3R - 126

2008 AGWMR

APR 2009

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2008

SNYDER GAS COM #1A
3RP-126
(F) SECTION 19 – T29N – R09W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

April 2009

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2008 XTO GROUNDWATER REPORT

SNYDER GAS COM #1A
3RP-126

SITE DETAILS

LEGALS - TWN: 29N **RNG:** 09W **SEC:** 19 **UNIT:** F
NMOCD HAZARD RANKING: 20 **LAND TYPE:** FEE

PREVIOUS ACTIVITIES

Excavation: Mar-94 (440 cy) **Monitoring Wells:** Oct-99
Quarterly Sampling Initiated: Oct-99

SITE MAP

A site map is presented as Figure 1.

SUMMARY TABLES

A summary of laboratory results from historical and current groundwater monitoring is presented as Table 1. General water quality data from 1999 is included as Table 2. Copies of the laboratory data sheets and associated quality assurance/quality control data for 2008 are presented as Attachment 1.

POTENTIOMETRIC SURFACE DIAGRAMS

Field data collected during site monitoring activities indicate a groundwater gradient that trends towards the west. Figures 2 - 5 illustrate the estimated groundwater gradients for 2008.

ANNUAL GROUNDWATER REMEDIATION REPORTS

Previous groundwater reports submitted to New Mexico Oil Conservation Division (NMOCD) in 2005 and 2006 recommended quarterly sampling of the groundwater monitoring wells, in accordance with the NMOCD approved Groundwater Management Plan.

The 2007 annual groundwater report was submitted to OCD in February 2008 proposing termination of quarterly sampling of MW-1 and MW-2 based on four consecutive quarters of sampling and continued quarterly sampling of MW-3 until BTEX concentrations were below New Mexico Water Quality Control Commission (NMWQCC) standards.

2008 ACTIVITIES

Quarterly groundwater samples were collected from MW-3 in 2008. Laboratory results reveal benzene, toluene, ethyl benzene and total xylenes (BTEX) concentrations were not detected above the laboratory equipment detection limits (0.2 ug/L) and are below NMWQCC standards.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Bore/Test Hole Reports are presented as Figures 6 - 8 representing drilling that occurred on site in October 1999.

DISPOSITION OF GENERATED WASTES

Waste generated (groundwater) during monitoring well sampling and development was placed in the produced water tank located on the well site.

CONCLUSIONS

January 1998 XTO Energy Inc. (XTO) acquired the Snyder Gas Com #1A from Amoco Production Company. XTO understands the initial evaluation of groundwater impact came from samples of groundwater collected from the bottom of the pit during excavation of hydrocarbon impacted soil. The initial samples demonstrated elevated levels of dissolved phase BTEX in groundwater. In 1999 three groundwater monitoring wells were installed to delineate the extent of hydrocarbon impact to groundwater. Monitoring well numbered MW-2 was installed in the center of the source area (closed and backfilled earthen blow pit). Groundwater samples collected from MW-2 in October 1999 indicated trace levels of dissolved phase BTEX constituents below the NMWQCC standards. Monitoring well numbered MW-1 was located up-gradient of the source area and monitoring well MW-3 was located down gradient of the source area. MW-1 and MW-3 were sampled and laboratory analysis showed no BTEX constituents above the detection limits of laboratory equipment (0.2 ug/L). Sampling was terminated and site closure was requested in 2000. NMOCD denied the request for closure pending four consecutive quarters of BTEX analysis below the NMWQCC standards.

Groundwater analytical data from MW-1, MW-2 and MW-3 for four (4) consecutive quarters have demonstrated no detectable levels of BTEX constituents and NMWQCC standards have been met. The quarterly sampling has confirmed no rebound of BTEX constituents has occurred, therefore, XTO requests closure of this site.

RECOMMENDATIONS

- XTO requests closure of this site.
- Following OCD approval for closure, all monitoring well locations will be abandoned in accordance with the monitoring well abandonment plan.

TABLE 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SNYDER GC #1A- BLOW PIT
UNIT F, SEC. 19, T29N, R9W

					BTEX EPA Method 801 (PPB)			
Sample Date	Monitor Well No.	DTW (ft)	TD (ft)	Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)
28-Oct-99	MW #1	6.79	15		ND	ND	ND	ND
13-Jul-06		NA	6.64		No Recovery			
19-Oct-06		10.88	11.97		2.7	9.1	1.1	28
18-Jan-07		9.71	12.42		ND	ND	ND	ND
11-Apr-07		9.12	12		ND	ND	ND	ND
28-Oct-99	MW #2	6.67	15		1.2	3.6	ND	3.7
13-Jul-06		10.31	15.23		ND	ND	ND	ND
16-Oct-06		10.49	15.28		3.1	16	2.3	68
18-Jan-07		9.4	15.23		ND	ND	ND	ND
11-Apr-07		8.82	15.23		ND	ND	ND	ND
28-Oct-99	MW #3	7.35	15		ND	ND	ND	ND
13-Jul-06		9.19	15.1		ND	ND	ND	ND
19-Oct-06		10.67	15.21		82	5.5	ND	19
18-Jan-07		9.64	15.1		2.1	ND	ND	ND
11-Apr-07		9.22	15.1		ND	ND	ND	ND
12-Mar-08		8.99	15.1		ND	ND	ND	ND
4-Jun-08		8.73	15.1		ND	ND	ND	ND
22-Sep-08		10.21	15.23		ND	ND	ND	ND
4-Dec-08		10.35	15.1		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS					10	750	750	620

TABLE 2

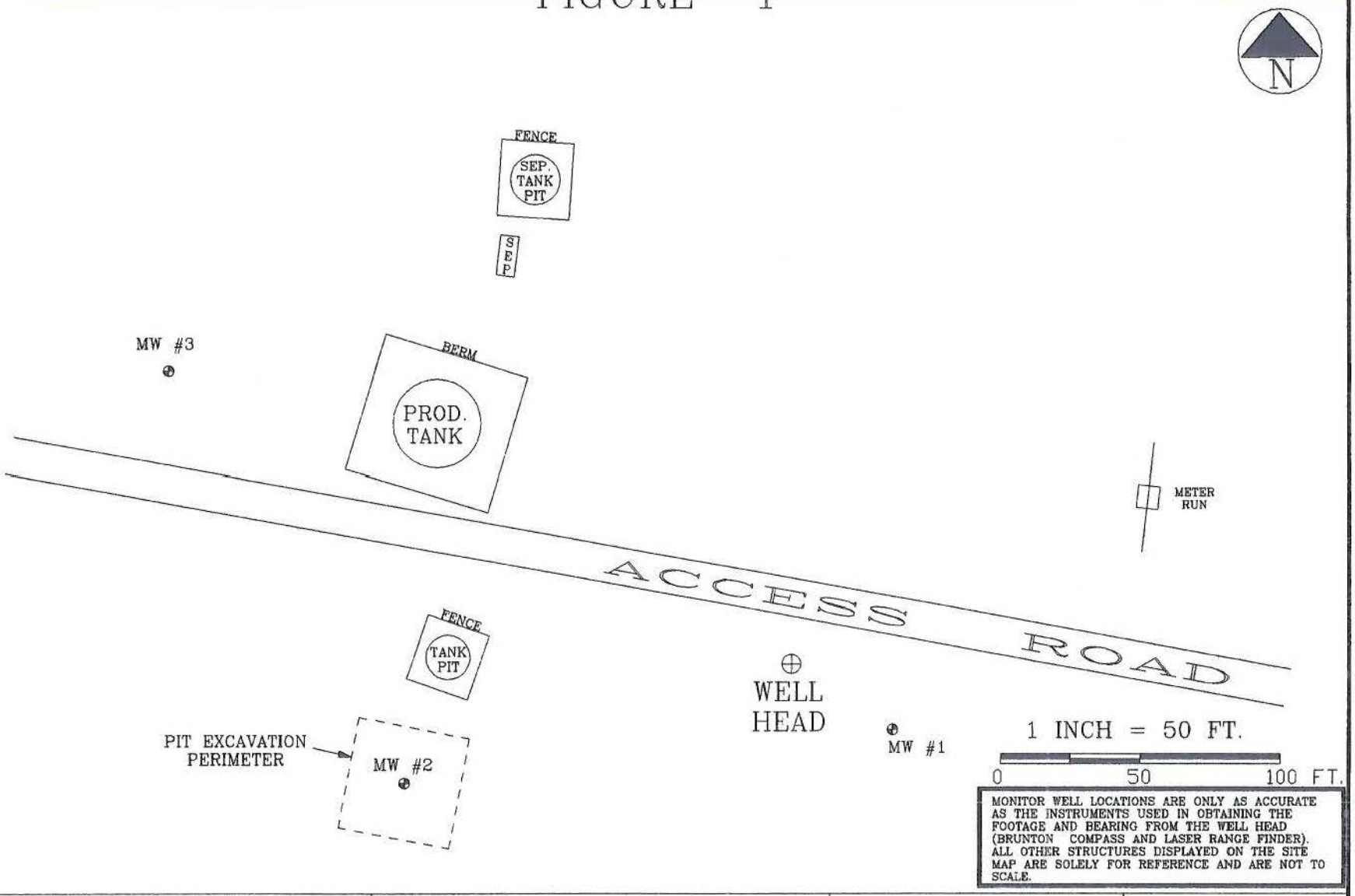
XTO ENERGY INC. GROUNDWATER LAB RESULTS

SNYDER GC #1A- BLOW PIT
UNIT F, SEC. 19, T29N, R9W

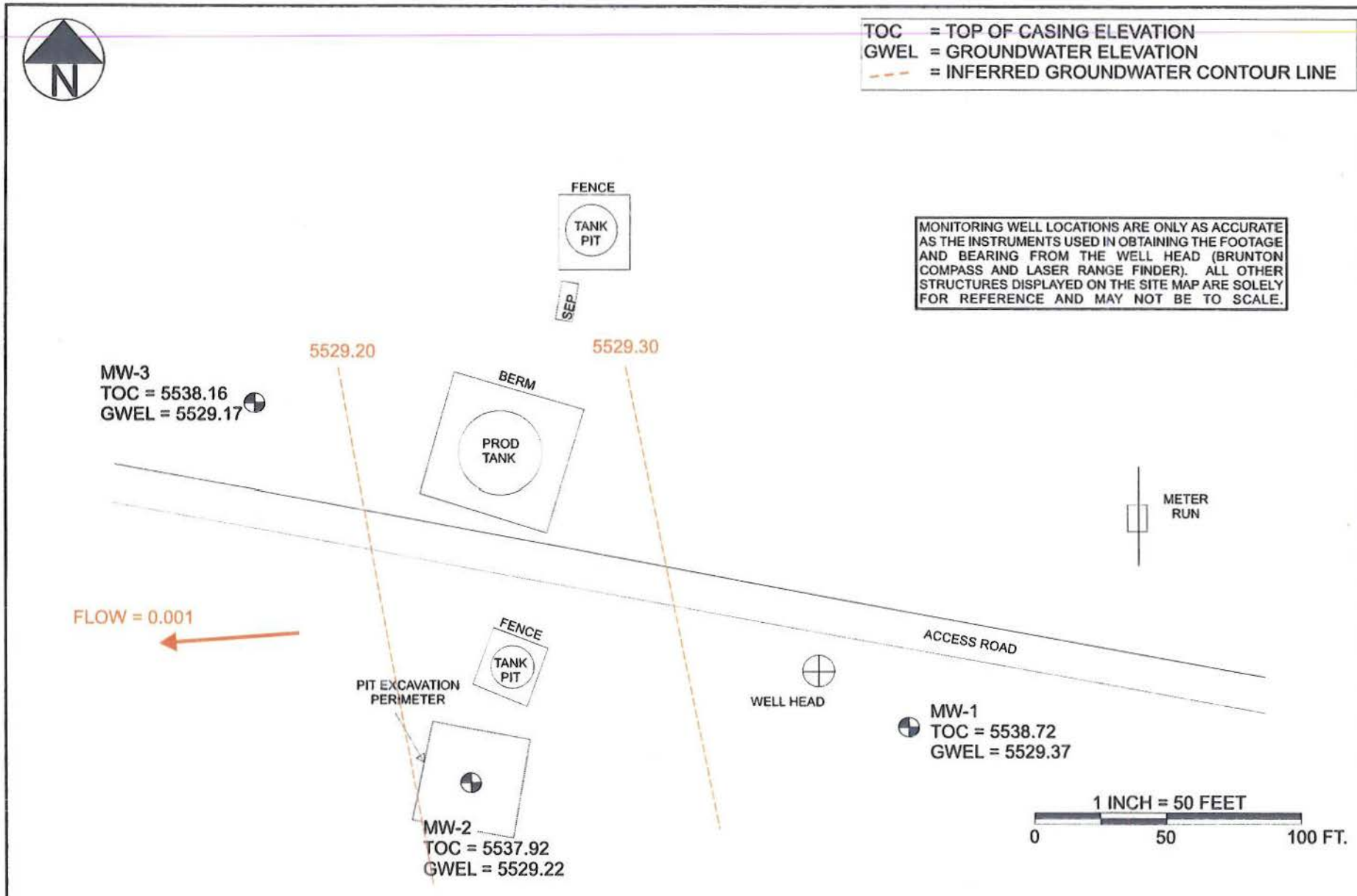
Sample Date: October 28, 1999

PARAMETERS	MW #1	MW #2	MW #3	UNITS
LAB Ph	7.28	7.37	7.36	s.u.
LAB CONDUCTIVITY @ 25 C	1,094	1,165	1,570	umhos/cm
TOTAL DISSOLVED SOLIDS @ 180 C	520	580	760	mg/L
TOTAL DISSOLVED SOLIDS (Calc)	504	541	733	mg/L
SODIUM ABSORPTION RATIO	2.8	2	1.4	ratio
TOTAL ALKALINITY AS CaCO3	221	245	247	mg/L
TOTAL HARDNESS AS CaCO3	198	256	420	mg/L
BICARBONATE AS HCO3	198	245	247	mg/L
CARBONATE AS CO3	< 1	< 1	< 1	mg/L
HYDROXIDE AS OH	< 1	< 1	< 1	mg/L
NITRATE NITORGEN	< 0.1	0.1	0.1	mg/L
NITRITE NITROGEN	0.003	< 0.001	< 0.001	mg/L
CHLORIDE	1.3	2.2	2.3	mg/L
FLUORIDE	1.47	1.35	1.49	mg/L
PHOSPHATE	1.1	0.8	0.5	mg/L
SULFATE	198	208	348	mg/L
IRON	0.007	< 0.001	0.036	mg/L
CALCIUM	73.6	97.2	141.6	mg/L
MAGNESIUM	3.42	3.17	16.1	mg/L
POTASSIUM	2.6	6.4	6.2	mg/L
SODIUM	89	74	67	mg/L
CATION/ANION DIFFERENCE	0.03	0.06	0.16	%

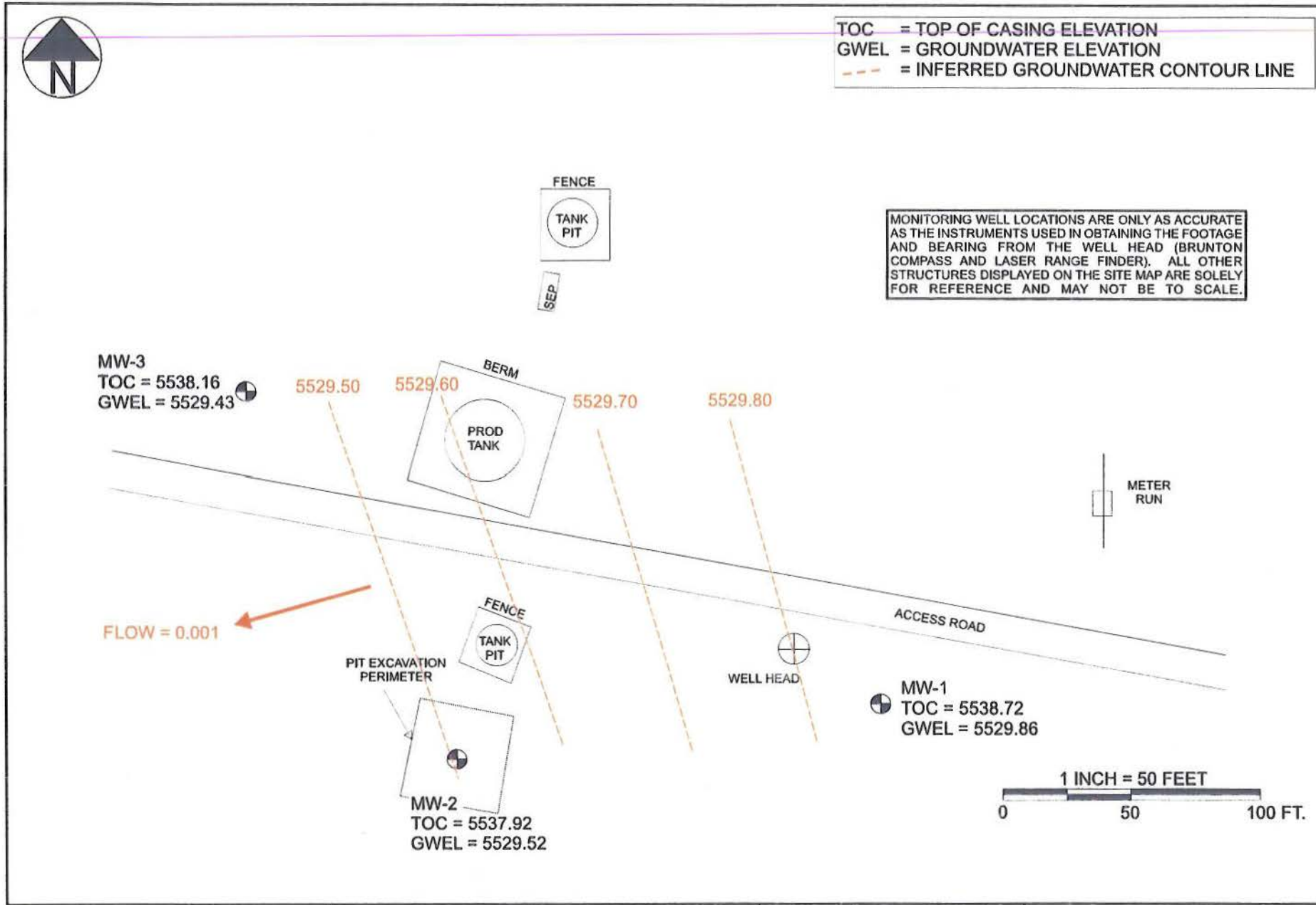
FIGURE 1



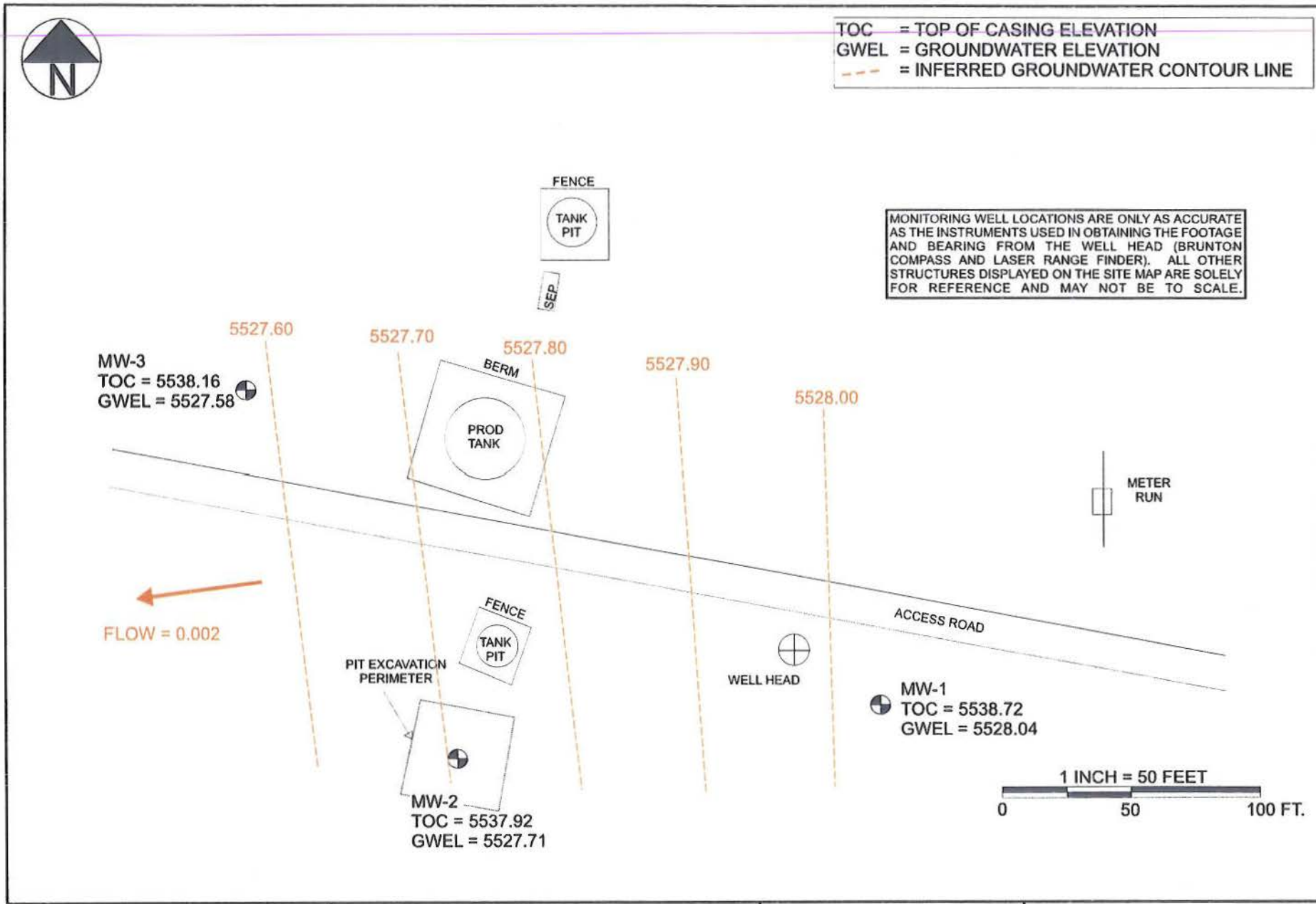
XTO ENERGY INC. SNYDER GC #1A SW/4 NW/4 SEC. 19, T29N, R9W SAN JUAN COUNTY, NEW MEXICO	BLAGG ENGINEERING, INC. CONSULTING PETROLEUM / RECLAMATION SERVICES P.O. BOX 87 BLOOMFIELD, NEW MEXICO 87413 PHONE: (505) 632-1199	PROJECT: MW INSTALL. DRAWN BY: NJV FILENAME: SNYDR-SM.SKD	SITE MAP 10/99



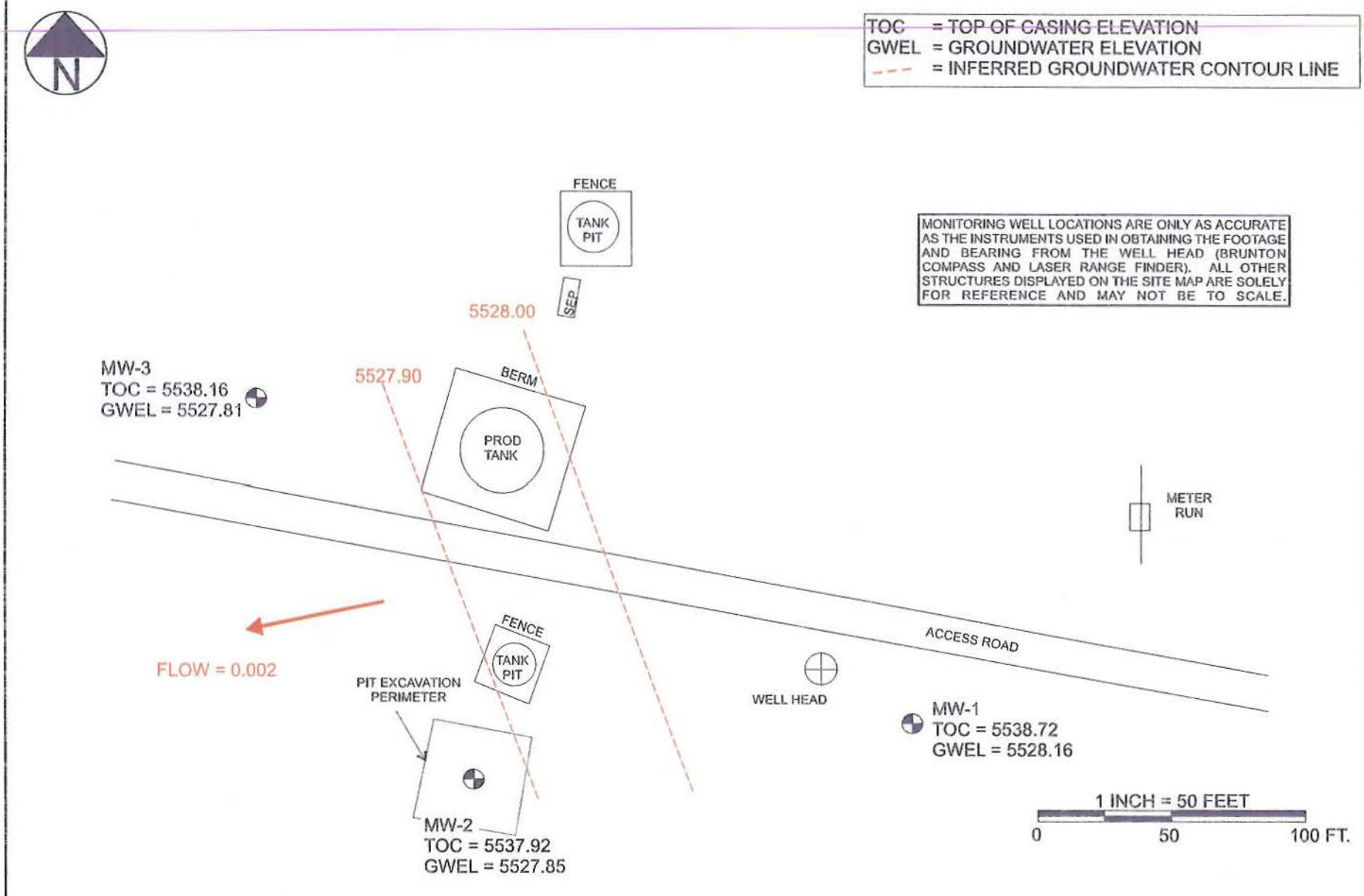
Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	SNYDER GAS COM #1A SW/4 NW/4 SEC. 19, T29N, R9W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 03/17/08	GROUNDWATER GRADIENT MAP 03/12/2008



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	SNYDER GAS COM #1A SW/4 NW/4 SEC. 19, T29N, R9W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 06/30/08	GROUNDWATER GRADIENT MAP 06/04/2008



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	SNYDER GAS COM #1A SW/4 NW/4 SEC. 19, T29N, R9W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 09/26/08	GROUNDWATER GRADIENT MAP 09/18/2008



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	SNYDER GAS COM #1A SW/4 NW/4 SEC. 19, T29N, R9W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ADH REVISED: 22Dec08	GROUNDWATER GRADIENT MAP 12/04008

FIGURE 6

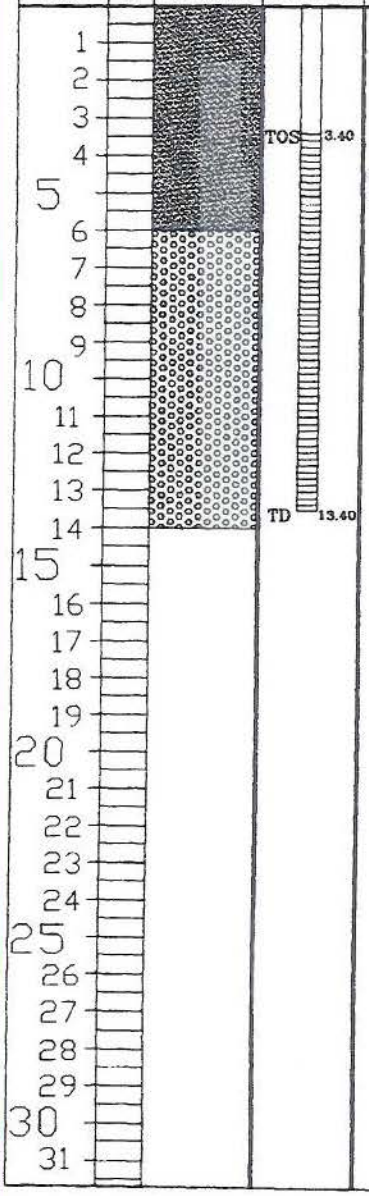
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

BORING #..... BH - 1
MW #..... 1
PAGE #..... 1
DATE STARTED 10/11/99
DATE FINISHED 10/11/99
OPERATOR..... DE
PREPARED BY NJV

CLIENT: XTO ENERGY INC.
LOCATION NAME: SNYDER GC #1A
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME61)
BORING LOCATION: 43 FT., S57.5E FEET FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.60 FT. ABOVE GROUND SURFACE.

MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.00 - 6.00 FT. INTERVAL).

▼ GW DEPTH ON 10/28/99 = 5.19 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH BROWN SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (6.00 - 14.00 FT. INTERVAL).

NOTE:
- SAND.
- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.

DRAWING: BH-1.SKD	DATE: 1/29/00	DWN BY: NJV

FIGURE 7

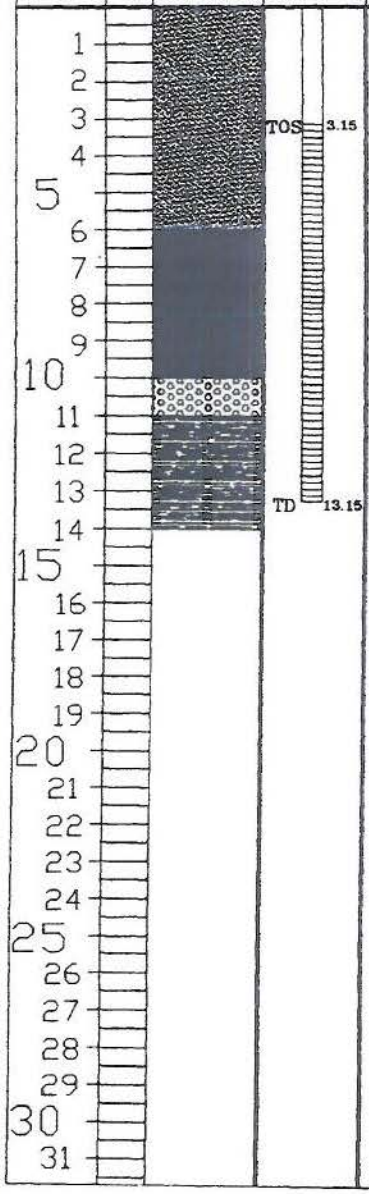
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

BORING # BH - 2
MW # 2
PAGE # 2
DATE STARTED 10/11/99
DATE FINISHED 10/11/99
OPERATOR DE
PREPARED BY NJV

CLIENT: XTO ENERGY INC.
LOCATION NAME: SNYDER GC #1A
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME61)
BORING LOCATION: 145 FT., S73W FEET FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.85 FT. ABOVE GROUND SURFACE.

MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.00 - 6.00 FT. INTERVAL).

▼ GW DEPTH ON 10/28/99 = 4.82 FT. (APPROX.) FROM GROUND SURFACE.

SAME AS ABOVE EXCEPT DARK GRAY TO BLACK, SATURATED, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY (6.00 - 10.00 FT. INTERVAL).

MEDIUM TO DARK GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY (10.00 - 11.00 FT. INTERVAL).

DARK GRAY CLAY, SLIGHTLY PLASTIC, SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY (11.00 - 14.00 FT. INTERVAL).

NOTE:
- SAND.
- DISCOLORED SAND.
- CLAY.
- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.

DRAWING: BH-2.SKD	DATE: 1/29/00	DWN BY: NJV

FIGURE 8

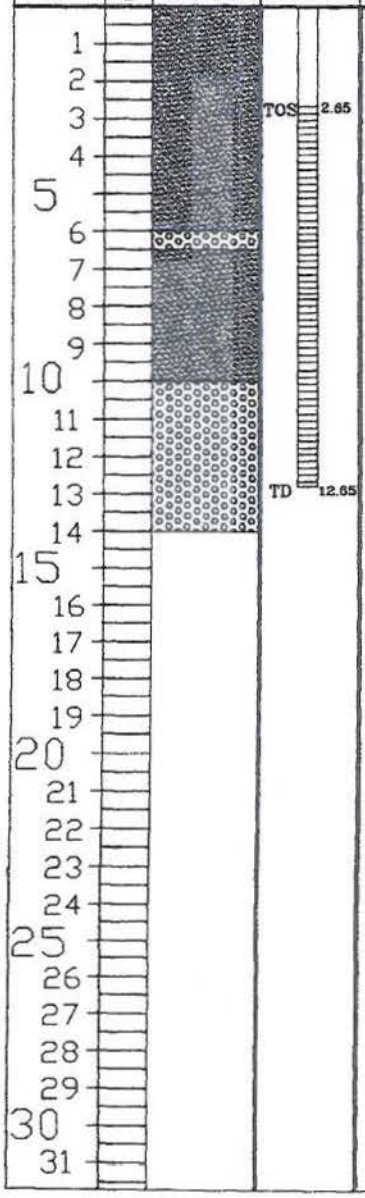
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

BORING #..... BH - 3
MW #..... 3
PAGE #..... 3
DATE STARTED 10/11/99
DATE FINISHED 10/11/99
OPERATOR..... DE
PREPARED BY NJV

CLIENT: XTO ENERGY INC.
LOCATION NAME: SNYDER GC #1A
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME61)
BORING LOCATION: 246 FT., N65W FEET FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.35 FT. ABOVE GROUND SURFACE.

MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.00 - 6.00 FT. INTERVAL).

GW DEPTH ON 10/28/99 = 5.00 FT. (APPROX.) FROM GROUND SURFACE.

SAME AS ABOVE EXCEPT WITH GRAVEL, SATURATED, (6.00 - 6.50 FT. INTERVAL).

SAME AS ABOVE EXCEPT WITHOUT GRAVEL, (6.50 - 10.00 FT. INTERVAL).

SAME AS ABOVE EXCEPT WITH GRAVEL, (10.00 - 14.00 FT. INTERVAL).

NOTE: - SAND.

- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.

DRAWING: BH-3.SKD	DATE: 1/29/00	DWN BY: NJV

Hall Environmental Analysis Laboratory, Inc.

Date: *24-Mar-08*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0803131

Lab ID: 0803131-01 **Collection Date:** 3/12/2008 6:08:00 PM
Client Sample ID: ~~Sullivan GCD1 MW-1~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	3/20/2008 5:56:49 PM
Toluene	ND	1.0		µg/L	1	3/20/2008 5:56:49 PM
Ethylbenzene	ND	1.0		µg/L	1	3/20/2008 5:56:49 PM
Xylenes, Total	ND	2.0		µg/L	1	3/20/2008 5:56:49 PM
Surr: 4-Bromofluorobenzene	104	68.9-122		%REC	1	3/20/2008 5:56:49 PM

Lab ID: 0803131-02 **Collection Date:** 3/12/2008 4:52:00 PM
Client Sample ID: Snyder MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	3/20/2008 6:27:04 PM
Toluene	ND	1.0		µg/L	1	3/20/2008 6:27:04 PM
Ethylbenzene	ND	1.0		µg/L	1	3/20/2008 6:27:04 PM
Xylenes, Total	ND	2.0		µg/L	1	3/20/2008 6:27:04 PM
Surr: 4-Bromofluorobenzene	99.7	68.9-122		%REC	1	3/20/2008 6:27:04 PM

Lab ID: 0803131-03 **Collection Date:** 3/12/2008 8:42:00 AM
Client Sample ID: ~~Bruington GC1 MW-1R~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	3/20/2008 6:57:15 PM
Toluene	ND	1.0		µg/L	1	3/20/2008 6:57:15 PM
Ethylbenzene	ND	1.0		µg/L	1	3/20/2008 6:57:15 PM
Xylenes, Total	ND	2.0		µg/L	1	3/20/2008 6:57:15 PM
Surr: 4-Bromofluorobenzene	102	68.9-122		%REC	1	3/20/2008 6:57:15 PM

Lab ID: 0803131-04 **Collection Date:** 3/12/2008 9:25:00 AM
Client Sample ID: Bruington GC1 MW-2R **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2800	50		µg/L	50	3/20/2008 7:57:29 PM
Toluene	890	50		µg/L	50	3/20/2008 7:57:29 PM
Ethylbenzene	750	50		µg/L	50	3/20/2008 7:57:29 PM
Xylenes, Total	5300	100		µg/L	50	3/20/2008 7:57:29 PM
Surr: 4-Bromofluorobenzene	118	68.9-122		%REC	50	3/20/2008 7:57:29 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Ground Water **Work Order:** 0803131

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 0803131-01A MSD		*MSD*			Batch ID:	**R27804**	Analysis Date:		3/21/2008 12:28:54 AM
Benzene	21.54	µg/L	1.0	104	85.9	113	0.409	27	
Toluene	20.86	µg/L	1.0	103	86.4	113	1.83	19	
Ethylbenzene	20.70	µg/L	1.0	103	83.5	118	0.523	10	
Xylenes, Total	61.20	µg/L	2.0	101	83.4	122	0.357	13	
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R27804**	Analysis Date:		3/20/2008 8:53:24 AM
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R27825**	Analysis Date:		3/21/2008 10:56:55 AM
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R27804**	Analysis Date:		3/21/2008 12:59:07 AM
Benzene	21.41	µg/L	1.0	107	85.9	113			
Toluene	21.41	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.55	µg/L	1.0	108	83.5	118			
Xylenes, Total	63.70	µg/L	2.0	106	83.4	122			
Sample ID: 100NG BTEX CCV		*LCS*			Batch ID:	**R27825**	Analysis Date:		3/21/2008 11:27:08 AM
Benzene	20.48	µg/L	1.0	101	85.9	113			
Toluene	21.13	µg/L	1.0	102	86.4	113			
Ethylbenzene	20.46	µg/L	1.0	101	83.5	118			
Xylenes, Total	62.14	µg/L	2.0	102	83.4	122			
Sample ID: 0803131-01A MS		*MS*			Batch ID:	**R27804**	Analysis Date:		3/20/2008 11:58:40 PM
Benzene	21.46	µg/L	1.0	103	85.9	113			
Toluene	20.49	µg/L	1.0	101	86.4	113			
Ethylbenzene	20.60	µg/L	1.0	102	83.5	118			
Xylenes, Total	60.98	µg/L	2.0	101	83.4	122			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date Received: 3/14/2008

Work Order Number 0803131 | Received by: TLS

Checklist completed by: Tamy Sharmin 3/14/08 (Signature / Date) | Sample ID labels checked by: ____ (Initials)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	4°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: XTO Energy
Kim Champlin
Address: 382 CR 3100
Aztec, NM 87410
Phone #: 505 333 3207
email or Fax#:
QA/QC Package:
[X] Standard [ ] Level 4 (Full Validation)
[ ] Other
[ ] EDD (Type)

Turn-Around Time:
[X] Standard [ ] Rush
Project Name: Ground Water
Project #:
Project Manager: Ashley Ager 970 946 1093
Sampler: Troy Urban
On Ice: [X] Yes [ ] No
Sample Temperature: 4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0803131	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021B BTEX				Air Bubbles (Y or N)
031208	1808	Sullivan GCD1 MW-1	2-40cc/3rd	HCl	1												✓				
031208	1652	SNYDER MW-3	20cc/3	HCl	2												✓				
031208	0842	Bruington GCI MW-1R TU	20cc/3	None	3												✓				
031208	0925	Bruington GCI MW-2R TU	20cc/3	None	4												✓				
031208	0958	Bruington GCI MW-3R TU	20cc/3	None	5												✓				
031208	1033	Bruington GCI MW-4	20cc/3	None	6												✓				
031208	1125	Bruington GCI MW-5	20cc/3	None	7												✓				
031208	1210	Bruington GCI MW-6	20cc/3	None	8												✓				
031208	1245	Bruington GCI MW-7	20cc/3	None	9												✓				
031208	1325	Bruington GCI MW-8	20cc/3	None	10												✓				
031208	0700	TRIP BLANK	20cc/2	HCl	11												✓				
031308	1022	Rowland GCI MW-5	20cc/3	HCl	12												✓				

Date:	Time:	Relinquished by:	Received by:
3/13/08	11:45	Troy Urban	3/14/08 950
Date:	Time:	Relinquished by:	Received by:

Remarks:
Please copy results to
ALA@lodestarservices.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory, Inc.

Date: *12-Jun-08*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0806072

Lab ID: 0806072-01 **Collection Date:** 6/3/2008 9:37:00 AM
Client Sample ID: ~~Jack Frost B2 MW-4~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	9.7	1.0		µg/L	1	6/12/2008 12:16:47 AM
Toluene	ND	1.0		µg/L	1	6/12/2008 12:16:47 AM
Ethylbenzene	ND	1.0		µg/L	1	6/12/2008 12:16:47 AM
Xylenes, Total	2.4	2.0		µg/L	1	6/12/2008 12:16:47 AM
Surr: 4-Bromofluorobenzene	92.8	68.9-122		%REC	1	6/12/2008 12:16:47 AM

Lab ID: 0806072-02 **Collection Date:** 6/3/2008 11:47:00 AM
Client Sample ID: ~~Valdez AE #1 MW-6~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1.5	1.0		µg/L	1	6/12/2008 1:19:40 AM
Toluene	ND	1.0		µg/L	1	6/12/2008 1:19:40 AM
Ethylbenzene	88	1.0		µg/L	1	6/12/2008 1:19:40 AM
Xylenes, Total	680	20		µg/L	10	6/12/2008 12:49:32 AM
Surr: 4-Bromofluorobenzene	96.3	68.9-122		%REC	1	6/12/2008 1:19:40 AM

Lab ID: 0806072-03 **Collection Date:** 6/3/2008 12:22:00 PM
Client Sample ID: ~~Valdez AE #1 MW-7~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	34	1.0		µg/L	1	6/12/2008 2:52:24 AM
Toluene	ND	1.0		µg/L	1	6/12/2008 2:52:24 AM
Ethylbenzene	63	1.0		µg/L	1	6/12/2008 2:52:24 AM
Xylenes, Total	490	20		µg/L	10	6/12/2008 2:22:23 AM
Surr: 4-Bromofluorobenzene	103	68.9-122		%REC	1	6/12/2008 2:52:24 AM

Lab ID: 0806072-04 **Collection Date:** 6/4/2008 10:40:00 AM
Client Sample ID: Snyder GC #1A MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	6/12/2008 3:52:25 AM
Toluene	ND	1.0		µg/L	1	6/12/2008 3:52:25 AM
Ethylbenzene	ND	1.0		µg/L	1	6/12/2008 3:52:25 AM
Xylenes, Total	ND	2.0		µg/L	1	6/12/2008 3:52:25 AM
Surr: 4-Bromofluorobenzene	89.1	68.9-122		%REC	1	6/12/2008 3:52:25 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Ground Water **Work Order:** 0806072

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 0806072-05A MSD		*MSD*			Batch ID:	**R28897**	Analysis Date:		6/12/2008 5:52:50 AM
Benzene	22.68	µg/L	1.0	101	85.9	113	0.677	27	
Toluene	20.86	µg/L	1.0	104	86.4	113	0.621	19	
Ethylbenzene	21.25	µg/L	1.0	106	83.5	118	0.816	10	
Xylenes, Total	63.51	µg/L	2.0	106	83.4	122	1.86	13	
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R28897**	Analysis Date:		6/11/2008 9:05:26 AM
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R28897**	Analysis Date:		6/12/2008 6:23:00 AM
Benzene	21.45	µg/L	1.0	107	85.9	113			
Toluene	21.73	µg/L	1.0	109	86.4	113			
Ethylbenzene	22.21	µg/L	1.0	111	83.5	118			
Xylenes, Total	66.49	µg/L	2.0	111	83.4	122			
Sample ID: 0806072-05A MS		*MS*			Batch ID:	**R28897**	Analysis Date:		6/12/2008 5:22:41 AM
Benzene	22.84	µg/L	1.0	102	85.9	113			
Toluene	20.99	µg/L	1.0	105	86.4	113			
Ethylbenzene	21.42	µg/L	1.0	107	83.5	118			
Xylenes, Total	64.70	µg/L	2.0	108	83.4	122			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date Received: 6/5/2008

Work Order Number 0806072 | Received by: TLS

Sample ID labels checked by: AB (Initials)

Checklist completed by: Tonya Shomin (Signature) 6/5/08 (Date)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	5°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: XTO Energy
Kim Champlin
Address: 382 CR 3100
Aztec NM 87410
Phone #: 505-333-3207
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Ground Water
Project #:
Project Manager: Ashley Ager
970-946-1093
Sampler: Troy Urban
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0806007a	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021 B BTEX				Air Bubbles (Y or N)
060308	0937	Jack Frost B2 mw-4	20cc/3	HCl	1												✓				
060308	1147	Valdez AE#1 mw-6	20cc/3	HCl	2												✓				
060308	1222	Valdez AE#1 mw-7	20cc/3	HCl	3												✓				
060408	1040	Snyder GC#1A mw-3	20cc/3	HCl	4												✓				
060408	1145	Sullivan GCD#1 mw1R	20cc/3	HCl	5												✓				

Date: 6/4/08 Time: 5:55 Relinquished by: Troy Urban Received by: 6/5/08 931
Date: Time: Relinquished by: Received by:

Remarks: please copy results to ALA@lodestarservices.com

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Hall Environmental Analysis Laboratory, Inc.

Date: *06-Oct-08*

CLIENT:	XTO Energy	**Client Sample ID:**	Snyder MW-3
Lab Order:	0809507	**Collection Date:**	9/22/2008 3:02:00 PM
Project:	Groundwater	**Date Received:**	9/23/2008
Lab ID:	0809507-10	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/30/2008 3:06:23 AM
Benzene	ND	1.0		µg/L	1	9/30/2008 3:06:23 AM
Toluene	ND	1.0		µg/L	1	9/30/2008 3:06:23 AM
Ethylbenzene	ND	1.0		µg/L	1	9/30/2008 3:06:23 AM
Xylenes, Total	ND	2.0		µg/L	1	9/30/2008 3:06:23 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/30/2008 3:06:23 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/30/2008 3:06:23 AM
Surr: 4-Bromofluorobenzene	90.5	65.9-130		%REC	1	9/30/2008 3:06:23 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Oct-08*

CLIENT:	XTO Energy	**Client Sample ID:**	Trip Blank
Lab Order:	0809507	**Collection Date:**	
Project:	Groundwater	**Date Received:**	9/23/2008
Lab ID:	0809507-12	**Matrix:**	TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/1/2008 3:59:29 AM
Benzene	ND	1.0		µg/L	1	10/1/2008 3:59:29 AM
Toluene	ND	1.0		µg/L	1	10/1/2008 3:59:29 AM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2008 3:59:29 AM
Xylenes, Total	ND	2.0		µg/L	1	10/1/2008 3:59:29 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2008 3:59:29 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2008 3:59:29 AM
Surr: 4-Bromofluorobenzene	85.2	65.9-130		%REC	1	10/1/2008 3:59:29 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Groundwater **Work Order:** 0809507

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 0809507-10A MSD		*MSD*			Batch ID:	**R30439**	Analysis Date:		9/30/2008 4:07:13 AM
Methyl tert-butyl ether (MTBE)	16.33	µg/L	2.5	81.6	51.2	138	10.1	28	
Benzene	20.33	µg/L	1.0	101	85.9	113	0.393	27	
Toluene	20.11	µg/L	1.0	101	86.4	113	0.0697	19	
Ethylbenzene	20.50	µg/L	1.0	102	83.5	118	1.51	10	
Xylenes, Total	62.27	µg/L	2.0	104	83.4	122	1.06	13	
1,2,4-Trimethylbenzene	20.61	µg/L	1.0	103	83.5	115	1.64	21	
1,3,5-Trimethylbenzene	20.49	µg/L	1.0	102	85.2	113	0.665	10	
Sample ID: b 5		*MBLK*			Batch ID:	**R30439**	Analysis Date:		9/29/2008 11:11:28 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R30439**	Analysis Date:		9/30/2008 9:14:37 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R30439**	Analysis Date:		9/30/2008 4:37:39 AM
Methyl tert-butyl ether (MTBE)	15.54	µg/L	2.5	77.7	51.2	138			
Benzene	19.76	µg/L	1.0	98.8	85.9	113			
Toluene	19.47	µg/L	1.0	97.4	86.4	113			
Ethylbenzene	20.41	µg/L	1.0	102	83.5	118			
Xylenes, Total	61.43	µg/L	2.0	102	83.4	122			
1,2,4-Trimethylbenzene	21.15	µg/L	1.0	106	83.5	115			
1,3,5-Trimethylbenzene	20.95	µg/L	1.0	105	85.2	113			
Sample ID: 0809507-10A MS		*MS*			Batch ID:	**R30439**	Analysis Date:		9/30/2008 3:36:51 AM
Methyl tert-butyl ether (MTBE)	14.75	µg/L	2.5	73.8	51.2	138			
Benzene	20.41	µg/L	1.0	101	85.9	113			
Toluene	20.09	µg/L	1.0	100	86.4	113			
Ethylbenzene	20.81	µg/L	1.0	104	83.5	118			
Xylenes, Total	62.94	µg/L	2.0	105	83.4	122			
1,2,4-Trimethylbenzene	20.95	µg/L	1.0	105	83.5	115			
1,3,5-Trimethylbenzene	20.67	µg/L	1.0	103	85.2	113			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Groundwater **Work Order:** 0809507

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SM 2540C Total Dissolved Solids									
Sample ID: MB-17178		*MBLK*			Batch ID:	**17178**	Analysis Date:		9/26/2008
Total Dissolved Solids	ND	mg/L	20						
Sample ID: LCS-17178		*LCS*			Batch ID:	**17178**	Analysis Date:		9/26/2008
Total Dissolved Solids	1005	mg/L	20	101	80	120			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date Received: 9/23/2008

Work Order Number 0809507 | Received by: ARS

Checklist completed by: _____ 9/23/08 | Sample ID labels checked by: _____

Signature | Date | Initials

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	13°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: XTO Energy
Kim Champlin
Address: 382 CR 3100
Aztec, NM 87410
Phone #: 505 333-3207
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Groundwater
Project #:
Project Manager: Ashley Ager
Sampler: Ashley Ager
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0809507	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021B BTEX				Air Bubbles (Y or N)
9-22-08	1046	Bruington GC #1 MW-1R	3	$HgCl_2$	-1												✓				
9-22-08	1148	Bruington GC #1 MW-2R	3	$HgCl_2$	-2												✓				
9-22-08	1110	Bruington GC #1 MW-3R	3	$HgCl_2$	-3												✓				
9-22-08	1130	Bruington GC #1 MW-4	3	$HgCl_2$	-4												✓				
9-22-08	1210	Bruington GC #1 MW-5	3	$HgCl_2$	-5												✓				
9-22-08	1230	Bruington GC #1 MW-6	3	$HgCl_2$	-6												✓				
9-22-08	1250	Bruington GC #1 MW-7	3	$HgCl_2$	-7												✓				
9-22-08	1323	Bruington GC #1 MW-8	3	$HgCl_2$	-8												✓				
9-22-08	1415	Rowland MW-5	3	$HgCl_2$	-9												✓				
9-22-08	1502	Snyder MW-3	3	$HgCl_2$	-10												✓				
9-22-08	1558	Sullivan GCD1 MW-1R	3	$HgCl_2$	-11												✓				
9-22-08	0700	TRIP BLANK	2		-12												✓				

Date:	Time:	Relinquished by:	Received by:	
9-23-08	0730	Ashley L Ager		
Date:	Time:	Relinquished by:	Received by:	16:00 9/23/08

Remarks: Please copy results to ALA@lodestarservices.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory, Inc.

Date: *11-Dec-08*

CLIENT: XTO Energy
Project: XTO Water
Lab Order: 0812149

Lab ID: 0812149-01 **Collection Date:** 12/4/2008 12:10:00 PM
Client Sample ID: ~~Jack Frost B2 MW-4~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/9/2008 1:53:58 PM
Benzene	1.7	1.0		µg/L	1	12/9/2008 1:53:58 PM
Toluene	ND	1.0		µg/L	1	12/9/2008 1:53:58 PM
Ethylbenzene	ND	1.0		µg/L	1	12/9/2008 1:53:58 PM
Xylenes, Total	ND	2.0		µg/L	1	12/9/2008 1:53:58 PM
1,2,4-Trimethylbenzene	2.5	1.0		µg/L	1	12/9/2008 1:53:58 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/9/2008 1:53:58 PM
Surr: 4-Bromofluorobenzene	83.5	65.9-130		%REC	1	12/9/2008 1:53:58 PM

Lab ID: 0812149-02 **Collection Date:** 12/4/2008 11:05:00 AM
Client Sample ID: ~~EJ Johnson C1E MW-5~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/9/2008 2:24:19 PM
Benzene	ND	1.0		µg/L	1	12/9/2008 2:24:19 PM
Toluene	ND	1.0		µg/L	1	12/9/2008 2:24:19 PM
Ethylbenzene	4.8	1.0		µg/L	1	12/9/2008 2:24:19 PM
Xylenes, Total	2.8	2.0		µg/L	1	12/9/2008 2:24:19 PM
1,2,4-Trimethylbenzene	5.0	1.0		µg/L	1	12/9/2008 2:24:19 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/9/2008 2:24:19 PM
Surr: 4-Bromofluorobenzene	97.9	65.9-130		%REC	1	12/9/2008 2:24:19 PM

Lab ID: 0812149-03 **Collection Date:** 12/4/2008 1:37:00 PM
Client Sample ID: Snyder Gas Com 1A-MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/9/2008 2:54:42 PM
Benzene	ND	1.0		µg/L	1	12/9/2008 2:54:42 PM
Toluene	ND	1.0		µg/L	1	12/9/2008 2:54:42 PM
Ethylbenzene	ND	1.0		µg/L	1	12/9/2008 2:54:42 PM
Xylenes, Total	ND	2.0		µg/L	1	12/9/2008 2:54:42 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/9/2008 2:54:42 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/9/2008 2:54:42 PM
Surr: 4-Bromofluorobenzene	80.3	65.9-130		%REC	1	12/9/2008 2:54:42 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XTO Water **Work Order:** 0812149

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 0812149-01A MSD		*MSD*			Batch ID:	**R31538**	Analysis Date:		12/9/2008 7:00:43 PM
Methyl tert-butyl ether (MTBE)	20.44	µg/L	2.5	102	51.2	138	0.147	28	
Benzene	23.01	µg/L	1.0	106	85.9	113	0.555	27	
Toluene	21.33	µg/L	1.0	107	86.4	113	0.598	19	
Ethylbenzene	21.46	µg/L	1.0	106	83.5	118	1.07	10	
Xylenes, Total	64.88	µg/L	2.0	106	83.4	122	4.02	13	
1,2,4-Trimethylbenzene	23.71	µg/L	1.0	106	83.5	115	2.86	21	
1,3,5-Trimethylbenzene	20.76	µg/L	1.0	104	85.2	113	3.20	10	
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R31538**	Analysis Date:		12/9/2008 9:17:44 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R31538**	Analysis Date:		12/9/2008 7:31:17 PM
Methyl tert-butyl ether (MTBE)	24.73	µg/L	2.5	124	51.2	138			
Benzene	21.35	µg/L	1.0	107	85.9	113			
Toluene	21.20	µg/L	1.0	106	86.4	113			
Ethylbenzene	21.23	µg/L	1.0	106	83.5	118			
Xylenes, Total	63.87	µg/L	2.0	106	83.4	122			
1,2,4-Trimethylbenzene	20.67	µg/L	1.0	102	83.5	115			
1,3,5-Trimethylbenzene	19.98	µg/L	1.0	99.9	85.2	113			
Sample ID: 0812149-01A MS		*MS*			Batch ID:	**R31538**	Analysis Date:		12/9/2008 6:30:15 PM
Methyl tert-butyl ether (MTBE)	20.47	µg/L	2.5	102	51.2	138			
Benzene	23.14	µg/L	1.0	107	85.9	113			
Toluene	21.46	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.69	µg/L	1.0	107	83.5	118			
Xylenes, Total	67.54	µg/L	2.0	110	83.4	122			
1,2,4-Trimethylbenzene	24.40	µg/L	1.0	109	83.5	115			
1,3,5-Trimethylbenzene	21.44	µg/L	1.0	107	85.2	113			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date Received: 12/5/2008

Work Order Number 0812149 | Received by: ARS

Checklist completed by: _____ 12/5/08 | Sample ID labels checked by: _____

Signature | Date | Initials

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	5°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: XTO Energy
Kim Champlin
Mailing Address: 382 CR 3100
Aztec, NM
Phone #: 505-333-3207
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: XTO water
Project #:
Project Manager: Martin Nee
Sampler: Alice Doyle Huff
On Ice: ☒ Yes ☐ No
Sample Temperature: 5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0812149	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX				Air Bubbles (Y or N)
4Dec08	12:10		Jackson B2-MW-4	glass/3	HCl	1												X				
4Dec08	1105		EJ Johnson E-MW-5	glass/3	HCl	2												X				
4Dec08	1337		Snyder Gas Com 1A-MW-3	glass/3	HCl	3												X				
4Dec08	1432		Sullivan Gas Com D1-MW-1R	glass/3	HCl	4												X				
4Dec08	15:40		Valdez A1E-MW-7	glass/3	HCl	5												X				
4Dec08	16:05		Valdez A1E-MW-6	glass/3	HCl	6												X				

Date	Time	Relinquished by	Received by	Date	Time
5Dec08	0730	Alice Doyle			
				12/5/08	15:00
Date	Time	Relinquished by	Received by	Date	Time

Remarks: please email results to
ala@lodestarservices.com
adh@lodestarservices.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 14, 2000

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-3983

Ms. Nina Hutton
Cross Timbers Oil Company
810 Houston St., Suite 2000
Fort Worth, Texas 76102-6298

RE: PIT CLOSURE/GROUND WATER MONITORING REPORTS

Dear Ms. Hutton:

The New Mexico Oil Conservation Division (OCD) has reviewed Cross Timbers Oil Company's (CTOC) February 21, 2000 "1999 ANNUAL GROUNDWATER REPORTS, SAN JUAN COUNTY, NEW MEXICO, PERMANENT CLOSURE REQUESTED" which was submitted on behalf of CTOC by their consultant Blagg Engineering, Inc. This document contains the results of CTOC's investigation, remediation and monitoring of soil and ground water contamination related to the disposal of oilfield wastes in unlined pits at 10 sites in the San Juan Basin and requests closure of the remedial actions.

Below is the OCD's review of the above referenced document:

A. The soil and ground water remedial actions at the sites listed below are satisfactory and the OCD **approves** of the closure of these pit sites. Please be advised that OCD approval does not relieve CTOC of responsibility if remaining contaminants pose a future threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve CTOC of responsibility for compliance with any other federal, state, tribal or local laws and regulations.

1.	Hare GC C #1 (Blow pit)	Unit M, Sec. 25, T29N, R10W.
2.	Pearce GC #1E (Blow pit)	Unit J, Sec. 23, T29N, R11W.
3.	Sanchez GC #1 (Blow pit)	Unit G, Sec. 28, T29N, R10W.
4.	Texas National GC #1 (Blow pit)	Unit L, Sec. 19, T29N, R09W.

B. The sites listed below were initially found to have ground water contaminated with benzene, toluene, ethylbenzene and xylene (BTEX) in excess of New Mexico Water Quality Control Commission (WQCC) standards. The reports for these sites contain only one subsequent round of water quality sampling events demonstrating that ground water currently meets WQCC standards. CTOC's approved ground water management plan required that all sites contaminated in excess of the WQCC standards would not be submitted for final closure until ground water quality at all monitoring points were below WQCC standards for a minimum of 4 consecutive quarters. Therefore, approval of the closure actions at these sites is **denied**. The OCD requires that CTOC continue ground water quality monitoring at these sites. Pursuant to the previously approved ground water management plan, the OCD will reconsider issuing final closure approval after CTOC demonstrates that ground water quality at all monitoring points are below WQCC standards for a minimum of 4 consecutive quarters.

In addition, the OCD could not find that any analytical results have been submitted for the landfarm activities at the Haney GC B#1E site. Please include these results in all future final closure requests.

1.	Baca GC A #1A (Blow/separator pit)	Unit F, Sec. 26, T29N, R10W.
2.	Haney GC B#1E (Separator pit)	Unit M, Sec. 20, T29N, R10W.
3.	Masden GC #1E (Blow pit)	Unit D, Sec. 28, T29N, R11W.
4.	McDaniel GC B#1E (Dehy pit)	Unit F, Sec. 26, T29N, R10W.
5.	Snyder GC #1A (Blow pit)	Unit E, Sec. 19, T29N, R09W.
6.	Sullivan Frame A#1E (Dehy pit)	Unit A, Sec. 30, T29N, R10W.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office
Bill Liess, BLM Farmington District Office
Nelson Velez, Blagg Engineering, Inc.