

3R - 127

**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:

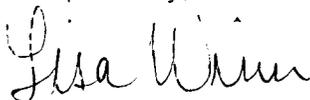
- Baca Gas Com A #1A- 3RP104
- Garcia Gas Com B #1- 3RP111
- Haney Gas Com B #1E- 3RP113
- Hare Gas Com B #1
- Hare Gas Com B #1E- 3RP384
- Hare Gas Com I #1
- Masden Gas Com #1E- 3RP120
- McDaniel Gas Com B #1E- 3RP121
- Stedje Gas Com #1- 3RP128
- Sullivan Frame A #1E- 3RP130

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

3R 127

XTO ENERGY INC.

ANNUAL GROUNDWATER REMEDIATION REPORT

2005

**STATE GC BS #1
(K) SECTION 23, 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

BEI Landfarm Field Report

BEI Pit Closure Field Report & Certificate of Waste Status Form - 8/10/04

**XTO Energy Inc.
State GC BS # 1
NE/4 SW/4 Sec. 23, T29N, R11W**

Pit Closure Date:

2/17/94

Monitor Well Installation Dates:

MW 1X – MW 5X - 4/01/03
MW 6X - 6/10/03
MW 7X - 8/18/04

Monitor Well Sampling Dates:

Wells MW1 – MW6: 6/5/96, 9/11/96, 6/23/97, 9/22/97,
12/18/97, 5/30/98, 5/13/99, 8/25/99, 11/30/99, 6/29/00
(Note: These wells destroyed in 6/02 during additional
site remedial efforts)

Wells MW1X – MW7X: 8/25/03, 4/10/03, 8/28/03, 11/19/03,
3/27/04, 6/22/04, 9/24/04

Historical Information:

- February 1994 – Groundwater impacts were observed following remedial work at an earthen separator pit area (Figure 1). Initial remedial efforts included removal of impacted soils in the pit tank area. Site operated by Amoco Production Co.
- April 1996 – Amoco conducts investigation of impacts with installation of wells MW's 1-3.
- June 1996 – Well sampling identifies benzene in excess of standards at original pit area in well MW2.
- June 1997 – Well MW4 installed to investigate down gradient impacts.
- December 1997 – Well MW5 installed to further define site impacts.
- January 1998 - XTO Energy Inc. (XTO) acquires the State GC BS #1 from Amoco Production Company.
- June 2000 – Site sampling and laboratory analysis indicates all wells have reached New Mexico Water Quality Control Commission (NMWQCC) standards for closure, via natural attenuation.
- June 2002 – Additional soil impacts were discovered at the site during pipeline installation by Questar Pipeline Company. Remediation by excavation (Figures 1A – 1C) was conducted, followed by installation and sampling of monitor wells MW1X – 7X to confirm success of the remedial effort.
- September 2004 – Sampling of site wells completes four quarters of testing with all wells meeting NMWQCC standards for closure.

General Site History:

Groundwater impacts at this site were first identified in February, 1994 following work at a separator tank. Initial remediation included excavation of impacted soils to groundwater (found at approximately 5 feet below grade) in the separator pit tank area. Groundwater sampling of monitor wells installed following this discovery indicated a limited area of impact (reference report dated February 1999). Water quality in and around the separator release reached New Mexico Water Quality Control Commission (NMWQCC) closure standards in June 2000 and sampling was terminated.

In June 2002 additional soil impacts at the site were discovered during installation of a pipeline by Questar



Pipeline Company. Remediation by excavation was conducted (see Site Excavation Figures and associated soil sampling tables) to address these impacts. Excavated soils were treated on site until residual hydrocarbon levels reached NMOCD closure standards and then delivered to the surface rights owner (fee surface) for land application. Subsequent groundwater monitor wells were installed and sampling of these wells indicated that no groundwater impacts in excess of NMWQCC standards were present.

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 - 6. 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 (Figures 3 – 5) indicates that groundwater flow at this site is predominately to the south.

Laboratory analytical results indicate that following remedial efforts, groundwater from monitor wells MW 1X through MW 7X exhibit no detectable levels or trace levels of BTEX constituents and are below NMWQCC closure standards.

Summary:



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**Summary Analytical Test Results for 2002 Remediation**

DATE	TIME	SAMP. PT.	SOIL TYPE	DIST.(ft.) & BEARING	SOIL DEPTH (ft.)	OVM (ppm)	SOIL TPH (ppm)	GW DEPTH (ft.)	GW SAMP. TIME	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	TOTAL XYLENES (ppb)
6/10/02	1120	TH1	SAND	230, S36W	4.5	219.2	ND	-	-	-	-	-	-
6/10/02	-	TH2	SAND, CLAY, GRAV	147, S15W	VISUALLY INSPECTED ONLY, NO DISCOLORATION OBSERVED WITHIN THE SOIL OR GROUNDWATER								
6/10/02	1147	TH3	SAND, GRAV	207, S25W	4.5	504	179	5.5	1157	ND	7.4	170	610
6/10/02	1635	TH4	SAND, GRAV	198, S13W	4	0.0	ND	5.5	1630	ND	ND	ND	ND
6/11/02	-	TH5	SAND, CLAY	348, S42W	-	-	-	5.5	1430	ND	ND	2.6	6.9
6/11/02	-	TH6	SAND, CLAY	375, S41W	-	-	-	5.5	1440	ND	ND	1.2	2.2
6/11/02	-	TH7	SAND, GRAV	285, S32W	-	-	-	5	1500	ND	ND	ND	ND
6/14/02	0830	TH8	SAND, GRAV	220, N84W	2.5	659	828	BTEX RESULTS FOR SOIL		17.1	186	159	1030
6/11/02	-	TH9	SAND, GRAV	118, S50W	VISUALLY INSPECTED ONLY, NO DISCOLORATION OBSERVED WITHIN THE SOIL OR GROUNDWATER								
6/11/02	-	TH10	SAND, GRAV	106, S43W	VISUALLY INSPECTED ONLY, NO DISCOLORATION OBSERVED WITHIN THE SOIL OR GROUNDWATER								
6/11/02	-	TH11	SAND, GRAV	192, S1E	VISUALLY INSPECTED ONLY, NO DISCOLORATION OBSERVED WITHIN THE SOIL OR GROUNDWATER								
6/11/02	-	TH12	SAND, GRAV	225, DUE SOUTH	VISUALLY INSPECTED ONLY, NO DISCOLORATION OBSERVED WITHIN THE SOIL OR GROUNDWATER								
6/11/02	-	TH13	SAND, GRAV	154, S2E	VISUALLY INSPECTED ONLY, NO DISCOLORATION OBSERVED WITHIN THE SOIL OR GROUNDWATER								
7/12/02	0706	TH #101	SAND, GRAV	41, N27E	4	0.1	ND	-	-	-	-	-	-
7/12/02	0710	TH #102	SAND, GRAV	36, N5W	4	0.7	ND	-	-	-	-	-	-
7/12/02	0722	TH #103	SAND, GRAV	49, N88W	4	1.0	ND	-	-	-	-	-	-
6/14/02	-	N-EX @GW	-	SEE SITE MAP	-	-	-	5	0900	89	520	160	1440

TABLE 1 (continued)**Summary Analytical Test Results for 2002 Remediation**

DATE	TIME	SAMP. PT.	SOIL TYPE	DIST.(ft.) & BEARING	SOIL DEPTH (ft.)	OVM (ppm)	SOIL TPH (ppm)	GW DEPTH (ft.)	GW SAMP. TIME	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	TOTAL XYLENES (ppb)
6/14/02	-	C-EX @GW	-	SEE SITE MAP	-	-	-	5.5	1330	ND	0.9	ND	1.2
6/14/02	-	WET-SS @GW	-	SEE SITE MAP	-	-	-	5	1340	0.6	0.9	0.8	4.5
6/17/02	0655	N-EX (MW #2)	SAND, GRAV	SEE SITE MAP	5	217.4	ND	-	-	-	-	-	-
6/17/02	-	N-EX (MW #2 So.)	SAND, GRAV	SEE SITE MAP	3.5	127.4	-	-	-	-	-	-	-
6/17/02	1100	N-EX (NE)	SILTY CLAY	SEE SITE MAP	4	54.4	78.1	-	-	-	-	-	-
6/10/02	1440	1A	SILTY SAND	25 NO. OF MW # 4R	4	198.2	22.4	-	-	-	-	-	-
6/17/02	1308	M-EX (MW #4R)	SAND, SILT	SEE SITE MAP	4	2.7	ND	-	-	-	-	-	-
6/10/02	-	MW # 4R	-	228, S12W	-	-	-	5	1000	ND	ND	1.4	1.8
6/10/02	-	MW #X (#4R DUP.)	-	"	-	-	-	"	"	ND	ND	1.5	1.9
6/19/02	0750	SW-SEEX	SAND	SEE SITE MAP	4.5	0.0	-	-	-	-	-	-	-
6/19/02	0755	NE-SEEX	SAND	SEE SITE MAP	4.5	70.1	-	-	-	-	-	-	-
6/19/02	0815	NW-SEEX	SAND	SEE SITE MAP	4.5	352	0.8	BTEX RESULTS FOR SOIL		ND	ND	ND	ND
6/19/02	-	NW-SEEX @GW	-	SEE SITE MAP	-	-	-	5.5	0858	ND	11	9.9	256
6/11/02	1330	PT	SILTY CLAY	297, S22W	3	24.3	-	-	-	-	-	-	-

NOTES: SAMP. = SAMPLE, PT. = POINT, DIST. = DISTANCE, (ft.) = FEET, OVM = ORGANIC VAPOR METER OR PHOT IONIZATION DETECTOR (PID), TPH = TOTAL PETROLEUM HYDROCARBONS, (ppm) = PARTS PER MILLION, GW = GROUNDWATER, (ppb) = PARTS PER BILLION, TH = TEST HOLE (advanced with trackhoe), GRAV. = GRAVEL OF VARYING SIZE, ND = NON DETECTABLE AT LABORATORY DETECTION LIMITS, SYMBOL (-) = NOT AVAILABLE AND/OR COLLECTED. DISTANCE & BEARING DERIVED FROM PEARCE GC # 1 PLUGGED & ABANDONED MARKER.

TABLE 2**Summary Soil Analytical Test Results for 2002 Remediation**

DATE	SAMP. ID	SOIL DEPTH (ft.)	OVM (ppm)	TIME COLLECTED	TIME READ	DATE	SAMP. ID	SOIL DEPTH (ft.)	OVM (ppm)	TIME COLLECTED	TIME READ
6/20/02	1	4	0.0	0958	1035	6/20/02	7	5	0.0	1106	1121
6/20/02	2	4	0.0	1003	1036	6/20/02	8	5	0.9	1044	1050
6/20/02	3	3.5	0.0	1005	1036	6/20/02	9	5	0.0	1042	1049
6/20/02	4	4.5	0.0	1058	1113	6/20/02	10	3.5	0.0	1038	1048
6/20/02	5	4.5	0.0	1055	1112	6/20/02	11	4	0.0	1012	1035
6/20/02	6	5	0.0	1109	1122						

NOTES: SAMP. = SAMPLE, (ft.) = FEET, OVM = ORGANIC VAPOR METER OR PHOT IONIZATION DETECTOR (PID), (ppm) = PARTS PER MILLION.

TABLE 3**Summary Groundwater PAH/General Chemistry for 2002 Remediation**

DATE	TIME	SAMPLE ID	PAH (ppb)	DATE	TIME	SAMPLE ID	pH	TDS (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	NITRATE (mg/L)	FLUORIDE (mg/L)
6/10/02	1157	TH3 @ GW (5.5')	72.0	6/14/02	1330	C-EX @ GW (5.5')	7.76	2,960	48.0	1,700	1.9	1.51
6/14/02	0900	N-EX @ GW (5')	60.0									
6/17/02	1525	D.T.H. @ GW (8')	6.0									

NOTES: PAH = POLYNUCLEAR AROMATIC HYDROCARBONS, (ppb) = PARTS PER BILLION, TDS = TOTAL DISSOLVED SOLIDS, (mg/L) = MILLIGRAMS PER LITER.

TABLE 4

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

STATE GC BS # 1
UNIT K, SEC. 23, T29N, R11W

REVISED DATE: AUGUST 28, 2000

FILENAME: (ST-2Q-00.WK4) NJV

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
05-Jun-96	MW #1	5.60	8.43	4,660	3,200	6.80		ND	ND	ND	ND
13-May-99		5.77		4,275	8,550	7.50		-	-	-	-
29-Jun-00		7.11			NA	NA		-	-	-	-
05-Jun-96	MW #2	5.57	8.43	5,120	4,400	6.70		57.2	ND	277	2,804
11-Sep-96		6.36			3,800	7.40		17.3	19.7	177	197.23
23-Jun-97		5.82	8.42		4,000	7.60		8.6	3.6	4.8	26.5
22-Sep-97		5.50			2,900	7.40		0.4	4.4	ND	14.8
18-Dec-97		5.29			3,300	6.90		ND	0.7	2.7	11.2
30-May-98		5.27			3,200	7.20		1.2	1.9	2.7	5.5
13-May-99		6.15		4,860	9,740	7.60		-	-	-	-
05-Jun-96	MW #3	5.75	8.62	13,000	6,500	7.00		ND	ND	ND	ND
13-May-99		6.40		8,050	16,200	7.50		-	-	-	-
29-Jun-00		7.67			4,300	7.30		ND	ND	ND	ND
23-Jun-97	MW #4	6.74	8.95	4,119	3,800	7.20		26.4	87	186	1,062
26-Jun-98	MW #4R	5.56	10.00		2,600	7.70		17.1	10	9	47
13-May-99		4.87		4,700	9,450	7.30		3.9	4.5	2.9	8.3
25-Aug-99		3.35			3,200	7.00		8.6	2.0	0.5	2.6
30-Nov-99		4.22			3,300	7.10		10.5	0.8	7.5	8.2
29-Jun-00		6.13			3,400	7.10		ND	ND	ND	ND
18-Dec-97	MW #5	6.45	9.00	1,870	3,200	6.90		ND	0.4	ND	0.6
13-May-99	MW #5R	7.65	10.00	4,790	9,600	7.30		-	-	-	-
29-Jun-00		8.90			3,400	7.10		ND	ND	ND	ND
25-Aug-00	MW #6	5.30	10.00	8,070	4,000	7.10		-	-	-	-
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

- NOTES :**
- 1) RESULTS HIGHLIGHTED IN RED INDICATE EXCEEDING NMWQCC STANDARDS .
 - 2) RESULTS HIGHLIGHTED IN BLUE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS HAD EXCEEDED .

TABLE 5
GENERAL WATER QUALITY
CROSS TIMBERS OIL COMPANY
STATE GC BS # 1
SAMPLE DATE : May 13 , 1999

PARAMETERS	MW # 1	MW # 2	MW # 3	MW # 4R	MW # 5R	Units
LAB pH	7.46	7.58	7.50	7.32	7.31	s. u.
LAB CONDUCTIVITY @ 25 C	8,550	9,740	16,200	9,450	9,600	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	4,275	4,860	8,050	4,700	4,790	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	4,264	4,841	8,004	4,669	4,755	mg / L
SODIUM ABSORPTION RATIO	8.7	12.2	25.2	11.1	11.7	ratio
TOTAL ALKALINITY AS CaCO3	364	568	876	316	332	mg / L
TOTAL HARDNESS AS CaCO3	1,445	1,325	1,295	1,350	1,320	mg / L
BICARBONATE as HCO3	364	568	876	316	332	mg / L
CARBONATE AS CO3	< 1	< 1	< 1	< 1	< 1	mg / L
HYDROXIDE AS OH	< 1	< 1	< 1	< 1	< 1	mg / L
NITRATE NITROGEN	< 0.1	< 0.1	< 0.1	0.7	3.1	mg / L
NITRITE NITROGEN	0.029	0.015	0.007	0.024	0.094	mg / L
CHLORIDE	15.5	50.0	56.5	17.0	13.5	mg / L
FLUORIDE	1.25	1.52	1.69	1.31	1.26	mg / L
PHOSPHATE	0.3	0.2	0.1	< 0.1	< 0.1	mg / L
SULFATE	2,690	2,910	4,840	2,990	3,040	mg / L
IRON	0.553	0.038	0.029	0.207	0.001	mg / L
CALCIUM	504	446	428	494	480	mg / L
MAGNESIUM	45.2	51.3	55.0	28.1	29.3	mg / L
POTASSIUM	26.5	17.5	11.0	6.0	6.0	mg / L
SODIUM	760	1020	2,080	940	980	mg / L
CATION / ANION DIFFERENCE	0.20	0.14	0.14	0.02	0.13	%

NOTE : Chloride & TDS samples collected on June 29, 2000 ; TDS sample collected from newly installed MW # 6 on August 25, 2000 ; results are as follows:

	TDS	CHLORIDE	
MW # 3	5,180	23.0	mg / L
MW # 4R	-	11.0	mg / L
MW # 5R	-	12.9	mg / L
MW # 6	8,070	-	mg / L

TABLE 6

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

STATE GC BS # 1

UNIT K, SEC. 23, T29N, R11W

REVISED DATE: JANUARY 19, 2006

FILENAME: (STAT3Q04.WK4) NJV

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
10-Apr-03	MW #1X	4.98	9.83		6,900	6.95		ND	ND	ND	ND
28-Aug-03		6.05			7,800	6.73		ND	ND	0.55	0.56
27-Mar-04		4.61			6,200	7.10		ND	ND	ND	ND
22-Jun-04		5.90			8,000	6.79		0.65	ND	ND	ND
24-Sep-04		5.80			5,700	6.65		ND	ND	ND	ND
10-Apr-03	MW #2X	3.79	8.55		2,200	6.95		ND	ND	ND	1.9
28-Aug-03		4.74			3,300	6.81		ND	ND	ND	ND
27-Mar-04		3.36			3,500	6.96		ND	ND	ND	ND
22-Jun-04		4.86			3,200	6.86		ND	ND	ND	ND
24-Sep-04		4.11			3,100	6.73		ND	ND	ND	ND
10-Apr-03	MW #3X	4.93	8.43		2,700	6.99		ND	ND	ND	ND
28-Aug-03		5.72			3,600	6.78		ND	ND	ND	ND
27-Mar-04		4.52			3,400	7.00		ND	ND	ND	ND
22-Jun-04		5.81			3,300	6.95		ND	ND	ND	ND
24-Sep-04		5.21			3,300	6.72		ND	ND	ND	ND
10-Apr-03	MW #4X	4.96	7.85		3,300	6.77		ND	0.5	1.4	2.5
28-Aug-03		5.48			4,100	6.71		ND	ND	1.1	ND
27-Mar-04		4.59			3,900	6.91		ND	ND	1.2	ND
22-Jun-04		5.56			4,200	6.85		ND	ND	0.73	ND
24-Sep-04		4.96			3,800	6.60		ND	ND	0.70	ND
10-Apr-03	MW #5X	6.48	10.00		3,300	6.90		11	150	100	790
28-Aug-03		6.82			3,900	6.75		2.6	4.9	22	100
"	duplicate	"						3.4	5.9	30	140
20-Nov-03		6.09			3,600	6.95		1.4	4.9	17	93
27-Mar-04		6.08			3,700	7.01		1.5	ND	5.4	19
22-Jun-04		6.93			4,400	6.74		3.3	2.5	37	120
24-Sep-04		6.37			3,700	6.68		ND	1.9	9.0	38
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

TABLE 6 (continued)

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

STATE GC BS # 1
UNIT K, SEC. 23, T29N, R11W

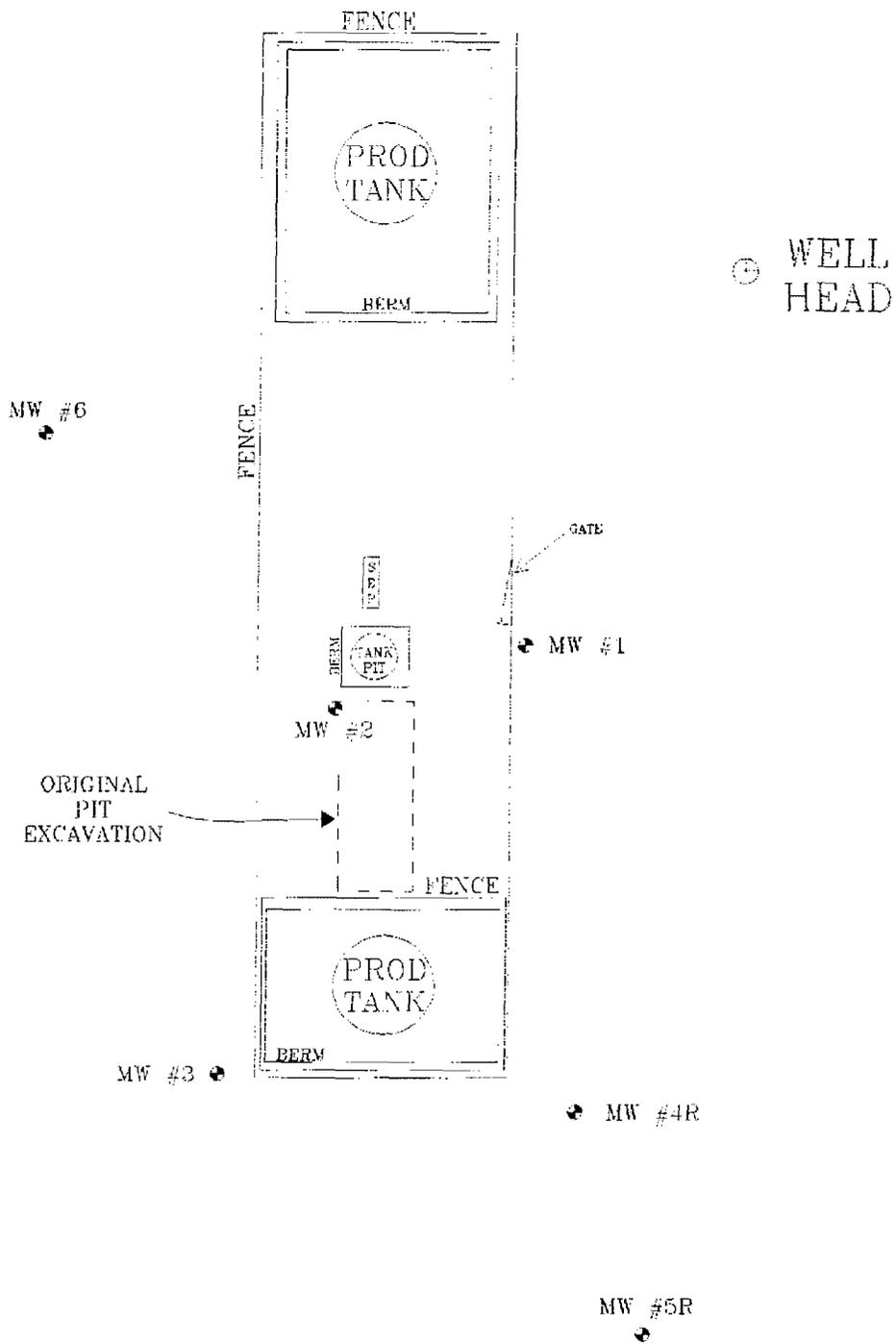
REVISED DATE: JANUARY 19, 2006

FILENAME: (STAT3Q04.WK4) NJV

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
28-Aug-03	MW #6X	6.80	10.00		3,700	6.87		ND	ND	ND	ND
20-Nov-03		6.05			3,700	6.99		ND	ND	ND	ND
27-Mar-04		6.09			3,700	7.05		ND	ND	ND	ND
22-Jun-04		6.92			4,000	6.91		ND	ND	ND	ND
24-Sep-04		6.35			3,700	6.73		ND	ND	ND	ND
24-Sep-04	MW #7X	5.68	10.00		4,900	6.93		1.3	ND	2.9	ND
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

- NOTES :**
- 1) RESULTS HIGHLIGHTED IN RED INDICATE EXCEEDING NMWQCC STANDARDS .
 - 2) RESULTS HIGHLIGHTED IN BLUE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS HAD EXCEEDED .

FIGURE 1



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 ARE NOT TO SCALE.

ONE INCH = 50 FEET

0 50 100 FT.

AMOCO PRODUCTION COMPANY

STATE GC BS 1

NE/4 NW/4 SEC. 23. 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: MW INSTALL.

DRAWN BY: NJV

FILENAME: 08 25-SMIND

REVISED: 4/3-1/01 NJV

SITE
MAP
08/00

FIGURE 1A

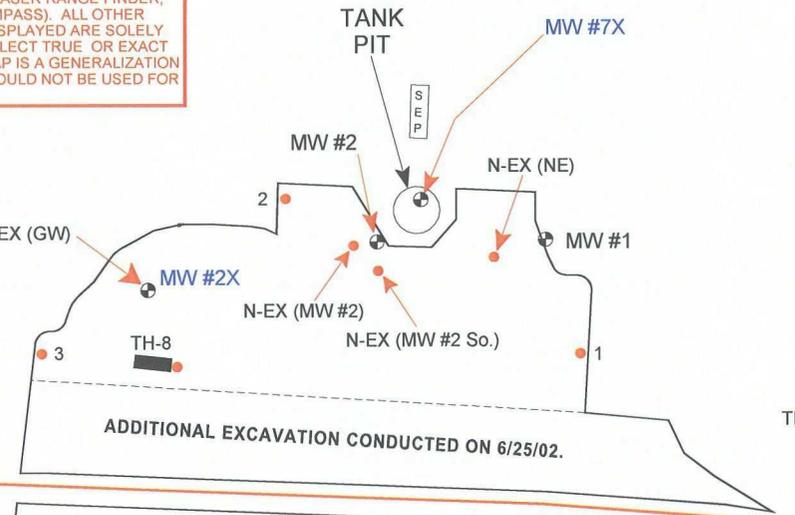


STATE GC BS # 1
WELL HEAD

TO MW #1X

MONITOR WELL & TEST HOLE LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM WELL HEAD AND/OR PLUGGED & ABANDONED MARKER (LASER RANGE FINDER, TAPE MEASURE, AND BRUNTON COMPASS). ALL OTHER FEATURES AND/OR STRUCTURES DISPLAYED ARE SOLELY FOR REFERENCE AND MAY NOT REFLECT TRUE OR EXACT ACCURACY AND/OR SCALE. THIS MAP IS A GENERALIZATION OF THE WORK CONDUCTED AND SHOULD NOT BE USED FOR SURVEY INFORMATION.

POSITION OF QUESTAR 20 INCH PIPELINE TRENDING APPROX. N87W



TH #102 TH #101

PEARCE GC # 1 P & A MARKER

● INDICATES APPROX. SOIL SAMPLE POINTS
 ● INDICATES APPROX. GROUNDWATER SAMPLE POINTS
 TH = TEST HOLE
 MW = PREVIOUSLY INSTALLED MONITOR WELLS
 MW#_X = NEWLY INSTALLED MONITOR WELLS

EXCAVATION PERIMETER DESIGNATION

TEST HOLE CENTER APPROX. 333 FT., S22W FROM PEARCE GC # 1 P & A MARKER

1 INCH = 50 FT.

0 50 100 FT.

XTO ENERGY, INC.
STATE GC BS # 1
 NE/4 SE/4 SEC. 23, T29N, R10W, NMPM
 SAN JUAN COUNTY, NEW MEXICO

PROJECT: GW MONITORING
 DRAWN BY: NJV
 FILENAME: 04-11-03-SM.SKF
 REVISED: 4/16/03 NJV

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

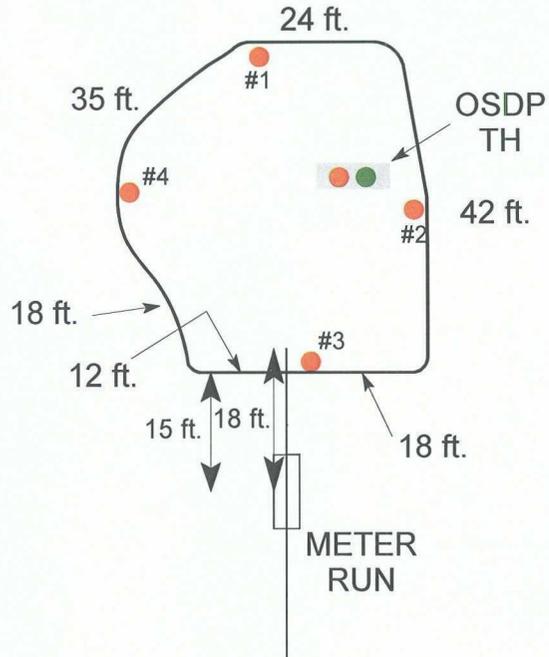
SITE MAP
 04/03

FIGURE 1B



TEST HOLE CENTER
APPROX. 102 FT., N48E FROM
WELL HEAD

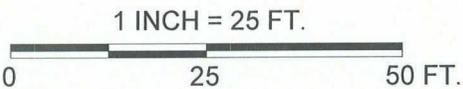
CENTER OF METER HOUSE
APPROX. 73 FT., N67E FROM
WELL HEAD



STATE GC BS # 1
WELL HEAD

DATE	TIME	SAMPLE ID	SAMPLE DEPTH	OVM (ppm)	TPH (ppm)
7/9/02	0740	#1	4 ft.	0.8	ND
7/9/02	0742	#2	4 ft.	1.1	ND
7/9/02	0746	#3	4 ft.	0.9	ND
7/9/02	0748	#4	4 ft.	0.7	ND
6/17/02	1112	OSDP	2 ft.	243	ND

DATE	SAMPLE ID	SAMPLE DEPTH	BENZENE (ppb)	ETHYL-BENZENE (ppb)	TOLUENE (ppb)	XYLENES (ppb)	TIME
6/17/02	OSDP	2 ft.	ND	ND	ND	ND	1112
6/17/02	OSDP @ GW	7 ft.	6.6	76	36	243	1120



- INDICATES APPROX. SOIL SAMPLE POINTS
 - INDICATES APPROX. GROUNDWATER SAMPLE POINT
- TH = TEST HOLE

TEST HOLE & SAMPLE POINT LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM WELL HEAD AND/OR PLUGGED & ABANDONED MARKER (LASER RANGE FINDER, TAPE MEASURE, AND BRUNTON COMPASS). ALL OTHER FEATURES AND/OR STRUCTURES DISPLAYED ARE SOLELY FOR REFERENCE AND MAY NOT REFLECT TRUE OR EXACT ACCURACY AND/OR SCALE. THIS MAP IS A GENERALIZATION OF THE WORK CONDUCTED AND SHOULD NOT BE USED FOR SURVEY INFORMATION.

XTO ENERGY, INC.

STATE GC BS # 1

NE/4 SE/4 SEC. 23, T29N, R10W, NMPM

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: REMEDIAL ACTION

DRAWN BY: NJV

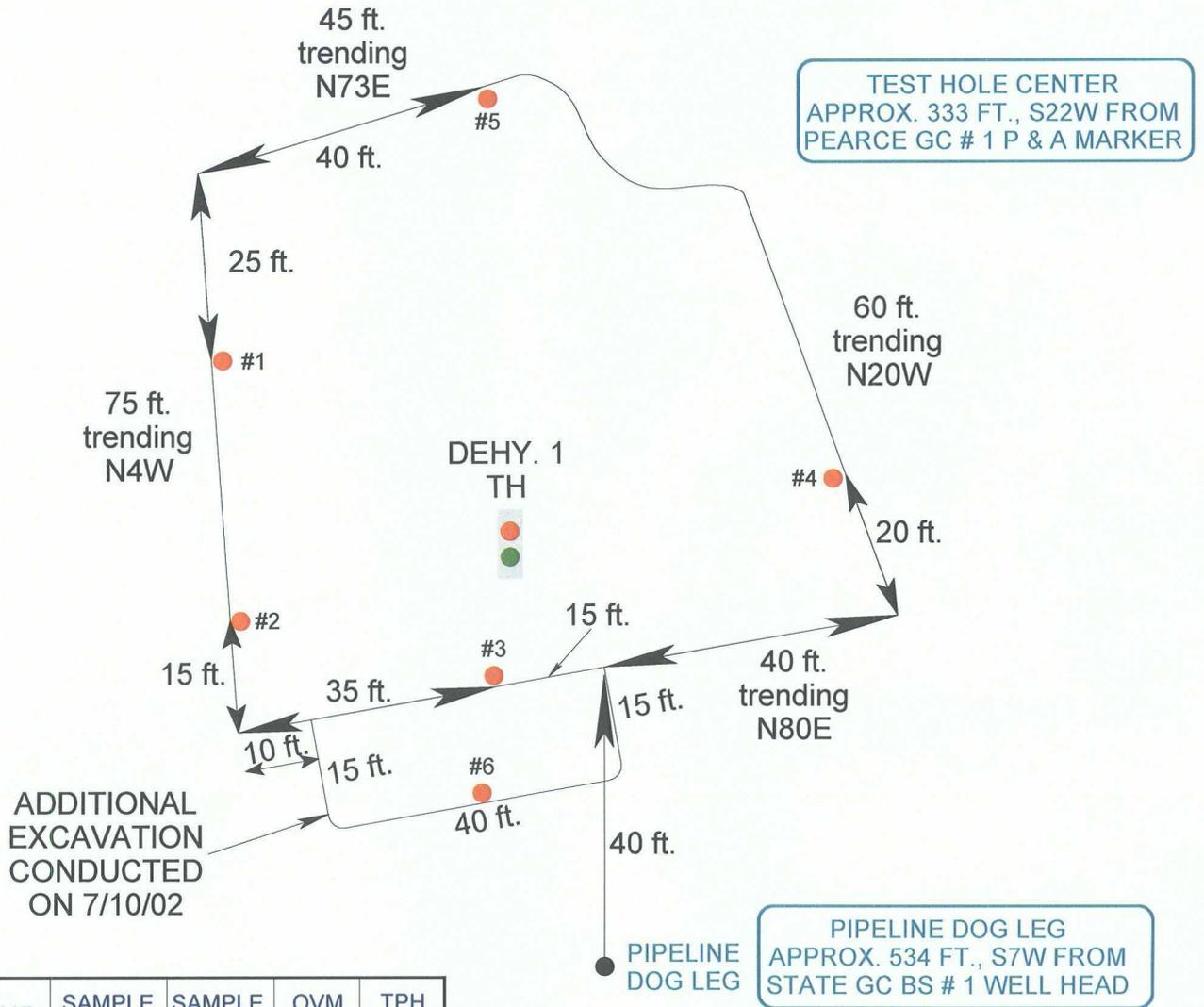
FILENAME: OSDP-SM.SKf

DRAWN: 7/23/02 NJV

**ON SITE
DEHYDRATOR
PIT
EXCAVATION
SITE MAP**

07/02

FIGURE 1C



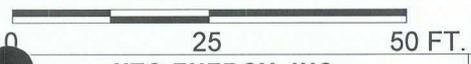
DATE	TIME	SAMPLE ID	SAMPLE DEPTH	OVM (ppm)	TPH (ppm)
6/17/02	1515	DEHY. 1	3.5 ft.	607	112
7/9/02	1549	#1	3.5 ft.	0.4	ND
7/9/02	1554	#2	5 ft.	17.0	ND
7/9/02	1603	#3	3.5 ft.	149	4.1
7/9/02	1606	#4	4 ft.	5.8	ND
7/9/02	1613	#5	4 ft.	0.6	ND
7/10/02	0845	#6	4 ft.	1.4	NA

DATE	TIME	SAMPLE ID	SAMPLE DEPTH	BENZENE (ppb)	ETHYL-BENZENE (ppb)	TOLUENE (ppb)	XYLENES (ppb)	TOTAL BTEX (ppb)
6/17/02	1515	DEHY. 1	3.5 ft.	5.7	113	20.3	298.7	438
6/17/02	1525	D.T.H. @ GW	8 ft.	13	320	72	800	NA
7/09/02	1603	#3	3.5 ft.	4.0	26.9	9.9	106.4	147

- INDICATES APPROX. SOIL SAMPLE POINTS
- INDICATES APPROX. GROUNDWATER SAMPLE POINT
- TH = TEST HOLE

TEST HOLE SAMPLE POINT LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM WELL HEAD AND/OR PLUGGED & ABANDONED MARKER (LASER RANGE FINDER, TAPE MEASURE, AND BRUNTON COMPASS). ALL OTHER FEATURES AND/OR STRUCTURES DISPLAYED ARE SOLELY FOR REFERENCE AND MAY NOT REFLECT TRUE OR EXACT ACCURACY AND/OR SCALE. THIS MAP IS A GENERALIZATION OF THE WORK CONDUCTED AND SHOULD NOT BE USED FOR SURVEY INFORMATION.

1 INCH = 25 FT.



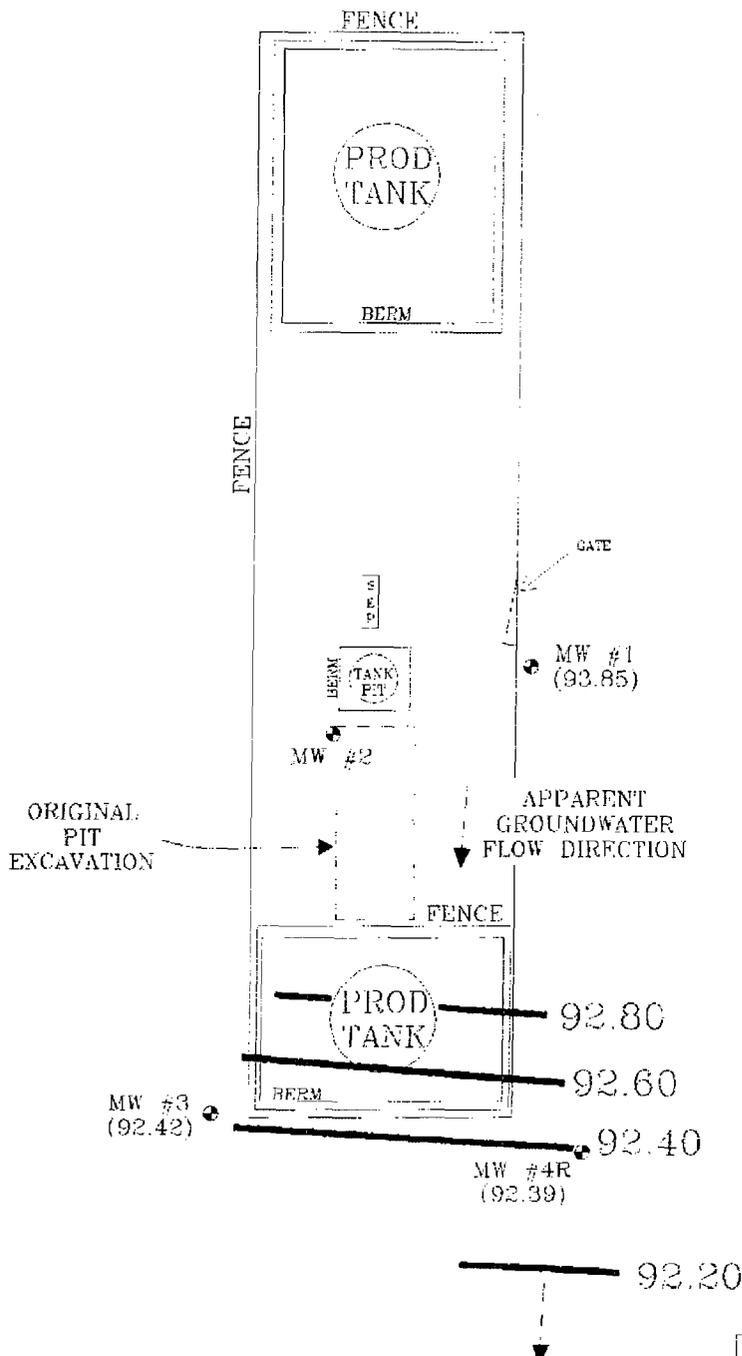
XTO ENERGY, INC.
 STATE GC BS # 1
 NE/4 SE/4 SEC. 23, T29N, R10W, NMPM
 SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: REMEDIAL ACTION
 DRAWN BY: NJV
 FILENAME: EPNG-DP-SM.SKF
 DRAWN: 7/23/02 NJV

EPNG DEHYDRATOR PIT EXCAVATION SITE MAP
 07/02

FIGURE 2 (2nd 1/4, 2000)



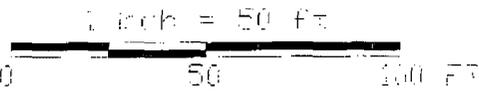
⊕ WELL HEAD

MW #3 (92.42) — 92.80
 — 92.60
 — 92.40
 MW #4R (92.39)

92.20
 MW #5R (92.03)

Top of Well Elevation	
MW #1	(100.96)
MW #2	(100.99)
MW #3	(100.09)
MW #4R	(98.52)
MW #5R	(100.93)
⊕ MW #1 (93.85)	Groundwater Elevation as of 8/29/00.

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 ARE NOT TO SCALE.



AMOCO PRODUCTION COMPANY
 STATE GC BS 1
 NE/4 NW/4 SEC. 23, 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: MW Sampling
 DRAWN BY: NJV
 FILENAME: 06-29-GW/SHU
 REVISED: 4/4/01 NJV

GROUNDWATER GRADIENT MAP
 06/00

FIGURE 3



↑ TO
MW #1X
(96.40)

⊕
STATE GC BS # 1
WELL HEAD

95.50

APPARENT
GROUNDWATER
FLOW DIRECTION
~ S5E

S
E
P

TANK
PIT

⊕ MW #2X
(94.83)

APPARENT
GROUNDWATER
FLOW DIRECTION
~ S1.5E

94.50

POSITION OF QUESTAR
20 INCH PIPELINE
TRENDING APPROX. N87W

⊕ PEARCE GC # 1
P & A MARKER

⊕ MW #3X
(93.82)

APPARENT
GROUNDWATER
FLOW DIRECTION
~ S3.5W

93.50

MW #4X
(92.59)

92.50

APPARENT
GROUNDWATER
FLOW DIRECTION
~ S35E

XTO ENERGY, INC.
STATE GC BS # 1

NE/4 SE/4 SEC. 23, T29N, R10W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PROJECT: GW MONITORING

DRAWN BY: NJV

FILENAME: 04-11-03-GW.SKF

REVISED: 10/31/05 NJV

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

**GROUNDWATER
CONTOUR
MAP**

04/03

Top of Well Elevation	
MW #1X	(101.38)
MW #2X	(98.62)
MW #3X	(98.75)
MW #4X	(97.55)
MW #5X	(98.54)
⊕ MW #1X (96.40)	Groundwater Elevation as of 4/11/03.

1 INCH = 50 FT.

50 100 FT.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM WELL HEAD AND/OR PLUGGED & ABANDONED MARKER (LASER RANGE FINDER, TAPE MEASURE, AND BRUNTON COMPASS). ALL OTHER FEATURES AND/OR STRUCTURES DISPLAYED ARE SOLELY FOR REFERENCE AND MAY NOT REFLECT TRUE OR EXACT ACCURACY AND/OR SCALE. THIS MAP IS A GENERALIZATION OF THE WORK CONDUCTED AND SHOULD NOT BE USED FOR SURVEY INFORMATION.

MW #5X
(92.06)

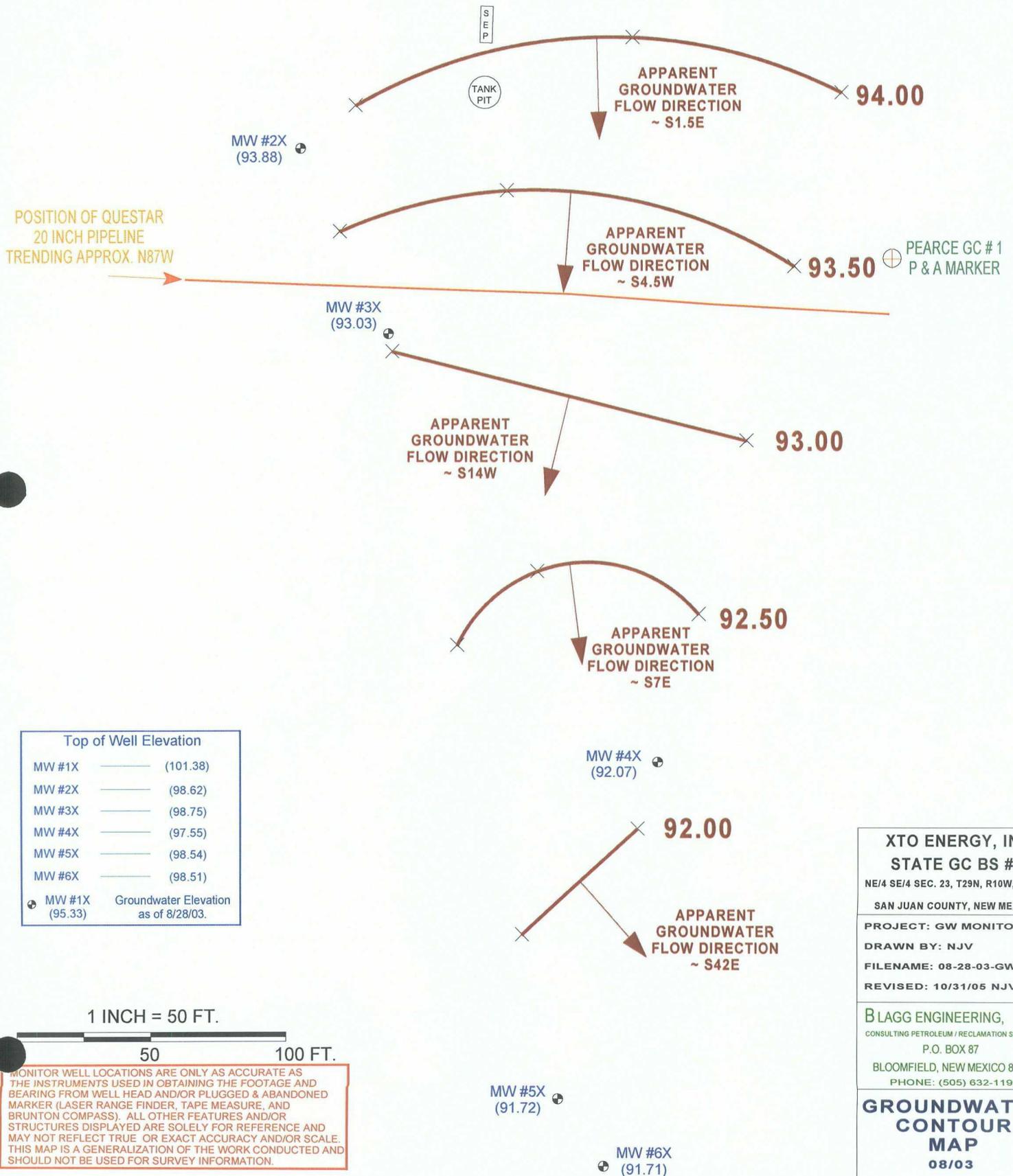
PROPOSED
NEW MW
LOCATION



FIGURE 4

STATE GC BS # 1
WELL HEAD

TO
MW #1X
(95.33)



Top of Well Elevation	
MW #1X	(101.38)
MW #2X	(98.62)
MW #3X	(98.75)
MW #4X	(97.55)
MW #5X	(98.54)
MW #6X	(98.51)
MW #1X (95.33)	Groundwater Elevation as of 8/28/03.

1 INCH = 50 FT.

50 100 FT.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM WELL HEAD AND/OR PLUGGED & ABANDONED MARKER (LASER RANGE FINDER, TAPE MEASURE, AND BRUNTON COMPASS). ALL OTHER FEATURES AND/OR STRUCTURES DISPLAYED ARE SOLELY FOR REFERENCE AND MAY NOT REFLECT TRUE OR EXACT ACCURACY AND/OR SCALE. THIS MAP IS A GENERALIZATION OF THE WORK CONDUCTED AND SHOULD NOT BE USED FOR SURVEY INFORMATION.

XTO ENERGY, INC.
STATE GC BS # 1
NE/4 SE/4 SEC. 23, T29N, R10W, NMPM
SAN JUAN COUNTY, NEW MEXICO
PROJECT: GW MONITORING
DRAWN BY: NJV
FILENAME: 08-28-03-GW.SKF
REVISED: 10/31/05 NJV

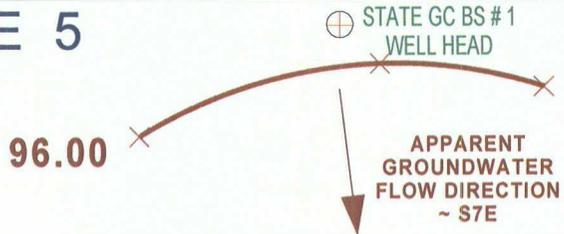
BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

**GROUNDWATER
CONTOUR
MAP**
08/03

FIGURE 5



TO
MW #1X
(96.77)



S
E
P

TANK
PIT

MW #2X
(95.26)

95.00

APPARENT
GROUNDWATER
FLOW DIRECTION
~ S4E

POSITION OF QUESTAR
20 INCH PIPELINE
TRENDING APPROX. N87W



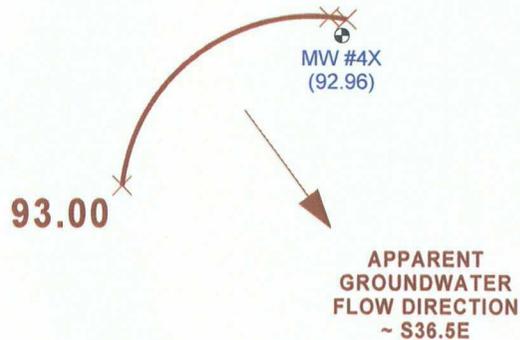
MW #3X
(94.23)

PEARCE GC #1
P & A MARKER

94.00

APPARENT
GROUNDWATER
FLOW DIRECTION
~ S3.5W

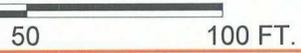
Top of Well Elevation		
MW #1X	————	(101.38)
MW #2X	————	(98.62)
MW #3X	————	(98.75)
MW #4X	————	(97.55)
MW #5X	————	(98.54)
MW #6X	————	(98.51)
MW #1X (96.77)	Groundwater Elevation as of 3/27/04.	



MW #5X
(92.46)

MW #6X
(92.42)

1 INCH = 50 FT.



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM WELL HEAD AND/OR PLUGGED & ABANDONED MARKER (LASER RANGE FINDER, TAPE MEASURE, AND BRUNTON COMPASS). ALL OTHER FEATURES AND/OR STRUCTURES DISPLAYED ARE SOLELY FOR REFERENCE AND MAY NOT REFLECT TRUE OR EXACT ACCURACY AND/OR SCALE. THIS MAP IS A GENERALIZATION OF THE WORK CONDUCTED AND SHOULD NOT BE USED FOR SURVEY INFORMATION.

XTO ENERGY, INC.
STATE GC BS # 1
 NE/4 SE/4 SEC. 23, T29N, R10W, NMPM
 SAN JUAN COUNTY, NEW MEXICO

PROJECT: GW MONITORING
 DRAWN BY: NJV
 FILENAME: 03-27-04-GW4.SKF
 REVISED: 10/31/06 NJV

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

**GROUNDWATER
 CONTOUR
 MAP
 03/04**

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 10608

7025

STATE GC BS #1 - SEPARATOR PIT
UNIT K, SEC. 23, T29N, R11W

LABORATORY (S) USED : ON - SITE TECH.

ENVIROTECH, INC.

Date : June 29, 2000

SAMPLER : N J V

Filename : 06-29-00.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	100.96	93.85	7.11	8.43	-	-	-	-	-
2	100.99		-	8.42	-	-	-	-	-
3	100.09	92.42	7.67	8.62	1125	7.3	4,300	0.50	-
4R	98.52	92.39	6.13	10.00	1055	7.1	3,400	2.00	-
5R	100.93	92.03	8.90	10.00	1105	7.1	3,400	0.50	-

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".

Very low quantity in all MW's . Collected BTEX & chloride samples from MW #'s 3, 4R, & 5R .

Collected TDS sample from MW # 3 only .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 7482

STATE GC BS # 1 - SEPARATOR PIT UNIT K, SEC. 23, T29N, R11W
--

LABORATORY (S) USED : ENVIROTECH, INC.

Date : August 25, 2000

SAMPLER : N J V

Filename : 08-25-00.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)
6	-	-	5.30	10.00	0855	7.1	4,000	2.25	-

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 "

Installed MW #6 on July 13, 2000. 5 ft. casing, 5 ft. 0.020 slotted screen with pointed end cap,
sanded annular with silica sand to surface. Top of casing approx. 2 ft. above ground surface.

Developed MW #6 prior to sampling. Poor recovery in MW #6. Collected TDS sample from
MW # 6 only.

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : 12164

STATE GC BS # 1
 UNIT K, SEC. 23, T29N, R11W

LABORATORY (S) USED : ON - SITE TECH.

Date : April 11, 2003

SAMPLER : N J V

Filename : 04-11-03.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)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1X	101.38	96.40	4.98	9.83	1320	6.95	6,900	1.00	-
2X	98.62	94.83	3.79	8.55	1306	6.95	2,200	2.25	-
3X	98.75	93.82	4.93	8.43	1253	6.99	2,700	1.00	-
4X	97.55	92.59	4.96	7.85	1212	6.77	3,300	1.50	-
5X	98.54	92.06	6.48	10.00	1235	6.90	3,300	1.00	-

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.01	2,800
04/11/03	09:00

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 $r = (1/12)$ 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 "

Drilled all MW 's on 4 / 1 / 03 except MW # 3X - 4 / 2 / 03 . Surveyed MW tops & measured depth to water on 4 / 8 / 03 . Developed all MW 's on 4 / 9 / 03 . Excellent recovery in MW # 2X & # 4X . Poor recovery in MW # 3X , & # 5X . MW # 1X - yellowish tint in appearance (initial bail) & very poor recovery . Collected BTEX samples from all MW 's listed above .

Top of casing MW # 1X ~ 1.00 ft , MW # 2X ~ 0.55 ft , MW # 3X ~ 0.30 ft , MW # 4X ~ 0.40 ft , MW # 5X ~ 0.80 ft . above grade .

MW #	DTW
1X	4.98
2X	3.79
3X	4.93
4X	4.96
5X	6.48

(prior to purging -
in ft.)

MW #	DTW
1X	7.25
2X	3.79
3X	5.05
4X	4.96
5X	6.62

(@ time of
sampling -
in ft.)

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

STATE GC BS # 1 UNIT K, SEC. 23, T29N, R11W
--

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : August 28, 2003

SAMPLER : N J V

Filename : 08-28-03.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.)
1X	101.38	95.33	6.05	9.83	1045	6.73	7,800	24.6	1.00
2X	98.62	93.88	4.74	8.55	0910	6.81	3,300	24.2	1.75
3X	98.75	93.03	5.72	8.43	0930	6.78	3,600	24.4	0.75
4X	97.55	92.07	5.48	7.85	0945	6.71	4,100	25.7	1.00
5X	98.54	91.72	6.82	10.00	1030	6.75	3,900	22.0	0.75
6X	98.51	91.71	6.80	10.00	1015	6.87	3,700	21.7	3.00

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	08/28/03	0700

NOTES : Volume of water purged from well prior to sampling: V = pi X r² X h X 7.48 gal./ft³ X 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".

Sample duplicate collected from MW # 5X (labeled MW # 7X). Excellent recovery in MW # 6X .

2X & # 4X . Poor recovery in # 3X , # 5X . Very poor recovery in MW # 1X .

MW # 1X - yellowish tint in appearance (initial bail). MW # 6X installed on 6 / 10 / 03 -

(5 ft. casing & 5 ft. screen [0.010 diameter slots]). Collected BTEX samples from

all MW 's listed above .

Top of casing MW # 1X ~ 1.00 ' , MW # 2X ~ 0.55 ' , MW # 3X ~ 0.30 ' , MW # 4X ~ 0.40 ' , MW # 5X ~ 0.80 ' , MW # 6X ~ 0.80 ' above grade .

MW #	DTW	(prior to purging - in ft.)	MW #	DTW	(@ time of sampling - in ft.)
1X	6.05		1X	7.75	
2X	4.74		2X	4.74	
3X	5.72		3X	5.70	
4X	5.48		4X	5.48	
5X	6.82		5X	7.17	
6X	6.80		6X	6.80	

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

STATE GC BS # 1 UNIT K, SEC. 23, T29N, R11W
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LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : November 19, 2003

SAMPLER : N J V

Filename : 11-19-03.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.)
1X	101.38		-	9.83	-	-	-	-	-
2X	98.62		-	8.55	-	-	-	-	-
3X	98.75		-	8.43	-	-	-	-	-
4X	97.55		-	7.85	-	-	-	-	-
5X	98.54		6.09	10.00	0830	6.95	3,600	12.2	1.00
6X	98.51		6.05	10.00	0845	6.99	3,700	11.7	2.00

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

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

Excellent recovery in MW #6X , poor recovery in #5X . Collected BTEX samples from MW #5X & #6X only .

Top of casing MW #1X ~ 1.00 ' , MW #2X ~ 0.55 ' , MW #3X ~ 0.30 ' , MW #4X ~ 0.40 ' , MW #5X ~ 0.80 ' , MW #6X ~ 0.80 ' above grade .

MW #	DTW
1X	-
2X	-
3X	-
4X	-
5X	6.09
6X	6.05

(prior to purging -
in ft.)

MW #	DTW
1X	-
2X	-
3X	-
4X	-
5X	6.12
6X	6.05

(@ time of sampling -
in ft.)

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

STATE GC BS # 1 UNIT K, SEC. 23, T29N, R11W
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LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : March 27, 2004

SAMPLER : N J V

Filename : 03-27-04.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.)
1X	101.38	96.77	4.61	9.83	1130	7.10	6,200	12.8	1.25
2X	98.62	95.26	3.36	8.55	1113	6.96	3,500	11.3	2.50
3X	98.75	94.23	4.52	8.43	1109	7.00	3,400	12.0	1.25
4X	97.55	92.96	4.59	7.85	1035	6.91	3,900	11.0	1.50
5X	98.54	92.46	6.08	10.00	1044	7.01	3,700	11.1	1.00
6X	98.51	92.42	6.09	10.00	1023	7.05	3,700	12.4	2.00

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	03/27/04	0800

NOTES : Volume of water purged from well prior to sampling; V = pi X r² X h X 7.48 gal./ft³ X 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".

Excellent recovery in MW # 2X, # 4X, & # 6 ; poor recovery in # 3X & # 5X, very poor recovery in MW # 1X. Collected BTEX samples from all MW 's listed above .

Top of casing MW # 1X ~ 1.00 ' , MW # 2X ~ 0.55 ' , MW # 3X ~ 0.30 ' , MW # 4X ~ 0.40 ' , MW # 5X ~ 0.80 ' , MW # 6X ~ 0.80 ' above grade .

MW #	DTW
1X	4.61
2X	3.36
3X	4.52
4X	4.59
5X	6.08
6X	6.09

(prior to purging -
in ft.)

MW #	DTW
1X	5.07
2X	3.38
3X	4.90
4X	4.60
5X	6.84
6X	6.09

(@ time of sampling -
in ft.)

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

STATE GC BS # 1 UNIT K, SEC. 23, T29N, R11W
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LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 22, 2004

SAMPLER : N J V

Filename : 06-22-04.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.)
1X	101.38	95.48	5.90	9.83	0855	6.79	8,000	18.6	1.00
2X	98.62	93.76	4.86	8.55	0835	6.86	3,200	18.1	1.75
3X	98.75	92.94	5.81	8.43	0825	6.95	3,300	18.4	0.75
4X	97.55	91.99	5.56	7.85	0750	6.85	4,200	16.6	1.00
5X	98.54	91.61	6.93	10.00	0800	6.74	4,400	16.0	0.75
6X	98.51	91.59	6.92	10.00	0740	6.91	4,000	14.8	1.50

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	06/21/04	1220

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 "

Excellent recovery in MW # 2X , # 4X , & # 6X . Poor recovery in MW # 3X & # 5X . MW # 1X - yellowish tint in appearance (initial bail) & very poor recovery . Collected BTEX samples from all MW ' s listed above .

Top of casing MW # 1X ~ 1.00 ' , MW # 2X ~ 0.55 ' , MW # 3X ~ 0.30 ' , MW # 4X ~ 0.40 ' , MW # 5X ~ 0.80 ' , MW # 6X ~ 0.80 ' above grade .

MW #	DTW	(prior to purging - in ft.)	MW #	DTW	(@ time of sampling - in ft.)
1X	5.90		1X	7.59	
2X	4.86		2X	4.86	
3X	5.81		3X	5.83	
4X	5.56		4X	5.56	
5X	6.93		5X	7.06	
6X	6.92		6X	6.92	

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

STATE GC BS # 1
 UNIT K, SEC. 23, T29N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : Sept. 24, 2004

SAMPLER : N J V

Filename : 09-24-04.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.)
1X	101.38	95.58	5.80	9.83	1455	6.65	5,700	23.6	1.00
2X	98.62	94.51	4.11	8.55	1250	6.73	3,100	23.3	2.25
3X	98.75	93.54	5.21	8.43	1330	6.72	3,300	23.7	0.75
4X	97.55	92.59	4.96	7.85	1430	6.60	3,800	23.5	1.50
5X	98.54	92.17	6.37	10.00	1440	6.68	3,700	22.5	1.00
6X	98.51	92.16	6.35	10.00	1420	6.73	3,700	23.7	1.75
7X			5.68	10.00	1310	6.93	4,900	24.5	1.00

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	09/24/04	1245

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".

Excellent recovery in MW # 2X, # 4X, & # 6 ; poor recovery in # 3X & # 5X, very poor recovery in MW # 1X. Collected BTEX samples from all MW's listed above. MW # 7X installed on 8 / 18 / 04 to address recent unreportable event with on-site tank pit (8 / 12 / 04) - (5 ft. casing & 5 ft. screen [0.010 diameter slots]). Collected BTEX samples from all MW's listed.

Top of casing MW # 1X ~ 1.00 ', MW # 2X ~ 0.55 ', MW # 3X ~ 0.30 ', MW # 4X ~ 0.40 ', MW # 5X ~ 0.80 ', MW # 6X ~ 0.80 ' above grade.

MW #	DTW
1X	5.80
2X	4.11
3X	5.21
4X	4.96
5X	6.37
6X	6.35
7X	5.68

(prior to purging -
in ft.)

MW #	DTW
1X	6.34
2X	4.12
3X	5.28
4X	4.97
5X	7.00
6X	6.35
7X	5.79

(@ time of sampling -
in ft.)

CLIENT: XTO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: -
C.O.C. NO: 09084
09093

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: STATE CC BS WELL# 1 PITS: -
QUAD/UNIT: K SEC: 23 TWP: 29N RNG: 11W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NELS W CONTRACTOR: P+S

DATE STARTED: 6/19/02
DATE FINISHED: 7/18/02
ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION:

REMEDIATION SYSTEM: COMPOSTED

APPROX. CUBIC YARDAGE: ~ 7,500

LAND USE: RANGE

LIFT DEPTH (ft):

FIELD NOTES & REMARKS: DEPTH TO GROUNDWATER: < 50' NEAREST SURFACE WATER: < 1,000'
NEAREST WATER SOURCE: > 1,000' NMOCD RANKING SCORE: 30 NMOCD TPH CLOSURE STD: 100 PPM

SOIL TYPE: SAND SILTY SAND / SILT / SILTY CLAY / CLAY GRAVEL / OTHER

SOIL COLOR: DUNE GRAY TO BLACK

COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE

CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE

PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC

DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD

MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED

DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION: VARIOUS GRAY TO BLACK & ALL

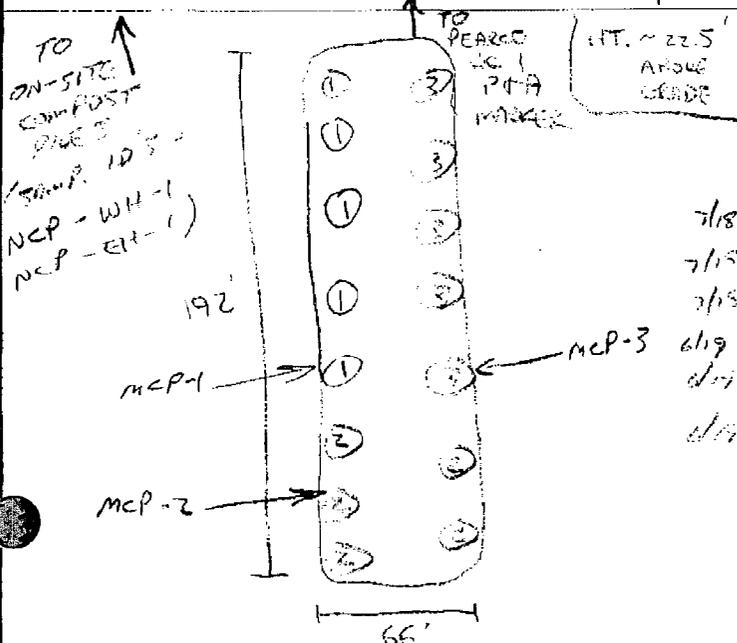
ODOR DETECTED: YES / NO EXPLANATION:

SAMPLING DEPTHS (LANDFARMS): NA (INCHES)

SAMPLE TYPE: GRAB / COMPOSITE # OF PTS: 5

ADDITIONAL COMMENTS: COLLECTED ON-SITE SAMPLES 6/19/02 & OFF-SITE SAMPLES (SKETCHED BELOW) 7/18/02. PENETRATED PILES USING TRACKHOE. SAMPLE MCP-1 @ SAME LOCATE BELOW THEN ADDITIONAL SOIL & MANURE ADDED PRIOR TO 7/18/02 SAMPLING. ALL BTEX SAMPLES BELOW REG'S.

SKETCH/SAMPLE LOCATIONS



OVM CALIB. READING 50.0 ppm (CHECK) - 6/19/02
 OVM CALIB. READ. = 53.3 ppm TIME = 0955
 OVM CALIB. GAS = 100 ppm RF = 0.52
 TIME: 12:00 am/pm DATE: 7/17/02

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE (ppm)
MCP-1	271
MCP-2	101
MCP-3	196
MCP-WH-1	120.4
MCP-EH-1	94.6
ECP-1	303

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	TPH RESULTS (PPM)
MCP-1	TPH & BTEX	0825	ND
MCP-2	TPH ONLY	0845	ND
MCP-3	TPH & BTEX	0900	ND
MCP-WH-1	TPH & BTEX	1320	25.3
MCP-EH-1	TPH ONLY	1335	13.7
ECP-1	TPH & BTEX	1402	77.2

SCALE



TRAVEL NOTES: CALLOUT: N/A

ONSITE: 6/19/02 & 7/18/02



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address XTO Energy Inc. 2700 Farmington Ave., Bldg. K, Suite 1 Farmington, NM 87401	2. Destination Name: J.F.J. Landfarm c/o Industrial Ecosystems Inc. 420 CR 3100 Aztec, NM 87410
3. Originating Site (name): STATE GC BS #1 (PACIFIC SC #1E)	Location of the Waste (Street address &/or ULSTR): NE 1/4, SW 1/4 UNIT K, SEC. 23, T29N, R11W
4. Source and Description of Waste CONDENSATE AND/OR PRODUCED WATER FROM SEPARATOR TANK PIT.	

Nelson Velez

I, _____ representative for:

Print Name

Blagg Engineering, Inc. c/o XTO Energy Inc.

do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1988, regulatory determination, the above described waste is: (Check appropriate classification)

EXEMPT oilfield waste

NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For NON-EXEMPT waste the following documentation is attached (check appropriate items):

- MSDS Information
- RCRA Hazardous Waste Analysis
- Chain of Custody
- Other (description)

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): _____

Title: **Staff Geologist / AGENT for XTO Energy**

Date: **AUGUST 10, 2004**