# 3R - 415

# 2008 AGWMR

# APR 2009

# XTO ENERGY INC.

3R-415

## ANNUAL GROUNDWATER REPORT

## 2008

## CARSON GAS COM #1E
~~3RP-315~~
## (F) SECTION 32 – T30N – R12W, 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

## CARSON GAS COM #1E
### 3RP-315

**SITE DETAILS**

**LEGALS - TWN:** 30N **RNG:** 12W **SEC:** 32 **UNIT:** F
**NMOCD HAZARD RANKING:** 30 **LAND TYPE:** FEE

## PREVIOUS ACTIVITIES

**Excavation:** Feb-04 (400 CY)
**Quarterly Sampling Initiated:** Feb-04
**Monitoring Wells:** Feb/Mar-04 & May-07
**Sampling Re-initiated:** Aug-06

## 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. Copies of the laboratory reports and associated quality assurance/quality control data for 2007 and 2008 are presented as Attachment 1.

## POTENTIOMETRIC SURFACE DIAGRAMS

Field data collected during site monitoring activities indicate a groundwater gradient that trends towards the southwest. Figures 2 - 5 illustrate the estimated groundwater gradient for four (4) consecutive quarters beginning 2007. Monitoring well MW-3 was replaced in May 2007 (MW-3R).

## ANNUAL GROUNDWATER REMEDIATION REPORTS

The 2006 annual groundwater report was submitted to New Mexico Oil Conservation Division (NMOCD) in February 2007, proposing replacement of MW-3 and continued quarterly sampling of the groundwater monitoring wells, in accordance with the NMOCD approved Groundwater Management Plan.

The 2007 annual groundwater reports was submitted to NMOCD in January 2008, proposing continued quarterly sampling of the groundwater monitoring wells, in accordance with the NMOCD approved Groundwater Management Plan.

## 2008 ACTIVITIES

Groundwater samples were collected from monitoring wells MW-1, MW-2 and MW-3R during the first quarter of 2008. Analytical results demonstrate benzene, toluene, ethyl benzene and total xylenes (BTEX) constituents in groundwater are not detectable for four (4) consecutive quarters in 2007 and 2008.

## GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Bore/Test Hole Reports were not generated in 2004 at the time of drilling and therefore are not presented. Bore/Test Hole Reports are presented as Figures 6 - 7 representing drilling that occurred on site in May 2007.

## 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 Carson Gas Com #1E from Amoco Production Company. In 2004 a historical dehydrator pit was discovered. The former pit was closed (Attachment 2) and three groundwater monitoring wells were installed to delineate the extent of hydrocarbon impact to groundwater. Monitoring well numbered MW-2 was installed near the center of the source area, (closed and backfilled earthen dehy pit). Monitoring well numbered MW-3 was placed down gradient of MW-2. BTEX constituents were not detected above the laboratory equipment detection limits (0.2 ug/L) in either of the monitoring wells.

Groundwater analytical data from MW-1, MW-2 and MW-3R for four (4) consecutive quarters have demonstrated no detectable levels of BTEX constituents and New Mexico Quality Control Commission (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

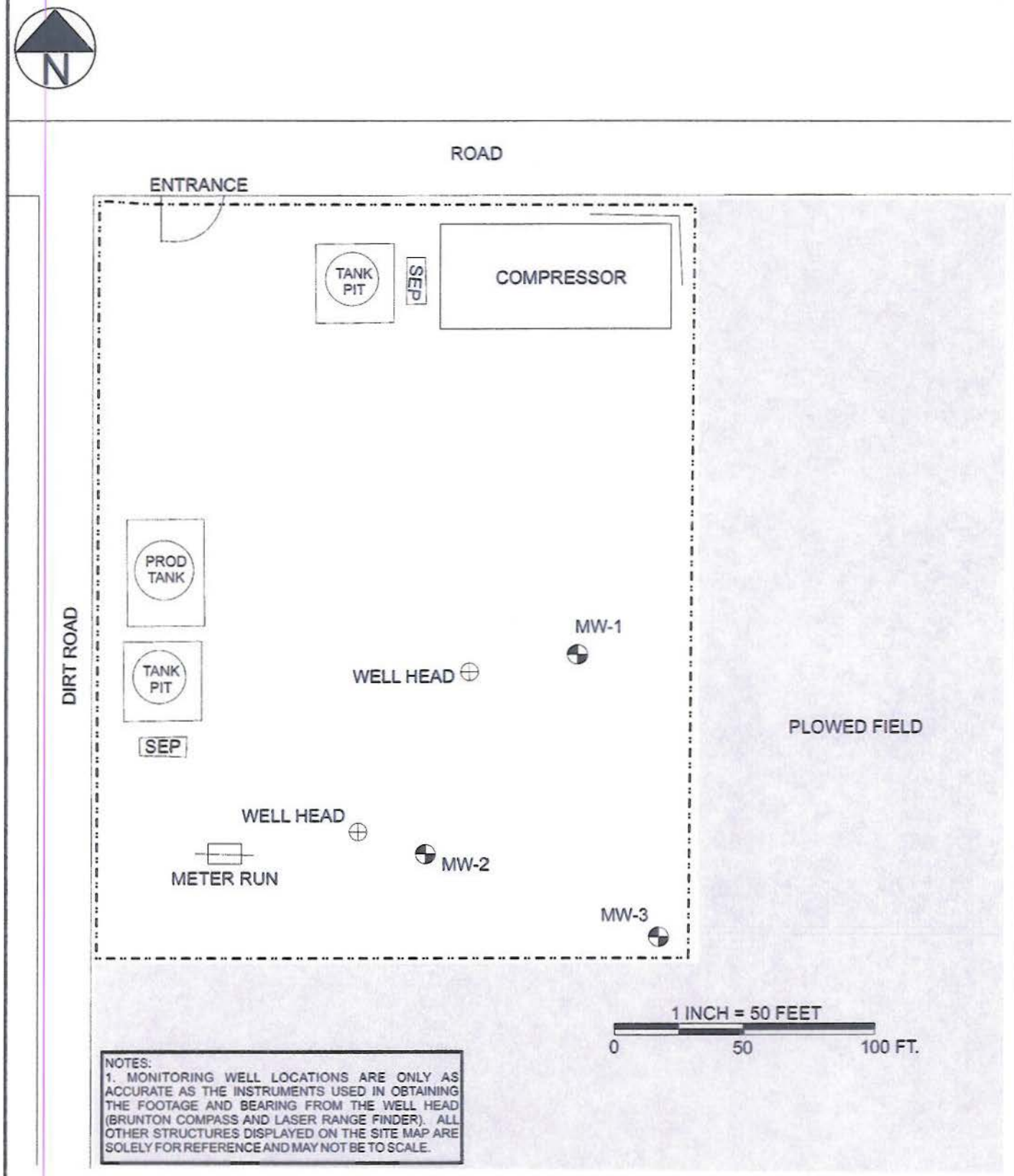
- XTO requests closure of this site.
- Following OCD approval for closure, all monitoring well locations will be abandoned in accordance with the monitoring well abandonment plan.

**TABLE 1**

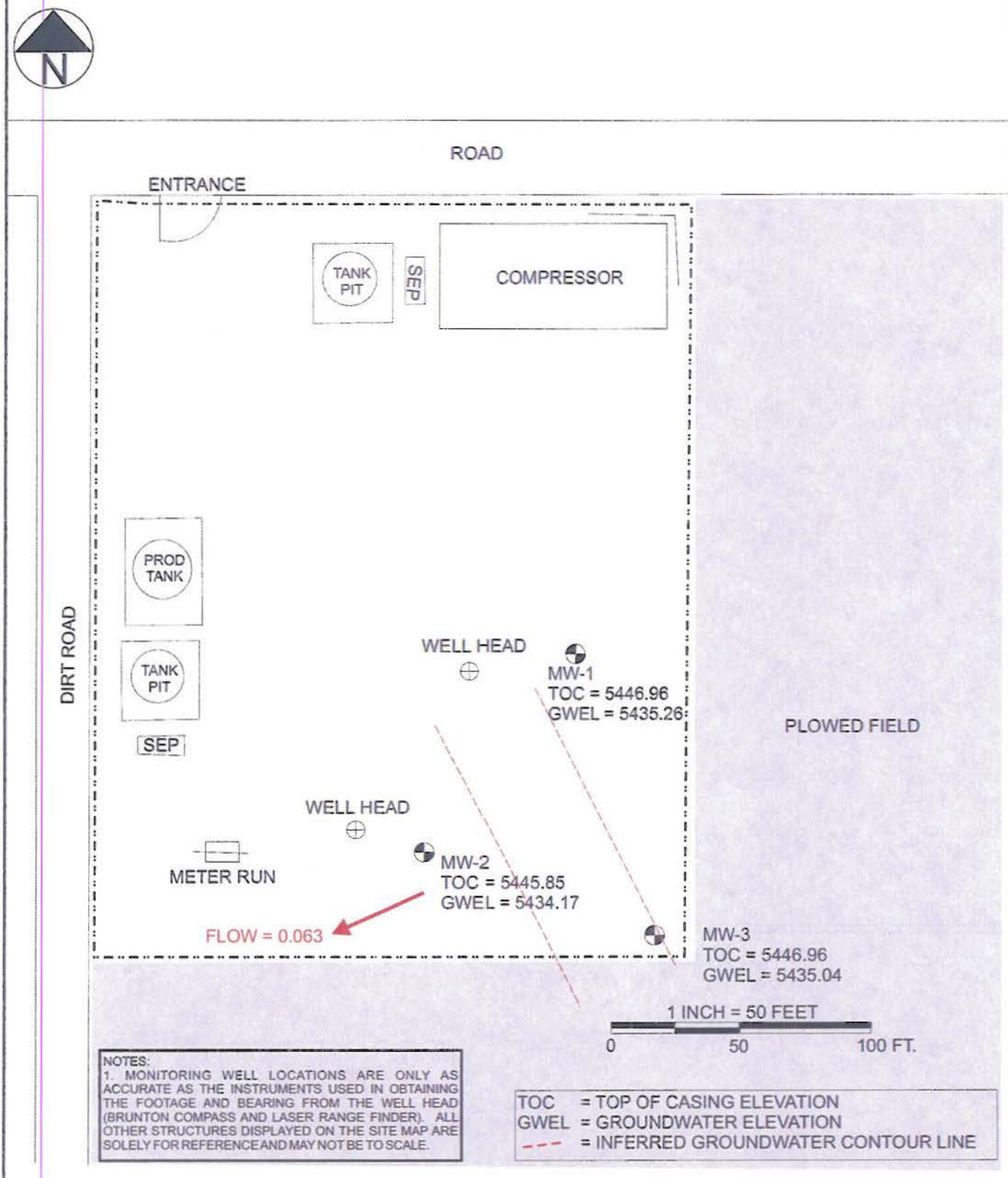
## XTO ENERGY INC. GROUNDWATER LAB RESULTS

**CARSON GC #1E- DEHY PIT**
**UNIT F, SEC. 32, T30N, R12W**

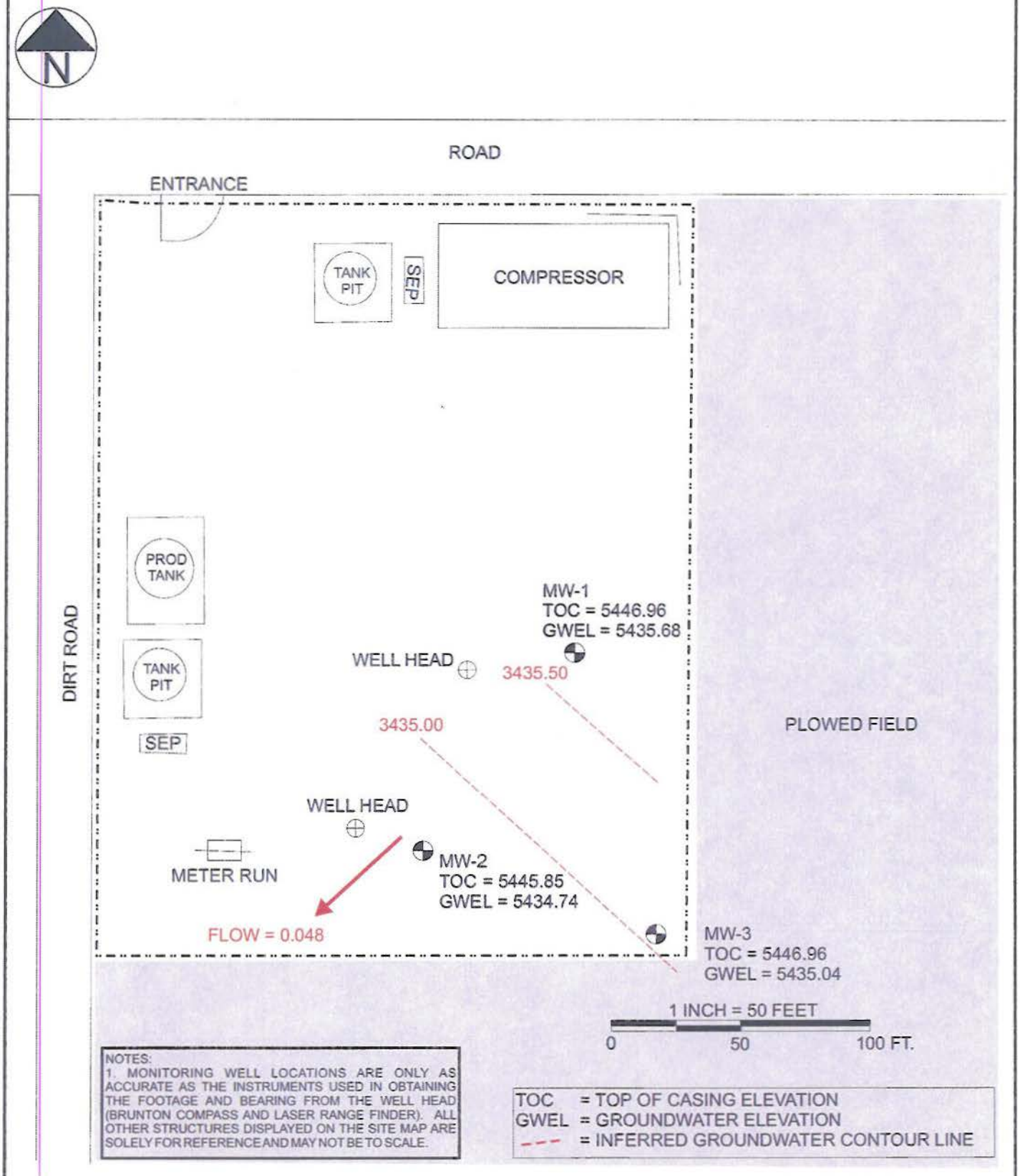
| | | | | | BTEX EPA Method 801 (PPB) | | | |
|---|---|---|---|---|---|---|---|---|
| Sample Date | Monitor Well No. | DTW (ft) | TD (ft) | Product (ft) | Benzene (ug/L) | Toluene (ug/L) | Ethyl Benzene (ug/L) | Total Xylene (ug/L) |
| 6-Dec-06 | MW #1 | | | | ND | ND | ND | ND |
| 15-Jun-07 | | 11.70 | 25.98 | | ND | ND | ND | ND |
| 25-Sep-07 | | 11.28 | 25.98 | | ND | ND | ND | ND |
| 28-Dec-07 | | 16.36 | 25.98 | | ND | ND | ND | ND |
| 13-Mar-08 | | 18.12 | 25.96 | | ND | ND | ND | ND |
| | | | | | | | | |
| 29-Feb-04 | MW #2 | | | | ND | 42 | 110 | 1100 |
| 21-Jun-04 | | | | | ND | ND | ND | ND |
| 27-Sep-04 | | | | | ND | ND | 0.88 | ND |
| 29-Dec-04 | | | | | ND | ND | 0.97 | 0.54 |
| 27-Jun-05 | | | | | ND | ND | ND | 0.96 |
| 6-Dec-06 | | | | | ND | ND | ND | ND |
| 15-Jun-07 | | 11.68 | 20.08 | | ND | ND | ND | ND |
| 25-Sep-07 | | 11.11 | 20.08 | | ND | ND | ND | ND |
| 28-Dec-07 | | 16.41 | 20.08 | | ND | ND | ND | ND |
| 13-Mar-08 | | 17.83 | 20.06 | | ND | ND | ND | ND |
| | | | | | | | | |
| 31-Mar-04 | MW #3 | | | | ND | ND | ND | ND |
| 21-Jun-04 | | | | | ND | ND | ND | ND |
| 15-Jun-07 | | 13.72 | 26.32 | | ND | ND | ND | ND |
| 25-Sep-07 | | 13.72 | 26.32 | | ND | ND | ND | ND |
| 28-Dec-07 | | 19.47 | 26.32 | | ND | ND | ND | ND |
| 13-Mar-08 | | 20.91 | 26.32 | | ND | ND | ND | ND |
| | | | | | | | | |
| **NMWQCC GROUNDWATER STANDARDS** | | | | | 10 | 750 | 750 | 620 |



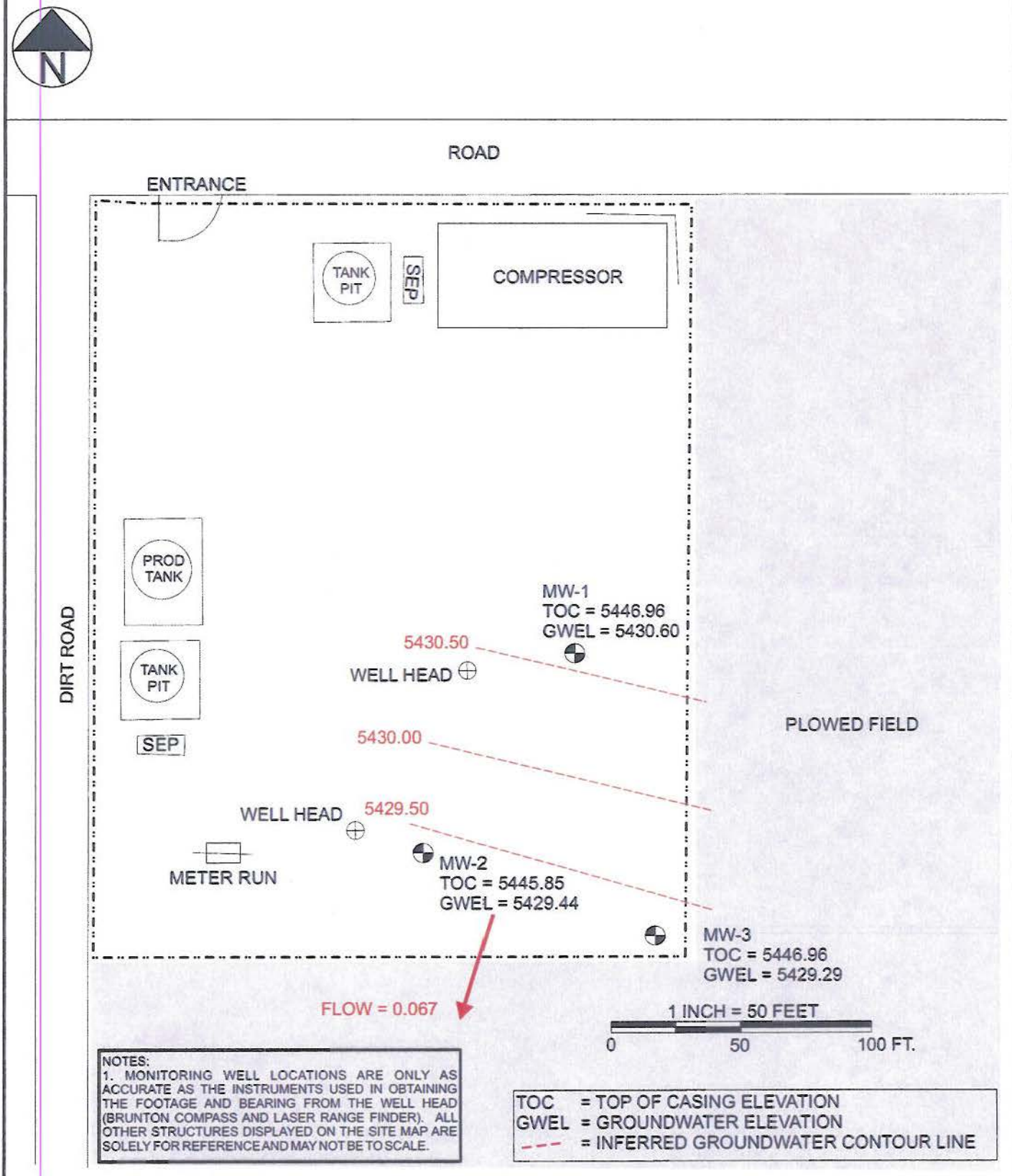

| | | | |
|---|---|---|---|
| Lodestar Services, Inc<br>PO Box 3861<br>Farmington, NM 87499 | CARSON GAS COM 1E<br>SE/4 MW/4 SEC. 32, T30N, R12W<br>SAN JUAN COUNTY, NEW MEXICO | PROJECT: XTO GROUND WATER<br>DRAWN BY: ALA<br>REVISED: 01/29/08 | SITE MAP<br>FIGURE 1<br>05/2007 |



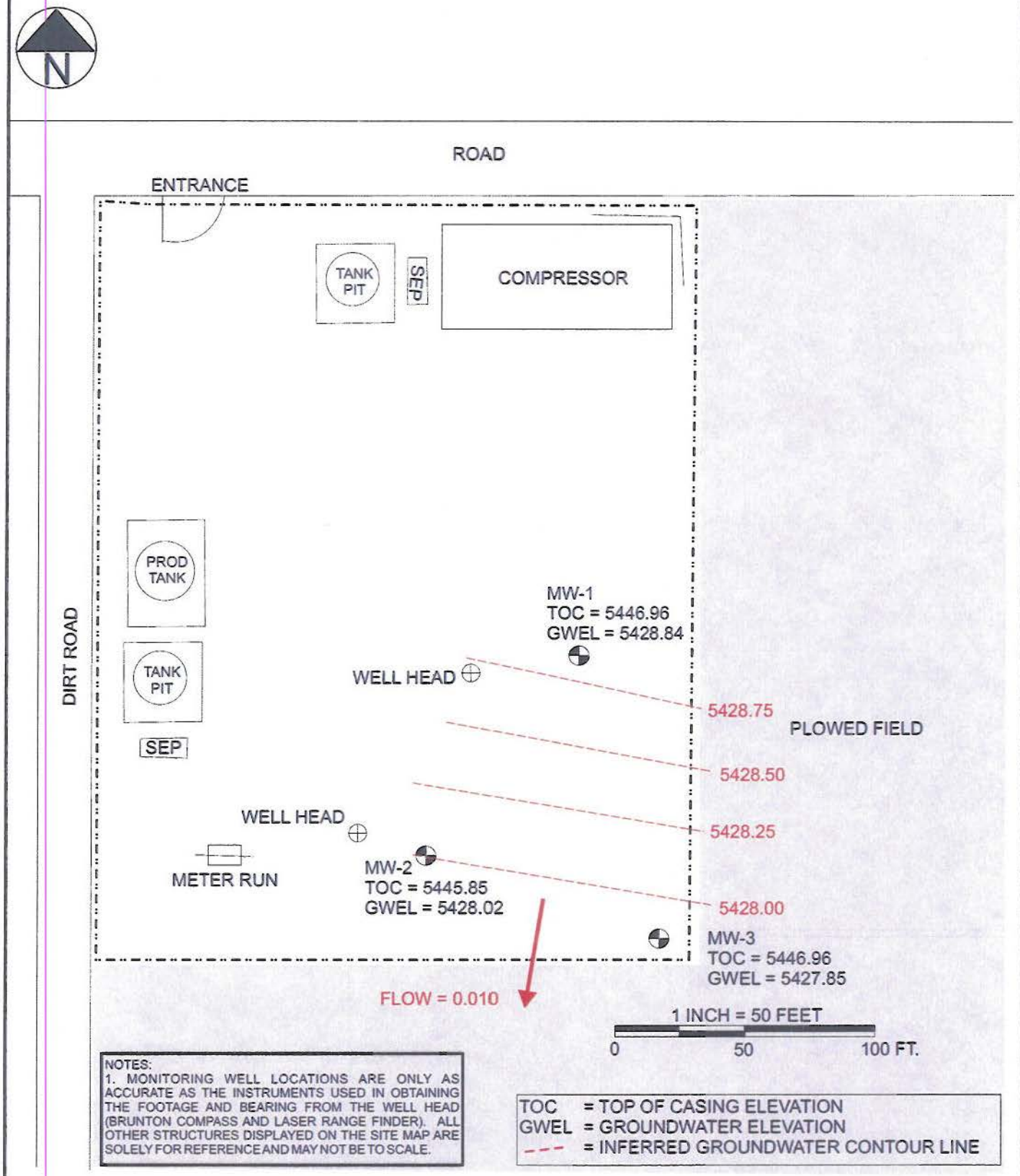

| | | | |
|---|---|---|---|
| Lodestar Services, Inc<br>PO Box 3861<br>Farmington, NM 87499 | CARSON GAS COM 1E<br>SE/4 MW/4 SEC. 32, T30N, R12W<br>SAN JUAN COUNTY, NEW MEXICO | PROJECT: XTO GROUND WATER<br>DRAWN BY: ALA<br>REVISED: 06/21/07 | SITE MAP<br>FIGURE 2<br>06/15/2007 |




| | | | |
|---|---|---|---|
| Lodestar Services, Inc<br>PO Box 3861<br>Farmington, NM 87499 | CARSON GAS COM 1E<br>SE/4 MW/4 SEC. 32, T30N, R12W<br>SAN JUAN COUNTY, NEW MEXICO | PROJECT: XTO GROUND WATER<br>DRAWN BY: ALA<br>REVISED: 09/28/07 | SITE MAP<br>FIGURE 3<br>09/27/2007 |




| | | | |
|---|---|---|---|
| Lodestar Services, Inc<br>PO Box 3861<br>Farmington, NM 87499 | CARSON GAS COM 1E<br>SE/4 MW/4 SEC. 32, T30N, R12W<br>SAN JUAN COUNTY, NEW MEXICO | PROJECT: XTO GROUND WATER<br>DRAWN BY: ALA<br>REVISED: 12/31/07 | SITE MAP<br>FIGURE 4<br>12/28/2007 |




| | | | |
|---|---|---|---|
| Lodestar Services, Inc<br>PO Box 3861<br>Farmington, NM 87499 | CARSON GAS COM 1E<br>SE/4 MW/4 SEC. 32, T30N, R12W<br>SAN JUAN COUNTY, NEW MEXICO | PROJECT: XTO GROUND WATER<br>DRAWN BY: ALA<br>REVISED: 03/18/08 | SITE MAP<br>FIGURE 5<br>03/13/2008 |

FIGURE6

# RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 1
Well #: MW-3
Page: 1 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: Carson Gas Com #1E

Borehole Location: 36° 35.689' N, 107° 52.356' W
GWL Depth: 21.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/01/07
Date Completed: 05/01/07

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 | 0-7' | cuttings | tan, poorly sorted gravelly sand with cobbles (fill from well pad) | 0 | Easy |
| 5 | 2 | 7-20' | cuttings | Brown, coarse sand, poorly sorted, sub-rounded, unconsolidated, moist | 0 | Easy |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |

Comments: Cobbles in top 20', but loose enough that auger was used to drill hole.

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-3
Page: 2 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: Carson Gas Com #1E

Borehole Location: 36° 35.689' N, 107° 52.356' W
GWL Depth: 21.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/01/07
Date Completed: 05/01/07

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 | 3 | 21.5-25.5 | cuttings | Brown, coarse sand, poorly sorted, sub-rounded, unconsolidated, saturated | 0 | Easy |
| 25 | 4 | 25.5 | cuttings | brown sandstone fragments | 0 | Hard |
| 30 | | | | | | |
| 35 | | | | | | |
| 40 | | | | | | |

Comments: Reached sandstone bedrock at 25.5'

Geologist Signature: Ashley L Ager

**FIGURE 7**
**MONITORING WELL INSTALLATION RECORD**

**Lodestar Services, Inc**
PO Box 3861
Farmington, New Mexico 87499
(505) 334-2791

Borehole # 1
Well # MW-3
Page 1 of 1

Project Name XTO Ground Water
Project Number _____ Cost Code _____
Project Location Carson Gas Com #1E

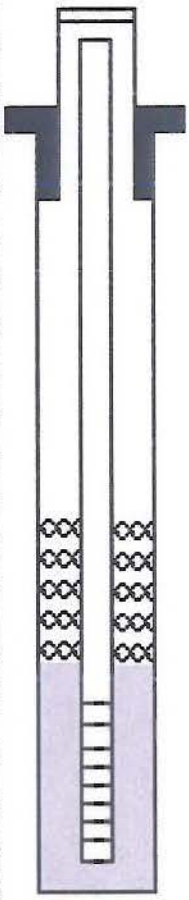
Elevation 5423
Well Location 36° 35.689' N, 107° 52.356' W
GWL Depth 21.5'
Installed By Enviro-Drill

Date/Time Started 04/30/07, 1350
Date/Time Completed 04/30/07, 1420

On-Site Geologist Ashley Ager
Personnel On-Site
Contractors On-Site Jeff Cathron and assistant
Client Personnel On-Site

Depths in Reference to Ground Surface

| Item | Material | Depth (feet) |
|---|---|---|
| Top of Protective Casing | Steel | 3 |
| Bottom of Protective Casing | | -2 |
| Top of Permanent Borehole Casing | | |
| Bottom of Permanent Borehole Casing | | |
| Top of Concrete | Concrete | 0.3 |
| Bottom of Concrete | | -.07 |
| Top of Grout | | NA |
| Bottom of Grout | | NA |
| Top of Well Riser | Sch. 40 PVC | 2.8 |
| Bottom of Well Riser | | -26.8 |
| Top of Well Screen | Sch. 40 PVC | -16.5 |
| Bottom of Well Screen | | -26.5 |
| Top of Peltonite Seal | 3/8" Bentonite hole plug | -12.5 |
| Bottom of Peltonite Seal | | -14.5 |
| Top of Gravel Pack | 10-20 grade silica sand | -14.5 |
| Bottom of Gravel Pack | | -26.8 |
| Top of Natural Cave-In | Silty sand | NA |
| Bottom of Natural Cave-In | | NA |
| Top of Groundwater | | -21.5 |
| Total Depth of Borehole | | -26.8 |



Top of Protective Casing 3.0
Top of Riser 2.8
Ground Surface 0
Top of Seal -12.5
Top of Gravel Pack -14.5
Top of Screen -16.5
Bottom of Screen -26.5
Bottom of Borehole -26.8

Comments: 50 lb bags of sand used: 4 ea., 50 lb bags of bentontie used: 3.5 ea.; 1 bag of quikcrete used

Geologist Signature Ashley L Ager

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *29-Jun-07*

**CLIENT:** XTO Energy
**Project:** Ground Water
**Lab Order:** 0706264

**Lab ID:** 0706264-04 **Collection Date:** 6/15/2007 11:58:00 AM
**Client Sample ID:** Carson GC #1E MW-2 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: LMM |
| Benzene | ND | 1.0 | | µg/L | 1 | 6/26/2007 5:08:42 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 6/26/2007 5:08:42 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 6/26/2007 5:08:42 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 6/26/2007 5:08:42 PM |
| Surr: 4-Bromofluorobenzene | 90.1 | 71.2-123 | | %REC | 1 | 6/26/2007 5:08:42 PM |

**Lab ID:** 0706264-05 **Collection Date:** 6/15/2007 12:23:00 PM
**Client Sample ID:** Carson GC #1E MW-3 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: LMM |
| Benzene | ND | 1.0 | | µg/L | 1 | 6/26/2007 5:47:37 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 6/26/2007 5:47:37 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 6/26/2007 5:47:37 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 6/26/2007 5:47:37 PM |
| Surr: 4-Bromofluorobenzene | 92.6 | 71.2-123 | | %REC | 1 | 6/26/2007 5:47:37 PM |

**Lab ID:** 0706264-06 **Collection Date:** 6/15/2007 12:52:00 PM
**Client Sample ID:** Carson GC #1E MW-1 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: LMM |
| Benzene | ND | 1.0 | | µg/L | 1 | 6/26/2007 6:26:34 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 6/26/2007 6:26:34 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 6/26/2007 6:26:34 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 6/26/2007 6:26:34 PM |
| Surr: 4-Bromofluorobenzene | 88.7 | 71.2-123 | | %REC | 1 | 6/26/2007 6:26:34 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 | | |

# Hall Environmental Analysis Laboratory, Inc.

Date: *29-Jun-07*

**CLIENT:** XTO Energy
**Project:** Ground Water

**Lab Order:** 0706264

**Lab ID:** 0706264-07 **Collection Date:**
**Client Sample ID:** Trip Blank **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: LMM |
| Benzene | ND | 1.0 | | µg/L | 1 | 6/27/2007 4:02:24 PM |
| Toluene | 1.1 | 1.0 | | µg/L | 1 | 6/27/2007 4:02:24 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 6/27/2007 4:02:24 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 6/27/2007 4:02:24 PM |
| Surr: 4-Bromofluorobenzene | 90.3 | 71.2-123 | | %REC | 1 | 6/27/2007 4:02:24 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:** 0706264

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: SW8260B** | | | | | | | | | |
| **Sample ID: 5mL rb** | | *MBLK* | | | Batch ID: | **R24131** | Analysis Date: | 6/26/2007 11:55:15 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | |
| Xylenes, Total | ND | µg/L | 3.0 | | | | | | |
| **Sample ID: 5mL rb** | | *MBLK* | | | Batch ID: | **R24155** | Analysis Date: | 6/27/2007 9:31:05 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | |
| Xylenes, Total | ND | µg/L | 3.0 | | | | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | Batch ID: | **R24131** | Analysis Date: | 6/26/2007 1:12:58 PM | |
| Benzene | 20.49 | µg/L | 1.0 | 102 | 82.4 | 128 | | | |
| Toluene | 19.13 | µg/L | 1.0 | 95.6 | 77.2 | 115 | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | Batch ID: | **R24155** | Analysis Date: | 6/27/2007 10:49:11 AM | |
| Benzene | 21.10 | µg/L | 1.0 | 106 | 82.4 | 128 | | | |
| Toluene | 20.10 | µg/L | 1.0 | 101 | 77.2 | 115 | | | |

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.

**Date:** *08-Oct-07*

| | | | |
|---|---|---|---|
| **CLIENT:** | XTO Energy | **Client Sample ID:** | Carson GC 1E MW-2 |
| **Lab Order:** | 0709406 | **Collection Date:** | 9/27/2007 11:24:00 AM |
| **Project:** | Ground Water | **Date Received:** | 9/28/2007 |
| **Lab ID:** | 0709406-25 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 10:05:58 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 10/3/2007 10:05:58 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 10:05:58 PM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 10/3/2007 10:05:58 PM |
| Surr: 4-Bromofluorobenzene | 86.4 | 70.2-105 | | %REC | 1 | 10/3/2007 10:05:58 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 | | |

## Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Oct-07*

| | | | |
|---|---|---|---|
| **CLIENT:** | XTO Energy | **Client Sample ID:** | Carson GC 1E MW-3 |
| **Lab Order:** | 0709406 | **Collection Date:** | 9/27/2007 11:53:00 AM |
| **Project:** | Ground Water | **Date Received:** | 9/28/2007 |
| **Lab ID:** | 0709406-26 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 10:35:51 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 10/3/2007 10:35:51 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 10:35:51 PM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 10/3/2007 10:35:51 PM |
| Surr: 4-Bromofluorobenzene | 84.6 | 70.2-105 | | %REC | 1 | 10/3/2007 10:35:51 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 | | |

## Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Oct-07*

| | | | |
|---|---|---|---|
| **CLIENT:** | XTO Energy | **Client Sample ID:** | Carson GC 1E MW-1 |
| **Lab Order:** | 0709406 | **Collection Date:** | 9/27/2007 12:20:00 PM |
| **Project:** | Ground Water | **Date Received:** | 9/28/2007 |
| **Lab ID:** | 0709406-27 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 11:05:55 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 10/3/2007 11:05:55 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 11:05:55 PM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 10/3/2007 11:05:55 PM |
| Surr: 4-Bromofluorobenzene | 86.3 | 70.2-105 | | %REC | 1 | 10/3/2007 11:05:55 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 | | |

## Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Oct-07*

| | | | |
|---|---|---|---|
| **CLIENT:** | XTO Energy | **Client Sample ID:** | Trip Blank |
| **Lab Order:** | 0709406 | **Collection Date:** | |
| **Project:** | Ground Water | **Date Received:** | 9/28/2007 |
| **Lab ID:** | 0709406-28 | **Matrix:** | TRIP BLANK |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: NSB |
| Benzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 11:35:56 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 10/3/2007 11:35:56 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 10/3/2007 11:35:56 PM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 10/3/2007 11:35:56 PM |
| Surr: 4-Bromofluorobenzene | 82.7 | 70.2-105 | | %REC | 1 | 10/3/2007 11:35:56 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 REPOR

**Client:** XTO Energy
**Project:** Ground Water **Work Order:** 0709406

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: SW8021** | | | | | | | | | |
| **Sample ID: 0709406-01A MSD** | | *MSD* | | | Batch ID: | **R25409** | Analysis Date: | | 10/3/2007 3:45:13 AM |
| Benzene | 20.98 | µg/L | 1.0 | 105 | 85.9 | 113 | 0.580 | 27 | |
| Toluene | 19.97 | µg/L | 1.0 | 99.6 | 86.4 | 113 | 0.764 | 19 | |
| Ethylbenzene | 19.95 | µg/L | 1.0 | 99.3 | 83.5 | 118 | 1.13 | 10 | |
| Xylenes, Total | 59.14 | µg/L | 2.0 | 98.1 | 83.4 | 122 | 0.764 | 13 | |
| **Sample ID: 0709406-20A MSD** | | *MSD* | | | Batch ID: | **R25420** | Analysis Date: | | 10/3/2007 8:05:57 PM |
| Benzene | 20.94 | µg/L | 1.0 | 102 | 85.9 | 113 | 1.15 | 27 | |
| Toluene | 19.97 | µg/L | 1.0 | 98.4 | 86.4 | 113 | 1.23 | 19 | |
| Ethylbenzene | 19.95 | µg/L | 1.0 | 99.2 | 83.5 | 118 | 2.10 | 10 | |
| Xylenes, Total | 58.87 | µg/L | 2.0 | 96.8 | 83.4 | 122 | 1.12 | 13 | |
| **Sample ID: 5ML RB** | | *MBLK* | | | Batch ID: | **R25409** | Analysis Date: | | 10/2/2007 8:14:55 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: 5ML RB** | | *MBLK* | | | Batch ID: | **R25420** | Analysis Date: | | 10/3/2007 9:00:15 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: | **R25409** | Analysis Date: | | 10/2/2007 8:15:26 PM |
| Benzene | 20.25 | µg/L | 1.0 | 101 | 85.9 | 113 | | | |
| Toluene | 19.54 | µg/L | 1.0 | 97.3 | 86.4 | 113 | | | |
| Ethylbenzene | 19.60 | µg/L | 1.0 | 97.4 | 83.5 | 118 | | | |
| Xylenes, Total | 58.14 | µg/L | 2.0 | 96.2 | 83.4 | 122 | | | |
| **Sample ID: 100NG BTEX LCS** | | *LCS* | | | Batch ID: | **R25420** | Analysis Date: | | 10/3/2007 11:00:56 AM |
| Benzene | 20.65 | µg/L | 1.0 | 103 | 85.9 | 113 | | | |
| Toluene | 20.04 | µg/L | 1.0 | 99.8 | 86.4 | 113 | | | |
| Ethylbenzene | 20.04 | µg/L | 1.0 | 99.6 | 83.5 | 118 | | | |
| Xylenes, Total | 60.00 | µg/L | 2.0 | 99.5 | 83.4 | 122 | | | |
| **Sample ID: 0709406-01A MS** | | *MS* | | | Batch ID: | **R25409** | Analysis Date: | | 10/3/2007 3:15:09 AM |
| Benzene | 21.10 | µg/L | 1.0 | 105 | 85.9 | 113 | | | |
| Toluene | 19.82 | µg/L | 1.0 | 98.8 | 86.4 | 113 | | | |
| Ethylbenzene | 19.73 | µg/L | 1.0 | 98.2 | 83.5 | 118 | | | |
| Xylenes, Total | 58.69 | µg/L | 2.0 | 97.4 | 83.4 | 122 | | | |
| **Sample ID: 0709406-20A MS** | | *MS* | | | Batch ID: | **R25420** | Analysis Date: | | 10/3/2007 7:35:52 PM |
| Benzene | 20.70 | µg/L | 1.0 | 101 | 85.9 | 113 | | | |
| Toluene | 19.73 | µg/L | 1.0 | 97.2 | 86.4 | 113 | | | |
| Ethylbenzene | 19.53 | µg/L | 1.0 | 97.1 | 83.5 | 118 | | | |
| Xylenes, Total | 58.22 | µg/L | 2.0 | 95.7 | 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 |

# QA/QC SUMMARY REPOR

**Client:** XTO Energy
**Project:** Ground Water **Work Order:** 0709406

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: E160.1** | | | | | | | | | |
| **Sample ID: 0709406-08B MSD** | | *MSD* | | | Batch ID: 13963 | | Analysis Date: | | 10/1/2007 |
| Total Dissolved Solids | 3202 | mg/L | 20 | 104 | 80 | 120 | 0.627 | 20 | |
| **Sample ID: MB-13963** | | *MBLK* | | | Batch ID: 13963 | | Analysis Date: | | 10/1/2007 |
| Total Dissolved Solids | ND | mg/L | 20 | | | | | | |
| **Sample ID: LCS-13963** | | *LCS* | | | Batch ID: 13963 | | Analysis Date: | | 10/1/2007 |
| Total Dissolved Solids | 1001 | mg/L | 20 | 100 | 80 | 120 | | | |
| **Sample ID: 0709406-08B MS** | | *MS* | | | Batch ID: 13963 | | Analysis Date: | | 10/1/2007 |
| Total Dissolved Solids | 3182 | mg/L | 20 | 102 | 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.

**Date:** *07-Jan-08*

**CLIENT:** XTO Energy
**Project:** Carson Gascom 1E
**Lab Order:** 0801007

**Lab ID:** 0801007-01 **Collection Date:** 12/28/2007 9:50:00 AM
**Client Sample ID:** Carson GC1E MW-1 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Methyl tert-butyl ether (MTBE) | ND | 2.5 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| Benzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:00:25 AM |
| Surr: 4-Bromofluorobenzene | 90.7 | 68.9-122 | | %REC | 1 | 1/4/2008 2:00:25 AM |

**Lab ID:** 0801007-02 **Collection Date:** 12/28/2007 10:20:00 AM
**Client Sample ID:** Carson GC1E MW-2 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Methyl tert-butyl ether (MTBE) | ND | 2.5 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| Benzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 2:30:34 AM |
| Surr: 4-Bromofluorobenzene | 93.4 | 68.9-122 | | %REC | 1 | 1/4/2008 2:30:34 AM |

**Lab ID:** 0801007-03 **Collection Date:** 12/28/2007 10:54:00 AM
**Client Sample ID:** Carson GC1E MW-3 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Methyl tert-butyl ether (MTBE) | ND | 2.5 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| Benzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 1/4/2008 3:00:40 AM |
| Surr: 4-Bromofluorobenzene | 91.0 | 68.9-122 | | %REC | 1 | 1/4/2008 3:00:40 AM |

**Qualifiers:**

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

# QA/QC SUMMARY REPORT

**Client:** XTO Energy
**Project:** Carson Gascom 1E
**Work Order:** 0801007

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8021B: Volatiles** | | | | | | | | | |
| **Sample ID: 0801007-03A MSD** | | *MSD* | | | Batch ID: | **R26788** | Analysis Date: | | 1/4/2008 4:00:40 AM |
| Methyl tert-butyl ether (MTBE) | 20.30 | µg/L | 2.5 | 101 | 51.2 | 138 | 0.118 | 28 | |
| Benzene | 21.22 | µg/L | 1.0 | 106 | 85.9 | 113 | 1.17 | 27 | |
| Toluene | 21.14 | µg/L | 1.0 | 105 | 86.4 | 113 | 0.274 | 19 | |
| Ethylbenzene | 20.96 | µg/L | 1.0 | 105 | 83.5 | 118 | 0.855 | 10 | |
| Xylenes, Total | 63.54 | µg/L | 2.0 | 106 | 83.4 | 122 | 0.681 | 13 | |
| 1,2,4-Trimethylbenzene | 20.65 | µg/L | 1.0 | 103 | 83.5 | 115 | 3.63 | 21 | |
| 1,3,5-Trimethylbenzene | 20.21 | µg/L | 1.0 | 101 | 85.2 | 113 | 2.91 | 10 | |
| **Sample ID: 5ML RB** | | *MBLK* | | | Batch ID: | **R26788** | Analysis Date: | | 1/3/2008 8:54:20 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: | **R26788** | Analysis Date: | | 1/4/2008 12:30:04 AM |
| Methyl tert-butyl ether (MTBE) | 20.82 | µg/L | 2.5 | 104 | 51.2 | 138 | | | |
| Benzene | 21.28 | µg/L | 1.0 | 106 | 85.9 | 113 | | | |
| Toluene | 21.38 | µg/L | 1.0 | 106 | 86.4 | 113 | | | |
| Ethylbenzene | 21.39 | µg/L | 1.0 | 107 | 83.5 | 118 | | | |
| Xylenes, Total | 65.46 | µg/L | 2.0 | 109 | 83.4 | 122 | | | |
| 1,2,4-Trimethylbenzene | 22.16 | µg/L | 1.0 | 110 | 83.5 | 115 | | | |
| 1,3,5-Trimethylbenzene | 21.64 | µg/L | 1.0 | 108 | 85.2 | 113 | | | |
| **Sample ID: 0801007-03A MS** | | *MS* | | | Batch ID: | **R26788** | Analysis Date: | | 1/4/2008 3:30:40 AM |
| Methyl tert-butyl ether (MTBE) | 20.32 | µg/L | 2.5 | 102 | 51.2 | 138 | | | |
| Benzene | 21.47 | µg/L | 1.0 | 107 | 85.9 | 113 | | | |
| Toluene | 21.20 | µg/L | 1.0 | 105 | 86.4 | 113 | | | |
| Ethylbenzene | 21.14 | µg/L | 1.0 | 106 | 83.5 | 118 | | | |
| Xylenes, Total | 63.97 | µg/L | 2.0 | 106 | 83.4 | 122 | | | |
| 1,2,4-Trimethylbenzene | 21.42 | µg/L | 1.0 | 107 | 83.5 | 115 | | | |
| 1,3,5-Trimethylbenzene | 20.81 | µg/L | 1.0 | 104 | 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 |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *24-Mar-08*

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

**Lab ID:** 0803131-13 **Collection Date:** 3/13/2008 7:52:00 AM
**Client Sample ID:** Carson GC1 E 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 | 3/21/2008 6:00:06 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 3/21/2008 6:00:06 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 3/21/2008 6:00:06 AM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 3/21/2008 6:00:06 AM |
| Surr: 4-Bromofluorobenzene | 107 | 68.9-122 | | %REC | 1 | 3/21/2008 6:00:06 AM |

**Lab ID:** 0803131-14 **Collection Date:** 3/13/2008 8:35:00 AM
**Client Sample ID:** Carson GC1 E MW-2 **Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 1.0 | | µg/L | 1 | 3/21/2008 6:30:08 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 3/21/2008 6:30:08 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 3/21/2008 6:30:08 AM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 3/21/2008 6:30:08 AM |
| Surr: 4-Bromofluorobenzene | 112 | 68.9-122 | | %REC | 1 | 3/21/2008 6:30:08 AM |

**Lab ID:** 0803131-15 **Collection Date:** 3/13/2008 9:15:00 AM
**Client Sample ID:** Carson GC1 E 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 | 3/21/2008 7:00:10 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 3/21/2008 7:00:10 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 3/21/2008 7:00:10 AM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 3/21/2008 7:00:10 AM |
| Surr: 4-Bromofluorobenzene | 110 | 68.9-122 | | %REC | 1 | 3/21/2008 7:00:10 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:** 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 | | | |
| lenes, Total | 63.70 | µg/L | 2.0 | 106 | 83.4 | 122 | | | |
| mple 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:

| | | | |
|---|---|---|---|
| | 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: Amy Thomas 3/14/08 (Signature / Date) | Sample ID labels checked by: AT (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 Chaplin
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: 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. | 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 031308 | 0752 | Carson GC1E MW-1 | 2oz/3 | HCl | 13 | | | | | | | | | | | | ✓ | | | | |
| 031308 | 0835 | Carson GC1E MW-2 | 2oz/3 | HCl | 14 | | | | | | | | | | | | ✓ | | | | |
| 031308 | 0915 | Carson GC1E MW-3 | 2oz/3 | HCl | 15 | | | | | | | | | | | | ✓ | | | | |

| Date: | Time: | Relinquished by: | Received by: | Remarks: |
|---|---|---|---|---|
| 3/13/08 | 11:45 | Troy Urban | 3/14/08 9:50 | Please Copy Results to ALA@lodestarservices.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.

VUL 30045255O8

| CLIENT: XTO | BLAGG ENGINEERING, INC.<br>P.O. BOX 87, BLOOMFIELD, NM 87413<br>(505) 632-1199 | LOCATION NO:<br>COCR NO: HALL |
|---|---|---|

# FIELD REPORT: PIT CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: CARSON GC WELL #: 1E TYPE: DEHY.
QUAD/UNIT: F SEC: 32 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: 1470'N / 1460'W J E/NW CONTRACTOR: HOI (HEBER)

DATE STARTED: 2/18/03
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 30 FT. x 30 FT. x 20 FT. DEEP. CUBIC YARDAGE: 400
DISPOSAL FACILITY: I.E.I. (GALLEGOS MESA) REMEDIATION METHOD: LANDFARM (?)
LAND USE: RANGE LEASE: FEE FORMATION: DK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 75 FT. S25W FROM WELLHEAD.
DEPTH TO GROUNDWATER: ≤50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: <1000'
NMOCD RANKING SCORE: 30 NMOCD TPH CLOSURE STD: 100 PPM

OVM CALIB. READ. = 50.1 ppm CHECK
OVM CALIB. GAS = 100 ppm RF = 0.52
TIME: 3:40 am/pm DATE: 2/23/04

## SOIL AND EXCAVATION DESCRIPTION:

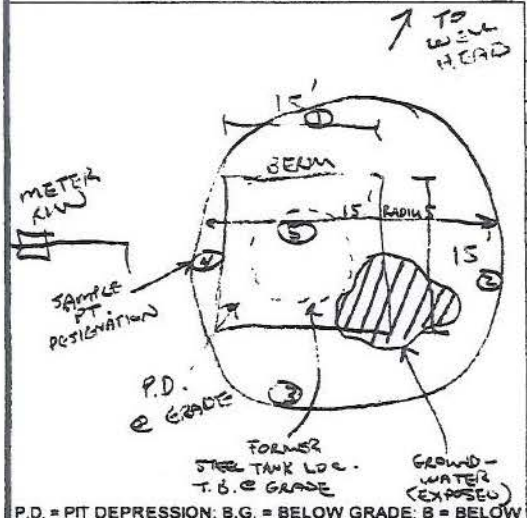
SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: DK. YELL. ORANGE (0'-5') LT. GRAY TO BLACK (5'-20')
COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE
~~PLASTICITY (CLAYS)~~: NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
~~DENSITY (COHESIVE CLAYS & SILTS)~~: SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION -
HC ODOR DETECTED: YES / NO EXPLANATION -
SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS. —
ADDITIONAL COMMENTS: GROUNDWATER IMPACTED

FIELD 418.1 CALCULATIONS

| SAMP. TIME | SAMP. ID | LAB NO. | WEIGHT (g) | mL FREON | DILUTION | READING | CALC. (ppm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |

SCALE 0 FT

## PIT PERIMETER




P.D. = PIT DEPRESSION; B.G. = BELOW GRADE; B = BELOW
T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM

## OVM READING

| SAMPLE ID | FIELD HEADSPACE (ppm) |
|---|---|
| 1 @ 8' | 147 |
| 2 @ 8' | 29.9 |
| 3 @ 12' | 60.1 |
| 4 @ 10' | 253 |
| 5 @ 19' | 232 |

## LAB SAMPLES

| SAMPLE ID | ANALYSIS | TIME |
|---|---|---|
| ④ @ 10' | TPH (8015B) | 1535 |
| " | BTEX (8021B) | " |

## PIT PROFILE

TRAVEL NOTES: CALLOUT: 2/18/04 - MORN. ONSITE: 2/18/04 - AFTER.

revised: 09/04/02 bei1005C.skf

# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

## CERTIFICATE OF WASTE STATUS

| 1. Generator Name and Address | 2. Destination Name: |
|---|---|
| XTO ENERGY INC<br>2700 FARMINGTON AVE. SUITE K<br>FARMINGTON, NM 87401 | J.F.J. Landfarm C/o Industrial Ecosystems Inc.<br>420 CR 3100 Aztec, NM 87410 |
| 3. Originating Site (name): CARSON GC #1E<br>attach list of originating sites as appropriate | Location of the Waste (Street address &/or ULSTR): F-32-30-12 |
| 4. Source and Description of Waste<br>DEHYDRATOR PIT FROM WELL SITE<br>WASTE ~~RECEIVED AS~~ PRODUCED WATER, GYLCOL BY PRODUCT<br>(MOST LIKELY) NW | |

I, NELSON VELEZ representative for :
Print Name

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

X EXEMPT oilfield waste

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

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

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

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

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

**Name (Original Signature):** Nelson Velez

**Title:** STAFF GEOLOGIST

**Date:** 2/23/04

# Hall Environmental Analysis Laboratory

**Date:** *01-Mar-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Blagg Engineering | **Client Sample ID:** | 4 @10' |
| **Lab Order:** | 0402187 | **Collection Date:** | 2/23/2004 3:35:00 PM |
| **Project:** | Carson GC#1E | | |
| **Lab ID:** | 0402187-01 | **Matrix:** | SOIL |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | 8.1 | 5.0 | | mg/Kg | 1 | 2/28/2004 11:18:14 AM |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 2/28/2004 11:18:14 AM |
| Surr: DNOP | 102 | 60-124 | | %REC | 1 | 2/28/2004 11:18:14 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 5.2 | 5.0 | | mg/Kg | 1 | 2/26/2004 5:41:00 PM |
| Surr: BFB | 107 | 74-118 | | %REC | 1 | 2/26/2004 5:41:00 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 2/26/2004 5:41:00 PM |
| Toluene | ND | 0.025 | | mg/Kg | 1 | 2/26/2004 5:41:00 PM |
| Ethylbenzene | ND | 0.025 | | mg/Kg | 1 | 2/26/2004 5:41:00 PM |
| Xylenes, Total | 0.034 | 0.025 | | mg/Kg | 1 | 2/26/2004 5:41:00 PM |
| Surr: 4-Bromofluorobenzene | 100 | 74-118 | | %REC | 1 | 2/26/2004 5:41:00 PM |

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BLAGG ENGR. / XTO ENERGY

Project Name: CARSON GC #1E

Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Project #: 7N-

Project Manager: NJV

Phone #: 505-632-1199

Sampler: NJV

Fax #: 505-632-3903

Sample Temperature: 2.0

| Date | Time | Matrix | Sample I.D. No. | Number/Volume | Preservative $HgCl_2$ | Preservative $HNO_3$ | Preservative | HEAL No 0402187 |
|---|---|---|---|---|---|---|---|---|
| 2/23/04 | 1535 | SOIL | ④ @ 10' | 1-4oz. | | | | 1 |

## ANALYSIS REQUEST

| (BTEX) + ~~MTBE + TMB's~~ (8021B) | BTEX + MTBE + TPH (Gasoline Only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8021) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$) | 8081 Pesticides / PCB's (8082) | 8260B (VOA) | 8270 (Semi-VOA) | | | | | Air Bubbles or Headspace (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | | ✓ | | | | | | | | | | | | | | |

| Date | Time | Relinquished By: (Signature) | Received By: (Signature) | Remarks: |
|---|---|---|---|---|
| 2/24/04 | 0700 | Nelson VM | | |
| | | | Gonzales 02/24/04 1637 | |
| Date: | Time: | Relinquished By: (Signature) | Received By: (Signature) | |

# Hall Environmental Analysis Laboratory

**Date:** *01-Mar-04*

**CLIENT:** Blagg Engineering
**Work Order:** 0402187
**Project:** Carson GC#1E

## QC SUMMARY REPORT
Method Blank

| Sample ID MB-5303 | Batch ID: 5303 | Test Code: SW8015 | Units: mg/Kg | Analysis Date 2/28/2004 9:47:23 AM | Prep Date 2/27/2004 |
|---|---|---|---|---|---|
| Client ID: | | Run ID: FID(17A) 2_040228A | | SeqNo: 255398 | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 5.0 | | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | | |
| Surr: DNOP | 10.79 | 0 | 10 | 0 | 108 | 60 | 124 | 0 | | | |

| Sample ID MB-5284 | Batch ID: 5284 | Test Code: SW8015 | Units: mg/Kg | Analysis Date 2/26/2004 9:38:17 AM | Prep Date 2/25/2004 |
|---|---|---|---|---|---|
| Client ID: | | Run ID: PIDFID_040226A | | SeqNo: 254818 | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | | |
| Surr: BFB | 938.5 | 0 | 1000 | 0 | 93.9 | 74 | 118 | 0 | | | |

| Sample ID MB-5284 | Batch ID: 5284 | Test Code: SW8021 | Units: mg/Kg | Analysis Date 2/26/2004 9:38:17 AM | Prep Date 2/25/2004 |
|---|---|---|---|---|---|
| Client ID: | | Run ID: PIDFID_040226A | | SeqNo: 254784 | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | | |
| Toluene | ND | 0.025 | | | | | | | | | |
| Ethylbenzene | ND | 0.025 | | | | | | | | | |
| Xylenes, Total | ND | 0.025 | | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.956 | 0 | 1 | 0 | 95.6 | 74 | 118 | 0 | | | |



**Qualifiers:** ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

# Hall Environmental Analysis Laboratory

**Date:** *01-Mar-04*

**CLIENT:** Blagg Engineering
**Work Order:** 0402187
**Project:** Carson GC#1E

## QC SUMMARY REPORT
Laboratory Control Spike - generic

| Sample ID **LCS-5303** | Batch ID: **5303** | Test Code: **SW8015** | Units: **mg/Kg** | Analysis Date **2/28/2004 10:17:31 AM** | Prep Date **2/27/2004** |
|---|---|---|---|---|---|
| Client ID: | | Run ID: **FID(17A) 2_040228A** | | SeqNo: **255399** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 50.07 | 5.0 | 50 | 0 | 100 | 67.4 | 117 | 0 | | | |

| Sample ID **LCSD-5303** | Batch ID: **5303** | Test Code: **SW8015** | Units: **mg/Kg** | Analysis Date **2/28/2004 10:48:02 AM** | Prep Date **2/27/2004** |
|---|---|---|---|---|---|
| Client ID: | | Run ID: **FID(17A) 2_040228A** | | SeqNo: **255400** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 41.88 | 5.0 | 50 | 0 | 83.8 | 67.4 | 117 | 50.07 | 17.8 | 17.4 | R |

| Sample ID **GRO STD 2.5ug** | Batch ID: **5284** | Test Code: **SW8015** | Units: **mg/Kg** | Analysis Date **2/26/2004 2:39:31 PM** | Prep Date |
|---|---|---|---|---|---|
| Client ID: | | Run ID: **PIDFID_040226A** | | SeqNo: **254820** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 23.6 | 5.0 | 25 | 0 | 94.4 | 85.8 | 111 | 0 | | | |

| Sample ID **BTEX STD 100ng** | Batch ID: **5284** | Test Code: **SW8021** | Units: **mg/Kg** | Analysis Date **2/26/2004 3:09:48 PM** | Prep Date |
|---|---|---|---|---|---|
| Client ID: | | Run ID: **PIDFID_040226A** | | SeqNo: **254799** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 1.034 | 0.025 | 1 | 0 | 103 | 77 | 122 | 0 | | | |
| Toluene | 1.034 | 0.025 | 1 | 0 | 103 | 81 | 115 | 0 | | | |
| Ethylbenzene | 1.03 | 0.025 | 1 | 0 | 103 | 84 | 117 | 0 | | | |
| Xylenes, Total | 3.077 | 0.025 | 3 | 0 | 103 | 84 | 116 | 0 | | | |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

## Hall Environmental Analysis Laboratory

### Sample Receipt Checklist

Client Name BLAGG — Date and Time Received:

Work Order Number 0402187 — Received by AMG

Checklist completed by A Gonzales 02/24/04
Signature — 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 - pH acceptable upon receipt? | | Yes ☐ | No ☐ | N/A ☑ | | | |

Container/Temp Blank temperature? 2° — *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

---

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____