

3R - 105

**ANNUAL
MONITORING
REPORT**

03/07/2008



March 7, 2008

Mr. Glenn von Gonten
Hydrologist-Groundwater Remediation
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Annual Groundwater Remediation Reports

Dear Mr. von Gonten,

XTO Energy Inc. (XTO) is submitting the Annual Groundwater Remediation Reports in accordance with the NMOCD approved Groundwater Management Plan (GMP). Enclosed are summary reports with analytical data, summary tables, site maps, potentiometric surface diagrams and recommendations/proposed actions for:

- Bruington Gas Com #1- 3RP106
- Carson Gas Com #1E
- EJ Johnson C #1E- 3RP385
- Federal Gas Com #H1 3R 110
- Frost, Jack B #2
- McCoy GC D #1E
- OH Randel #7- 3RP386
- PO Pipken #3E 3R 409
- Rowland Gas Com #1- 3RP124
- Snyder Gas Com #1A- 3RP126
- Sullivan Gas Com D #1- 3RP131
- Valdez A #1E- 3RP134

We have also enclosed an Annual Report for ten sites that meet the closure requirements outlined in the GMP. XTO respectfully requests closure of:

- Baca Gas Com A #1A- 3RP104
- Garcia Gas Com B #1- 3RP111
- Haney Gas Com B #1E- 3RP113
- Hare Gas Com B #1
- Hare Gas Com B #1E- 3RP384
- Hare Gas Com I #1
- Masden Gas Com #1E- 3RP120
- McDaniel Gas Com B #1E- 3RP121
- Stedje Gas Com #1- 3RP128
- Sullivan Frame A #1E- 3RP130

In previously submitted reports five sites met the closure requirements outlined in the GMP and XTO requested closure on those sites in 2006 and 2007. The reports for the below listed sites are being submitted again for your review.

- Abrams J #1- 3RP100
- Armenta Gas Com C #1E- 3RP394
- Bergin Gas Com #1E- 3RP105
- Romero Gas Com A #1- 3RP123
- State Gas Com BS #1- 3RP127

Thank you for your review of the reports. XTO looks forward to hearing from you regarding closure requests and proposed remediation actions. If you have any questions please do not hesitate to contact me at (505) 333-3100.

Respectfully,



Lisa Winn
EH & S Manager
San Juan Division

cc: Mr. Brandon Powell, Environmental, NMOCD District III Office, Aztec, NM
Mr. Martin Nee, Lodestar Services Inc.
File- San Juan Groundwater

3R105

XTO ENERGY INC.

ANNUAL GROUNDWATER REMEDIATION REPORT

2005

**BERGIN GC #1E
(F) SECTION 21, T29N, R11W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

**PREPARED FOR:
MR. GLENN VON GONTEN
NEW MEXICO OIL CONSERVATION DIVISION**

JANUARY 2006

**PREPARED BY:
BLAGG ENGINEERING, INC.**

**Consulting Petroleum / Reclamation Services
P.O. Box 87
Bloomfield, New Mexico 87413**

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Field Sampling Data Summaries

Laboratory Reports

XTO ENERGY INC.
Bergin GC # 1E - Separator Pit
SE/4 NW/4 Sec. 21, T29N, R11W

Pit Closure Dates: 11/16/93 – 1/3/94

Monitor Well Installation Dates: MW 1, 2 & 3 – 4/22/96
MW 4 - 11/27/97
MW 3R - 6/5/98 (Replacement for MW 3)
MW 2R - 6/10/03 (Replacement for MW 2)

Monitor Well Sampling Dates: 6/5/96, 9/11/96, 12/27/96, 3/19/97, 6/23/97, 12/18/97, 6/12/98,
1/25/99, 5/13/99, 8/25/99, 6/30/00, 5/17/01, 9/24/01,
11/28/01, 2/19/02, 6/27/03, 8/25/03, 11/14/03, 3/25/04

Historical Information:

- November 1993 to January 1994 – An earthen separator pit was closed at this site by Amoco Production Company (Figure 1). Remediation included excavating approximately 1520 cubic yards of hydrocarbon impacted soil to beneath groundwater (found at approximately 10 – 12 feet below ground surface). Impacted soils were transported to the Amoco permitted waste management facility.
- April 1996 - Groundwater monitor wells were installed to evaluate impacts to groundwater.
- January 1998 - XTO Energy Inc. (XTO) acquires the Bergin GC #1E from Amoco Production Company.
- January 1998 to March 2004 – Continued Quarterly/Annual sampling to confirm closure.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells (MW) following US EPA: SW-846 protocol. Samples were collected using new disposable bailers and placed in laboratory supplied containers and stored in a cooler on ice. The samples were delivered to an accredited environmental laboratory according to chain-of-custody procedures. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) per US EPA Method 8021B and general water chemistry per US EPA Method 600/4-79-020. Analytical results are summarized on Tables 1 - 3. Waste generated (groundwater) during monitor well sampling and development was placed in the produced water separator tank located on the well site.

Water Quality and Gradient Information:

Groundwater elevation data consistently indicates the water gradient trends in a southern direction (Figures 2 – 7).

Groundwater monitor wells were installed and sampled to evaluate impacts to groundwater. Groundwater monitor well MW 1 is located up-gradient of the source area and exhibited no detectable levels of BTEX constituents. Trace levels of residual BTEX was detected in MW 2 (MW 2R) and MW 3 and elevated chloride levels were observed between 1999 and 2002 in monitor well MW 2R. Monitor well MW 4 is directly down-gradient from the original pit area and laboratory analysis show no detectable levels of BTEX.

Summary and Recommendations:

XTO requests closure of this groundwater site according to the NMOCD approved Groundwater Management Plan. Analytical data from monitor well sampling indicates that water quality standards have been achieved in the source area and down-gradient wells. Permanent closure of this site is recommended. Following NMOCD approval for closure, all site monitor wells will be abandoned by placing a cement/bentonite grout mix in the well and cutting the casing to below surface grade.

TABLE 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

**BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W**

REVISED DATE: August 25, 1999
FILENAME: (BE-3Q-99.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8020 (PPB)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
05-Jun-96	MW #1	11.65	15.00	2990	2400	7.0		ND	ND	ND	ND
13-May-99		12.73		2850	5700	7.0		NA	NA	NA	NA
05-Jun-96	MW #2	12.28	15.00	1230	1800	6.5		9.92	7.85	19.6	89.2
11-Sep-96		10.03			1600	6.9		5.86	7.57	11.8	24.6
27-Dec-96		10.30			5900	6.8		1.42	1.33	1.89	8.99
19-Mar-97		12.11			4600	7.2		2.54	ND	ND	ND
13-May-99		13.55		3485	6980	7.1		NA	NA	NA	NA
05-Jun-96	MW #3	13.24	15.00	1080	1700	6.7		11.8	23.1	12	137.9
11-Sep-96		11.00			1600	7.2		36.4	11.7	135	529
23-Jun-97		14.21			NA	NA		0.5	0.8	1.2	3.9
17-Sep-97		12.02			2000	6.9		ND	ND	52	305.6
18-Dec-97		11.41			1900	7.2		42.6	4	107	632
12-Jun-98		14.01	20.00		1900	7.1		ND	ND	ND	0.8
25-Jan-99		11.10			1700	7.2		ND	0.7	26.7	219.9
13-May-99		13.84		2134	4300	7.3		2.2	11.1	0.6	12.2
25-Aug-99		12.30			1900	7.1		8.6	2.3	4.5	24.8
18-Dec-97	MW #4	11.31	17.53		2100	7.0		ND	ND	ND	ND
13-May-99		14.28		2450	4900	7.4		NA	NA	NA	NA
25-Aug-99		12.74			1900	7.3		3.1	2.2	ND	1.7
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

- NOTES : 1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .
 2) RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS EXCEEDED .
 3) NA - INDICATES NOT APPLICABLE .

TABLE 2
GENERAL WATER QUALITY
XTO ENERGY INC. (CTOC)
BERGIN GC # 1E

INITIAL SAMPLE DATE : MAY 13, 1999

PARAMETERS	MW # 1	MW # 2	MW # 3R	MW # 4	Units
LAB pH	6.95	7.12	7.29	7.35	s. u.
LAB CONDUCTIVITY @ 25 C	5,700	6,980	4,300	4,900	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	2,850	3,485	2,150	2,450	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	2,825	3,453	2,134	2,447	mg / L
SODIUM ABSORPTION RATIO	3.9	11.7	3.0	2.7	ratio
TOTAL ALKALINITY AS CaCO3	284	780	328	324	mg / L
TOTAL HARDNESS AS CaCO3	1,365	920	1,085	1,330	mg / L
BICARBONATE as HCO3	284	780	328	324	mg / L
CARBONATE AS CO3	< 1	< 1	< 1	< 1	mg / L
HYDROXIDE AS OH	< 1	< 1	< 1	< 1	mg / L
NITRATE NITROGEN	15.0	6.0	6.1	12.5	mg / L
NITRITE NITROGEN	0.068	0.146	2.000	2.000	mg / L
CHLORIDE	18.5	503	9.0	10.5	mg / L
FLUORIDE	0.97	1.06	1.02	1.02	mg / L
PHOSPHATE	< 0.1	1.6	< 0.1	< 0.1	mg / L
SULFATE	1,740	1,290	1,250	1,470	mg / L
IRON	< 0.001	0.089	< 0.001	0.007	mg / L
CALCIUM	546	328	434	506	mg / L
MAGNESIUM	< 0.01	24.4	< 0.1	15.9	mg / L
POTASSIUM	2.5	10.0	2.5	2.5	mg / L
SODIUM	330	815	230	230	mg / L
CATION / ANION DIFFERENCE	0.08	0.08	0.39	0.32	%

CHLORIDE ONLY RESULTS

SAMP. PT.	DATE	RESULTS		mg / L	DTW (ft.)
MW # 2	08/25/99	632		"	12.02
	06/30/00	32.0		"	12.93
	05/17/01	148	DUPLICATE	"	12.41
	09/24/01	476		"	12.31
	11/28/01	36.8	▼ 460	"	11.15
	02/19/02	304		"	12.06
MW # 2R	06/27/03	26.8		"	11.74
	08/25/03	17.6		"	11.75
	11/14/03	10.0		"	11.31
	03/25/04	10.4		"	13.00
MW # 3R	08/25/99	35.7		"	12.30
	06/30/00	22.5		"	13.10
	05/17/01	4.2		"	13.70

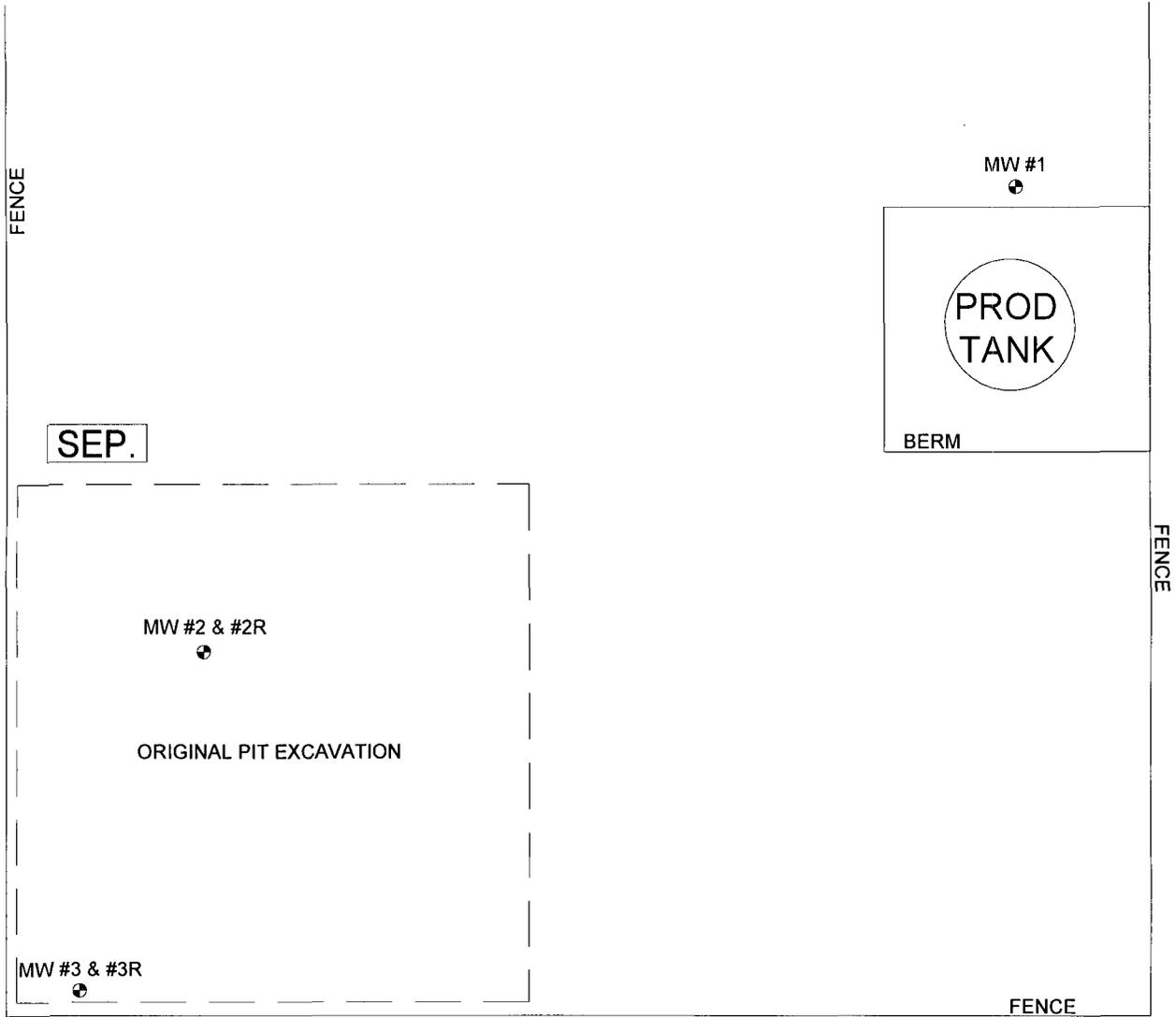
NMWQCC GROUNDWATER STANDARDS 250

NOTE : mg / L = milligrams per liter , DTW = depth to water .

FIGURE 1



⊕ WELL HEAD



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

1 INCH = 25 FEET

0 25 50 FT.

CROSS TIMBERS OPERATING COMPANY
BERGIN GC 1E
SE/4 NW/4 SEC. 21, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

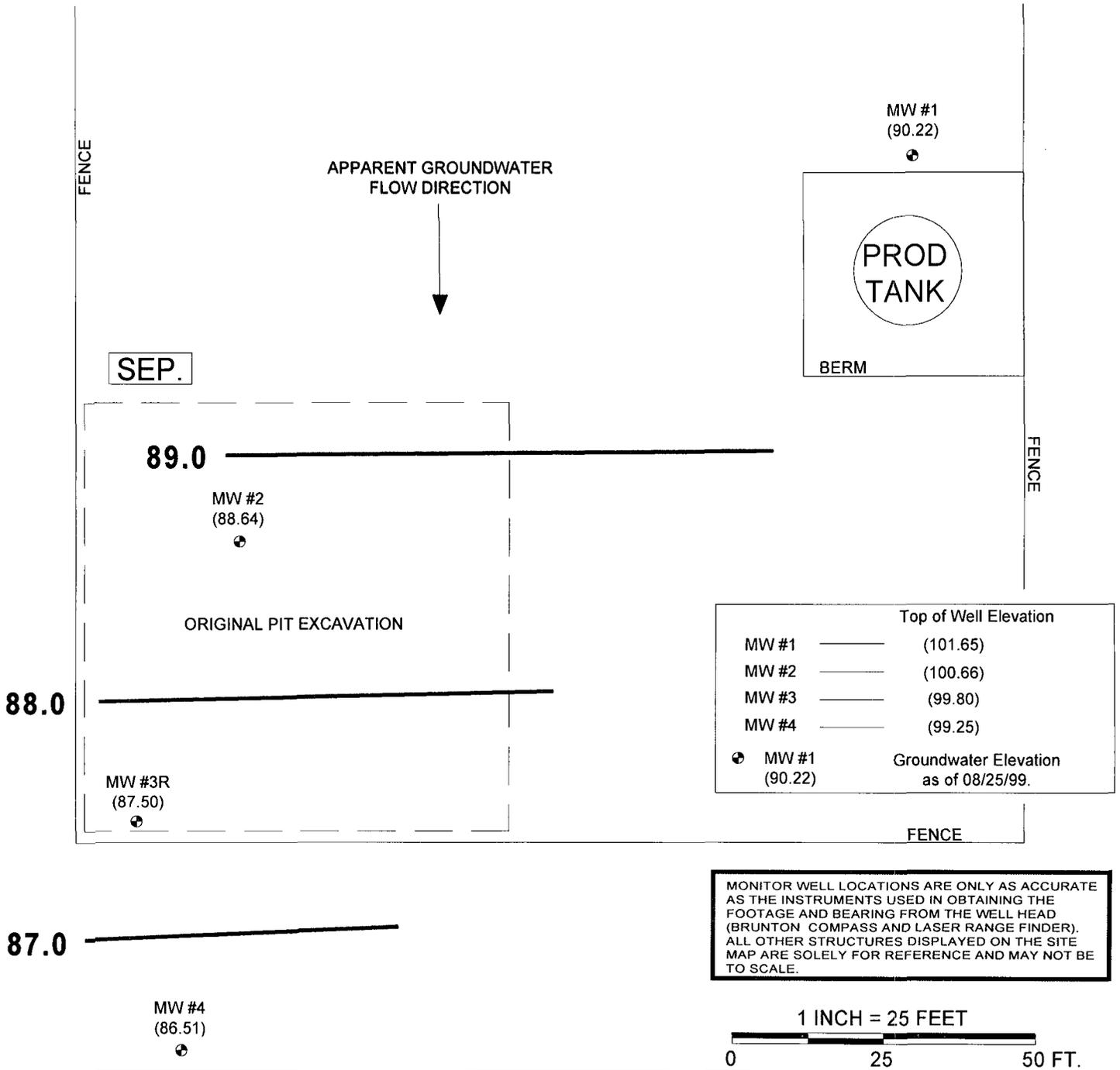
PROJECT: 1/4ly Monitor.
DRAWN BY: NJV
FILENAME: 08-25-99-SM.SKF
REVISED: 11/02/05 NJV

**SITE
MAP**
08/99

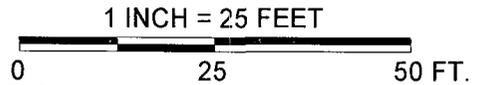
FIGURE 2 (3rd 1/4, 1999)



⊕ WELL HEAD



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.



CROSS TIMBERS OPERATING COMPANY
BERGIN GC 1E
SE/4 NW/4 SEC. 21, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

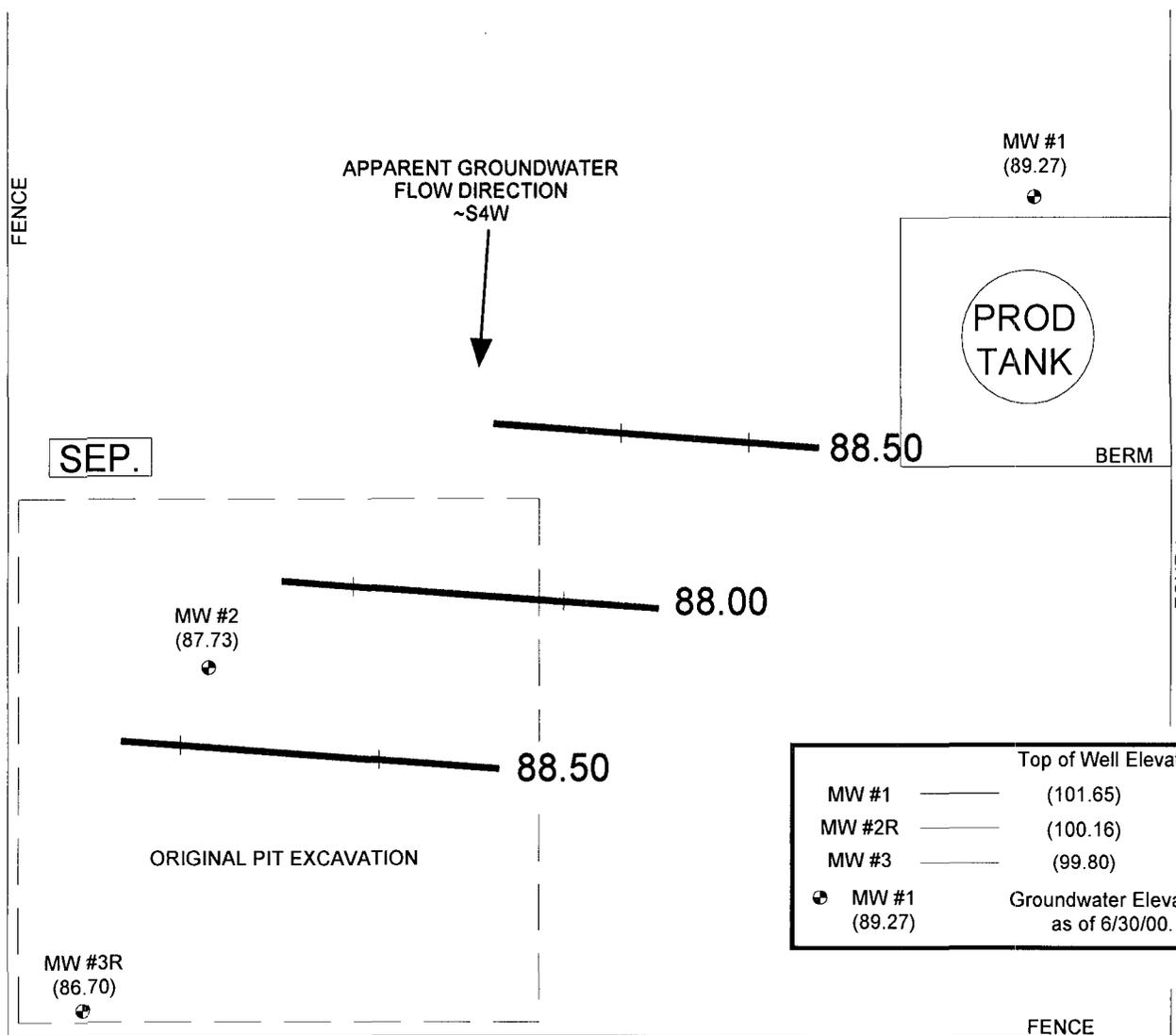
PROJECT: 1/4ly Monitoring
DRAWN BY: NJV
FILENAME: 08-25-99-GW.SKF
REVISED: 08/31/99 NJV

GROUNDWATER GRADIENT MAP
08/99

FIGURE 3 (2nd 1/4, 2000)

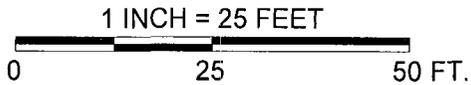


⊕ WELL HEAD



Top of Well Elevation	
MW #1	(101.65)
MW #2R	(100.16)
MW #3	(99.80)
Groundwater Elevation as of 6/30/00.	
⊕ MW #1	(89.27)

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.



CROSS TIMBERS OPERATING COMPANY
BERGIN GC 1E
SE/4 NW/4 SEC. 21, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

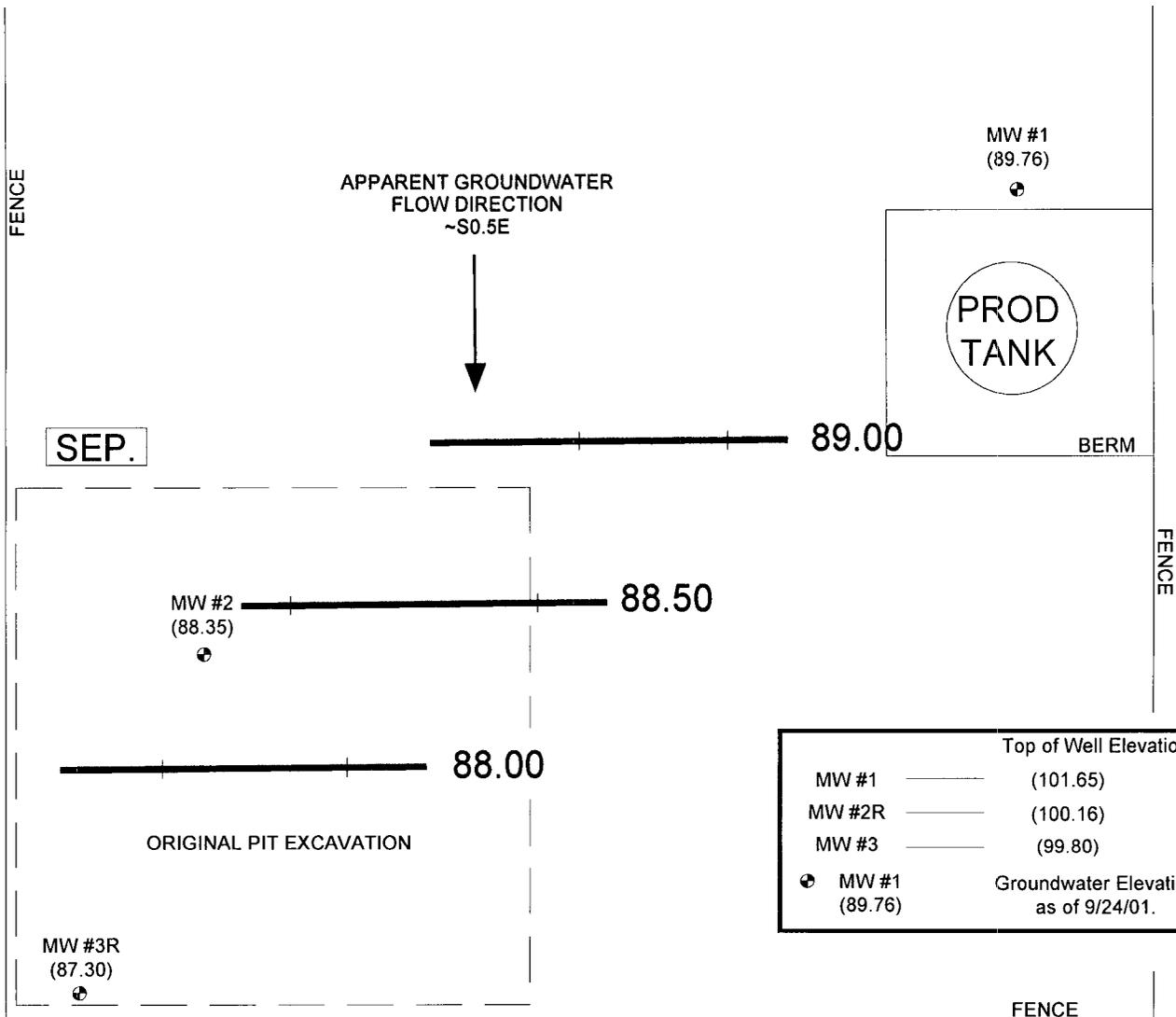
PROJECT: 1/4ly Monitoring
DRAWN BY: NJV
FILENAME: 06-30-00-GW.SKF
REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP
06/00

FIGURE 4 (3rd 1/4, 2001)

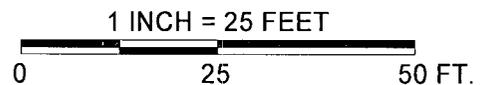


⊕ WELL HEAD



Top of Well Elevation	
MW #1	(101.65)
MW #2R	(100.16)
MW #3	(99.80)
Groundwater Elevation as of 9/24/01.	
⊕ MW #1 (89.76)	

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.



MW #4

CROSS TIMBERS OPERATING COMPANY
BERGIN GC 1E
SE/4 NW/4 SEC. 21, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

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CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

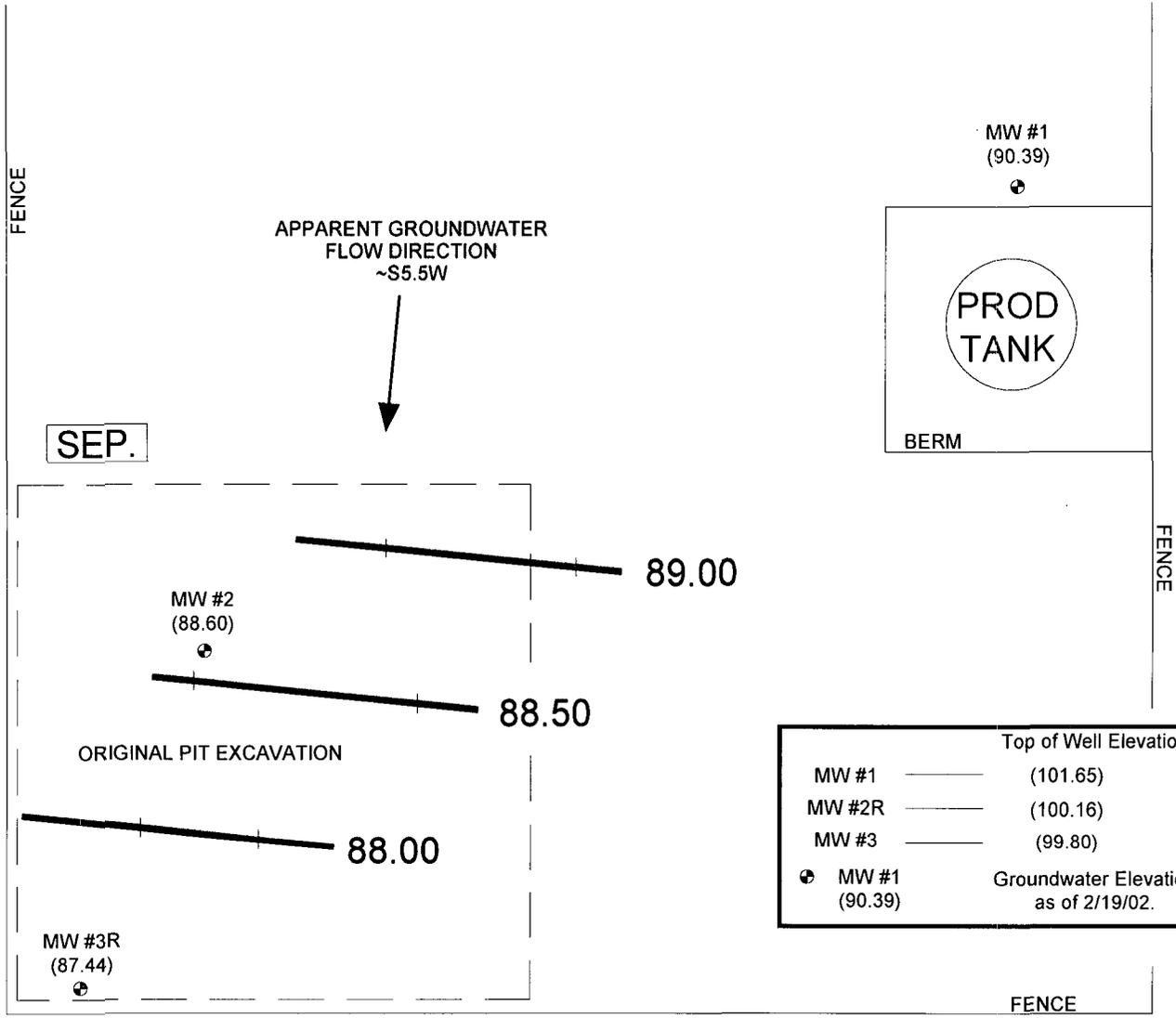
PROJECT: 1/4ly Monitoring
DRAWN BY: NJV
FILENAME: 09-24-01-GW.SKF
REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP
09/01

FIGURE 5 (1st 1/4, 2002)

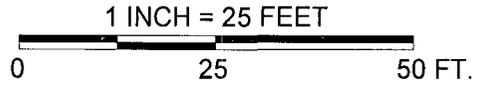


⊕ WELL HEAD



	Top of Well Elevation
MW #1	(101.65)
MW #2R	(100.16)
MW #3	(99.80)
⊕ MW #1 (90.39)	Groundwater Elevation as of 2/19/02.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.



CROSS TIMBERS OPERATING COMPANY
BERGIN GC 1E
SE/4 NW/4 SEC. 21, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

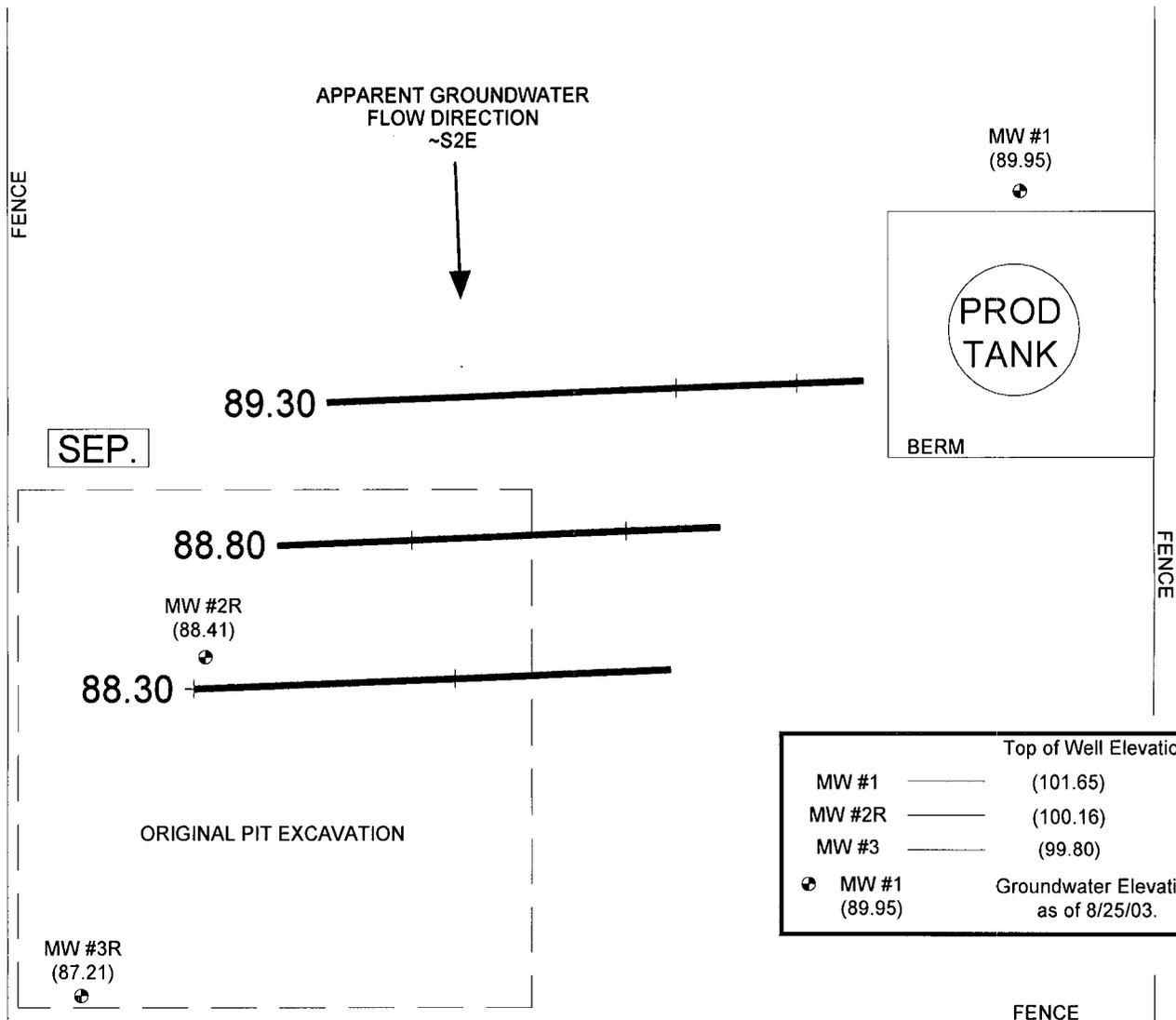
PROJECT: 1/4ly Monitoring
DRAWN BY: NJV
FILENAME: 02-19-02-GW,SKF
REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP
02/02

FIGURE 6 (3rd 1/4, 2003)

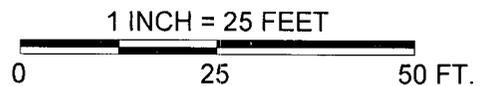


⊕
WELL
HEAD



Top of Well Elevation	
MW #1	(101.65)
MW #2R	(100.16)
MW #3	(99.80)
⊕ MW #1 (89.95)	Groundwater Elevation as of 8/25/03.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.



CROSS TIMBERS OPERATING COMPANY
BERGIN GC 1E
SE/4 NW/4 SEC. 21, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

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P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: 1/4ly Monitoring
DRAWN BY: NJV
FILENAME: 08-25-03-GW/SKF
REVISED: 11/02/05 NJV

**GROUNDWATER
GRADIENT
MAP
08/03**

FIGURE 8

BLAGG ENGINEERING, INC.

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BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

BORING #.....	BH - 2R
MW #.....	2R
PAGE #.....	2A
DATE STARTED	6/10/03
DATE FINISHED	6/10/03
OPERATOR.....	JCB
PREPARED BY	NJV

CLIENT:	XTO ENERGY INC.
LOCATION NAME:	BERGIN GC # 1E
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE)
BORING LOCATION:	S33W, 159 FEET FROM WELL HEAD.

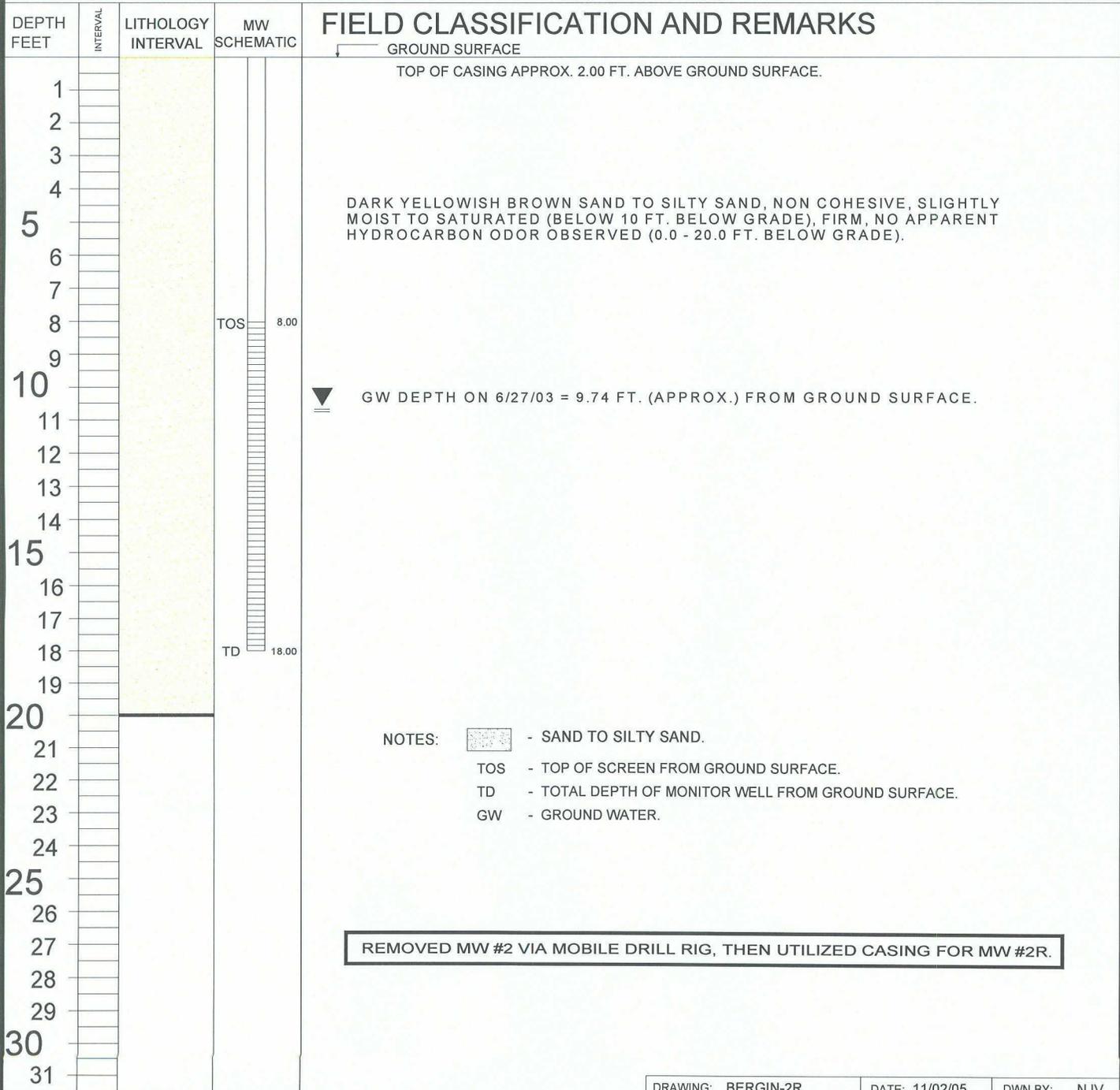


FIGURE 9

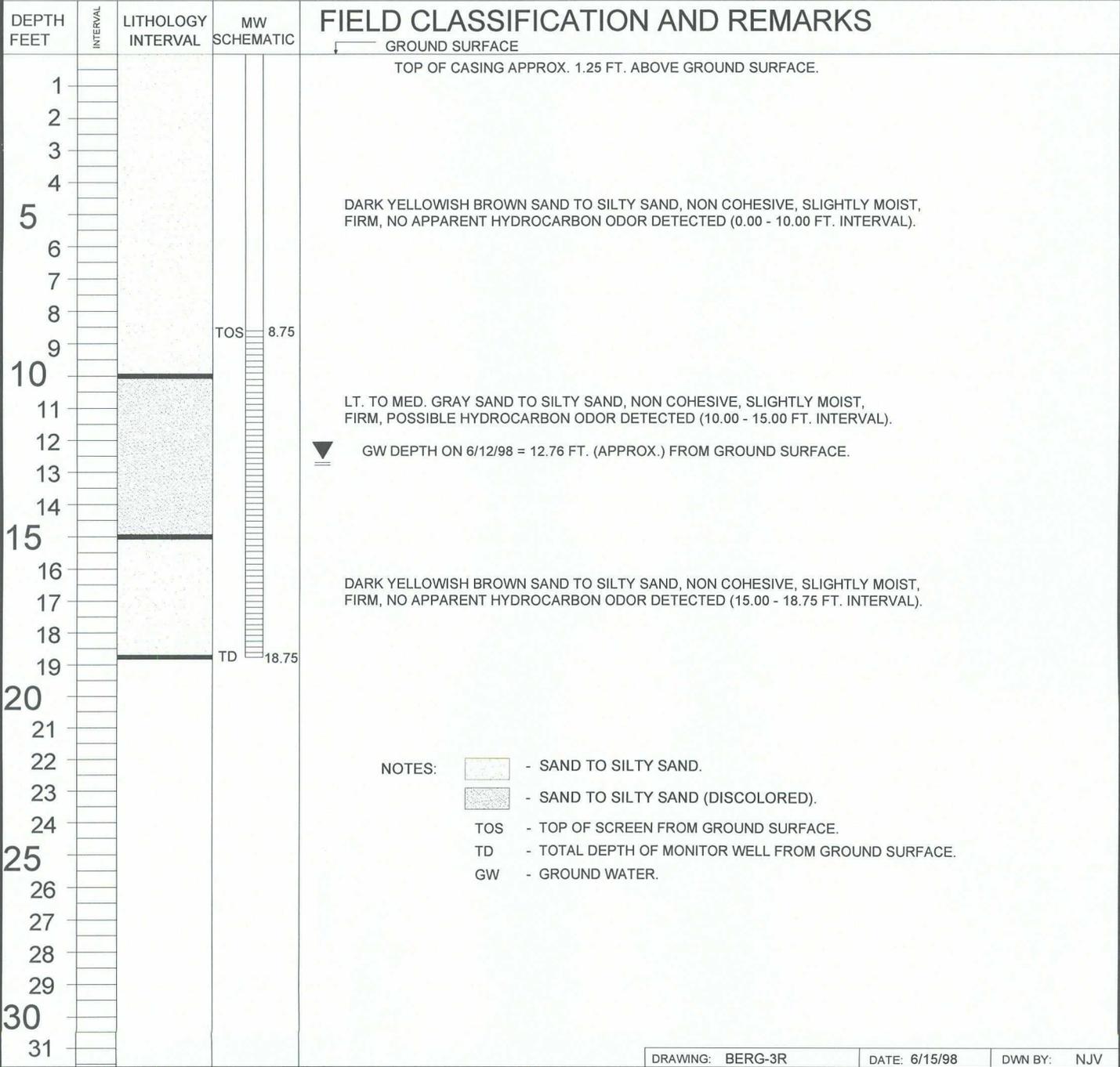
BLAGG ENGINEERING, Inc.

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BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

BORING #.....	BH - 3R
MW #.....	3R
PAGE #.....	3A
DATE STARTED	6/5/98
DATE FINISHED	6/5/98
OPERATOR.....	JCB
PREPARED BY	NJV

CLIENT:	CROSS TIMBERS OIL COMPANY
LOCATION NAME:	BERGIN GC # 1E
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHROBE)
BORING LOCATION:	S30W, 207 FEET FROM WELL HEAD.



- NOTES:
- SAND TO SILTY SAND.
 - SAND TO SILTY SAND (DISCOLORED).
 - TOS - TOP OF SCREEN FROM GROUND SURFACE.
 - TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
 - GW - GROUND WATER.

FIGURE 10

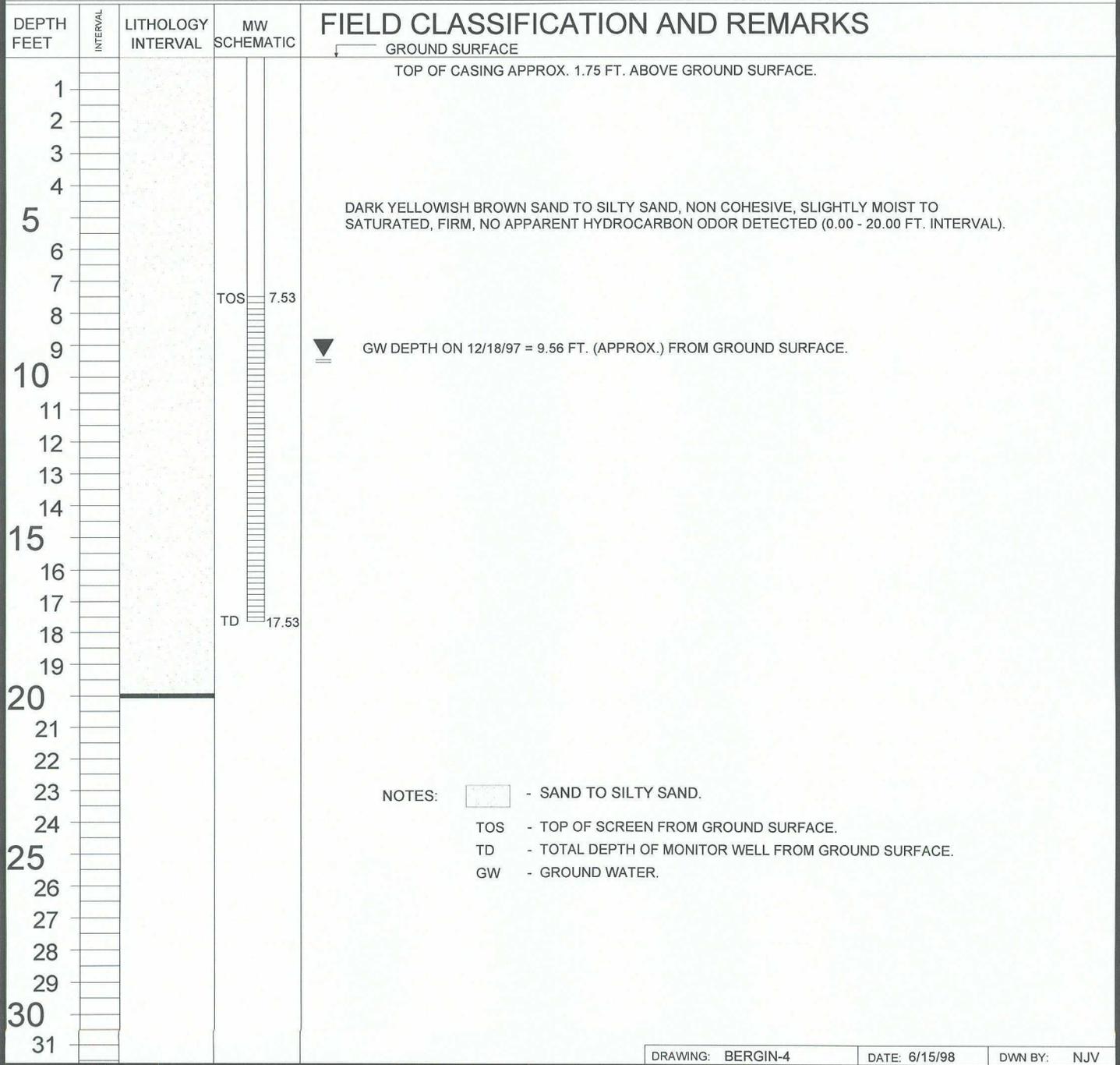
BLAGG ENGINEERING, Inc.

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(505) 632-1199

BORE / TEST HOLE REPORT

BORING #.....	BH - 4
MW #.....	4
PAGE #.....	4
DATE STARTED	11/26/97
DATE FINISHED	11/26/97
OPERATOR.....	JCB
PREPARED BY	NJV

CLIENT: **CROSS TIMBERS OIL COMPANY**
 LOCATION NAME: **BERGIN GC # 1E**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **MOBILE DRILL RIG (EARTHROBE)**
 BORING LOCATION: **S24W, 237 FEET FROM WELL HEAD.**



BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 6701

BERGIN GC #1E - SEPARATOR PIT UNIT F, SEC. 21, T29N, R11W
--

LABORATORY (S) USED : ENVIROTECH, INC.

Date : August 25, 1999

SAMPLER : N J V

Filename : 08-25-99.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	90.22	11.43	15.00	-	-	-	-	-
2	100.66	88.64	12.02	15.00	0830	6.6	3,700	1.50	-
3	99.80	87.50	12.30	20.00	0815	7.1	1,900	3.75	-
4	99.25	86.51	12.74	17.53	0920	7.3	1,900	2.50	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
 (i.e. 2" MW $r = (1/12) \text{ ft. } h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft. } h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Collected BTEX for MW #'s 3 & 4 . Collected chloride samples in MW #'s 2 & 3 .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 6941

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : June 30, 2000

SAMPLER : N J V

Filename : 06-30-00.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	89.27	12.38	15.00	-	-	-	-	-
2	100.66	87.73	12.93	15.00	1030	6.8	3,000	1.00	-
3	99.80	86.70	13.10	20.00	1020	7.2	2,400	3.50	-
4	99.25		-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

- 1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).
- 2 bails per foot - small teflon bailer.
- 3 bails per foot - 3 / 4 " teflon bailer.
- 2.00 " well diameter = 0.49 gallons per foot of water.
- 4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2".

Collected chloride samples in MW #'s 2 & 3.

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OPER. CO.

CHAIN-OF-CUSTODY # : 8402

BERGIN GC # 1E - SEPARATOR PIT UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : May 17, 2001

SAMPLER : N J V

Filename : 05-17-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	89.25	12.40	15.00	-	-	-	-	-
2	100.66	88.25	12.41	15.00	1910	7.33	2,100	0.50	-
3	99.80	86.10	13.70	20.00	1610	7.07	2,000	1.50	-
4	99.25	-	-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Collected chloride samples in MW #'s 2 & 3 . Very poor recovery in MW # 2 , fair recovery in # 3 .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : 9428

BERGIN GC # 1E - SEPARATOR PIT UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : Sept. 24, 2001

SAMPLER : N J V

Filename : 09-24-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	89.76	11.89	15.00	-	-	-	-	-
2	100.66	88.35	12.31	15.00	1455	6.87	2,200	0.75	-
3	99.80	87.30	12.50	20.00	-	-	-	-	-
4	99.25	-	-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2".

Collected chloride sample in MW # 2 only . Very poor recovery in MW # 2 .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : 9441

73482

BERGIN GC # 1E - SEPARATOR PIT UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

IML

Date : Nov. 28, 2001

SAMPLER : N J V

Filename : 11-28-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	91.16	10.49	15.00	-	-	-	-	-
2	100.66	89.51	11.15	15.00	1040	6.63	2,600	1.00	-
3	99.80	88.33	11.47	20.00	-	-	-	-	-
4	99.25	-	-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
 (i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Collected chloride sample in MW # 2 only . Poor recovery in MW # 2 .

Bailed approx. 0.75 gallons @ time 0840 . Returned @ time 1035 ;

Depth to water measured @ 11.17 ft. , then sampled .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : 9720

BERGIN GC #1E - SEPARATOR PIT UNIT F, SEC. 21, T29N, R11W
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LABORATORY (S) USED : ENVIROTECH, INC.

Date : February 19, 2002

SAMPLER : N J V

Filename : 02-19-02.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	90.39	11.26	15.00	-	-	-	-	-
2	100.66	88.60	12.06	15.00	1330	6.94	2,200	0.75	-
3	99.80	87.44	12.36	20.00	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2"

Collected chloride sample in MW # 2 only . Poor recovery in MW # 2 .

Bailed approx. 0.75 gallons @ time 1015 . Returned @ time 1327 ;

Depth to water measured @ 12.06 ft . , then sampled .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 9830

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : June 27, 2003

SAMPLER : N J V

Filename : 06-27-03.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	89.72	11.93	15.00	-	-	-	-	-
2R	100.16	88.42	11.74	20.00	0935	7.05	1,300	21.1	4.25
3	99.80	87.27	12.53	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	06/27/03	06:45

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 11123

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : August 25, 2003

SAMPLER : N J V

Filename : 08-25-03.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	89.95	11.70	15.00	-	-	-	-	-
2R	100.16	88.41	11.75	20.00	1205	6.91	2,100	23.5	4.00
3	99.80	87.21	12.59	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	08/25/03	0910

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : **XTO ENERGY INC.**

CHAIN-OF-CUSTODY # : **11143**

**BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W**

LABORATORY (S) USED : **ENVIROTECH, INC.**

Date : **November 14, 2003**

SAMPLER : **N J V**

Filename : **11-14-03.WK4**

PROJECT MANAGER : **N J V**

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	90.42	11.23	15.00	-	-	-	-	-
2R	100.16	88.85	11.31	20.00	0833	7.03	2,400	12.0	4.25
3	99.80	87.67	12.13	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	11/11/03	0730

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 11143

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : March 25, 2004

SAMPLER : N J V

Filename : 03-25-04.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	88.71	12.94	15.00	-	-	-	-	-
2R	100.16	87.16	13.00	20.00	1555	6.97	2,200	20.0	3.50
3R	99.80	85.98	13.82	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	03/25/04	1600

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (wellbores).
 (i.e. 2" MW $r = (1/12)$ ft. $h = 1$ ft.) (i.e. 4" MW $r = (2/12)$ ft. $h = 1$ ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .
