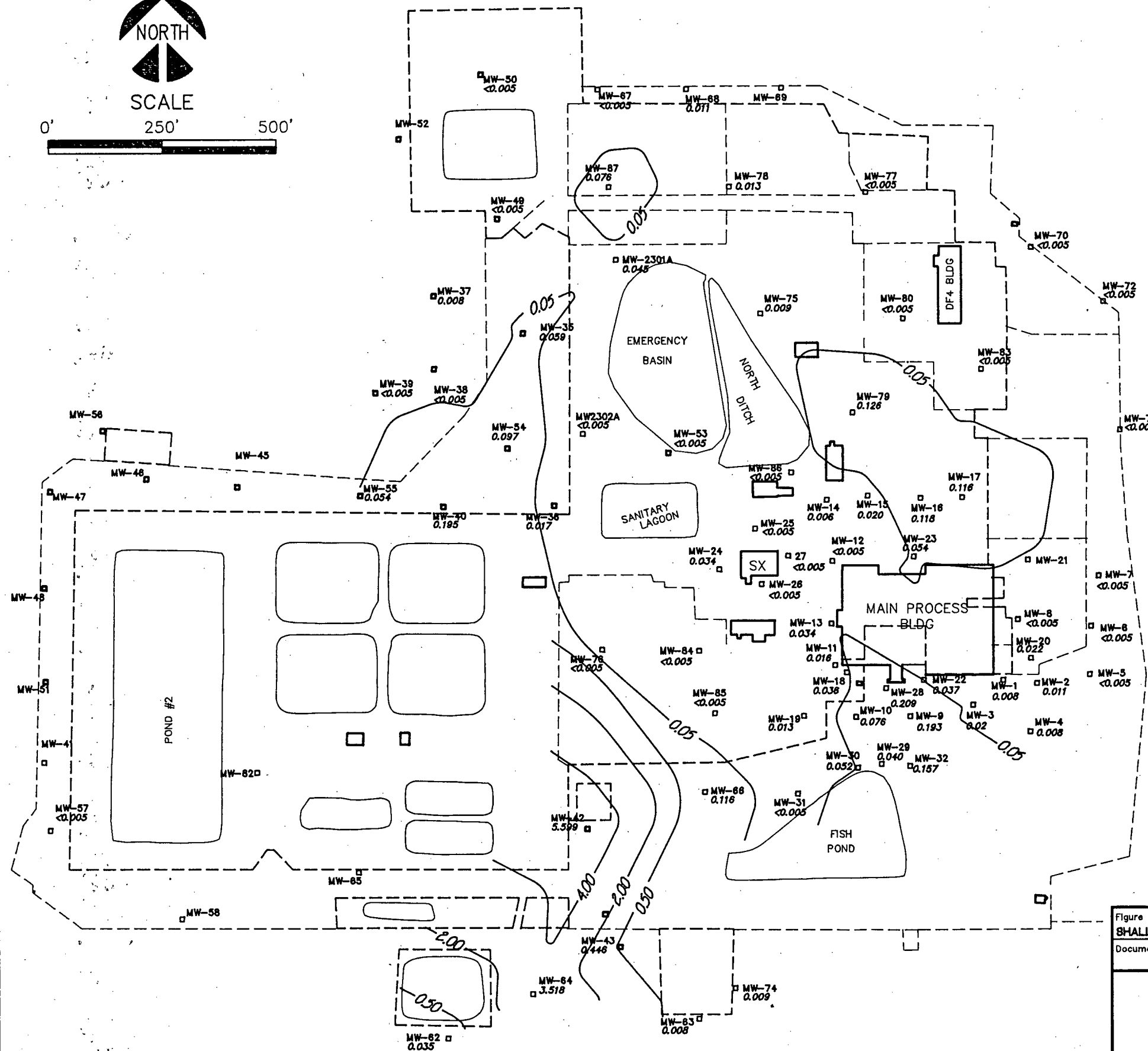
M: METAL ANALYSES (19 METALS)

Figure Title: SPECIAL GROUNDWATER SAMPLE SITES MARCH 7-8, 1991		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3893		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 S09	DRAFTED BY: RML
			FIGURE NO.: 96



SCALE

0' 250' 500'



LEGEND

MW-72
0.005

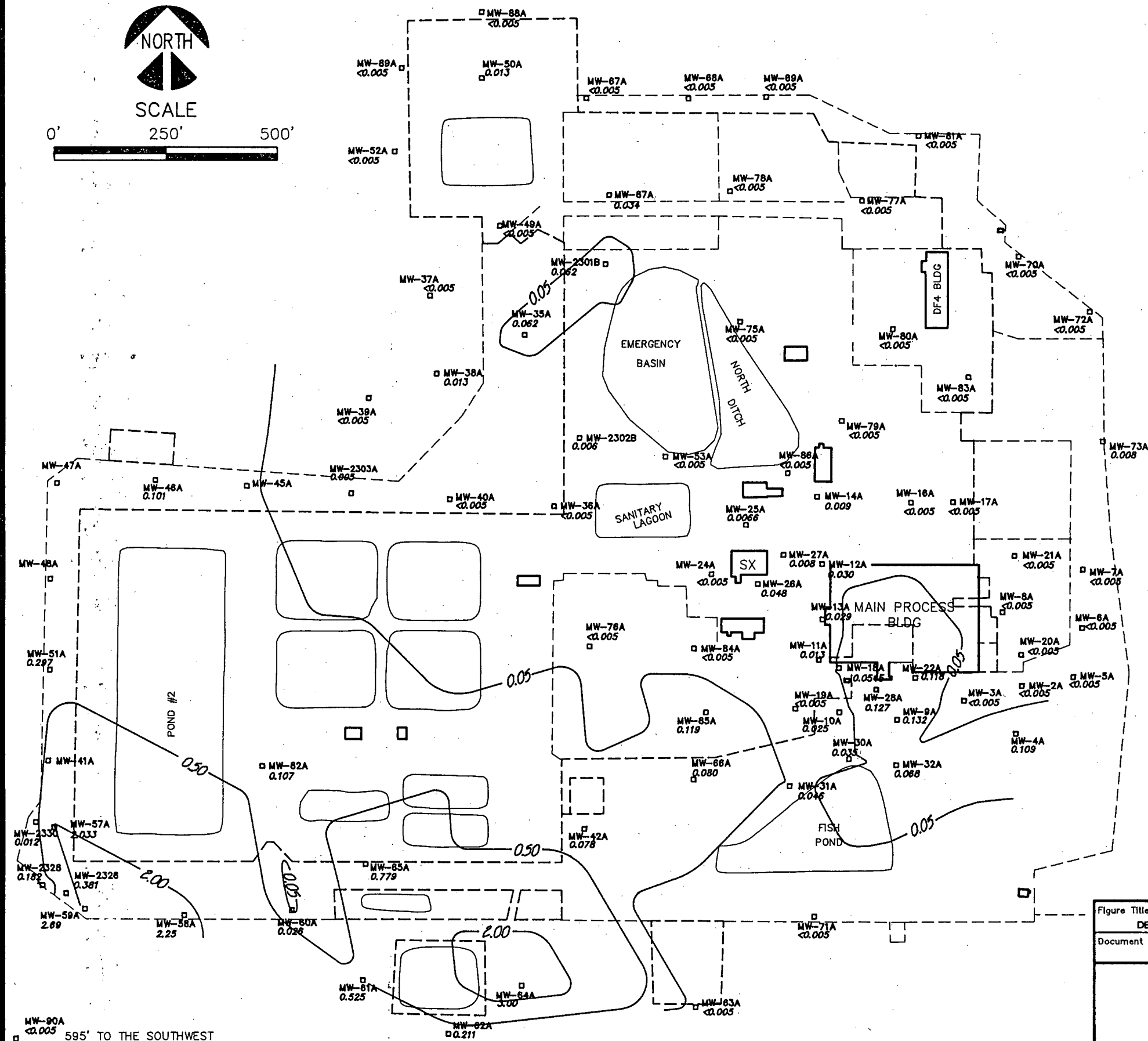
LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL
AND TOTAL ARSENIC VALUE, MG/L,
APRIL 23 TO MAY 17, 1991

2.00

ISOPLETH OF TOTAL ARSENIC CONCENTRATION IN SHALLOW SHALE/
TERRACE DEPOSITS GROUNDWATER, MG/L,
APRIL 23 TO MAY 17, 1991

CONTOURS SHOWN:
0.05, 0.50, 2.0, AND 4.0

Figure Title: ISOPLETH OF TOTAL ARSENIC CONCENTRATION SHALLOW SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 521-3895		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 N65	DRAFTED BY: RML
		FIGURE NO.:	97



LEGEND

MW-72A
0.005

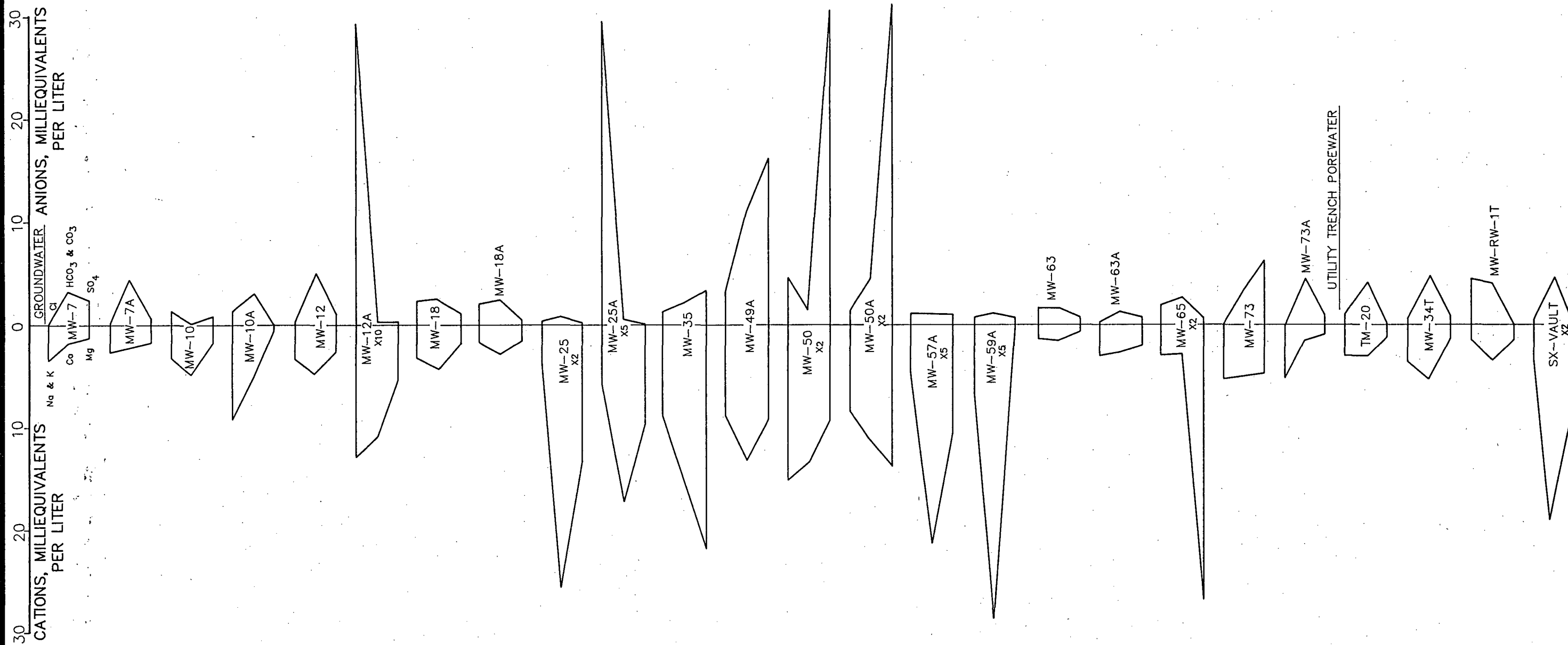
LOCATION OF DEEP SANDSTONE/SHALE MONITOR WELL
AND TOTAL ARSENIC VALUE, MG/L, APRIL 23 TO
MAY 17, 1991

—050— ISOPLETH OF TOTAL ARSENIC CONCENTRATION IN DEEP
SANDSTONE/SHALE GROUNDWATER, MG/L , APRIL 23
TO MAY 17, 1991

NOTES :

- * WELLS MW-41A, MW-45A, MW-47A, AND MW-48A ARE DRY.
- * CONTOURS SHOWN: 0.05, 0.50, AND 2.0

Figure Title: ISOPLETH OF TOTAL ARSENIC CONCENTRATION DEEP SANDSTONE/SHALE GROUNDWATER, 4/23-5/17/91	Client: SEOUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT	Location: GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK</u> <u>& ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3695	DATE: 6/14/91	PREPARED BY: RL
	SCALE: 1"=250'	CHECKED BY: B.J.S.
		DRAFTED BY: RML
	PROJECT NO: 90067 N60	FIGURE NO.: 98



NOTE: NITRATE IS A MAJOR ANION IN THE FACILITY GROUNDWATER IN SEVERAL WELLS, HOWEVER IT IS NOT SHOWN ON THE ABOVE STIFF DIAGRAMS

X5: ACTUAL PATTERN IS 5 TIMES LARGER THAN SHOWN

Figure Title: STIFF DIAGRAMS GROUNDWATER AND UTILITY TRENCH POREWATER		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 521-3895		DATE: 7/1/91	PREPARED BY: B.S.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L35	DRAFTED BY: RML
			FIGURE NO.: 99

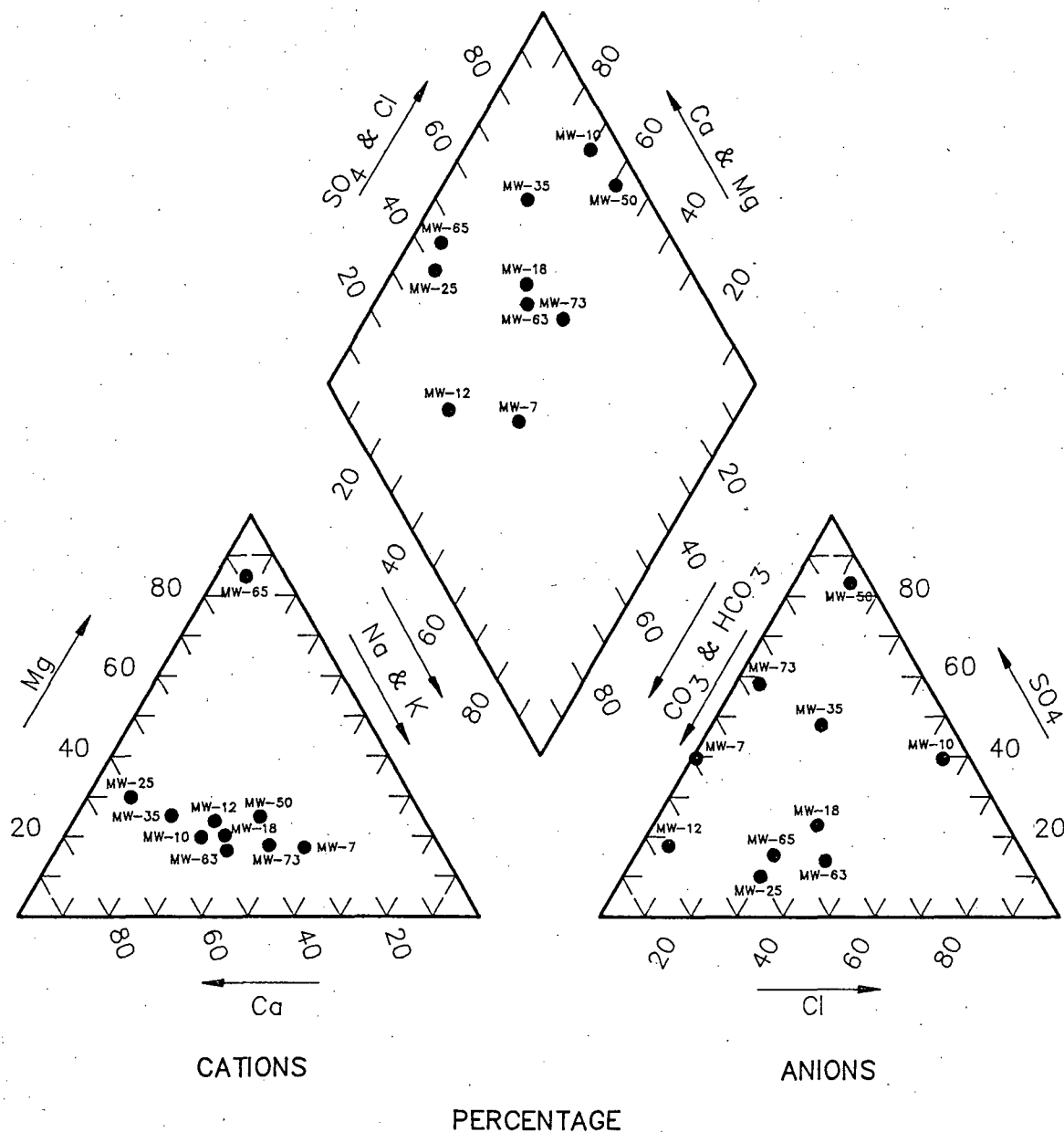


Figure Title: **PIPER TRILINEAR DIAGRAM**
SHALLOW SHALE/TERRACE DEPOSIT GROUNDWATER SYSTEM

Client: **SEQUOYAH FUELS CORPORATION**

Document Title: **FEI**
FINDINGS REPORT

Location: **GORE, OKLAHOMA**

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
 Environmental Consultants
 3700 West Robinson, Suite 200
 Norman, Oklahoma 73072
 (405) 321-3895

DATE: 7/1/91	PREPARED BY: B.R.
SCALE: NTS	CHECKED BY: B.J.S.
PROJECT NO: 90067 L33	DRAFTED BY: RML
	FIGURE NO.: 100

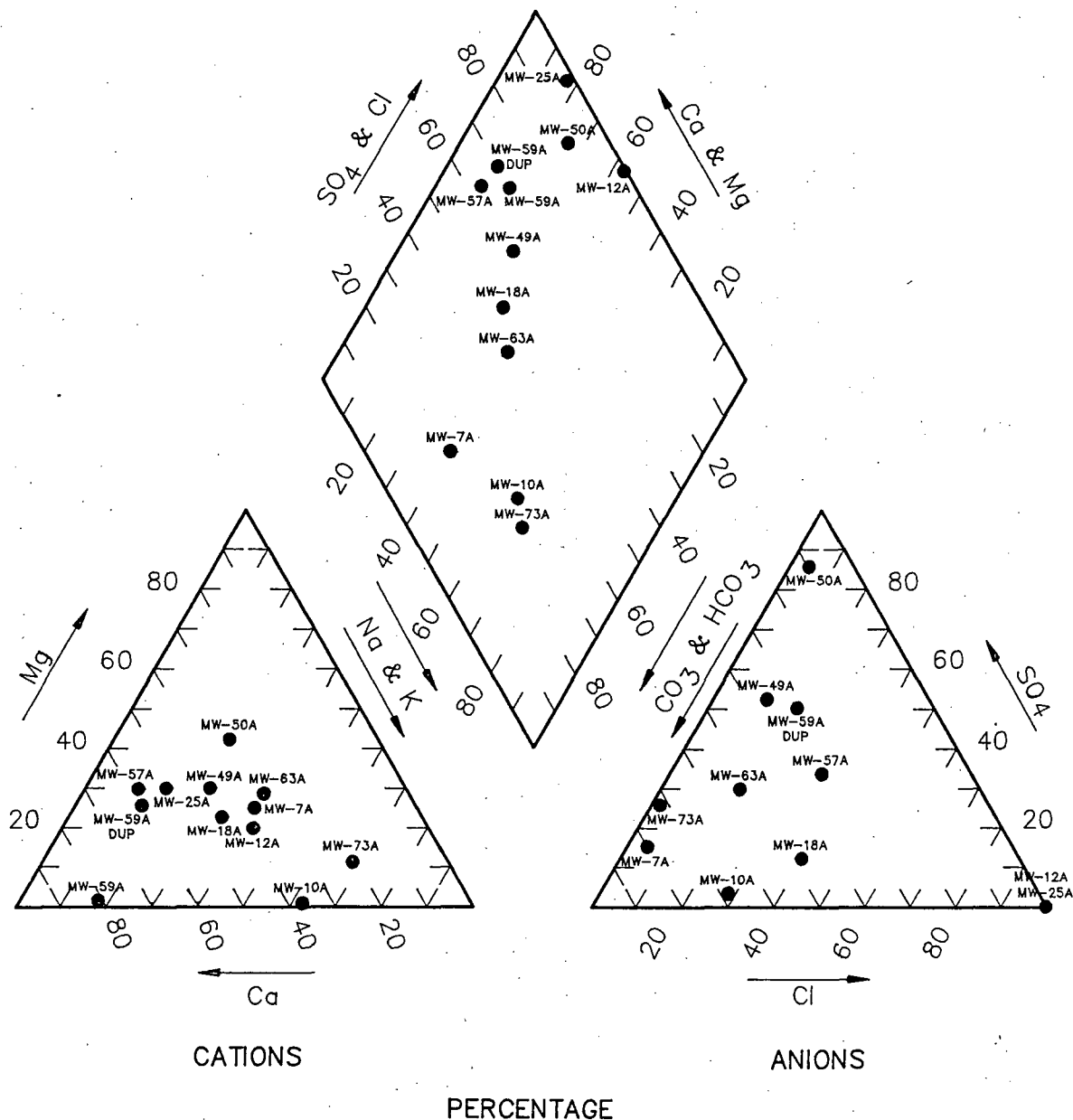


Figure Title:
PIPER TRILINEAR DIAGRAM
DEEP SANDSTONE/SHALE GROUNDWATER SYSTEM

Client:
SEQUOYAH FUELS CORPORATION

Document Title:
FEI
FINDINGS REPORT

Location:
GORE, OKLAHOMA

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
 Environmental Consultants
 3700 West Robinson, Suite 200
 Norman, Oklahoma 73072
 (405) 321-3895

DATE: 7/1/91	PREPARED BY: B.R.
SCALE: NTS	CHECKED BY: B.J.S.
PROJECT NO: 90067 L32	DRAFTED BY: RML
	FIGURE NO.: 1 01

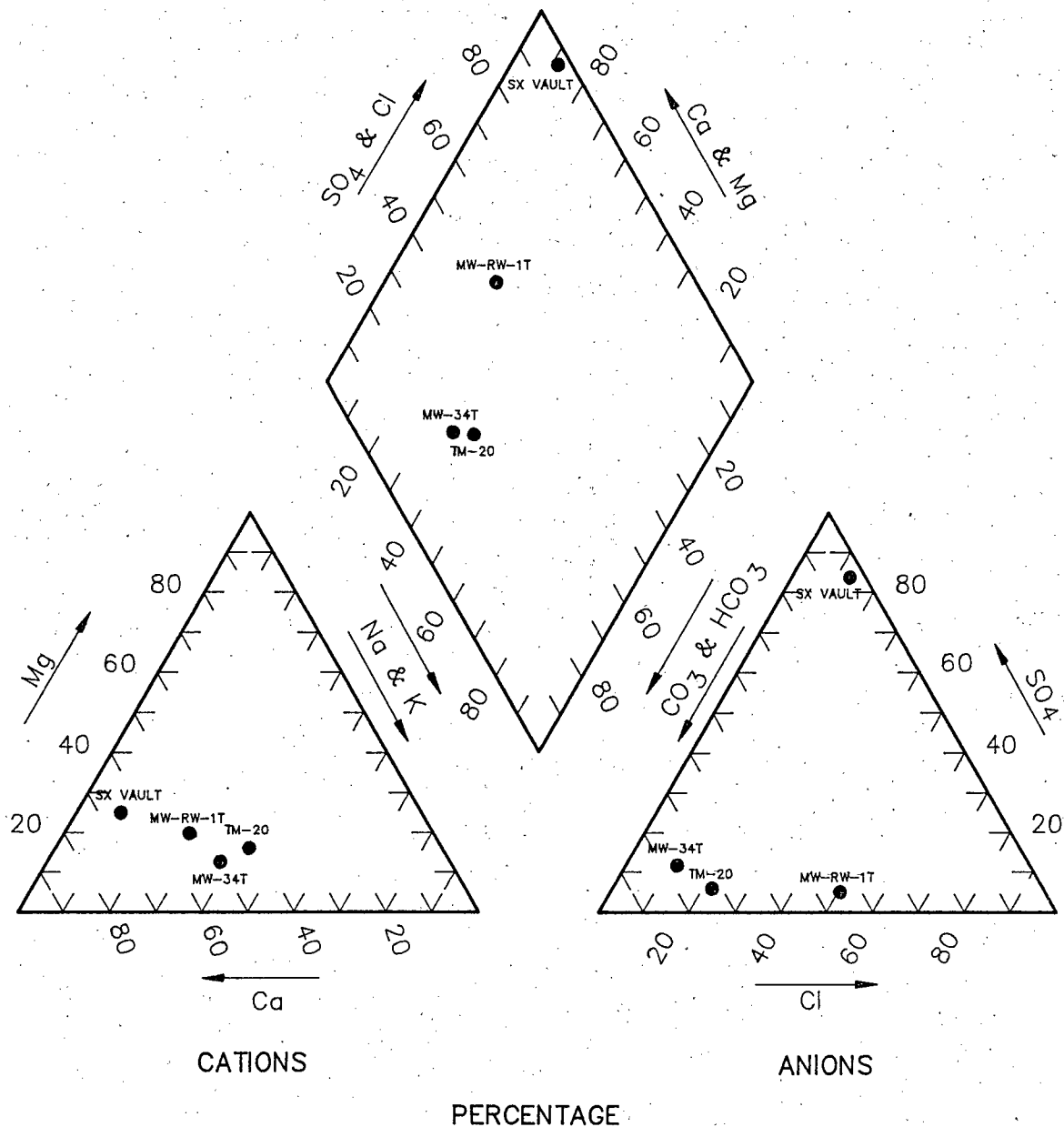


Figure Title:

**PIPER TRILINEAR DIAGRAM
UTILITY TRENCH POREWATER**

Client:

SEQUOYAH FUELS CORPORATION

Document Title:

**FEI
FINDINGS REPORT**

Location:

GORE, OKLAHOMA

ROBERTS/SCHORNICK
& ASSOCIATES, INC.
Environmental Consultants
3709 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

DATE:
7/1/91

PREPARED BY: B.R.

SCALE:
NTS

CHECKED BY: B.J.S.

DRAFTED BY: RML

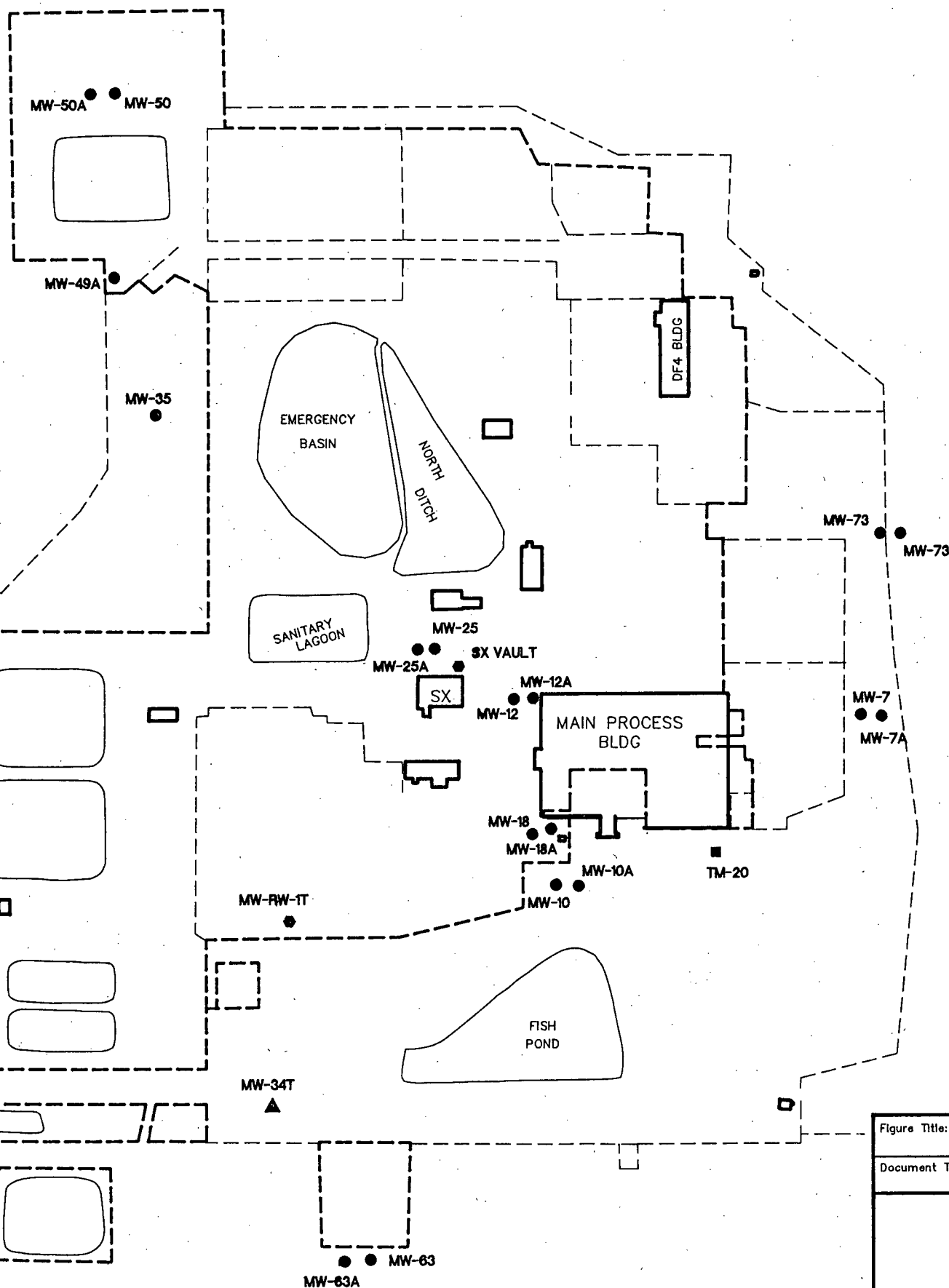
PROJECT NO:
90067 L31

FIGURE NO.: 102



SCALE

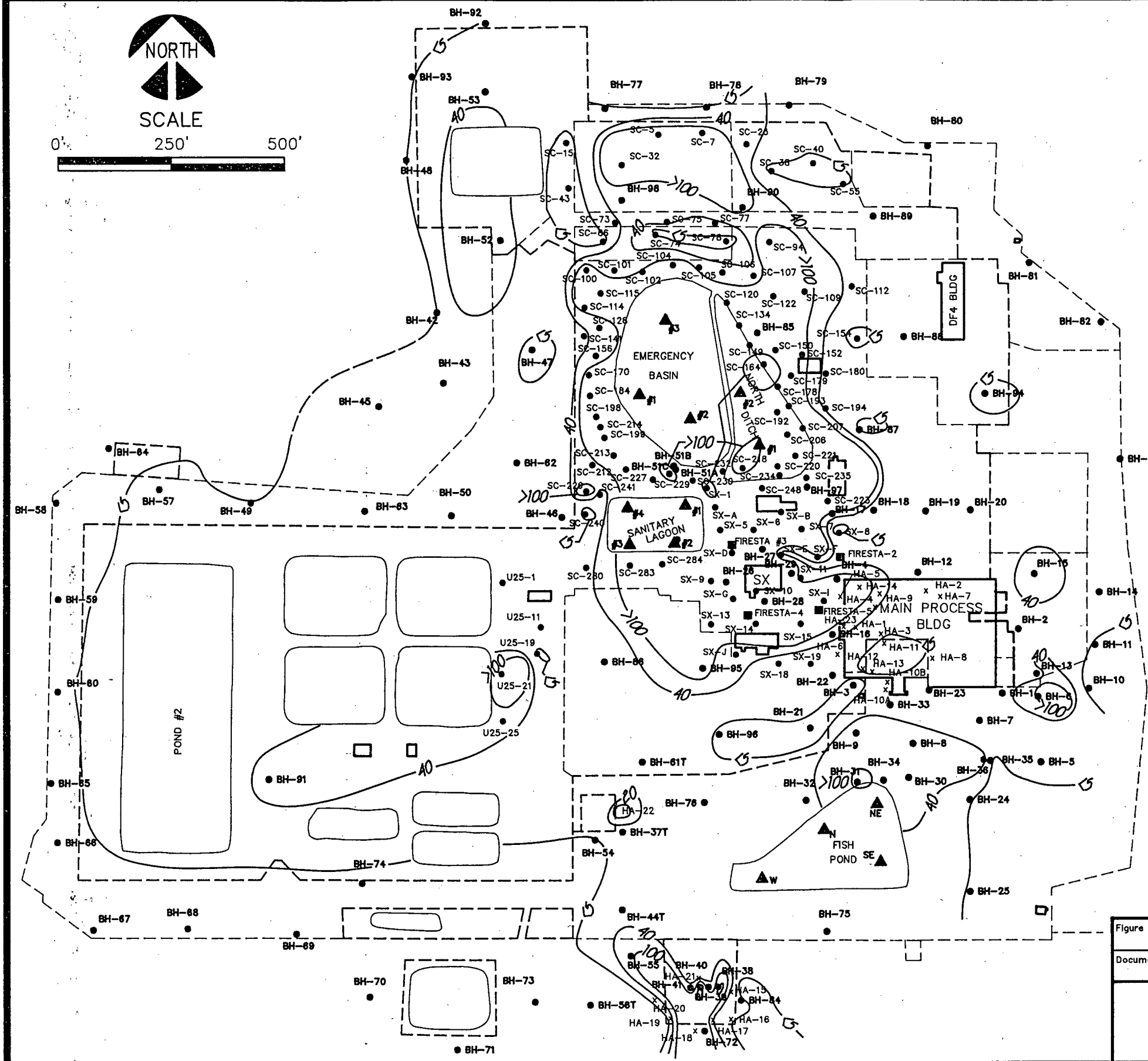
0' 250' 500'



LEGEND

- MW-12 ● GROUNDWATER MONITORING WELL
- MW-RW-TT ● UTILITY TRENCH RECOVERY WELL
- MW-34T ▲ UTILITY TRENCH MONITORING WELL
- TM-20 ■ UTILITY TRENCH MONITOR

Figure Title: GROUNDWATER SAMPLING SITES FOR GEOCHEMICAL MODELING STUDY, 4/17-5/23/91		Client: SEOUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 821-3885		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 S08	DRAFTED BY: RML
		FIGURE NO.: 103	



LEGEND

BH-82 • LOCATION OF LITHOLOGICAL AND CHEMICAL CHARACTERIZATION BORING

40 — ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, UG/G, 0-1 FOOT DEPTH, SEPTEMBER, 1990 TO APRIL, 1991

NOTES:

1. ACTUAL URANIUM LEVELS IN SOIL ARE NOT SHOWN ON THIS MAP. REFER TO TABLES 43 AND 44 FOR EXACT LEVELS FOR EACH BOREHOLE.
2. ISOPLETH LINES ARE PRESENTED SOLELY FOR THE INTERPRETATION OF SURFACE SOIL CONDITIONS AND, THEREFORE, ARE TERMINATED AT BOUNDARY CONDITIONS DEFINED BY BASIN OR IMPOUNDMENTS.

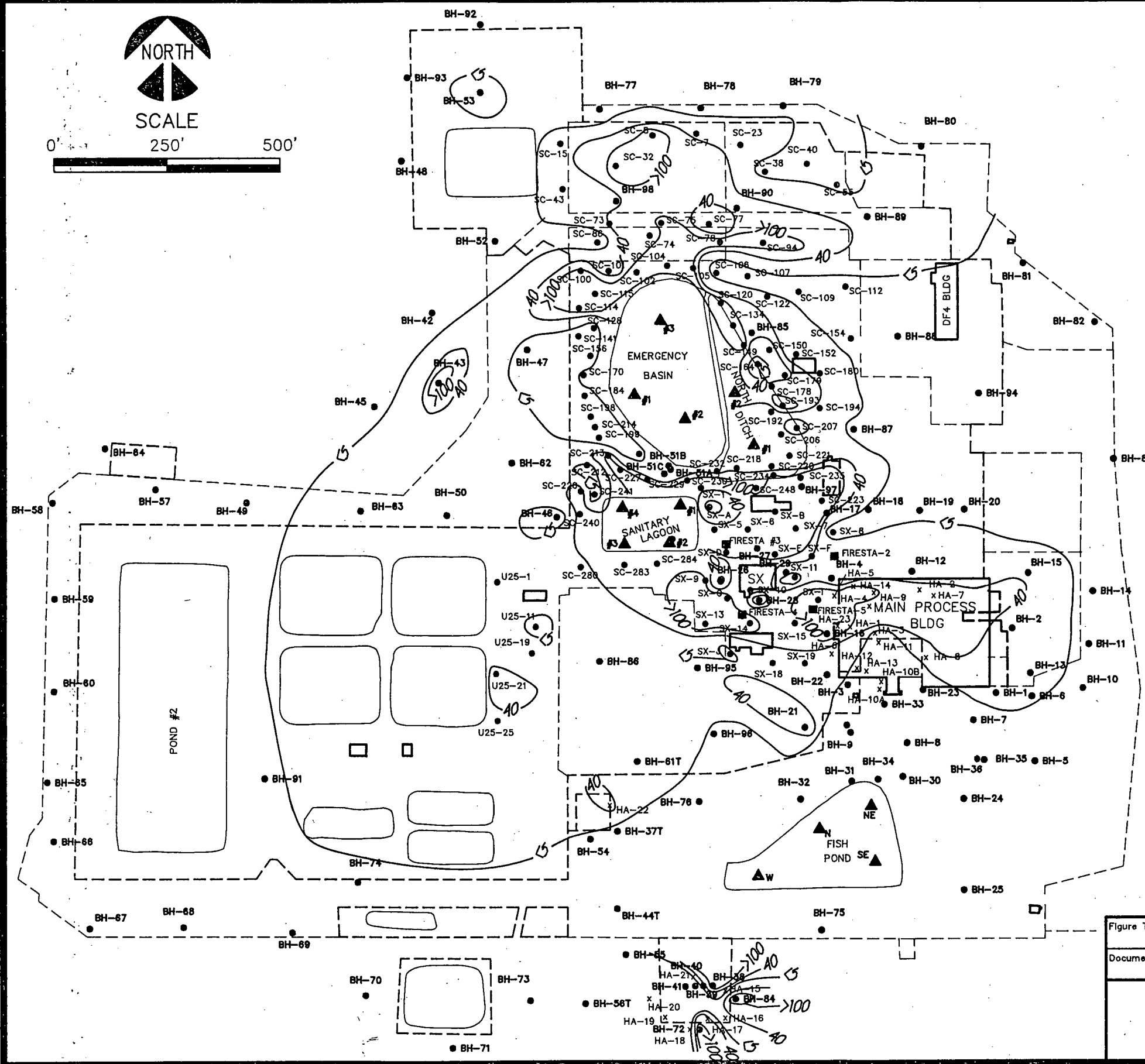
CONTOUR INTERVAL: < 5, 40 AND >100

Figure Title: ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, 0-1 FOOT DEPTH		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 521-3895		DATE: JULY, 1991	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L18	DRAFTED BY: RML
		FIGURE NO.: 104	



SCALE

0 250' 500'



LEGEND

BH-62 • LOCATION OF LITHOLOGICAL AND CHEMICAL CHARACTERIZATION BORING

— 40 — ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, UG/G, 1-5 FOOT DEPTH, SEPTEMBER, 1990 TO APRIL, 1991

NOTES:

1. ACTUAL URANIUM LEVELS IN SOIL ARE NOT SHOWN ON THIS MAP. REFER TO TABLES 43 AND 44 FOR EXACT LEVELS FOR EACH BOREHOLE.
2. ISOPLETH LINES ARE PRESENTED SOLELY FOR THE INTERPRETATION OF SURFACE SOIL CONDITIONS AND, THEREFORE, ARE TERMINATED AT BOUNDARY CONDITIONS DEFINED BY BASIN OR IMPOUNDMENTS.

CONTOUR INTERVAL: < 5, 40, AND >100

Figure Title:	ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, 1-5 FOOT DEPTH		Client:	SEOUOYAH FUELS CORPORATION	
Document Title:	FEI FINDINGS REPORT		Location:	GORE, OKLAHOMA	
<u>ROBERTS/SCHORNICK & ASSOCIATES, INC.</u> Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895			DATE:	JULY, 1991	PREPARED BY: RL
			SCALE:	1"=250'	CHECKED BY: B.J.S.
			PROJECT NO:	90067 L19	DRAFTED BY: RML
			FIGURE NO.:	105	

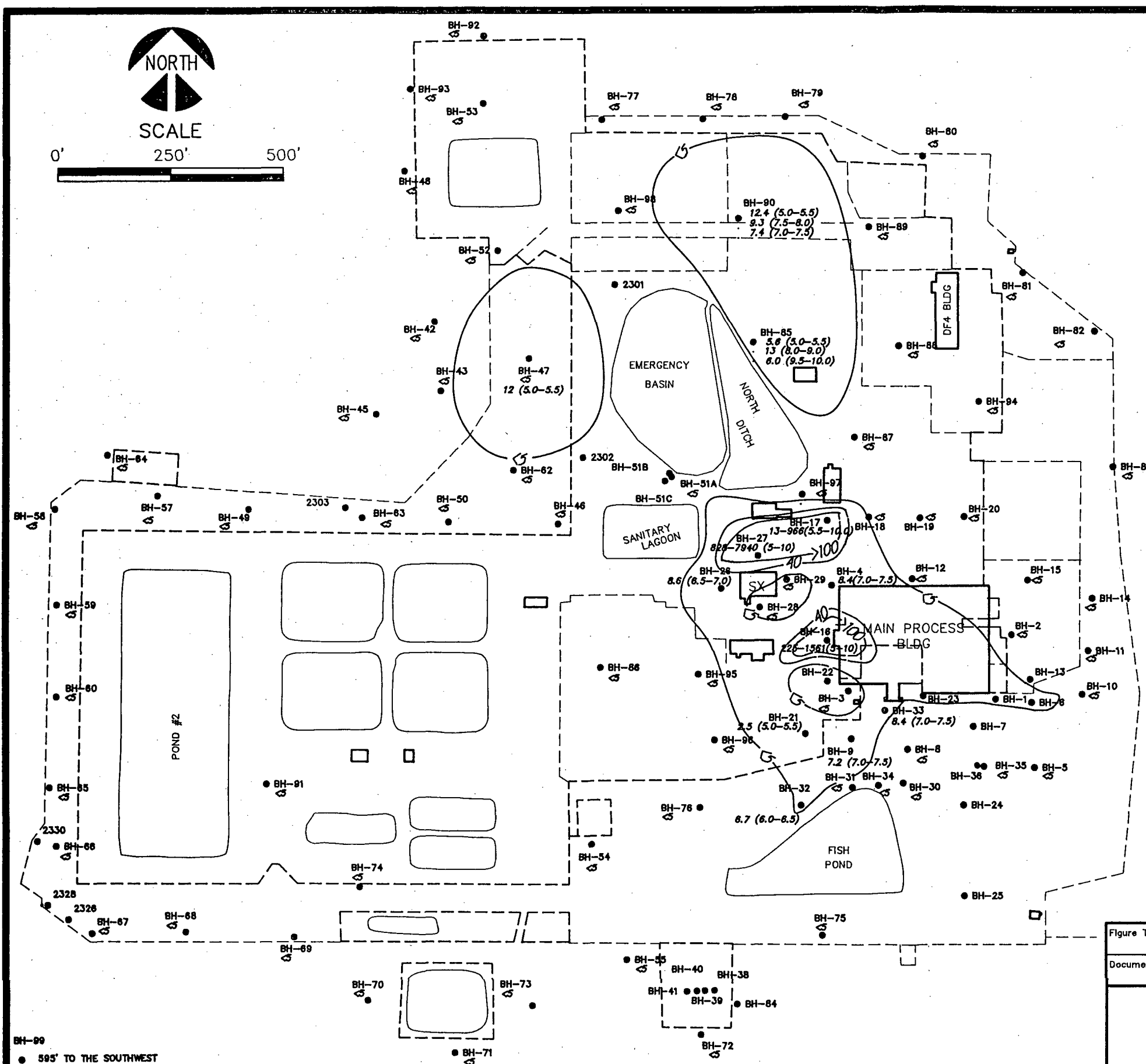
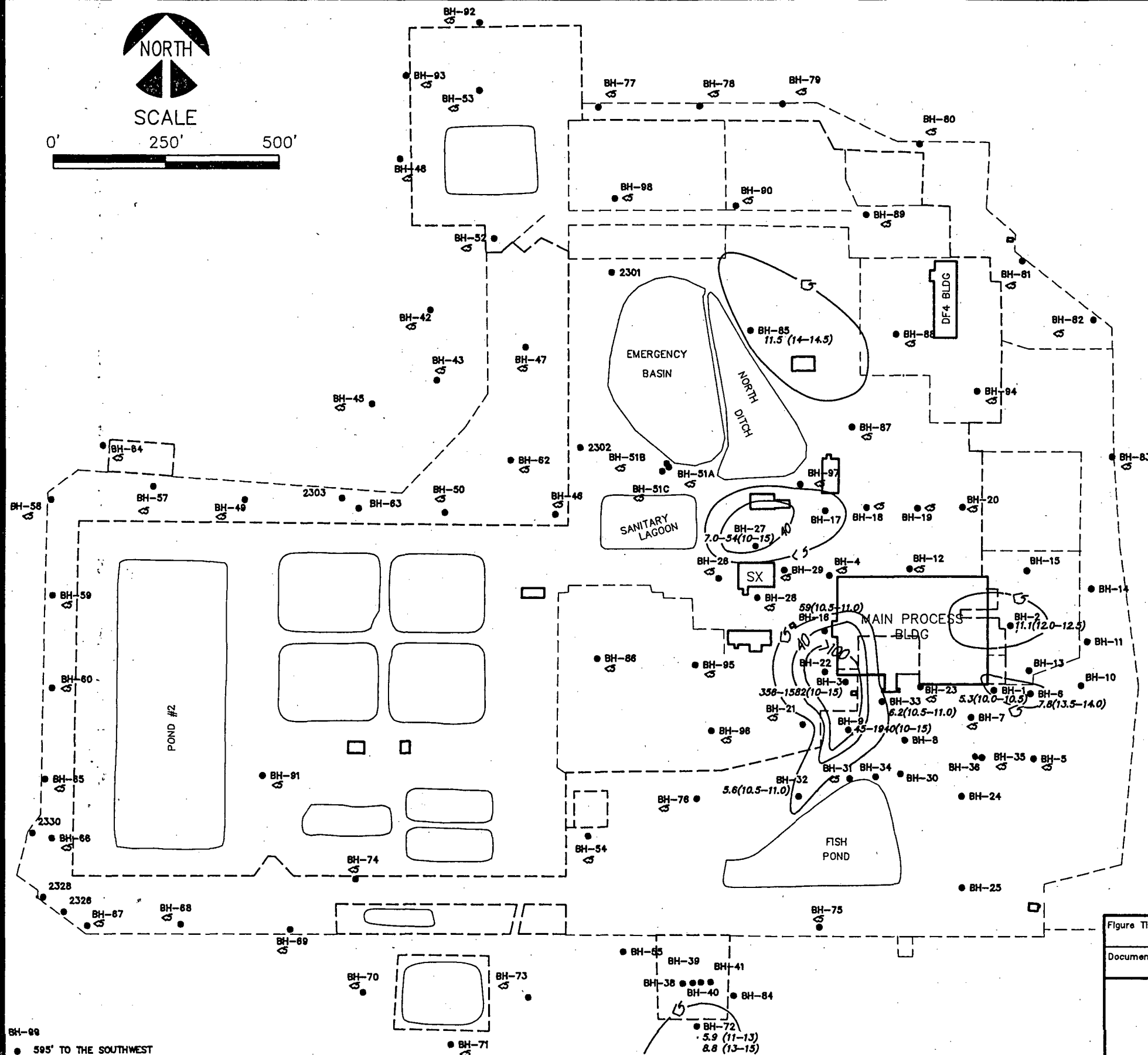


Figure Title: ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, 5-10 FOOT DEPTH		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 521-3898		DATE: JULY, 1991	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L13	DRAFTED BY: RML
		FIGURE NO.: 106	



SCALE

0' 250' 500'



LEGEND

BH-82 • LOCATION OF LITHOLOGICAL AND CHEMICAL CHARACTERIZATION BORING, AND TOTAL URANIUM IN SOIL, UG/G

11.5 (14-14.5) FIRST NUMBER, 11.5, IS TOTAL URANIUM IN UG/G. SECOND NUMBER (14-14.5), IS SAMPLE DEPTH INTERVAL, FEET

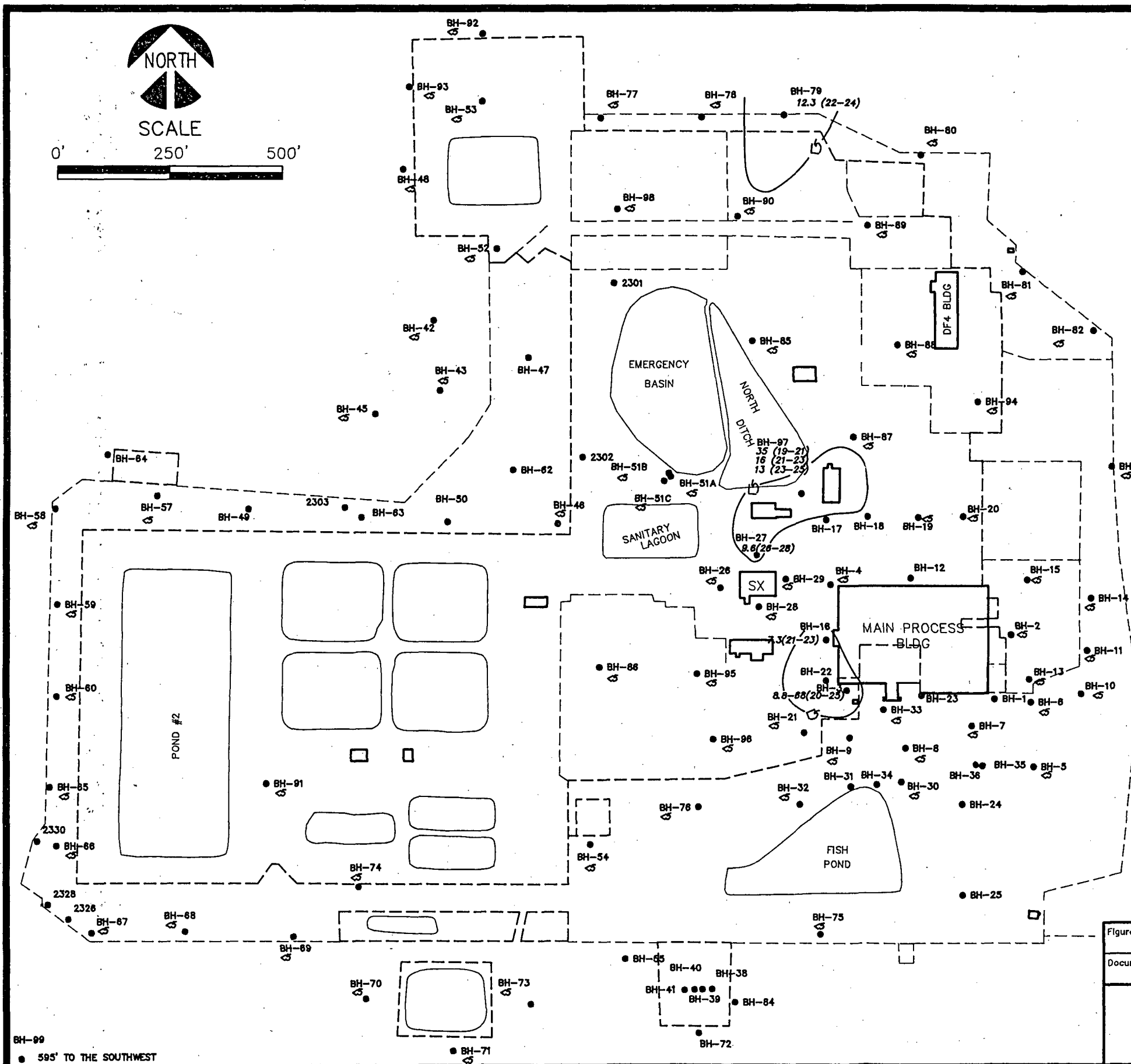
10 ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, UG/G, SEPTEMBER, 1990 TO APRIL, 1991

NOTE:
IF <5 IS SHOWN, THEN URANIUM IS LESS THAN 5 UG/G IN SOIL OVER THE 10-15 FOOT INTERVAL.

CONTOUR INTERVALS: <5, 40, AND >100

Figure Title:	ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, 10-15 FOOT DEPTH	Client:	SEQUOYAH FUELS CORPORATION
Document Title:	FEI FINDINGS REPORT	Location:	GORE, OKLAHOMA
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3855		DATE:	JULY, 1991
		SCALE:	1"=250'
		PROJECT NO:	90067 L15
		PREPARED BY:	RL
		CHECKED BY:	B.J.S.
		DRAFTED BY:	RML
		FIGURE NO.:	107

BH-99
595' TO THE SOUTHWEST



LEGEND

BH-82 • LOCATION OF LITHOLOGICAL AND CHEMICAL CHARACTERIZATION BORING, AND TOTAL URANIUM IN SOIL, UG/G

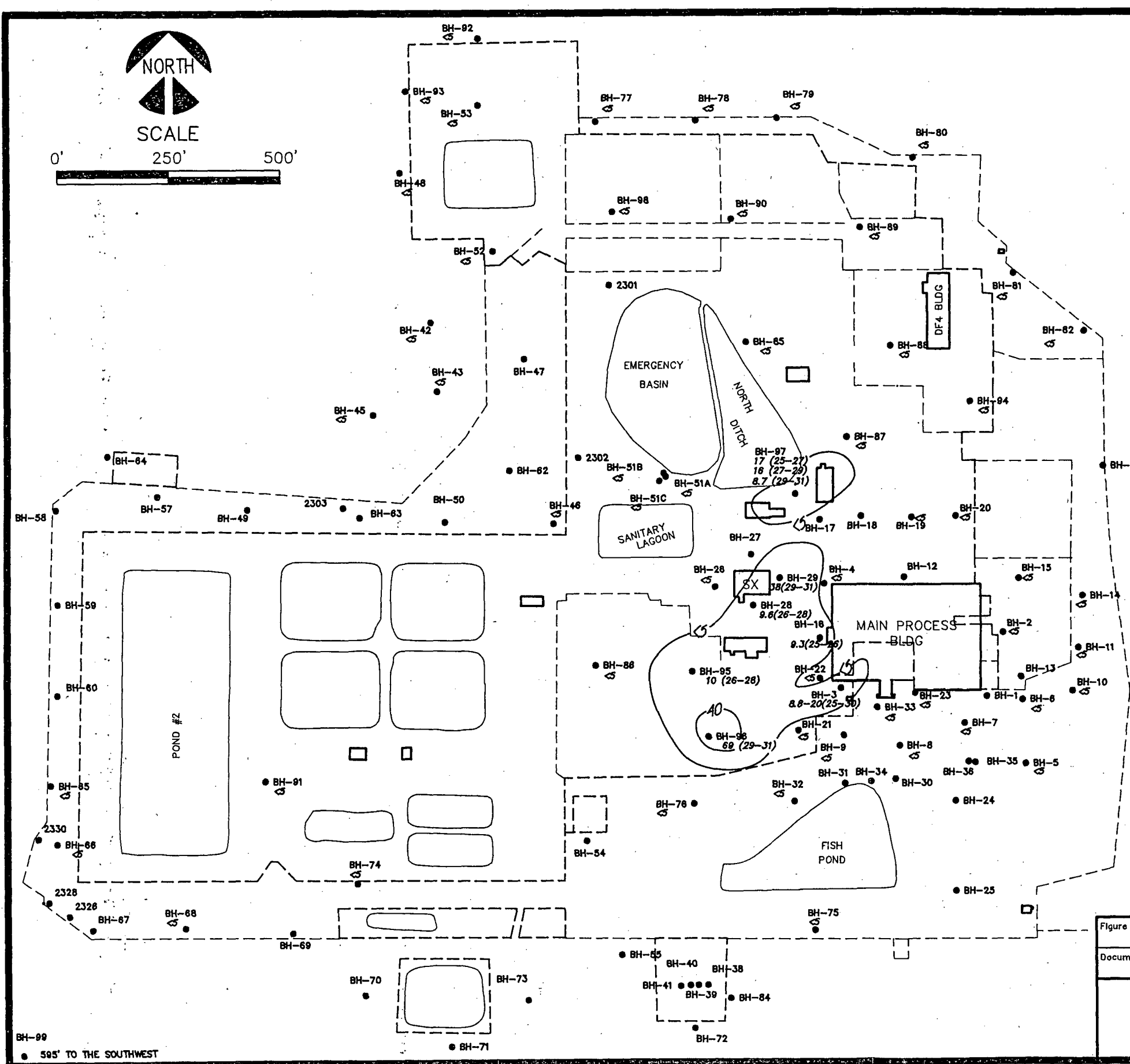
12.3 (22-24) FIRST NUMBER, 12.3, IS TOTAL URANIUM IN UG/G. SECOND NUMBER (22-24), IS SAMPLE DEPTH INTERVAL, FEET

40 ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, UG/G, SEPTEMBER, 1990 TO APRIL, 1991

NOTE: IF <5 IS SHOWN, THEN URANIUM IS LESS THAN 5 UG/G IN SOIL OVER THE 20-25 FOOT DEPTH INTERVAL

CONTOUR INTERVAL: <5, 40 AND >100

Figure Title: ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, 20-25 FEET DEPTH		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: JULY, 1991	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L12	DRAFTED BY: RML
		FIGURE NO.: 109	



LEGEND

- BH-82 •
 <5.0
- 17 (25-27)
- 40
- NOTE: IF <5 IS SHOWN, THEN URANIUM IS LESS THAN 5 UG/G IN SOIL OVER THE 25-30 FOOT DEPTH INTERVAL.
- CONTOUR INTERVAL: <5 , 40, AND >100

Figure Title: ISOPLETH OF TOTAL URANIUM LEVELS IN SOIL, 25-30 FOOT DEPTH		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINAL FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: JULY, 1991	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO: 90067 L14	DRAFTED BY: RML
		FIGURE NO.: 110	

BH-99
595' TO THE SOUTHWEST

HIGHEST URANIUM LEVEL IN SOIL, UG/G

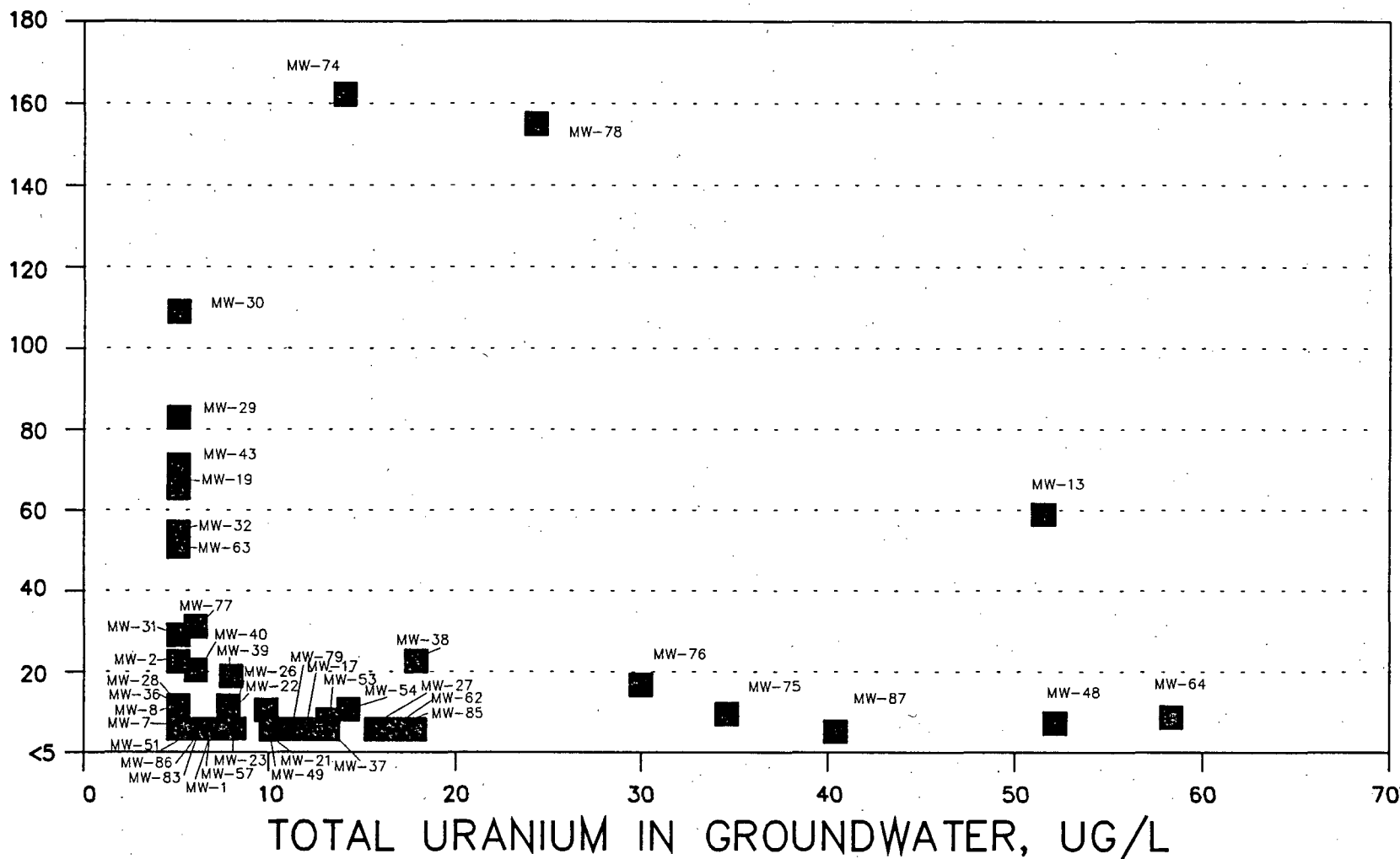


Figure Title: COMPARISON OF URANIUM LEVELS IN SOIL VS URANIUM LEVEL IN SHALLOW SHALE/TERRACE GROUNDWATER

Document Title: FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**
Environmental Consultants
3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client: SEQUOYAH FUELS CORPORATION
Location: GORE, OKLAHOMA

DATE: 6/21/91	PREPARED BY: D.P.
SCALE: N/A	CHECKED BY: B.J.S.
PROJECT NO: 90067 G07	DRAFTED BY: S.A.R.
	FIGURE NO.: 111

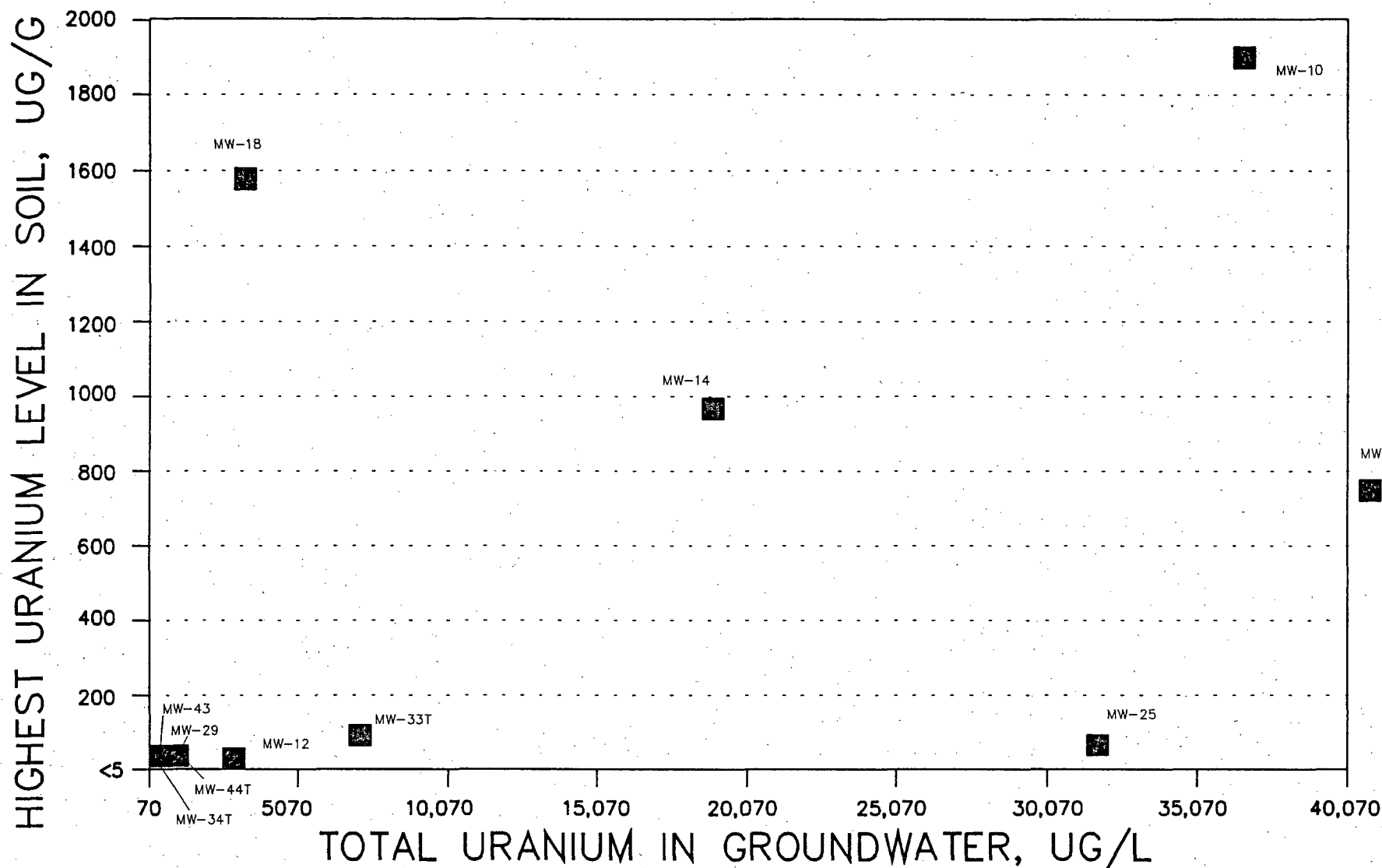


Figure Title:
COMPARISON OF URANIUM LEVELS IN SOIL VS URANIUM LEVEL
IN SHALLOW SHALE/TERRACE GROUNDWATER AND UTILITY TRENCHES

Document Title:

FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:

SEQUOYAH FUELS CORPORATION

Location:

GORE, OKLAHOMA

DATE:

6/21/91

SCALE:

N/A

PROJECT NO:
90067 G07A

PREPARED BY: D.P.

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

FIGURE NO.:
111 (CONT.)

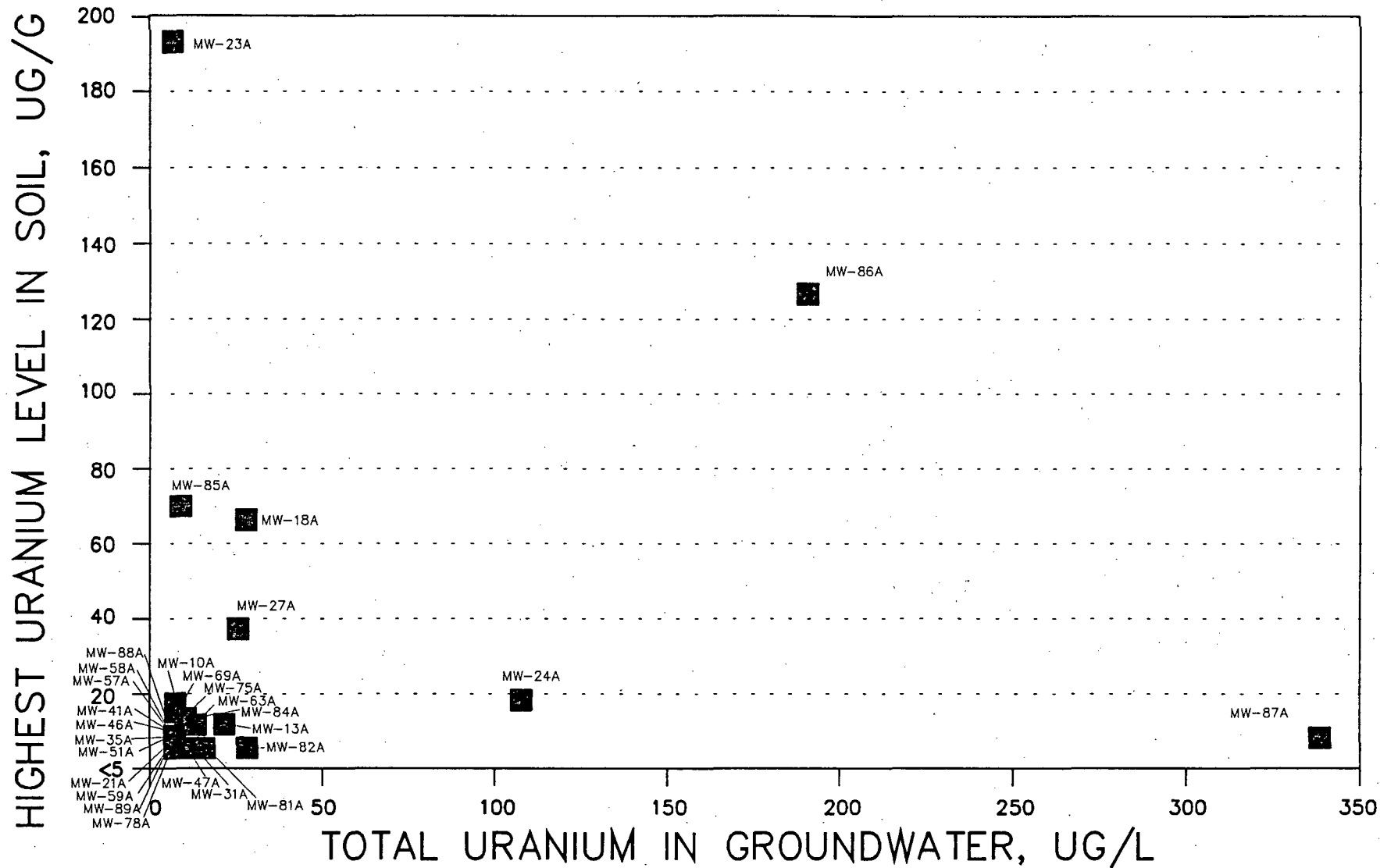


Figure Title: COMPARISON OF URANIUM LEVELS IN SOIL VS URANIUM LEVEL IN DEEP SANDSTONE/SHALE GROUNDWATER

Document Title:

FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:

SEQUOYAH FUELS CORPORATION

Location:

GORE, OKLAHOMA

DATE:

6/21/91

SCALE:

N/A

PROJECT NO:

90067 G08

PREPARED BY: D.P.

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

FIGURE NO.:

112

HIGHEST URANIUM LEVEL IN SOIL, UG/G

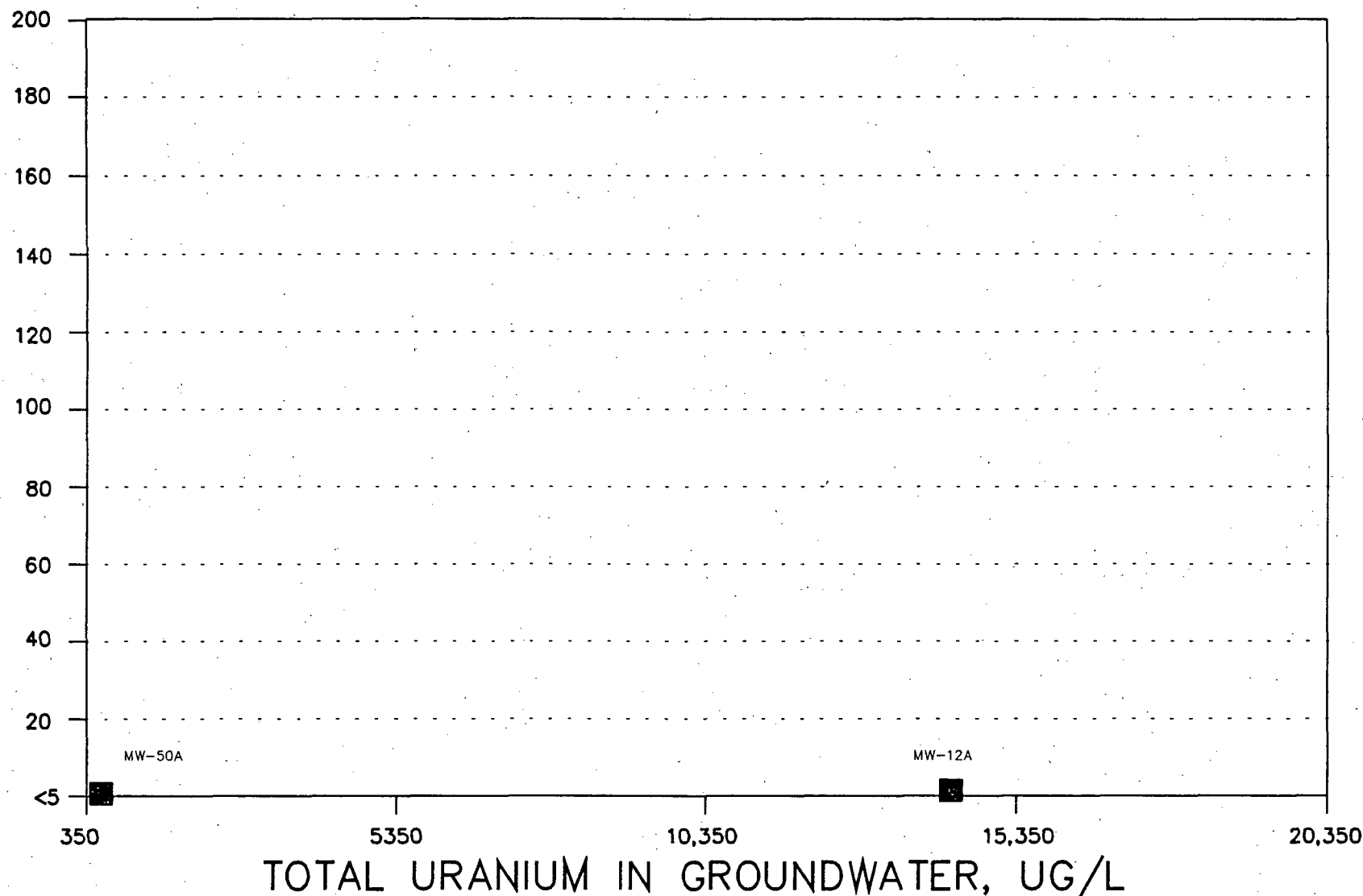


Figure Title: COMPARISON OF URANIUM LEVELS IN SOIL VS URANIUM LEVEL IN DEEP SANDSTONE/SHALE GROUNDWATER

Document Title:

FEI FINDINGS REPORT

**ROBERTS/SCHORNICK
& ASSOCIATES, INC.**

Environmental Consultants

3700 West Robinson, Suite 200
Norman, Oklahoma 73072
(405) 321-3895

Client:

SEQUOYAH FUELS CORPORATION

Location:

GORE, OKLAHOMA

DATE:

6/21/91

SCALE:

N/A

PROJECT NO:
90067 G08A

PREPARED BY: D.P.

CHECKED BY: B.J.S.

DRAFTED BY: S.A.R.

FIGURE NO.:
112 (CONT.)

URANIUM ANALYSES
SX SAND WELL STATION #2 (NE)
SEQUOYAH FUELS CORP.

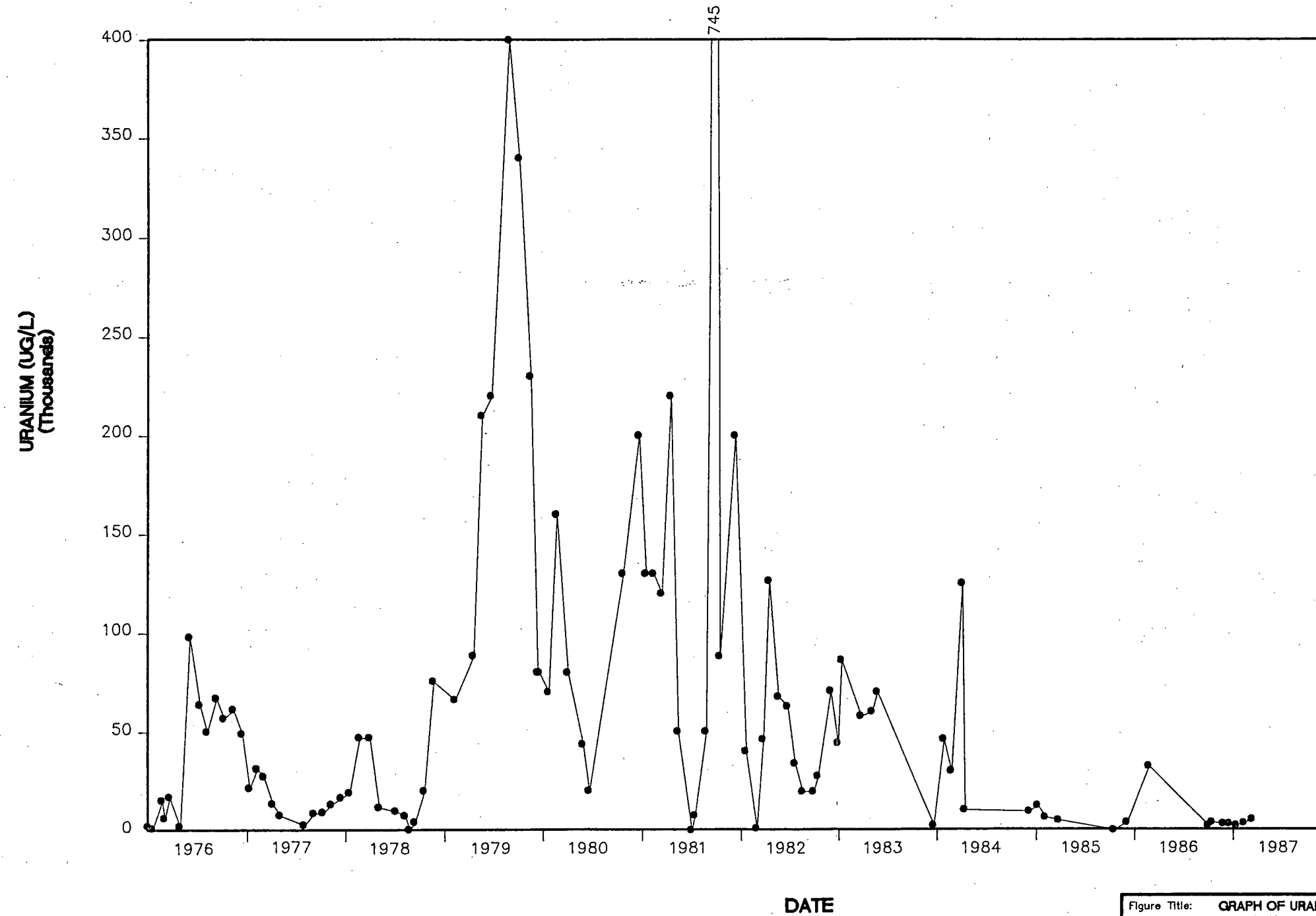


Figure Title: GRAPH OF URANIUM ANALYTICAL DATA FROM SX SAND WELL STATION #2 (NE)		Client: SEQUOYAH FUEL CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE: 6/28/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M73	DRAFTED BY: RML
		FIGURE NO.: 113	

URANIUM ANALYSES
SX SAND WELL STATION #3 (NW)
SEQUOYAH FUELS CORP.

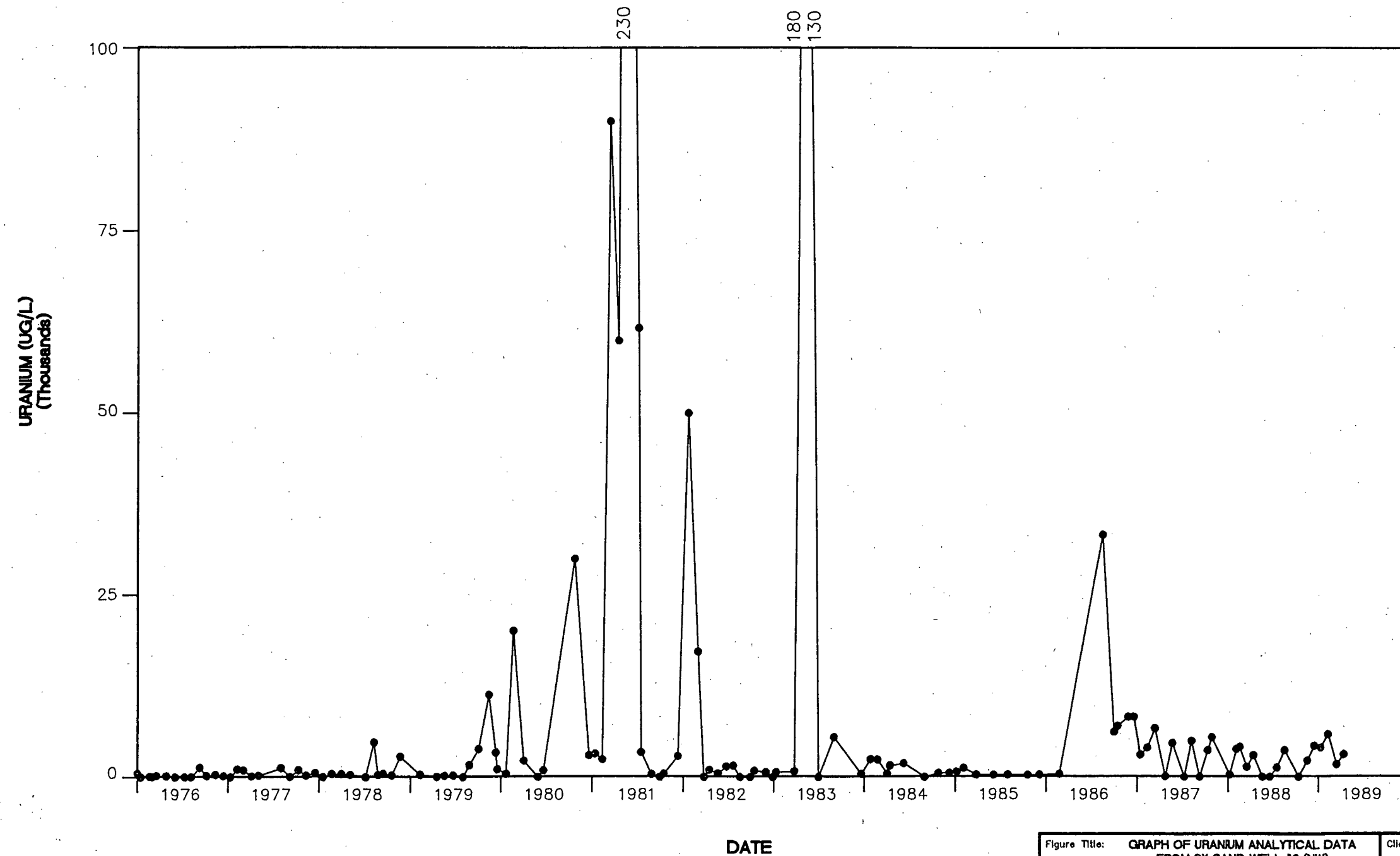


Figure Title: GRAPH OF URANIUM ANALYTICAL DATA FROM SX SAND WELL #3 (NW)		Client: SEQUOYAH FUELS, CORP.	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M75	DRAFTED BY: RML
		FIGURE NO.: 114	

**URANIUM ANALYSES
SX SAND WELL STATION #4 (SW)
SEQUOYAH FUELS CORP.**

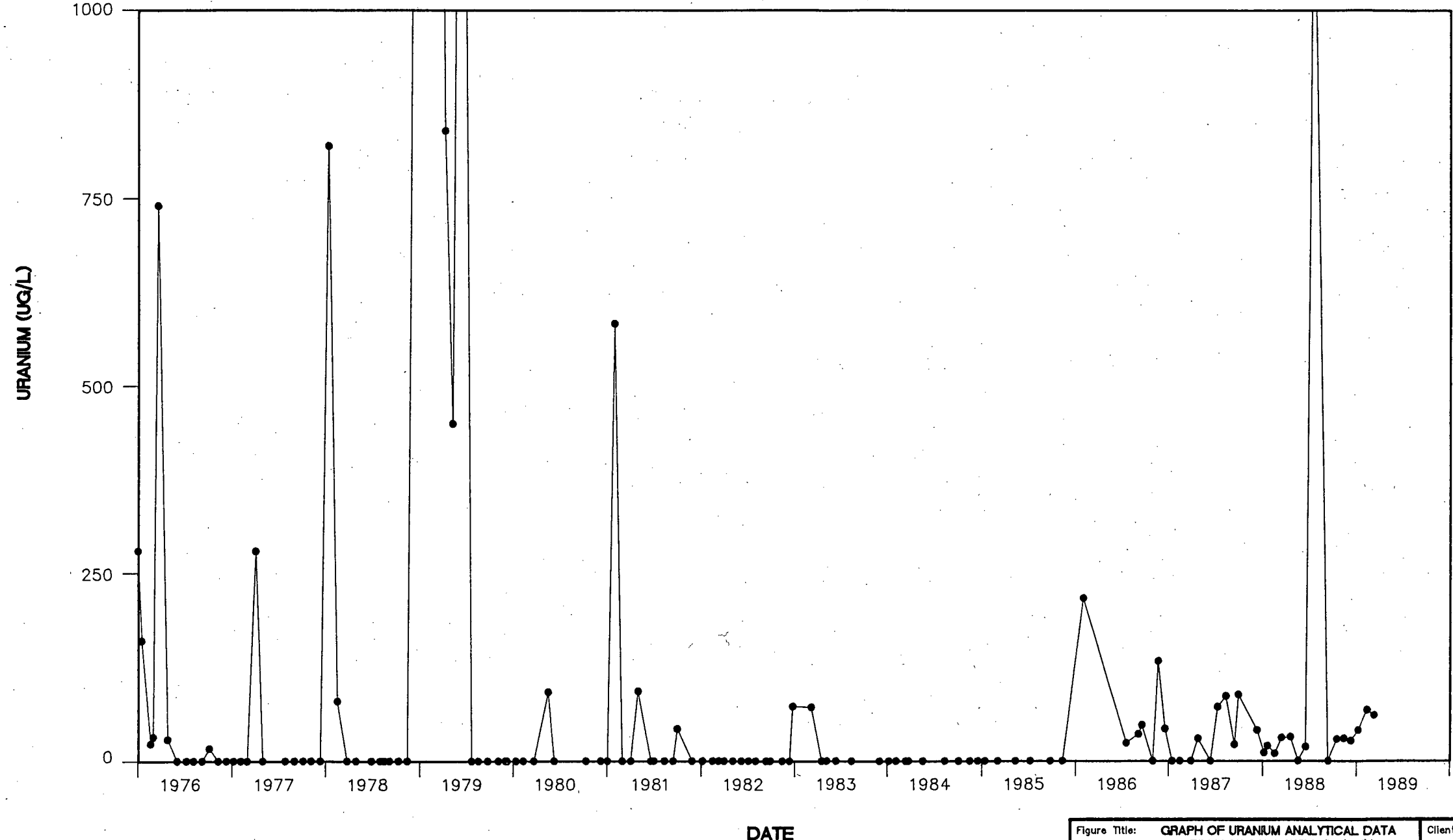


Figure Title: GRAPH OF URANIUM ANALYTICAL DATA FROM SX SAND WELL #4 (SW)		Client: SEQUOYAH FUELS CORP.	
Document Title: FBI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants <small>3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895</small>		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M77	DRAFTED BY: RML
		FIGURE NO.: 115	

URANIUM ANALYSES
SX SAND WELL STATION #5 (SE)
SEQUOYAH FUELS CORP.

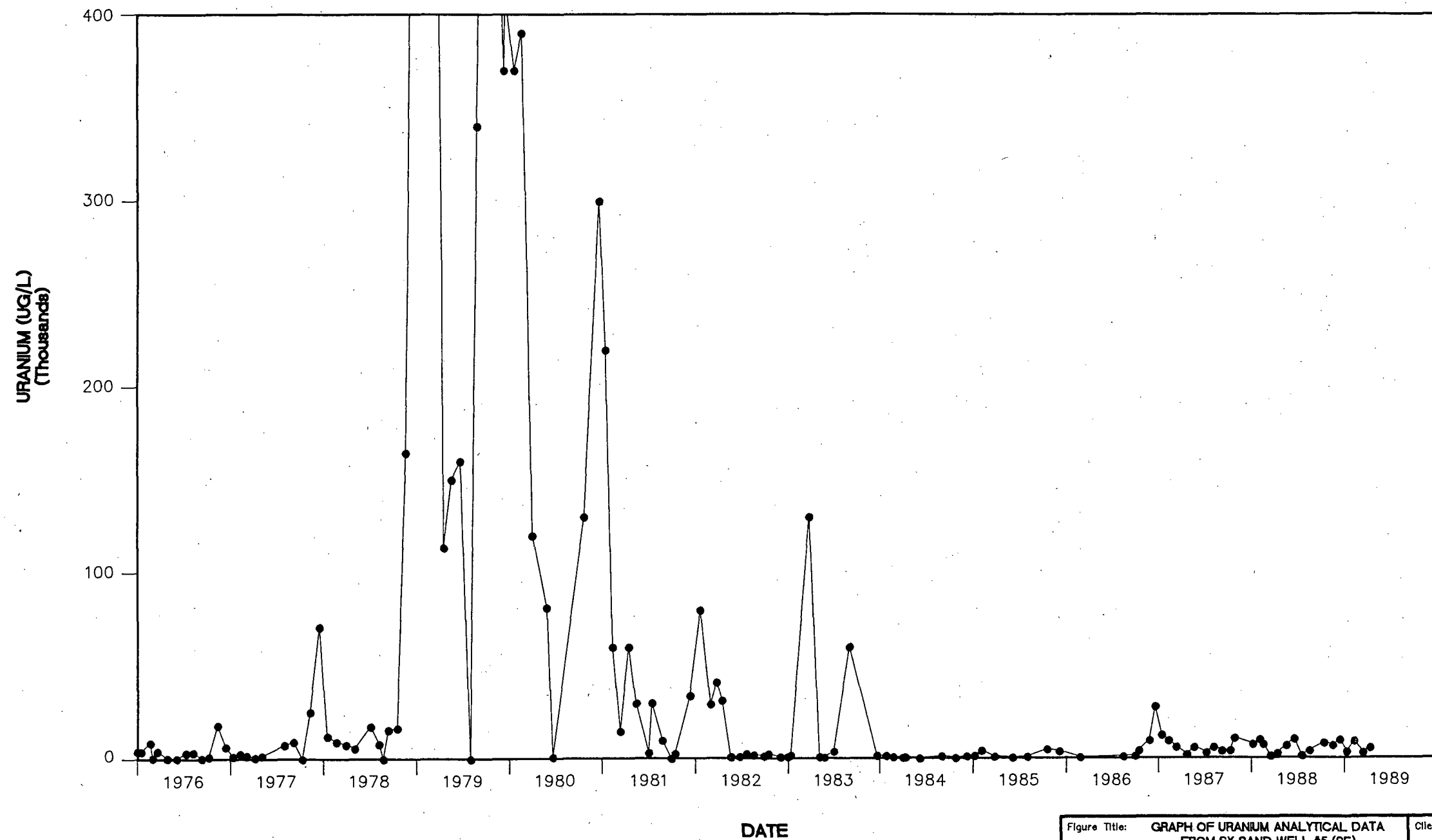


Figure Title: GRAPH OF URANIUM ANALYTICAL DATA FROM SX SAND WELL #5 (SE)		Client: SEQUOYAH FUELS, CORP.	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3896		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M79	DRAFTED BY: RML
		FIGURE NO.:	116

**NITRATE ANALYSES
SX SAND WELL STATION #2 (NE)
SEQUOYAH FUELS CORP.**

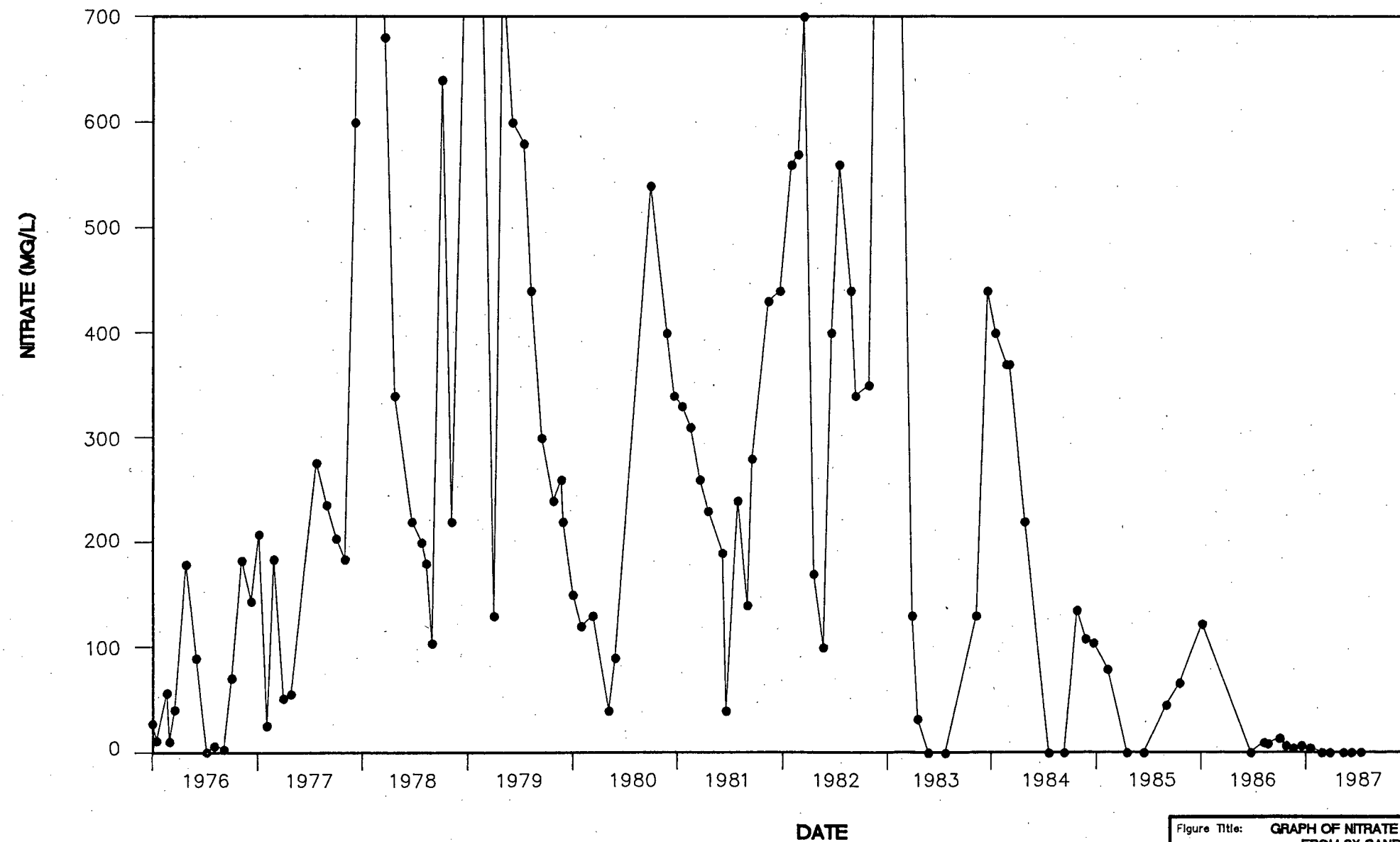


Figure Title: GRAPH OF NITRATE ANALYTICAL DATA FROM SX SAND WELL #2 (NE)		Client: SEQUOYAH FUELS, CORP.	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3895		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M74	FIGURE NO.: 117

**NITRATE ANALYSES
SX SAND WELL STATION #3 (NW)
SEQUOYAH FUELS CORP.**

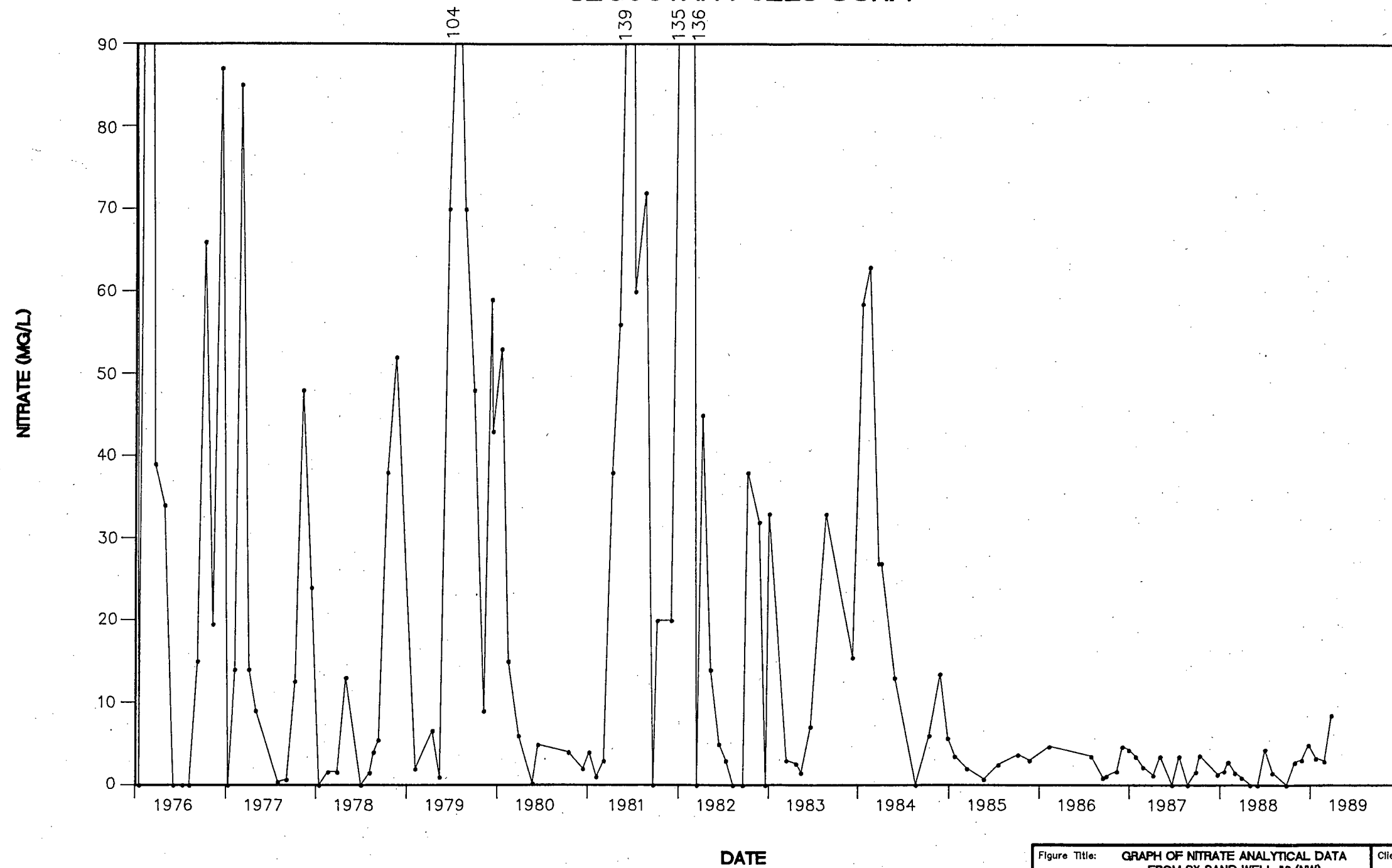


Figure Title: GRAPH OF NITRATE ANALYTICAL DATA FROM SX SAND WELL #3 (NW)		Client: SEQUOYAH FUELS, CORP.	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3885		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M76	DRAFTED BY: RML
		FIGURE NO.:	118

NITRATE ANALYSES
SX SAND WELL STATION #4 (SW)
SEQUOYAH FUELS CORP.

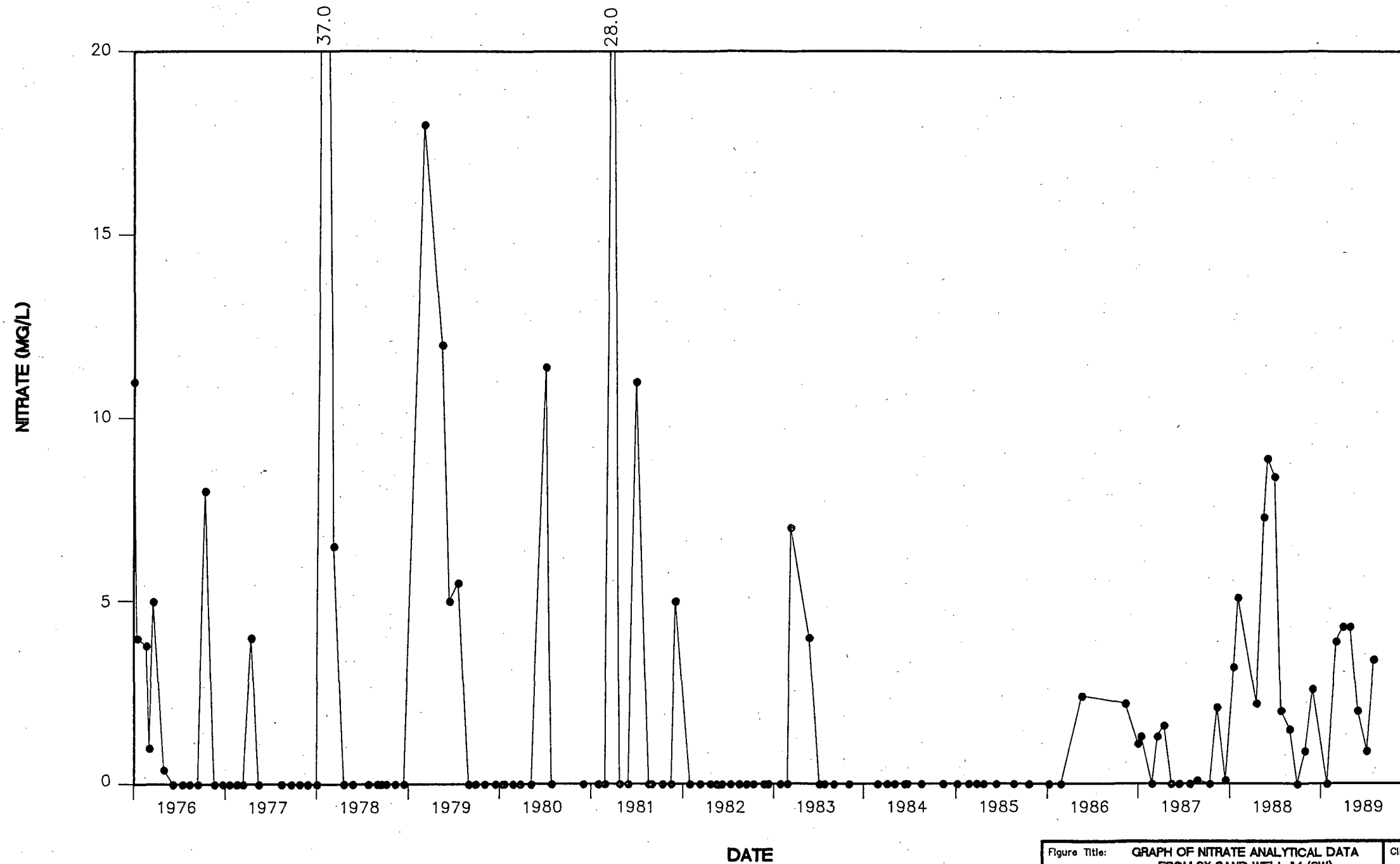


Figure Title: GRAPH OF NITRATE ANALYTICAL DATA FROM SX SAND WELL #4 (SW)		Client: SEQUOYAH FUELS, CORP.	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
ROBERTS/SCHORNICK & ASSOCIATES, INC. Environmental Consultants 3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3555		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M78	DRAFTED BY: RML
		FIGURE NO.: 119	

**NITRATE ANALYSES
SX SAND WELL STATION #5 (SE)
SEQUOYAH FUELS CORP.**

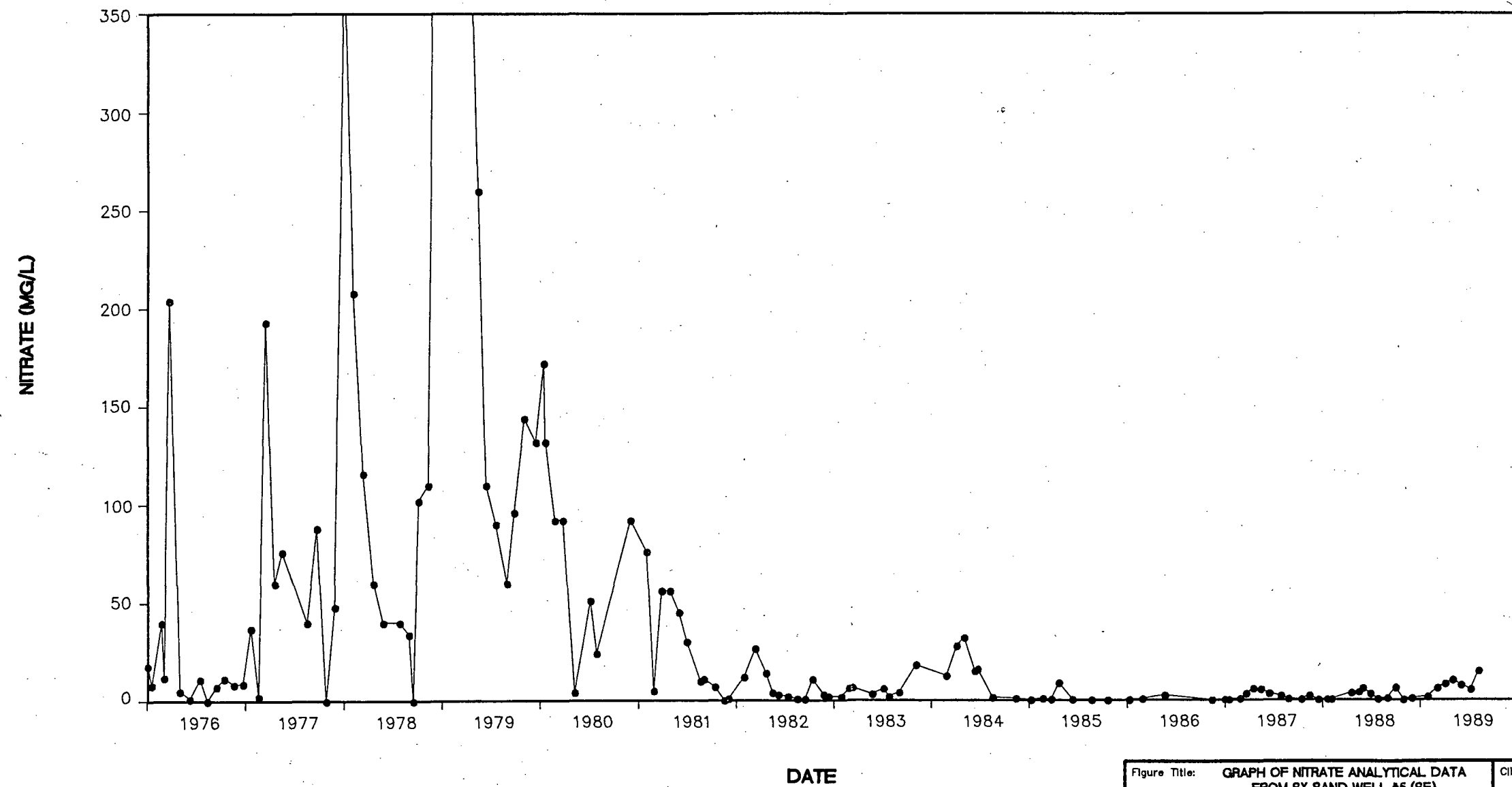


Figure Title: GRAPH OF NITRATE ANALYTICAL DATA FROM SX SAND WELL #5 (SE)		Client: SEQUOYAH FUELS, CORP.	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
<i>ROBERTS/SCHORNICK & ASSOCIATES, INC.</i> Environmental Consultants <small>3700 West Robinson, Suite 200 Norman, Oklahoma 73072 (405) 321-3886</small>		DATE: 3/19/91	PREPARED BY: D.P.
		SCALE: N.T.S.	CHECKED BY: B.J.S.
		PROJECT NO: 90067 M80	DRAFTED BY: RML
		FIGURE NO.: 120	