3RP-385

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XTO ENERGY

Annual Groundwater Remediation Reports For Year 2008

April 2009

XTO ENERGY

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April 13, 2009

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) herein submits the Annual Groundwater Remediation Reports for year 2008, in accordance with the New Mexico Oil Conservation Division (NMOCD) approved Groundwater Management Plan (GMP). Enclosed are summary reports with analytical data, summary tables, site maps, topographic maps, potentiometric surface diagrams and recommendations/proposed actions for:

- Bruington Gas Com #1- 3RP106
- EJ Johnson C #1E- 3RP385
- Federal Gas Com #H1- 3RP110
- Frost, Jack B #2- 3RP416
- McCoy GC D #1E- 3RP414
- OH Randel #7- 3RP386
- PO Pipken #3E- 3RP409
- Rowland Gas Com #1- 3RP124
- Valdez A #1E- 3RP134

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

- Carson Gas Com #1E- 3RP315
- Snyder Gas Com #1A- 3RP126
- Sullivan Gas Com D #1- 3RP131

In previously submitted reports, fifteen sites met the closure requirements outlined in the GMP and XTO requested closure of those sites in 2006, 2007 and 2008. The reports for the below listed sites are being submitted again for your review.

- Abrams J #1- 3RP100
- Armenta Gas Com C #1E- 3RP394
- Baca Gas Com A #1A- 3RP104
- Bergin Gas Com #1E- 3RP105
- Garcia Gas Com B #1- 3RP111
- Haney Gas Com B #1E- 3RP113
- Hare Gas Com B #1- 3RP413
- Hare Gas Com B #1E- 3RP384
- Hare Gas Com I #1- 3RP412
- Masden Gas Com #1E- 3RP120
- McDaniel Gas Com B #1E- 3RP121
- Romero Gas Com A #1- 3RP123
- State Gas Com BS #1- 3RP127
- Stedje Gas Com #1- 3RP128
- Sullivan Frame A #1E- 3RP130

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

Respectfully,

Martin Nee
EH & S Manager
San Juan Division

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

EJ Johnson C #1E-
3RP385

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2008

E.J. JOHNSON C #1E
3RP-385
(C) SECTION 21 – T27N – R10W, 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

E.J. JOHNSON C #1E
3RP-385

SITE DETAILS

LEGALS - TWN: 27N **RNG:** 10W **SEC:** 21 **UNIT:** C
OCD HAZARD RANKING: 20 **LAND TYPE:** FEDERAL
LATITUDE: 36.54786 **LONGITUDE:** 107.85792

INTRODUCTION

XTO Energy Inc. (XTO) acquired the EJ Johnson C #1E well site from Amoco Production Company (Amoco) in January 1998. This is a gas producing well in the Basin Dakota formation and is currently active. A site map and topographic map are presented as Figures 1 and 2.

HISTORY

XTO has learned that remedial efforts at this location initially included the excavation of approximately 440 cubic yards of hydrocarbon impacted soil from an abandoned production pit in August 1994 by Amoco (Attachment 1). Groundwater was encountered at approximately 10 feet below ground surface and was removed with pump trucks and aerated until December 1995, when test results identified residual hydrocarbon levels below New Mexico Water Quality Control Commission (WQCC) standards. In November 1996 New Mexico Oil Conservation Division (OCD) denied closure due to lack of information regarding benzene, toluene, ethyl benzene and total xylenes (BTEX) concentrations. Remedial activities were re-initiated by XTO after the acquisition of the property.

Monitoring wells MW-1, MW-2 and MW-3 were installed and sampled in September 1999. There are no Bore/Test Hole reports for the installation on file. Groundwater results from all three monitoring wells were consistently below laboratory equipment detection limits (0.2 ug/L) or below the WQCC standards for BTEX and sampling was discontinued by XTO in 2003 in accordance to the OCD approved Groundwater Management Plan.

In response to OCD correspondence dated December 26, 2001, XTO installed a down gradient monitoring well (MW-4) in January 2002. Bore/Test Hole report is presented as Figure 3 representing drilling that occurred on site in January 2002. Groundwater from MW-4 was below laboratory equipment detection limits or below WQCC standards for BTEX and sampling was discontinued in 2004.

An additional monitoring well (MW-5) was installed further down gradient of MW-4 and the source area in July 2003. Figure 4 is presented for the monitoring well installed on site in 2003. Groundwater samples from MW-5 revealed BTEX levels exceeded WQCC standards.

The 2005 annual groundwater report submitted to the OCD in January 2006 proposed installation of an additional monitoring well (MW-6) northwest of MW-5 to further delineate the potential of hydrocarbon impact in the down gradient direction. MW-6 was installed in April 2007. Figure 5 is presented for the monitoring well installed on site in 2007.

Laboratory results from MW-6 indicate concentrations of BTEX were non-detect and sampling of MW-6 was discontinued.

The 2006 annual groundwater report submitted to the OCD in February 2007 proposed continued quarterly sampling of MW-5.

The 2007 annual groundwater report submitted to the OCD in February 2008 proposed continued quarterly sampling of MW-5.

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

METHODOLOGY

Monitoring well MW-5 was sampled quarterly during 2008 with the exception of September 2008 when the monitoring well was repaired.

Water Level Measurements

Static groundwater level monitoring includes recording depth to groundwater measurements with a Keck oil/water interface probe. The interface probe is decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement. These data are recorded as Depth to Water (DTW) and Total Depth (TD) in feet on Table 1.

Groundwater Sampling

Prior to sampling at monitoring wells, depth to groundwater and total depth of wells is measured with a Keck oil/water interface probe. Presence of any free-phase crude oil is also investigated using the interface probe. The interface probe is decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement. The volume of water in the wells is calculated, and a minimum of three casing volumes of water is purged from each well using a disposable bailer or a permanent decontaminated PVC bailer. As water is extracted, pH, electric conductivity and temperature are monitored. Wells are purged until these properties stabilize, indicating that the purge water is representative of aquifer conditions. Stabilization is defined as three consecutive stable readings for each water property (±0.4 units for pH, ±10 percent for electric conductivity and ±2° C for temperature). All purge water is disposed of into tanks on site.

Once each monitoring well is properly purged, groundwater samples are collected by filling at least two 40-millititer (ml) glass vials. The pre-cleaned and pre-preserved (with hydrochloric acid or mercuric chloride) vials are filled and capped with no air inside to prevent degradation of the sample. Samples are labeled with the date and time of collection, well designation, project name, collector's name and parameters to be analyzed. They are immediately sealed and packed on ice. The samples are shipped to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico in a sealed cooler via bus before designated holding times expire. Proper chain-of-custody (COC) procedures are followed with logs documenting the date and time sampled, sample number, type of sample, sampler's name, preservative used, analyses required and sampler's signature.

Groundwater Contour Maps

Top of casing well elevations are surveyed using a surveyor's level; and groundwater elevations obtained from monitoring wells during site visits are used to draft groundwater contour maps. Contours are inferred based on groundwater elevations obtained and observation of physical characteristics at the site (topography, proximity to irrigation ditches, etc.).

RESULTS

Laboratory results from MW-5 indicate BTEX levels decreased throughout the year and are currently below standards or not detected. All laboratory analytical results are presented in Table 1. Laboratory reports are presented in Attachment 2.

Field data collected during site monitoring activities indicate a groundwater gradient that consistently trends west with a slight northwest component. The estimated groundwater flow has been constant and parallels the nearby surface drainage (Kutz Wash). In June 2007 a new data point (MW-6) revealed that the groundwater gradient becomes steeper as it approaches the adjacent drainage. Figures 6-9 illustrate the estimated groundwater gradients during 2008.

CONCLUSIONS

Based on the laboratory results from 2008, natural degradation of BTEX is occurring and there is no further hydrocarbon impact either up gradient or down gradient of the source area.

RECOMMENDATIONS

Quarterly sampling of groundwater for BTEX concentrations in MW-5 until WQCC standards have been met for four consecutive quarters.

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

JOHNSON, E.J. C #1E- PROD. TANK PIT
UNIT C, SEC. 21, T27N, R10W

					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)
27-Sep-99	MW #1	15.32	20.00		13.9	11.0	17.2	10.0
18-Feb-00		15.39			2.4	ND	11.0	ND
20-Jun-00		15.19			3.8	1.6	16	ND
23-Jun-03		16.27			1.0	0.91	ND	ND
26-Aug-03		16.28			0.52	ND	ND	ND
27-Sep-99	MW #2	12.96	20.00		58.7	39.0	90.2	107.4
18-Feb-00		13.08			ND	ND	86	42.6
20-Jun-00		12.86			ND	ND	41	12.5
23-Jun-03		13.90			ND	11	15	1.3
26-Aug-03		13.89			ND	ND	35	2.0
27-Sep-99	MW #3	8.24	20.00		22.7	3.3	2.1	11.6
18-Feb-00		8.51			ND	ND	ND	ND
20-Jun-00		8.14			ND	ND	ND	ND
23-Jun-03		9.30			ND	ND	ND	ND
26-Aug-03		9.28			ND	ND	ND	ND
20-Feb-02	MW #4	12.63	19.80		120	33	840	3,540
23-Jun-03		12.38			1.1	22	7.3	17
26-Aug-03		12.36			2.2	ND	31	15
24-Nov-03		12.15			1.3	ND	38	18
26-Mar-04		12.17			ND	ND	ND	7.0
16-Jun-04		12.00			0.92	ND	9.3	4.2
26-Aug-03	MW #5	15.50	20.00		64	1,100	520	4,200
24-Nov-03		12.35			100	43	190	940
26-Mar-04		12.39			51	ND	61	300
16-Jun-04		12.22			61	3.2	76	380
28-Jun-05		12.44			23	ND	15	71
20-Sep-06		13.02	19.84		2.9	ND	ND	ND
28-Mar-07		13.1	19.84		8.2	ND	ND	ND
12-Jun-07		12.74	19.84		15	ND	ND	ND
25-Sep-07		12.91	19.84		8.2	ND	ND	ND
20-Dec-07					9	ND	ND	ND
13-Mar-08		13.7	14.40		ND	ND	ND	ND
04-Dec-08					ND	ND	4.8	2.8
12-Jun-07	MW #6	14.8	27.14		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS					10	750	750	620

TABLE 2

XTO ENERGY INC. GROUNDWATER LAB RESULTS

JOHNSON, E.J. C #1E- PROD. TANK PIT
UNIT C, SEC. 21, T27N, R10W

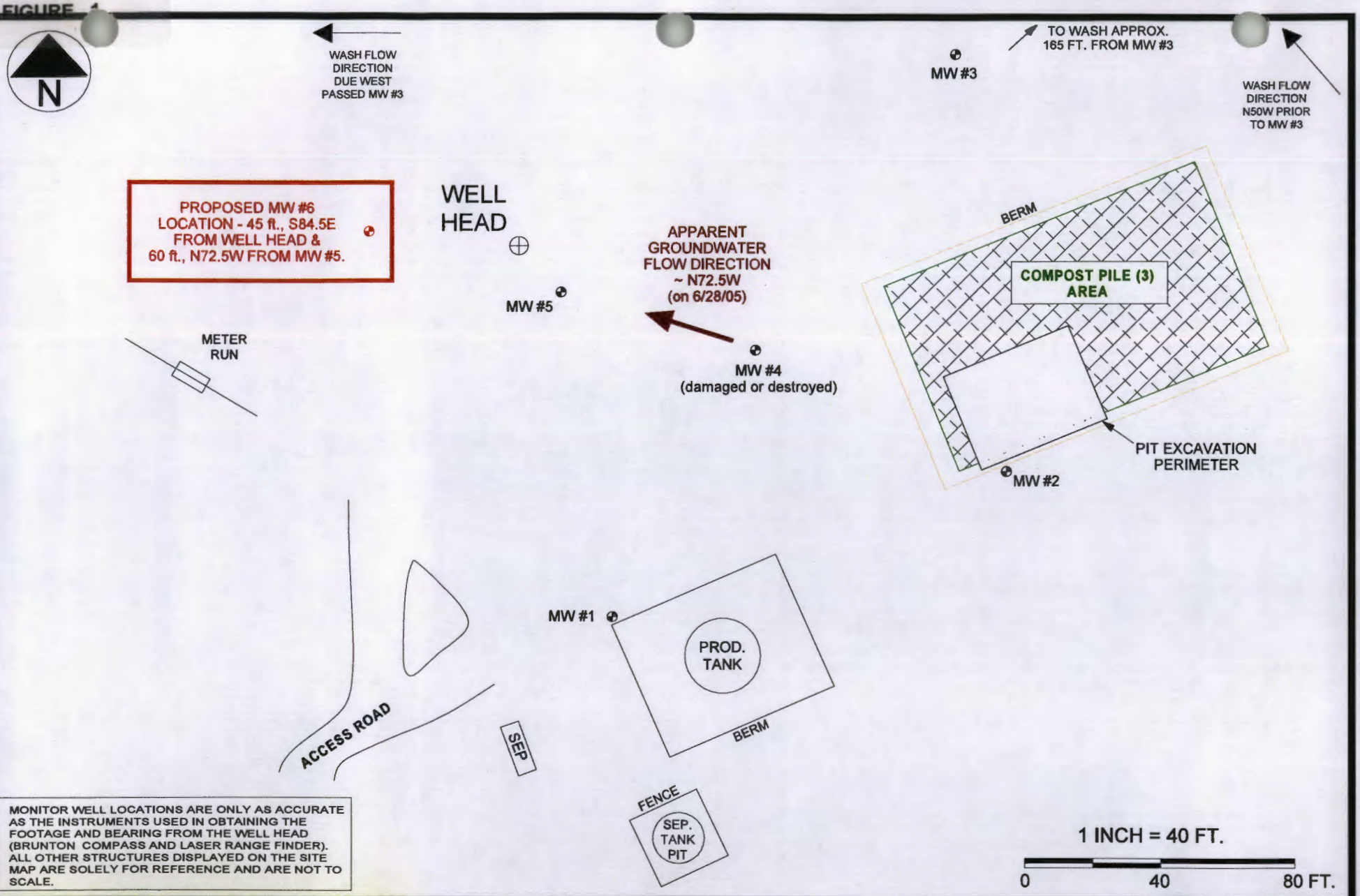
Sample Date: September 27, 1999
February 20, 2002

PARAMETERS	MW #1R 09/27/99	MW #2R 09/27/99	MW #3 09/27/99	MW #4 02/20/02	UNITS
LAB Ph	7.51	8.09	7.85	8.05	s.u.
LAB CONDUCTIVITY @ 25 C	6,920	1,472	6,840	10,600	umhos/cm
TOTAL DISSOLVED SOLIDS @ 180 C	3,440	720	3,410	5,810	mg/L
TOTAL DISSOLVED SOLIDS (Calc)	3,400	710	3,320	5,700	mg/L
SODIUM ABSORPTION RATIO	27.4	11.5	29.3	70.9	ratio
TOTAL ALKALINITY AS CaCO3	648	482	376	1,560	mg/L
TOTAL HARDNESS AS CaCO3	260	72	220	152	mg/L
BICARBONATE AS HCO3	648	482	376	1,560	mg/L
CARBONATE AS CO3	< 1	< 1	< 1	< 0.1	mg/L
HYDROXIDE AS OH	< 1	< 1	< 1	< 0.1	mg/L
NITRATE NITORGEN	0.2	0.2	0.1	0.8	mg/L
NITRITE NITROGEN	0.005	0.015	0.005	0.064	mg/L
CHLORIDE	5.0	15	18	1030	mg/L
FLUORIDE	2.1	0.96	1.66	0.88	mg/L
PHOSPHATE	0.7	3.4	0.5	119	mg/L
SULFATE	1,870	140	1,990	1,540	mg/L
IRON	0.011	0.147	0.008	0.135	mg/L
CALCIUM	88	25.6	60	46.4	mg/L
MAGNESIUM	9.8	2	17.1	8.79	mg/L
POTASSIUM	7.5	7.5	7.5	0.5	mg/L
SODIUM	1,020	225	1,000	2,010	mg/L
CATION/ANION DIFFERENCE	0.14	0.19	0.24	0.02	%

Sample Date: September 20, 2006

PARAMETERS	MW #1R 09/20/06	MW #2R 09/20/06	MW #3 09/20/06	MW #5 09/20/06	UNITS
TOTAL DISSOLVED SOLIDS (Calc)	1,900	1,600	2,600	1,800	mg/L
CHLORIDE	7.3	4	8.2	20	mg/L

FIGURE 1



XTO ENERGY INC.

JOHNSON, E.J. C #1E

NE/4 NW/4, SEC. 21, T27N, R10W

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: DELINEATION

DRAWN BY: NJV

FILENAME: 05-22-06-SM.SKF

REVISED: 05/19/06

SITE MAP

05/06

FIGURE 2

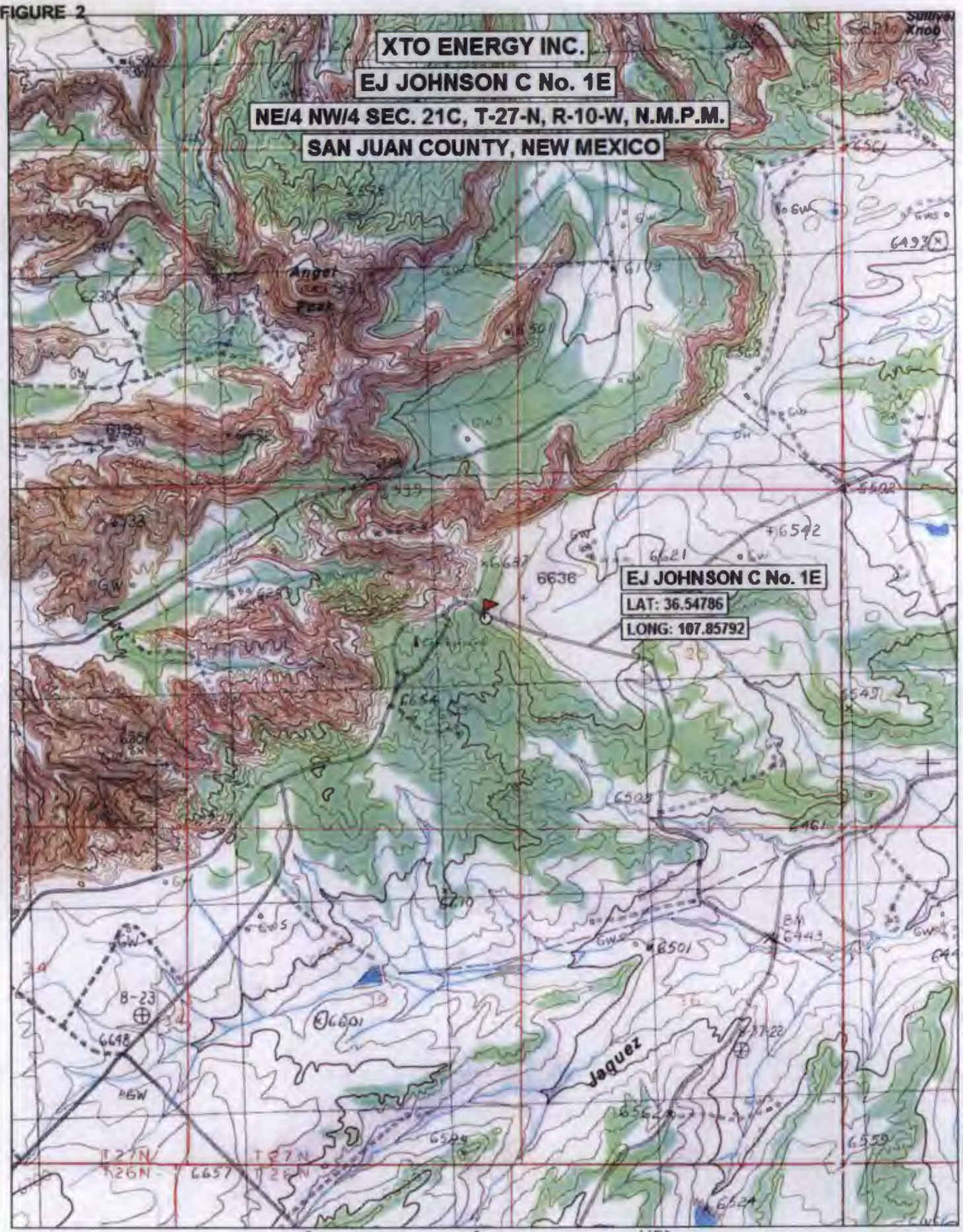


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FIGURE 3

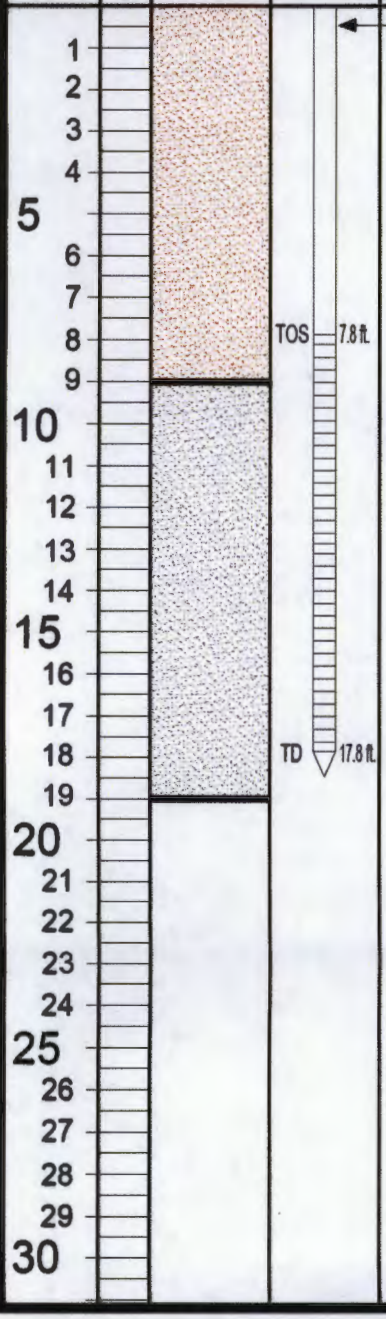
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT:	XTO ENERGY INC.
LOCATION NAME:	JOHNSON, E.J. C # 1E PROD. TANK PIT - UNIT C, SEC. 21, T27N, R10W
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	EARTHPROBE 200
BORING LOCATION:	76.5 FEET, S66E FROM WELL HEAD.

BORING #.....	BH - 4
MW #.....	4
PAGE #.....	4
DATE STARTED	1/24/02
DATE FINISHED	1/24/02
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APROX. 2.20 FT. ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 9.0 FT. BELOW GRADE).

▼ GW DEPTH ON 2/20/02 = 10.43 FT. (APPROX.) FROM GROUND SURFACE.

MEDIUM GRAY SAND, NON COHESIVE, SATURATED, STRONG HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS, (9.0 - 19.0 FT. BELOW GRADE).

NOTES:
- SAND.
- SAND (HYDROCARBON IMPACTED).

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from grade to 7.80 ft. below grade, 0.010 slotted screen between 7.80 to 17.80 feet below grade, sand packed annular to 3.50 ft. below grade. Slip cap at top of casing.

DRAWING: BH4-MW4. SKF | DATE: 2/23/05 | DWN BY: NJV

FIGURE 4

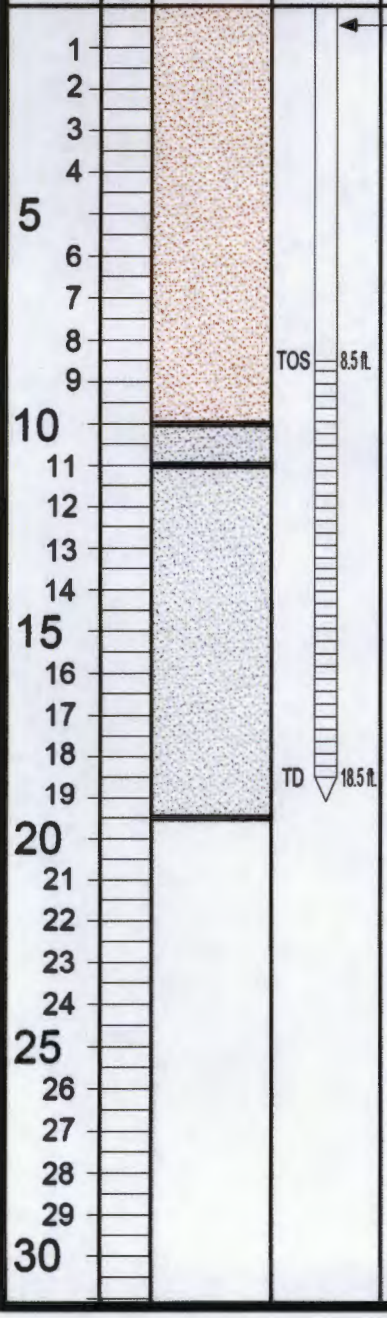
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT:	XTO ENERGY INC.
LOCATION NAME:	JOHNSON, E.J. C # 1E PROD. TANK PIT - UNIT C, SEC. 21, T27N, R10W
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	EARTHPROBE 200
BORING LOCATION:	18.5 FEET, S42E FROM WELL HEAD.

BORING #.....	BH - 5
MW #.....	5
PAGE #.....	5
DATE STARTED	7/18/03
DATE FINISHED	7/18/03
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APROX. 1.00 FT. ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 10.0 FT. BELOW GRADE).

MEDIUM TO MEDIUM GRAY SAND, NON COHESIVE, MOIST TO SATURATED, STRONG HC ODOR DETECTED WITHIN CUTTINGS (10.0 - 11.0 FT. BELOW GRADE).

GW DEPTH ON 8/26/03 = 11.56 FT. (APPROX.) FROM GROUND SURFACE.

MEDIUM GRAY SAND, NON COHESIVE, SATURATED, STRONG HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS, (11.0 - 19.5 FT. BELOW GRADE).

NOTES:
- SAND.
- SAND (HYDROCARBON IMPACTED).

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from grade to 8.50 ft. below grade, 0.010 slotted screen between 8.50 to 18.50 feet below grade, sand packed annular to 4 ft. below grade. Slip cap at top of casing.

DRAWING: BH5-MW5. SKF | DATE: 2/23/05 | DWN BY: NJV

FIGURE 5

RECORD OF SUBSURFACE EXPLORATION

LodeStar Services
P.O. Box 4465
Durango, CO 81302
303-917-6288

Borehole #: 1
Well #: MW-6
Page: 1 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: EJ Johnson C #1E

Borehole Location: 36° 33.945' N, 107° 54.244' W
GWL Depth: 19.5'
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 04/30/07
Date Completed: 04/30/07

Drilling Method: Hollow Stem Auger
Air Monitoring Method: PID

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
0	1	0-5'	cuttings	damp, reddish brown, moderately sorted medium sand, subrounded		Easy
5	2	5-10'	cuttings	damp, brown, moderately sorted coarse sand, subrounded, varying mineralogies		Easy
10	3	10-15'	cuttings	moist, dark brown, poorly sorted coarse sand, subrounded, varying mineralogies		Easy
15	4	15-20'	cuttings	grayish brown moist silty sand, poorly sorted, subrounded sand content	0.7	Easy
20						

Comments: Well is located on edge of well pad, close to wash. Wash has some running water.

Geologist Signature: Ashley L Ager

RECORD OF SUBSURFACE EXPLORATION

LodeStar Services
P.O. Box 4465
Durango, CO 81302
303-917-6288

Borehole #: 1
Well #: MW-6
Page: 2 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: EJ Johnson C #1E

Borehole Location: 36° 33.945' N, 107° 54.244' W
GWL Depth: 19.5'
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 04/30/07
Date Completed: 04/30/07

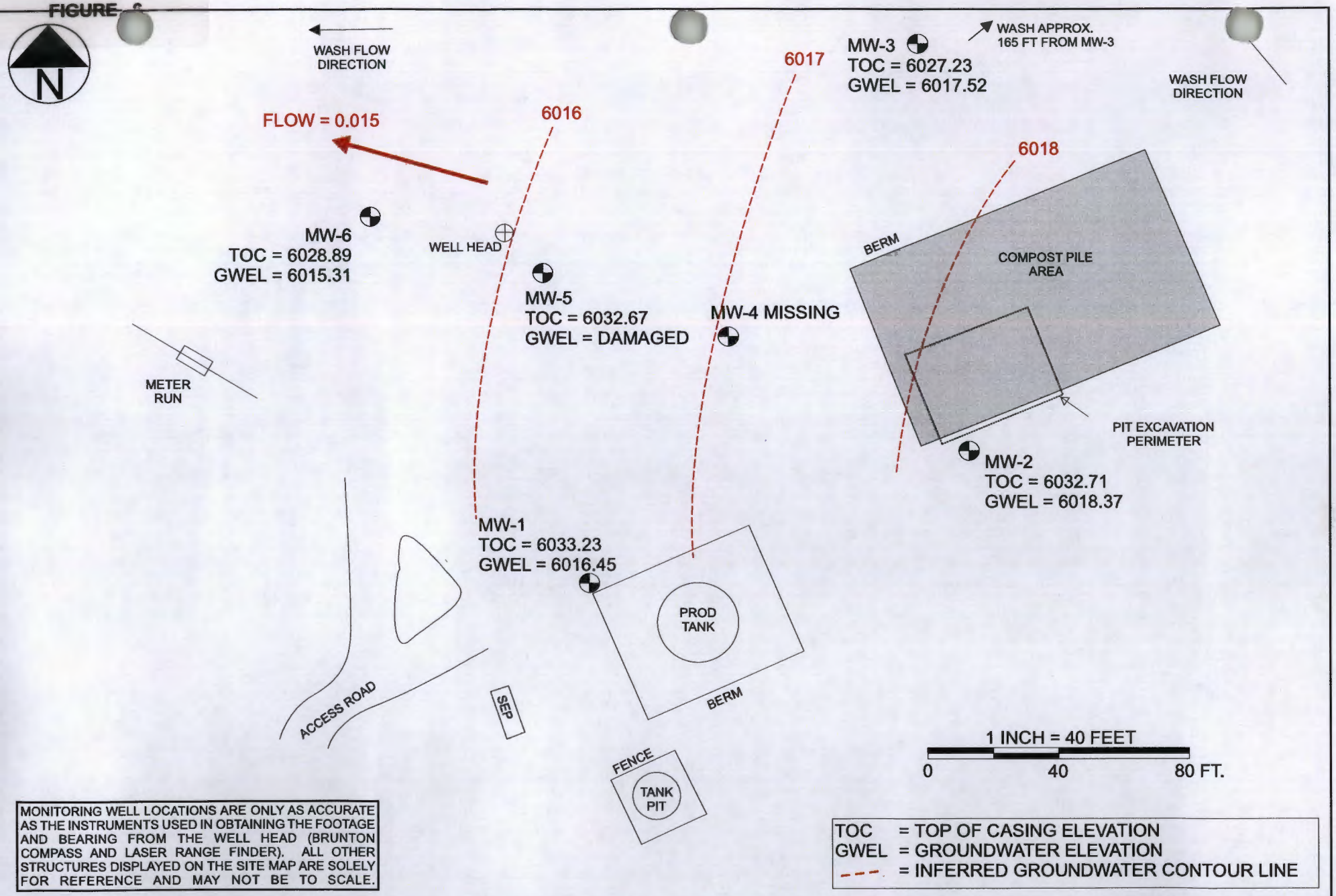
Drilling Method: Hollow Stem Auger
Air Monitoring Method: PID

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20 25 30 35 40	5	20-25'	cuttings	wet, gray sandy silt, coarse sand content, poorly sorted. GWL at ~19.5' water gushing out of hole at 25'	0.9	Easy

Comments:

Geologist Signature: Ashley L. Ager

FIGURE 6

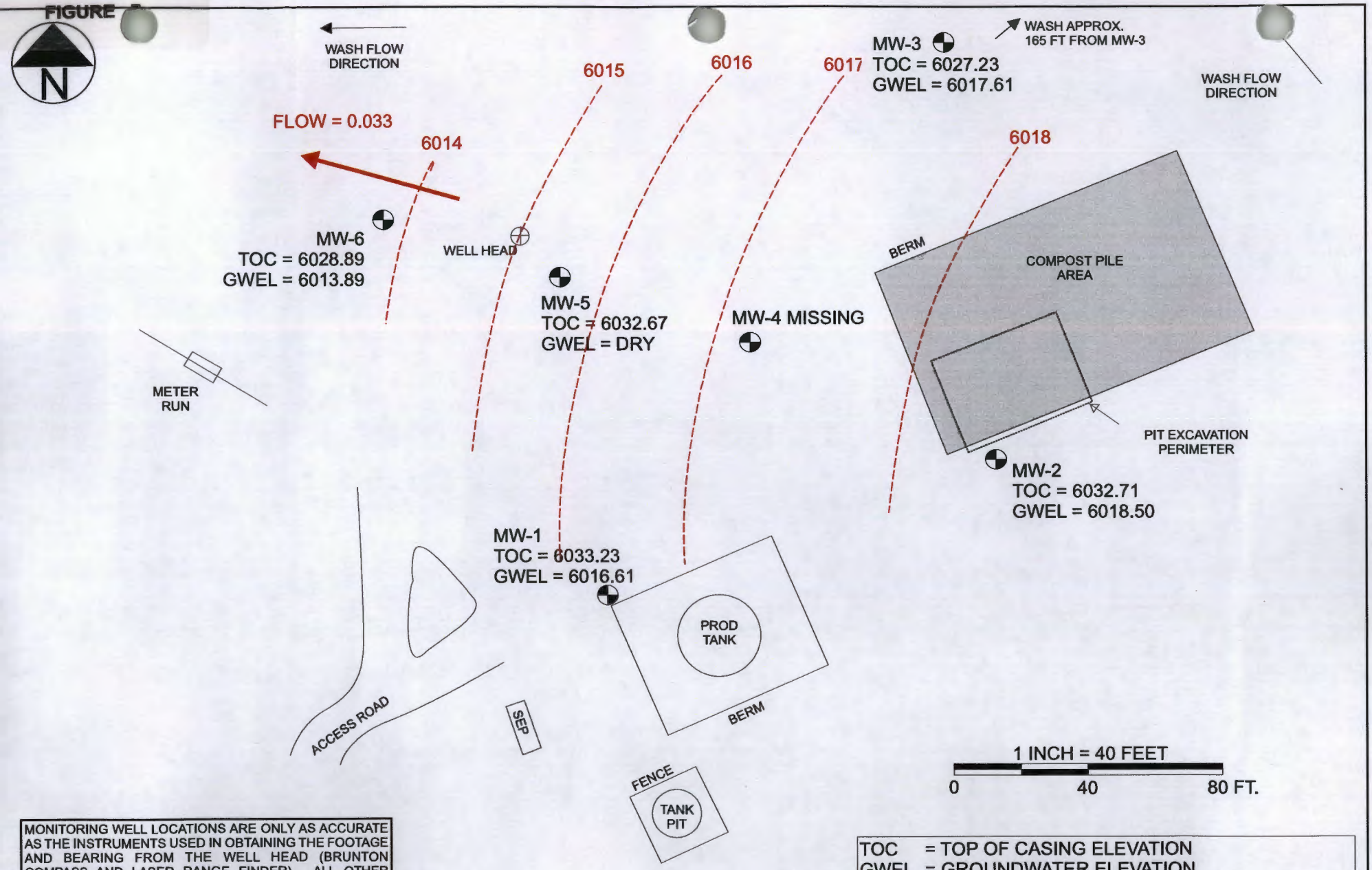


MONITORING WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

TOC = TOP OF CASING ELEVATION
GWEL = GROUNDWATER ELEVATION
- - - = INFERRED GROUNDWATER CONTOUR LINE

Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	E.J. JOHNSON C #1E NE/4 NW/4 SEC. 21, T27N, R10W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 03/17/08	GROUNDWATER GRADIENT MAP 03/13/08

FIGURE

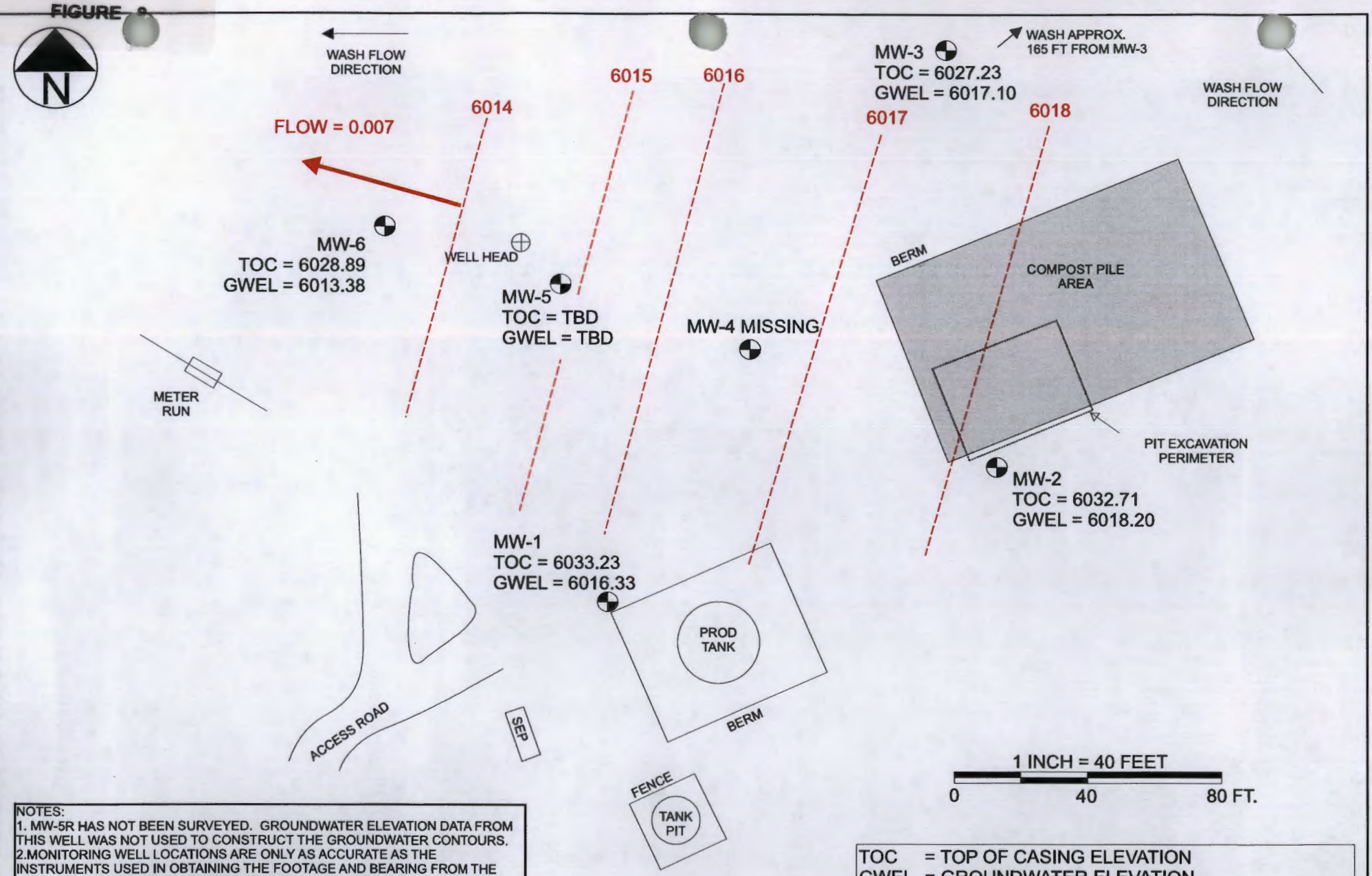


MONITORING WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

TOC = TOP OF CASING ELEVATION
GWEL = GROUNDWATER ELEVATION
---- = INFERRED GROUNDWATER CONTOUR LINE

Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	E.J. JOHNSON C #1E NE/4 NW/4 SEC. 21, T27N, R10W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 06/30/08	GROUNDWATER GRADIENT MAP 06/03/2008

FIGURE 9

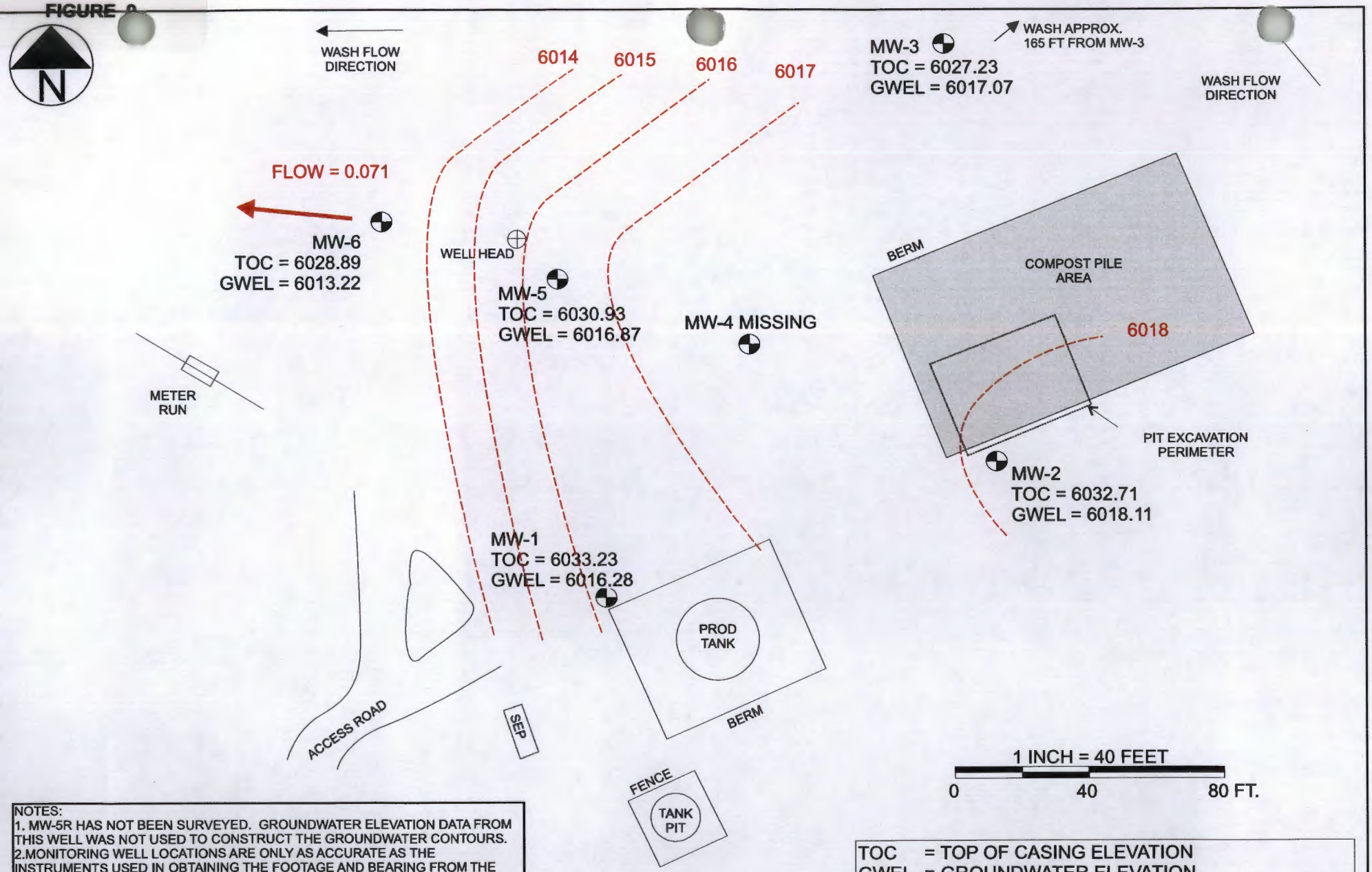


NOTES:
1. MW-5R HAS NOT BEEN SURVEYED. GROUNDWATER ELEVATION DATA FROM THIS WELL WAS NOT USED TO CONSTRUCT THE GROUNDWATER CONTOURS.
2.MONITORING WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

TOC = TOP OF CASING ELEVATION
GWEL = GROUNDWATER ELEVATION
--- = INFERRED GROUNDWATER CONTOUR LINE

Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	E.J. JOHNSON C #1E NE/4 NW/4 SEC. 21, T27N, R10W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ADH REVISED: 09/30/08	GROUNDWATER GRADIENT MAP 09/22/2008

FIGURE 8



NOTES:
1. MW-5R HAS NOT BEEN SURVEYED. GROUNDWATER ELEVATION DATA FROM THIS WELL WAS NOT USED TO CONSTRUCT THE GROUNDWATER CONTOURS.
2.MONITORING WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

TOC = TOP OF CASING ELEVATION
GWEL = GROUNDWATER ELEVATION
- - - = INFERRED GROUNDWATER CONTOUR LINE

Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	E.J. JOHNSON C #1E NE/4 NW/4 SEC. 21, T27N, R10W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ADH REVISED: 12/22/2008	GROUNDWATER GRADIENT MAP 12/04/2008

ATTACHMENT 1

orm 3160-5
une 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.: SF - 077386 A

6. If Indian, Allottee or Tribe Name:

SUBMIT IN TRIPLICATE

7. If Unit or CA, Agreement Designation:

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.: EJ JOHNSON C # 1E

2. Name of Operator: Amoco Production Company

9. API Well No.: 3004524206

3. Address and Telephone No.: 200 Amoco Court, Farmington, N.M. 87401 Tel: (505) 326-9200

10. Field and Pool, or Exploratory Area: DAKOTA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): NE/NW. SEC. 21, T27N, R10W NMPM

11. County or Parish, State: SAN JUAN, N.M.

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Pit closure	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Pit closure verification - see attached documentation.

PRODUCTION PIT - ABANDONED - WATER SAMPLE

↓

PREVIOUSLY SUBMITTED - ●

14. I hereby certify that the foregoing is true and correct

Signed B.A. Shaw Title ENVIRO. COORDINATOR Date 2-9-95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Bo 115

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: E J JOHNSON C #1E
Well Name

Location: Unit or Qtr/Qtr Sec C Sec 21 T 27 N R 10 W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other PRODUCTION PIT

Land Type: BLM X, State ___, Fee ___, Other ___

Pit Location: (Attach diagram)
Pit dimensions: length 40', width 30', depth 10'
Reference: wellhead X, other ___
Footage from reference: 75
Direction from reference: 90 Degrees ___ East North X of X West South ___

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	0
	RANKING SCORE (TOTAL POINTS):	20

BD 115

Date Remediation Started: 8-24-94 **Date Completed:** _____

Remediation Method: (Check all appropriate sections) **Excavation** X **Approx. cubic yards** 350

Landfarmed ___ **Insitu Bioremediation** ___

Other COMPOST

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) **Onsite** X **Offsite** _____

General Description Of Remedial Action: _____

Excavation + PUMPING CONTAMINATED WATER - CONTINUING

Ground Water Encountered: **No** ___ **Yes** X **Depth** 10'

Final Pit:
Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 10'

Sample date _____ **Sample time** _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

Ground Water Sample: **Yes** X **No** ___ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 12-14-94

SIGNATURE B D Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

District I
...ox 1980, Hobbs, NM
District II
...Drawer, DD, Artesia, NM 88211
District III
...os Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company Telephone: (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: E. J. JOHNSON C #1E
Well Name

Location: Unit or Qtr/Qtr Sec C Sec 21 T 27N R 10W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other PRODUCTION TANK

Land Type: BLM X, State ___, Fee ___, Other ___

Pit Location: (Attach diagram)
Pit dimensions: length 40', width 30', depth 10'
Reference: wellhead X, other ___
Footage from reference: 75
Direction from reference: 90 Degrees ___ East North X of
X West South ___

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	0
	RANKING SCORE (TOTAL POINTS):	20

Date Remediation Started: _____ Date Completed: 1-27-95

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards _____

Landfarmed ___ Insitu Bioremediation ___

Other SOIL COMPOSTED

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

General Description Of Remedial Action: _____

Excavation - PUMPING + AERATION OF CONTAMINATED WATER,

PIT PREVIOUSLY SUBMITTED AS ONGOING GROUNDWATER REMEDIATION.

Ground Water Encountered: No ___ Yes X Depth 10'

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

Ground Water Sample: Yes X No ___ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 2-9-95

SIGNATURE B.D. Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

R 10

CLIENT: AMOCO

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

LOCATION NO: B0115
C.O.C. NO: _____

FIELD REPORT: PIT CLOSURE VERIFICATION

FIELD REPORT COMPLETED: 10-7-94

LOCATION: NAME: EJ JOHNSON C WELL #: 1E PIT: PROD.
QUAD/UNIT: C SEC: 21 TWP: 27 N RNG: 10W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NE/NW CONTRACTOR: EPC

DATE STARTED: 8-24-94
DATE FINISHED: _____
ENVIRONMENTAL SPECIALIST: F.M./RGO

EXCAVATION APPROX. 40 FT. x 30 FT. x 10 FT. DEEP. CUBIC YARDS: 350
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: COMPOST
LAND USE: RANGE LEASE: SF-077386A FORMATION: _____

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 75 FEET WEST FROM WELLHEAD.
DEPTH TO GROUNDWATER: 10' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >100'
NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: ? OPEN -

ENVIROTECH TOOK ORIGINAL SAMPLE - NO FIELD REPORT PRODUCED, MET ON SITE WITH FRANK MCDONALD - WATER NOT REMEDIATED AS OF 10-7-94. RGO.

12-14-94
CONTAMINATED WATER BEING PUMPED.

1/27/95
CONTIN. - WATER BEING PUMPED.

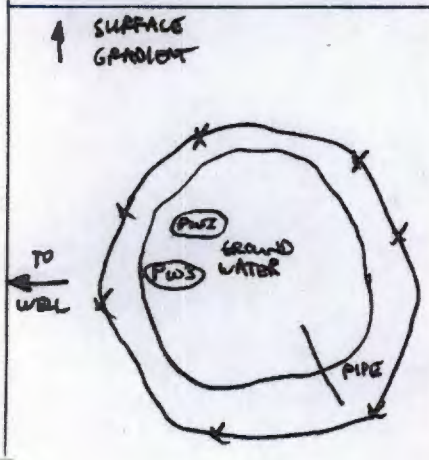
G.W.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE
0 10 20 FT

PIT PERIMETER

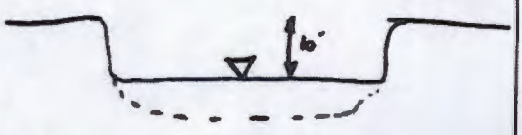


OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	
2	
3	
4	
5	
LAB	SAMPLES
PIT WATER @ 10'	BTEX 8/24/94
PW2 @ GW (10')	BTEX 10/20/94 NT
PW3 @ GW (10')	BTEX 1/27/95 NT
PASSED	

B - 2.0 T - 80.4 E - 57.2 X - 403 ppb

PIT PROFILE



TRAVEL NOTES: CALLOUT: _____ ONSITE: _____

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	~~MW #1~~ GROUNDWATER	Date Reported:	09-02-94
Laboratory Number:	7839	Date Sampled:	08-24-94
Sample Matrix:	Water	Date Received:	08-24-94
Preservative:	HgCl & Cool	Date Analyzed:	09-01-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	258	0.3
Toluene	0.3	0.3
Ethylbenzene	0.5	0.2
m-Xylene	0.7	0.3
o-Xylene	1.6	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	104 %
Bromofluorobenzene	105 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: EJ Johnson C #1E Production Pit A0099

Analyst

Review

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Nelson Velez	Date:	10/21/94
Company:	Blagg Engineering	Lab ID:	2157
Address:	P.O. Box 87	Sample ID:	3673
City, State:	Bloomfield, NM 87413	Job No.	2-1000

Project Name:	E. J. Johnson C 1 E				
Project Location:	PW 2 @ GW (10')				
Sampled by:	NV	Date:	10/20/94	Time:	9:45
Analyzed by:	DLA	Date:	10/21/94		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	33.6	0.2
Toluene	21.2	0.2
Ethylbenzene	ND	0.2
m,p-Xylene	16.0	0.2
o-Xylene	58.3	0.2
TOTAL	129.1 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: [signature]

Date: 10/24/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Nelson Velez	Date:	12/17/94
Company:	Blagg Engineering	Lab ID:	2333
Address:	P.O. Box 87	Sample ID:	4421
City, State:	Bloomfield, NM 87413	Job No.	2-1000

Project Name:	E. J. Johnson C 1 E				
Project Location:	PW 2 @ GW (10') - Prod. Pit				
Sampled by:	NV	Date:	12/16/94	Time:	14:35
Analyzed by:	DLA	Date:	12/17/94		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	154.9	0.2
Toluene	54.2	0.2
Ethylbenzene	126.9	0.2
m,p-Xylene	577.2	0.2
o-Xylene	43.2	0.2
TOTAL	956.3 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by:

Date: 12/19/94

OFF: (505) 325-8786

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Nelson Velez	Date:	1/28/95
Company:	Blagg Engineering	Lab ID:	2529
Address:	P.O. Box 87	Sample ID:	4933
City, State:	Bloomfield, NM 87413	Job No.	2-1000

Project Name:	E. J. Johnson C 1 E				
Project Location:	PW 3 @ GW (10') - Prod				
Sampled by:	NV	Date:	1/27/95	Time:	10:20
Analyzed by:	DLA	Date:	1/28/95		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	2.0	0.2
Toluene	80.4	0.2
Ethylbenzene	57.2	0.2
m,p-Xylene	338.2	0.2
o-Xylene	64.8	0.2
TOTAL	542.7 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: Da G
Date: 1/30/95

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 11/27/95

Page 1 of 1

80115

Purchase Order No.:	Job No.		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name	Title PE
Company CLACK ENGINEERING	Dept.	Company SAME	
Address P.O. BOX 87		Mailing Address SAME	
City, State, Zip BLOOMFIELD, NM 87413		City, State, Zip SAME	
		Telephone No. 632-1199	Telefax No.

Sampling Location: E.T. JOHNSON C1E

Sampler: Nelson Velez

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX (8020)	LAB ID
PW 2 C EW (10') - PROD.	11/27/95	1020	WATER	HCl	2	✓	4533-2529
~~PW C EW ( )~~	~~11/27/95~~		~~WATER~~	~~HCl~~	~~2~~	~~✓~~	

Relinquished by: Nelson Velez	Date/Time 11/27/95 1200	Received by: [signature]	Date/Time 11/27/95 1200
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

ATTACHMENT 2

Hall Environmental Analysis Laboratory, Inc.

Date: *27-Mar-08*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0803158

Lab ID: 0803158-01 **Collection Date:** 3/13/2008 12:30:00 PM
Client Sample ID: ~~PO Pipken 3E MW-2~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **BDH**
Benzene	9.7	1.0		µg/L	1	3/25/2008 11:31:05 AM
Toluene	ND	1.0		µg/L	1	3/25/2008 11:31:05 AM
Ethylbenzene	1.1	1.0		µg/L	1	3/25/2008 11:31:05 AM
Xylenes, Total	5.7	2.0		µg/L	1	3/25/2008 11:31:05 AM
Surr: 4-Bromofluorobenzene	98.9	68.9-122		%REC	1	3/25/2008 11:31:05 AM

Lab ID: 0803158-02 **Collection Date:** 3/13/2008 2:34:00 PM
Client Sample ID: El Johnson CIE MW-5 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	3/25/2008 12:01:16 PM
Toluene	ND	1.0		µg/L	1	3/25/2008 12:01:16 PM
Ethylbenzene	ND	1.0		µg/L	1	3/25/2008 12:01:16 PM
Xylenes, Total	ND	2.0		µg/L	1	3/25/2008 12:01:16 PM
Surr: 4-Bromofluorobenzene	96.4	68.9-122		%REC	1	3/25/2008 12:01:16 PM

Lab ID: 0803158-03 **Collection Date:** 3/13/2008 3:11:00 PM
Client Sample ID: ~~Jack Frost B2 MW-4~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **BDH**
Benzene	17	1.0		µg/L	1	3/25/2008 12:31:24 PM
Toluene	ND	1.0		µg/L	1	3/25/2008 12:31:24 PM
Ethylbenzene	ND	1.0		µg/L	1	3/25/2008 12:31:24 PM
Xylenes, Total	ND	2.0		µg/L	1	3/25/2008 12:31:24 PM
Surr: 4-Bromofluorobenzene	109	68.9-122		%REC	1	3/25/2008 12:31:24 PM

Lab ID: 0803158-04 **Collection Date:**
Client Sample ID: Trip Blank **Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	3/25/2008 1:01:32 PM
Toluene	ND	1.0		µg/L	1	3/25/2008 1:01:32 PM
Ethylbenzene	ND	1.0		µg/L	1	3/25/2008 1:01:32 PM
Xylenes, Total	ND	2.0		µg/L	1	3/25/2008 1:01:32 PM
Surr: 4-Bromofluorobenzene	98.8	68.9-122		%REC	1	3/25/2008 1:01:32 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: 0803158

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 0803158-01A MSD		*MSD*			Batch ID:	**R27861**	Analysis Date:		3/25/2008 2:01:44 PM
Benzene	28.56	µg/L	1.0	94.4	85.9	113	1.36	27	
Toluene	19.46	µg/L	1.0	96.0	86.4	113	1.31	19	
Ethylbenzene	20.31	µg/L	1.0	96.1	83.5	118	1.87	10	
Xylenes, Total	62.71	µg/L	2.0	95.0	83.4	122	2.20	13	
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R27861**	Analysis Date:		3/25/2008 9:00:00 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:	**R27861**	Analysis Date:		3/25/2008 2:32:03 PM
Benzene	20.48	µg/L	1.0	102	85.9	113			
Toluene	20.78	µg/L	1.0	104	86.4	113			
Ethylbenzene	20.85	µg/L	1.0	104	83.5	118			
Xylenes, Total	61.22	µg/L	2.0	102	83.4	122			
Sample ID: 0803158-01A MS		*MS*			Batch ID:	**R27861**	Analysis Date:		3/25/2008 1:31:37 PM
Benzene	28.95	µg/L	1.0	96.3	85.9	113			
Toluene	19.72	µg/L	1.0	97.3	86.4	113			
Ethylbenzene	20.69	µg/L	1.0	98.0	83.5	118			
Xylenes, Total	64.11	µg/L	2.0	97.3	83.4	122			

Qualifiers:

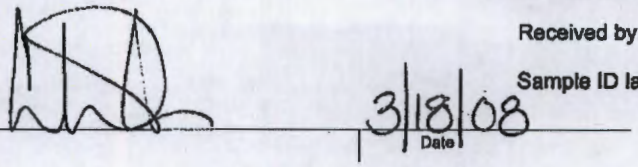
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date Received: 3/18/2008

Work Order Number 0803158 | Received by: ARS

Checklist completed by:  Signature 3/18/08 Date | Sample ID labels checked by: AB 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:
☒ 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: Ashley Ager
On Ice: 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. 0803158	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)
03-13-08	1230	PO Pipken 3E MW-2	20cc/3	HCl	1												✓				
03-13-08	1434	EJ Johnson CIE MW-5	20cc/2	HCl	2												✓				
03-13-08	1511	Jack Frost B2 MW-4	20cc/3	HCl	3												✓				
03-13-08	0700	TRIP BLANK	20cc/2	HCl	4												✓				

Date:	Time:	Relinquished by:	Received by:	Remarks:
3-17-08	1630	Ashley L Ager	8:25 8/18/08	please copy results to ALA@lodestarservice.com
Date:	Time:	Relinquished by:	Received by:	

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	108	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:

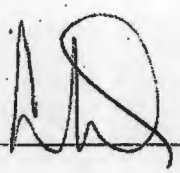
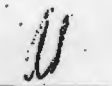
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

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:  Signature 12/5/08 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?	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: Allie Dayhuff
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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HALL NO. 08121191	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 Frost B2-MW-4	glass/3	HCl	1												X				
4Dec08	1105		E.J Johnson 1E-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	Allie Dayhuff			
Date:	Time:	Relinquished by:	Received by:	12/5/08	15:00

Remarks: please email results to
data 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.