From: Smith, Cory, EMNRD
To: Kyle Summers
Cc: kwchristesen@blm. gov (kwchristesen@blm.gov); Griswold, Jim, EMNRD; Billings, Bradford, EMNRD; Marc Gentry; Drewry, Scott; Cooksey, Nick; Miller, Greg
Subject: RE: (OCD RP: 3R-451) Lateral K-7 (2012) - AGMR & Closure Report
Date: Monday, January 13, 2020 11:06:49 AM

Kyle,

I will put it in Que to be reviewed, if it met all the requirements to be closed it will be closed and not transitioned over to a Stage 1.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Kyle Summers <ksummers@ensolum.com>
Sent: Wednesday, January 8, 2020 3:44 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: kwchristesen@blm. gov (kwchristesen@blm.gov) <kwchristesen@blm.gov>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Marc Gentry <mgentry@ensolum.com>; 'Drewry, Scott' <sdrewry@eprod.com>; 'Cooksey, JN - EHS&T' <jncooksey@eprod.com>; Miller, Greg <GEMiller@eprod.com>
Subject: [EXT] (OCD RP: 3R-451) Lateral K-7 (2012) - AGMR & Closure Report

Mr. Smith,
I have attached the electronic copy of the above-referenced report. Hard copies of this report were mailed to the NMOCD and BLM by Enterprise on December 10, 2019. I was informed that Whitney Thomas is no longer the point of contact for the BLM, so I have copied Kenneth Christesen on this email. If you think it should go to someone else, please let me know. This is a GW site that was essentially at the point of closure when the NMAC revisions were implemented and as such the NMOCD did not request a Stage 1 Abatement Plan for it. With Vanessa Fields' departure from the NMOCD, I don't know if you are/were familiar with the site. The final C-141 included at the end of the report has not yet been signed, but if you are in agreement that the site is ready for closure, Enterprise will upload the report and the completed C-141 to the fee site. If you have any questions, feel free to reach out.

Respectfully,
Kyle Summers

Kyle Summers
Ensolum, LLC | Environmental & Hydrogeologic Consultants
606 South Rio Grande, Suite A | Aztec, NM 87410

Mobile 903.821.5603
ksummers@ensolum.com
www.ensolum.com

Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

December 3, 2019

Return Receipt Requested
Certified Mail No. 7018 1830 0001 4779 0466

Mr. Cory Smith
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: ***2018 Annual Groundwater Monitoring Report*** **(Ensolum, December 5, 2019)**
Enterprise Field Services, LLC
Lateral K-7 Pipeline Release (8/30/2012)
Rio Arriba County, New Mexico
OCD RP: 3R-451

Dear Mr. Smith:

Enterprise Products Operating LLC (Enterprise), on behalf of Enterprise Field Services, LLC, is submitting one hard copy and one electronic copy of the above-referenced report that summarizes results of the quarterly groundwater monitoring and sampling (GWM&S) events conducted at the above-referenced location (Site). The data contained in the report covers the period between January 1, 2018 and December 31, 2018 (the "reporting period").

Based on data and results presented in the attached report, constituent of concern (COC) concentrations were not identified above the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (*GQSs*) during the four (4) sampling events. These four events complete nine consecutive quarters of GWM&S events where COC concentrations were below the WQCC GQSs. As such, Enterprise requests that the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) grant permission to plug and abandon the monitoring wells in accordance with New Mexico Administrative Code (NMAC) 19.15.25 and requests that a no further action (NFA) status be issued for the Site.

Enterprise appreciates the OCD's continued assistance and guidance in bringing this Site to closure. Should you have any questions, comments or concerns, or require additional information, please feel free to contact me any time at 713-381-8780, or at gemiller@eprod.com.

Sincerely,

Gregory E. Miller, P.G.
Supervisor, Environmental

Rodney M. Sartor, REM
Sr. Director, Environmental

cc: Ms. Whitney Thomas – BLM, Farmington, NM (landowner)
ec: Mr. Cory Smith – NMOCD, Aztec, NM
Mr. Jim Griswold – NMOCD, Santa Fe, NM
Mr. Brad Billings – NMOCD, Santa Fe, NM
Mr. Liz Scaggs – Ensolum, Dallas, TX

7018 1830 0001 4779 0466

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AP5106 – AP (2012)

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Mr. Cory Smith
Street and NMOCD
City, State 1000 Rio Brazos Road
Aztec, New Mexico 87410

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AP5106 – AP (2012)

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Cory Smith
NMOCD
1000 Rio Brazos Road
Aztec, New Mexico 87410

9590 9402 4677 8323 6900 09

2. Article Number *(Transfer from service label)*
7018 1830 0001 4779 0466

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A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)* Shawna Parsons
C. Date of Delivery 12-13-19

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
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- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
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- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

2018 ANNUAL GROUNDWATER MONITORING REPORT

Property:

Lateral K-7 Pipeline Release (2012)
NW ¼, S27 T26N R7W
Rio Arriba County, New Mexico

New Mexico EMNRD OCD RP No. 3R-451

December 5, 2019
Ensolum Project No. 05A1226007

Prepared for:

Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attn: Mr. Gregory E. Miller, P.G.

Prepared by:

Ranee Deechilly
Staff Scientist

Liz Scaggs, P.G.
Principal

ENSOLUM

2018 GROUNDWATER MONITORING REPORT
EXECUTIVE SUMMARY

The Lateral K-7 Pipeline Release (2012), referred to hereinafter as the "Site", is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in Section 27, Township 26 North, Range 7 West, in Rio Arriba County, New Mexico.

On August 30, 2012, a release of natural gas and associated pipeline liquids was discovered at the Site. During September 2012, field screening of soil samples collected from the pipeline repair excavation and four (4) test pits completed outside the excavation indicated petroleum hydrocarbon affected soils were present at the Site. During December 2012, Animas Environmental Services, LLC (AES) advanced eight (8) soil borings (SB-1 through SB-8) at the Site to delineate the extent of petroleum hydrocarbon affected soil and potentially impacted groundwater. Samples collected from the soil borings exhibited concentrations of constituents of concern (COCs) in soil and groundwater above the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) standards and the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs)*.

During October 2013, AES advanced five (5) additional soil borings which were completed as groundwater monitoring wells. COCs were subsequently identified in groundwater samples collected from the monitoring wells at concentrations that exceed the WQCC *GQSs*. This original monitoring well network was sampled semi-annually until June, 2015 by AES and then by Apex Titan, Inc. (Apex).

Following a pipeline modification event at the Site during August 2015, Enterprise elected to perform additional corrective action activities to remove residual petroleum hydrocarbon affected soils. During corrective action activities, all on-Site monitoring wells were plugged and abandoned (P&A'd) to allow the excavation of affected soils (*Corrective Action Report,* dated January 21, 2016 – Apex*)*.

During November 2016, after recieving the required United States Burea of Land Management (BLM) Plan of Development (POD) approval, Apex advanced six (6) soil borings at the Site and completed the soil borings as monitoring wells MW-1A through MW-6A to replace/enhance the monitoring network that was removed during soil remediation activities. Sample results from the soil borings did not indicate COCs in soil at concentrations in excess of EMNRD OCD standards. Analytical results for groundwater samples collected from the monitoring wells during the December 2016 and March 2017 sampling events did not indicate COC concentrations above the applicable WQCC *GQSs* (*Supplemental Environmental Site Investigation and Groundwater Sampling Report (November/December 2016 and March 2017,* dated August 16, 2017 - Apex).

Groundwater sampling events were conducted by Apex during April, June, September, and December 2018. The objectives of the groundwater monitoring events described herein were to further evaluate groundwater conditions at the Site with respect to WQCC *GQSs* and to demonstrate natural attenuation following the removal of affected soils. Findings and recommendations based on these activities are as follows:

Findings and recommendations based on these activities are as follows:

- The groundwater flow direction at the Site is generally towards the north-northwest, with an approximate average gradient of 0.008 feet per foot (ft/ft) across the Site.

- During the April, June, September, and December 2018 sampling events, the groundwater samples collected from monitoring wells MW-1A through MW-6A did not exhibit benzene, toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC *GQSs.*

Ensolum offers the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD;
- Request that no further action be required in relation to this release based on:
    - Nine (9) consectutive groundwater sampling events have demonstrated no residual impact to groundwater above abatement standards, and
    - Removal of all hydrocarbon-impacted soil completed in 2015.
- Request approval to plug and abandon the monitoring wells.

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LIST OF APPENDICES

ENSOLUM

2018 ANNUAL GROUNDWATER MONITORING REPORT

New Mexico EMNRD OCD RP No. 3R-451

Ensolum Project No. 05A1226007

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral K-7 Pipeline Release (2012) (Site)
Location:	36.46422° North, 107.56505° West Northwest (NW) ¼ of Section 27, Township 26 North, Range 7 West Rio Arriba County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

A release of natural gas and associated pipeline liquids was discovered at the Site on August 30, 2012. Animas Environmental Services, LLC (AES) collected five (5) soil samples from the pipeline repair excavation and eight (8) soil samples from four (4) "test pits" completed outside the excavation. Constituent of concern (COC) concentrations were present in soil above the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) standards (*Release Report for the Lateral K-7 September 2012 Release, dated September 26, 2012 – AES*).

During November 2012, AES performed delineation activities to evaluate the extent of petroleum hydrocarbon affected soils and potentially impacted groundwater, which resulted in the advancement and sampling of eight (8) soil borings (SB-1 through SB-8). Laboratory analytical results identified benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations and combined total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO) concentrations that exceeded applicable New Mexico EMNRD OCD *RALs* in soil borings SB-3 and SB-8. Groundwater analytical results for groundwater samples collected from the soil borings SB-1 through SB-6 identified benzene and toluene (SB-3W) concentrations above the applicable New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standard (GQS)* (*Continued Site Assessment Report, dated February 25, 2013 – AES*).

During October 2013, AES performed additional delineation activities by advancing five (5) soil borings (SB-9 through SB-13) which were completed as groundwater monitoring wells MW-1 through MW-5. At these locations, COCs were not identified in soils at concentrations above the New Mexico EMNRD OCD *RALs*, however benzene concentrations in groundwater were identified above the applicable New Mexico WQCC *GQS* at monitoring wells MW-1, MW-3, and MW-5 *(Groundwater Investigation Report, dated March 19, 2014 – AES).*

On February 18, 2014, AES conducted a groundwater monitoring event. The resulting analytical results indicate COC concentrations exceeding the WQCC *GQS* for benzene in monitoring wells MW-1, MW-3, and MW-5.

On November 11, 2014 and June 23, 2015, Apex TITAN, Inc. (Apex) conducted groundwater monitoring events at the Site. Groundwater samples were not obtained from monitoring well MW-5 due to an obstruction within the well casing. During the November 2014 sampling event, benzene concentrations

exceeded the WQCC *GQS* at monitoring wells MW-1 and MW-3. During the June 2015 sampling event, no COC concentrations were identified above the WQCC *GQSs*.

During August 2015, after completing pipeline modification activities at the Site, Enterprise performed additional excavation at the Site to remove residual petroleum hydrocarbon affected soils. Approximately 1,841 cubic yards of petroleum hydrocarbon affected soils were transported to a New Mexico EMNRD OCD-approved landfarm for treatment/disposal. During corrective action activities, monitoring wells MW-1 through MW-5 were plugged and abandoned (P&A'd) to allow the excavation of the affected soils (*Corrective Action Report, dated January 21, 2016 – Apex)*.

During November 2016, after recieving the required United States Burea of Land Management (BLM) Plan of Development (POD) approval, Apex performed site investigation activities to reestablish the monitoring well network that was removed during 2015 soil remediation activities. Six (6) soil borings were advanced and completed as monitoring wells (MW-1A through MW-6A). Soil samples collected from the soil borings did not indicate COC concentrations above the applicable New Mexico EMNRD OCD *RALs*. Analytical results from groundwater samples collected from the monitoring wells during the December 2016 and March 2017 sampling events did not indicate COC concentrations above the applicable WQCC *GQSs* (*Supplemental Environmental Site Investigation and Groundwater Sampling Report (November/December 2016 and March 2017), dated August 16, 2017 – Apex*).

Quarterly groundwater monitoring events were conducted by Apex during 2017 and 2018. COC concentrations were not detected in groundwater, and the laboratory detection limits were below WQCC standards. (*Groundwater Monitoring Report (July, September, and December 2017 Sampling Events), dated August 3, 2018 – Apex*).

The Site location is depicted on **Figure 1** of **Appendix A** which was reproduced from a portion of a United States Geological Survey (USGS) 7.5-minute series topographic map. A **Site Vicinity Map**, created from an aerial photograph, is provided as **Figure 2**, and a **Site Map**, which indicates the approximate locations of the monitoring wells and previous soil boring locations in relation to pertinent structures and general Site boundaries, is included as **Figure 3** of **Appendix A**.

1.2 Project Objectives

The objectives of the groundwater monitoring events were to further evaluate groundwater conditions at the Site and demonstrate successful natural attenuation following the removal of affected soils.

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases* (revised 8/14/2018). which establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action. Additionally, the New Mexico EMNRD OCD utilizes the New Mexico WQCC GQSs (NMAC 20.6.2) to evaluate baseline groundwater conditions.

In accordance with the NMAC 20.6.2 *Groundwater and Surface Water Protection* (effective 12/21/2018), subsurface water abatement is not considered complete until a minimum of eight (8) consecutive sampling events meet or fall below the standards of Subsections A, B, and C of NMAC 20.6.2.3103. Abatement standards for groundwater at the Site include:

- 5 micrograms per liter (µg/L) for benzene,
- 700 µg/L for ethylbenzene,
- 1,000 µg/L for toluene, and
- 620 µg/L for total xylenes.

Soil remediation, delineation, and groundwater monitoring activities performed at the Site are detailed in the following reports:

- *Release Report for the Lateral K-7,* AES, September 26, 2012
- *Continued Site Assessment Report,* AES, February 25, 2013
- *Groundwater Investigation Report,* AES, March 19, 2014
- *Annual Groundwater Monitoring Report (February and November 2014 Sampling Events),* Apex, April 25, 2017
- *Corrective Action Report - Lateral K-7 Pipeline Release (8/30/2012),* Apex, January 21, 2016
- *Annual Groundwater Monitoring Report (June 2015 Sampling Event),* Apex, February 24, 2016
- *Supplemental Environmental Site Investigation and Groundwater Sampling Report (November/December 2016 and March 2017),* Apex, August 16, 2017
- *Groundwater Monitoring Report (July, September, and December 2017 Sampling Events),* Apex, August 3, 2018

3.0 GROUNDWATER MONITORING

3.1 Groundwater Sampling Program

Groundwater sampling events were conducted during April, June, September, and December 2018 by Apex TITAN, Inc. (Apex).

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

Based on information provided by Enterprise, Apex's groundwater sampling program consisted of the following:

Prior to sample collection, Apex gauged the depth to fluids in each monitoring well using an interface probe capable of detecting non-aqueous phase liquids (NAPL).

Each monitoring well was sampled utilizing micro-purge low-flow sampling techniques. Subsequent to the completion of the micro-purge process, one (1) groundwater sample was collected from each monitoring well.

Low-flow refers to the velocity with which groundwater enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system, to the extent practical, taking into account established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (L/min) are maintained during sampling activities, using dedicated or decontaminated sampling equipment.

The groundwater samples are collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are taken every three to five minutes while purging. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for three successive readings.

Groundwater samples were collected in laboratory supplied containers, labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The groundwater samples were relinquished to the courier for Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico under proper chain-of-custody procedures.

3.2 Groundwater Laboratory Analytical Methods

The groundwater samples collected from the monitoring wells during the 2018 groundwater sampling events were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) utilizing Environmental Protection Agency (EPA) Method SW-846 #8021/8260. The containers were pre-preserved with mercuric chloride ($HgCl_2$).

A summary of the per-event analytes, sample matrix, sample frequency and EPA-approved methods for all four (4) sampling events are presented on the following table.

Analytes	Sample Matrix	No. of Samples (per event)	EPA Method
BTEX	Groundwater	6	SW-846 8021/8260

Laboratory analytical results are summarized in **Table 1** in **Appendix B**. The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix C**.

3.3 Groundwater Flow Direction

Each of the monitoring wells has been surveyed to determine top-of-casing (TOC) elevations. Prior to sample collection, Apex gauged the depth to fluids in each monitoring well. The groundwater flow direction (gradient) at the Site is generally toward the north-northwest, with an average gradient of approximately 0.008 feet per foot (ft/ft) across the Site.

Groundwater measurements collected during the 2018 gauging events are presented with TOC elevations in **Table 2** (**Appendix B**). Groundwater gradient maps for the 2018 gauging events are included as **Figure 4A** through **4D** (**Appendix A**).

3.4 Data Evaluation

Ensolum compared the BTEX laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with the groundwater samples collected from monitoring wells during the April, June, September, and December 2018 sampling events to the New Mexico WQCC *GQSs*. The results of the groundwater sample analyses are summarized in **Table 1** of **Appendix B**. Groundwater Analtyical Data maps are provided as **Figures 5A** through **5D** of **Appendix A**.

April, June, September, and December 2018 Sample Results:

The April, June, September, and December groundwater samples collected from monitoring wells MW-1A through MW-6A did not exhibit benzene concentrations above the laboratory PQLs, which are below the WQCC *GQSs* of 5 µg/L.

The April, June, September, and December groundwater samples collected from monitoring wells MW-1A through MW-6A did not exhibit toluene concentrations above the laboratory PQLs, which are below the WQCC *GQSs* of 700 µg/L.

The April, June, September, and December groundwater samples collected from monitoring wells MW-1A through MW-6A did not exhibit ethylbenzene concentrations above the laboratory PQLs, which are below the WQCC *GQSs* of 1,000 µg/L.

The April, June, September, and December groundwater samples collected from monitoring wells MW-1A

through MW-6A did not exhibit total xylenes concentrations above the laboratory PQLs, which are below the WQCC *GQSs* of 620 µg/L.

Data Qualifier Flags		
Sample ID	**Data Qualifier Flag**	**Comments/Reactions**
MW-2A (collected 4/17/2018)	Sample Diluted Due to Matrix.	The sample was diluted due to matrix interference.
MW-3A (collected 4/17/2018)	Sample Diluted Due to Matrix.	The sample was diluted due to matrix interference.

No data qualifier flags were associated with the June, September, and December 2018 analytical results.

4.0 FINDINGS AND RECOMMENDATIONS

Groundwater sampling events were conducted by Apex at the Lateral K-7 Pipeline Release (2012) Site during April, June, September, and December 2018. The objectives of the groundwater monitoring events were to further evaluate groundwater conditions at the Site and demonstrate successful natural attenuation following the removal of affected soils.

- The groundwater flow direction at the Site is generally towards the north-northwest, with an approximate gradient of 0.008 ft/ft across the Site.

- The groundwater samples collected from monitoring wells MW-1A through MW-6A during the four (4) 2018 sampling events did not exhibit BTEX concentrations above the applicable WQCC *GQSs.*

Based on the results of groundwater monitoring activities, Ensolum has the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD;

- Request that no further action be required in relation to this release based on:
    - Nine (9) consectutive groundwater sampling events have demonstrated no residual impact to groundwater above abatement standards, and
    - Removal of all hydrocarbon-impacted soil completed in 2015.

- Request approval to plug and abandon the monitoring wells.

NMOCD Form C-141 (revised 9/4/2018) is included in Appendix D to document the request for closure.

5.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

5.1 Standard of Care

Ensolum's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other

third parties). This scope of services was performed in accordance with the scope of work agreed with the client, as detailed in our proposal.

5.2 Additional Limitations

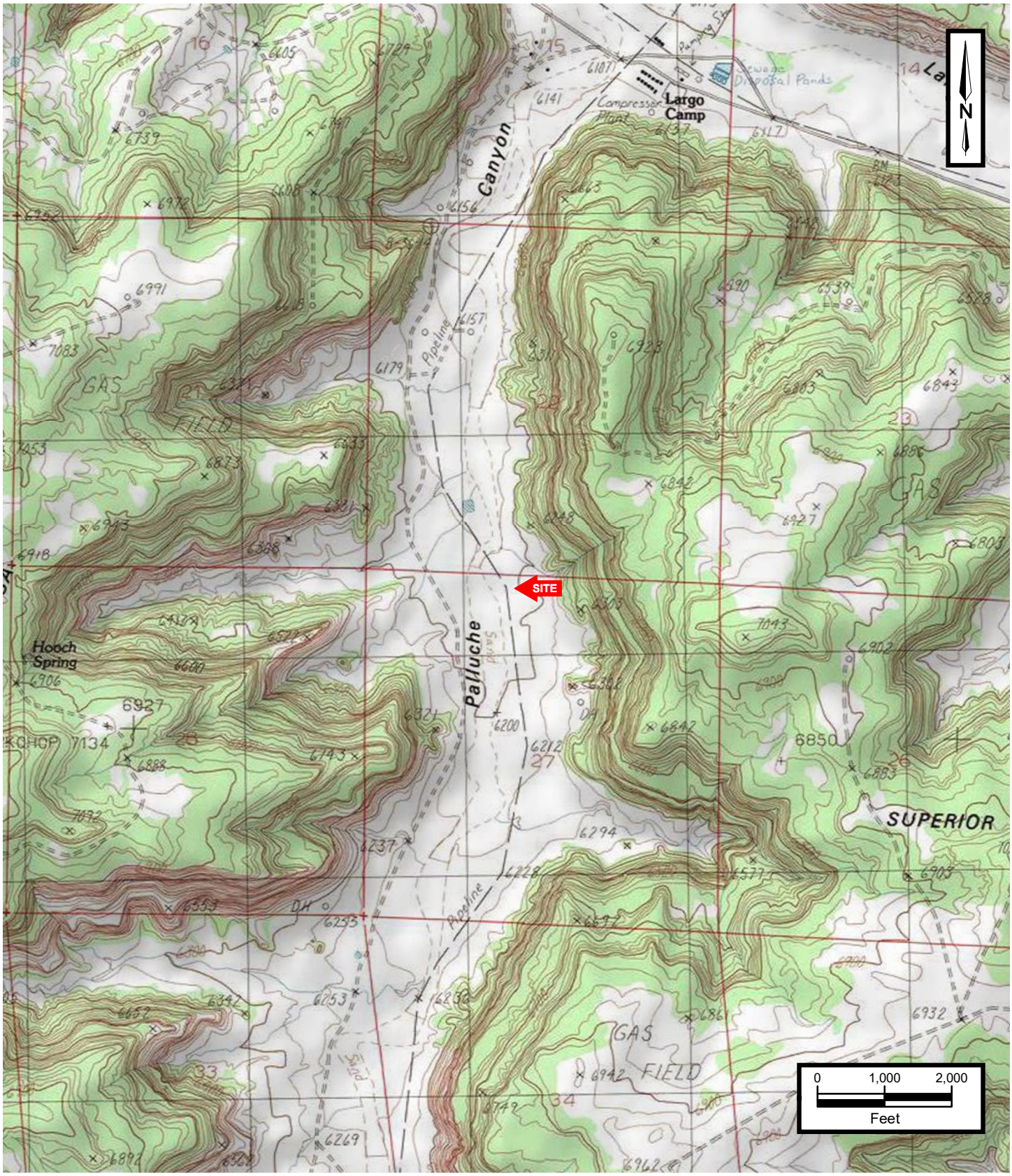
Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings, and recommendations are based solely upon data available to Ensolum at the time of these services.

5.3 Reliance

This report has been prepared for the exclusive use of Enterprise Products Operating LLC, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise Products Operating LLC and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

APPENDIX A

Figures



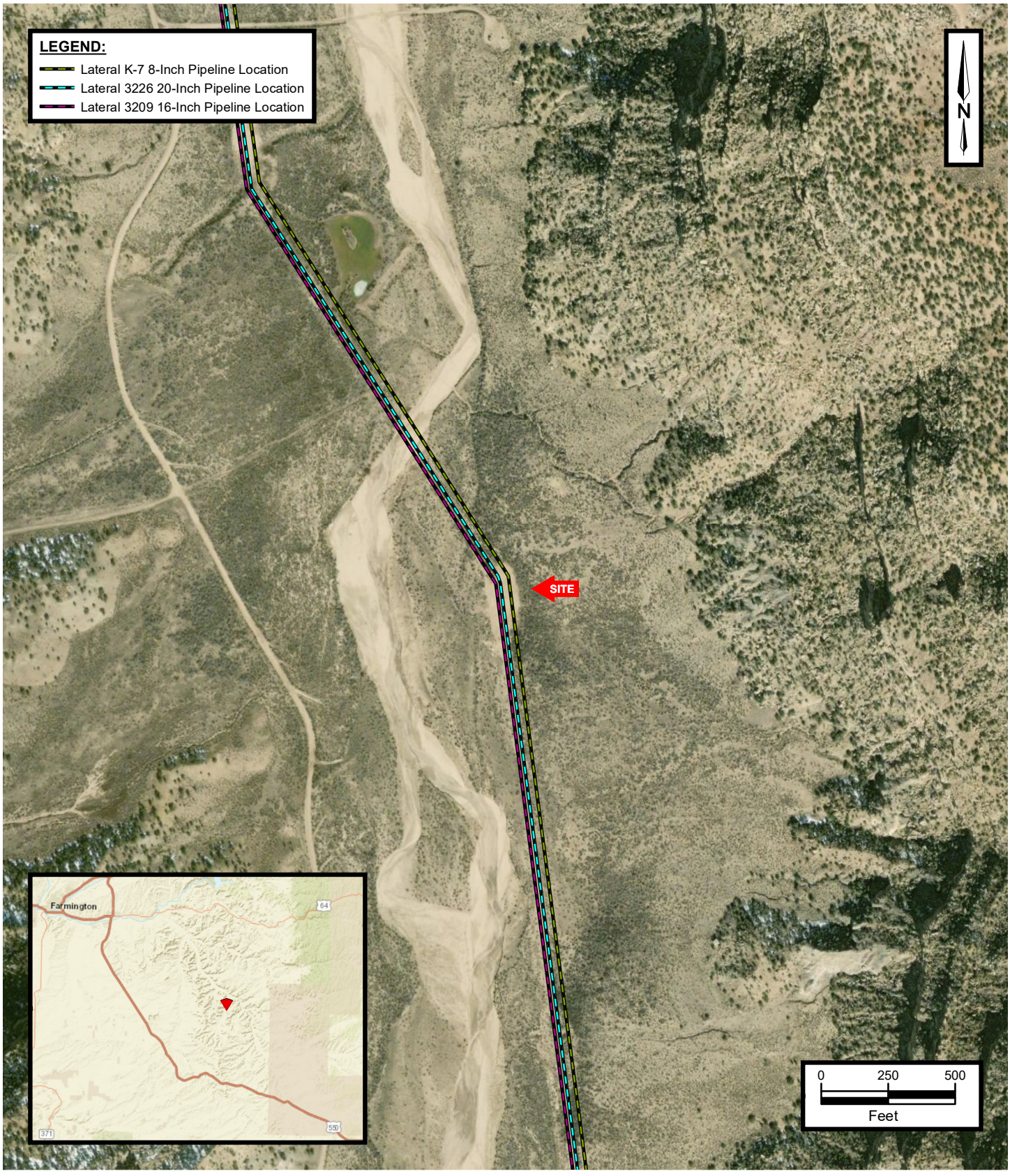
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
1



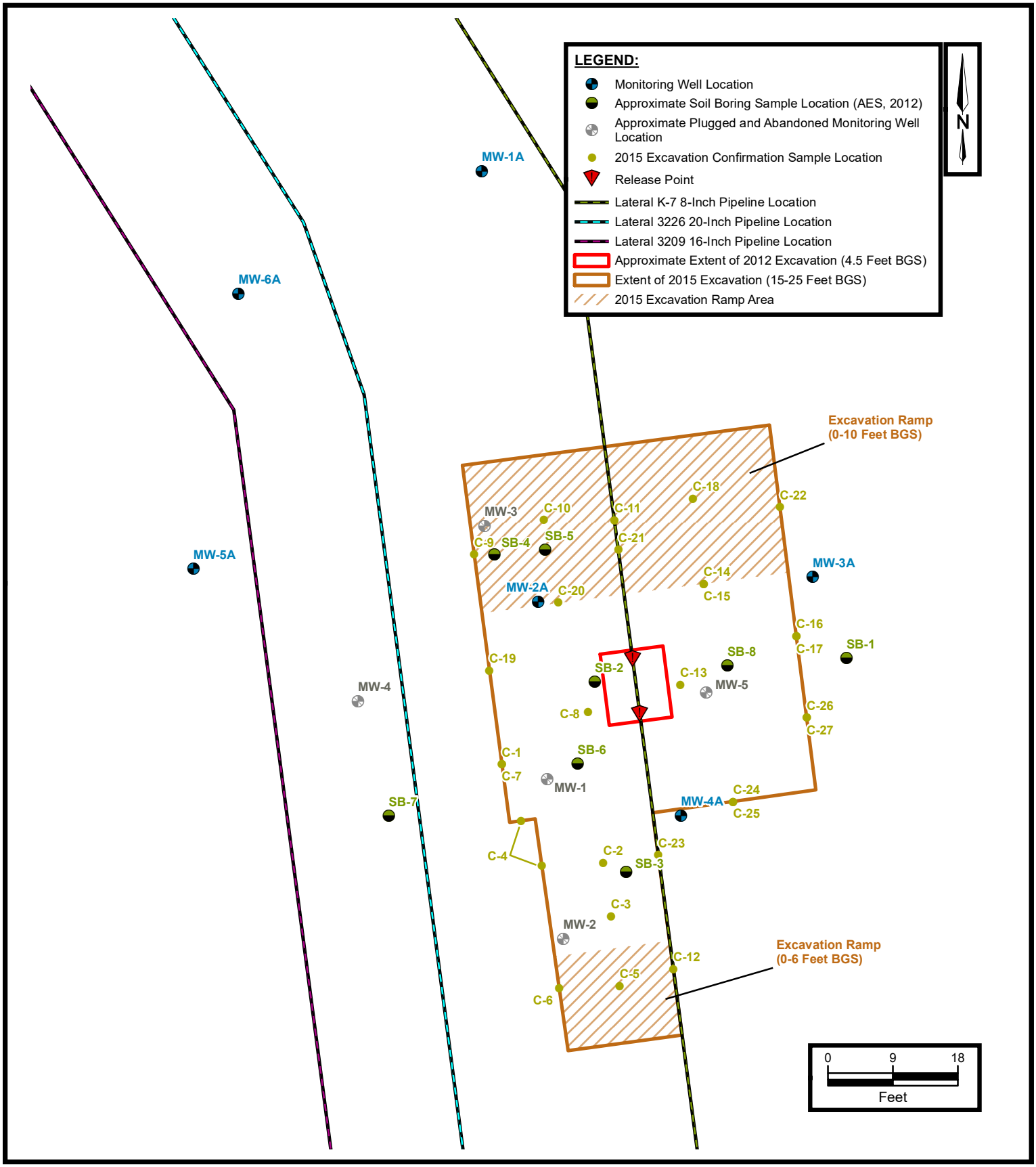
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
2



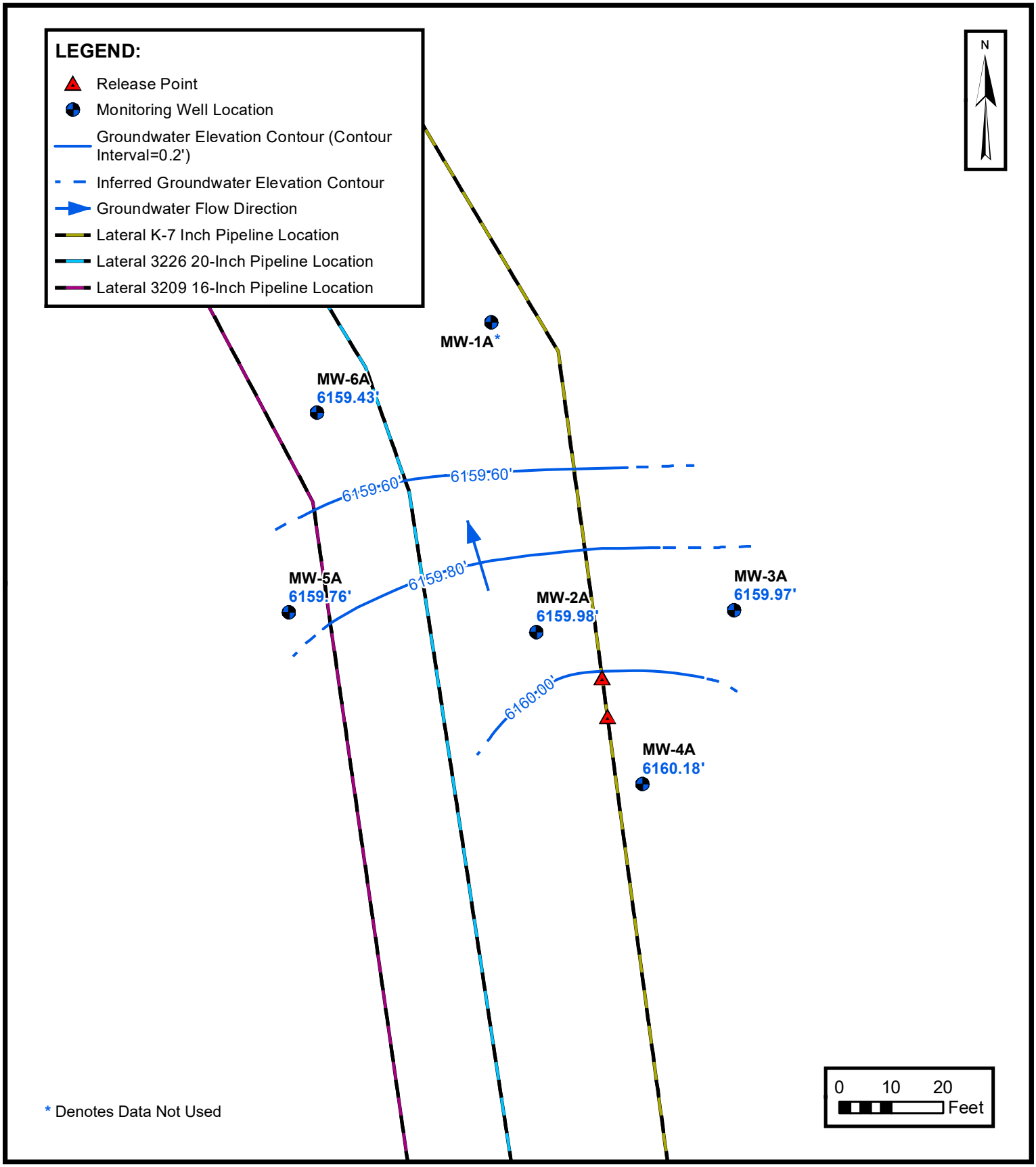
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
3



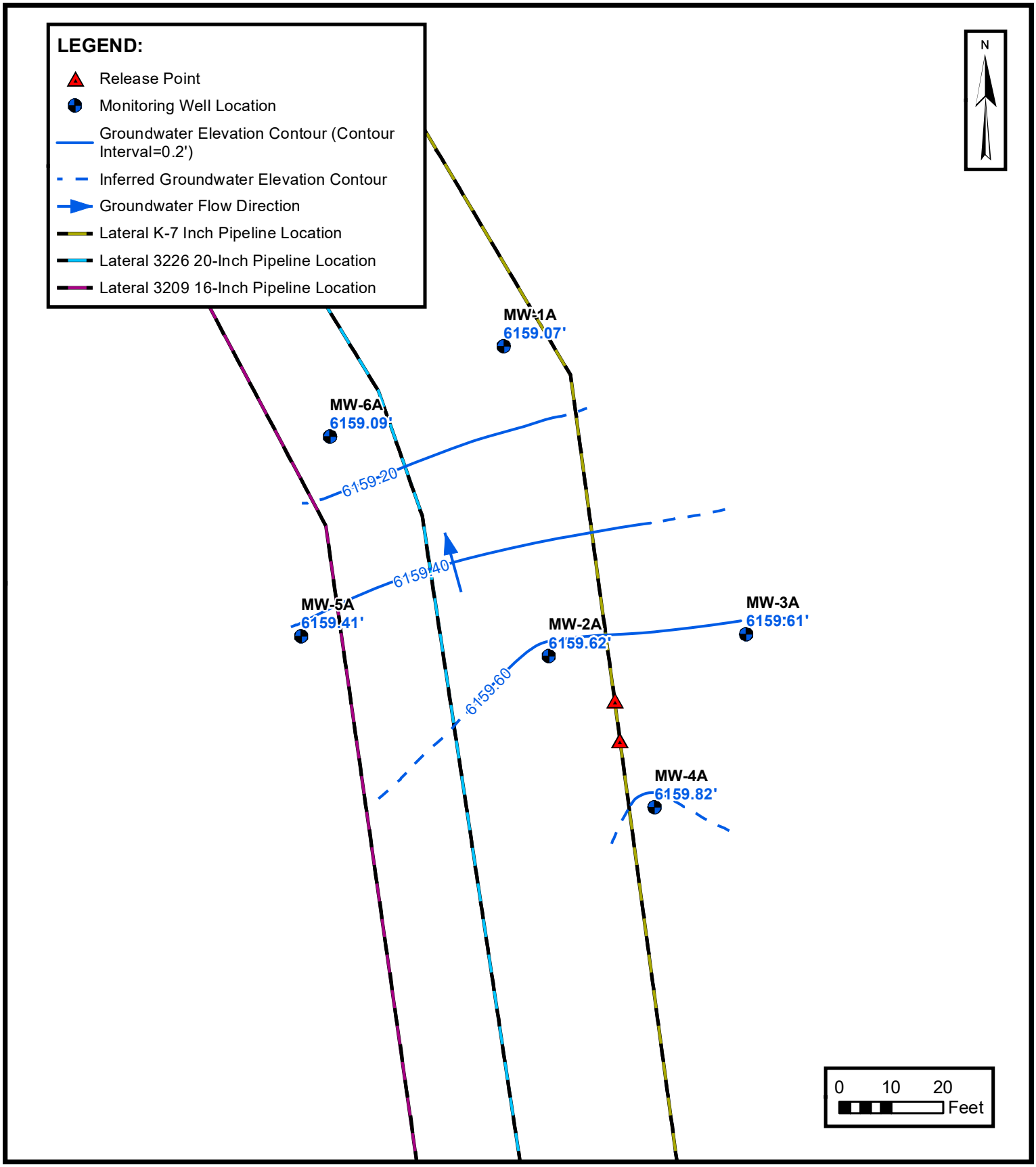
ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER GRADIENT MAP
(APRIL 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
4A



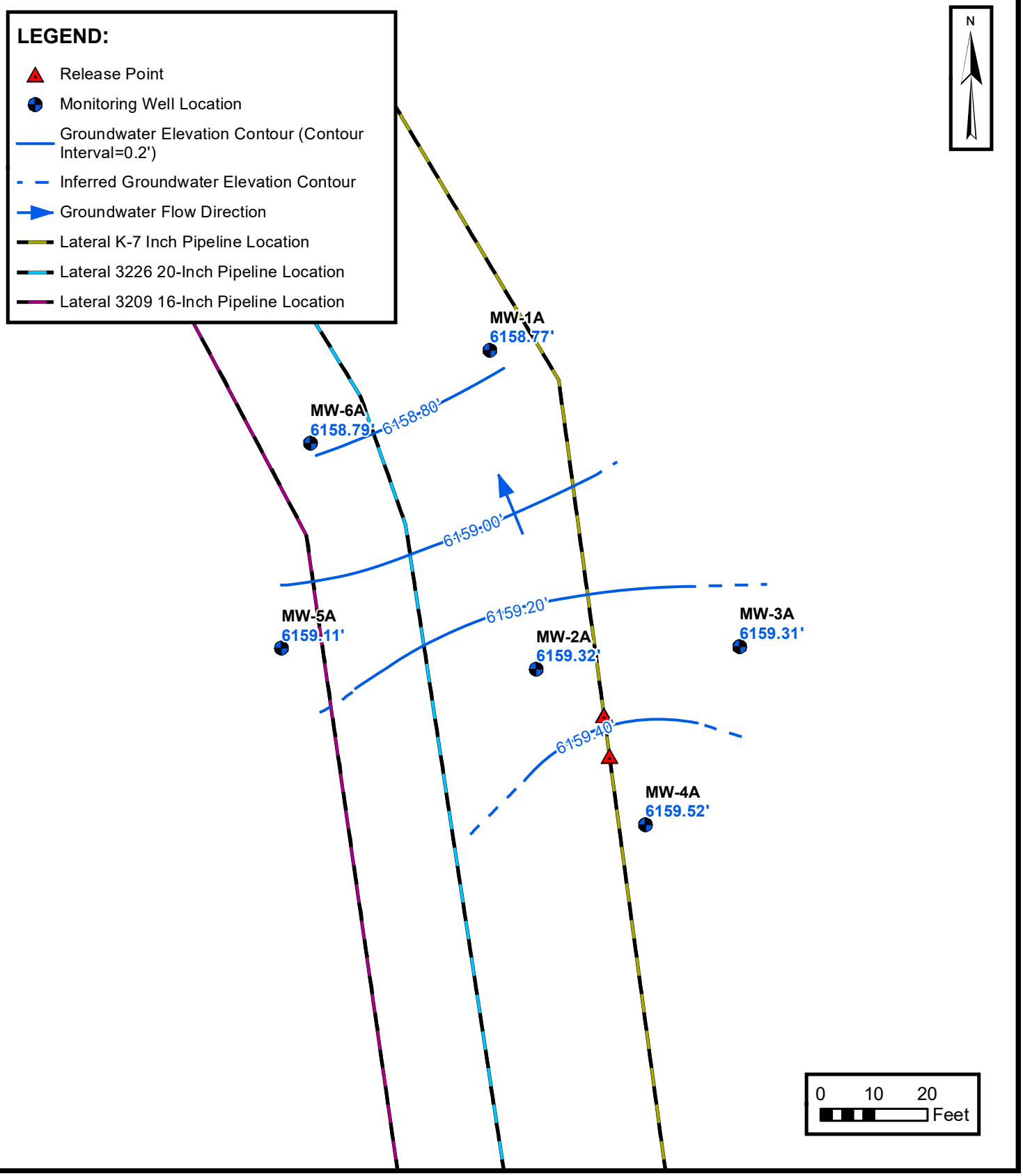
ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER GRADIENT MAP
(JUNE 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
4B



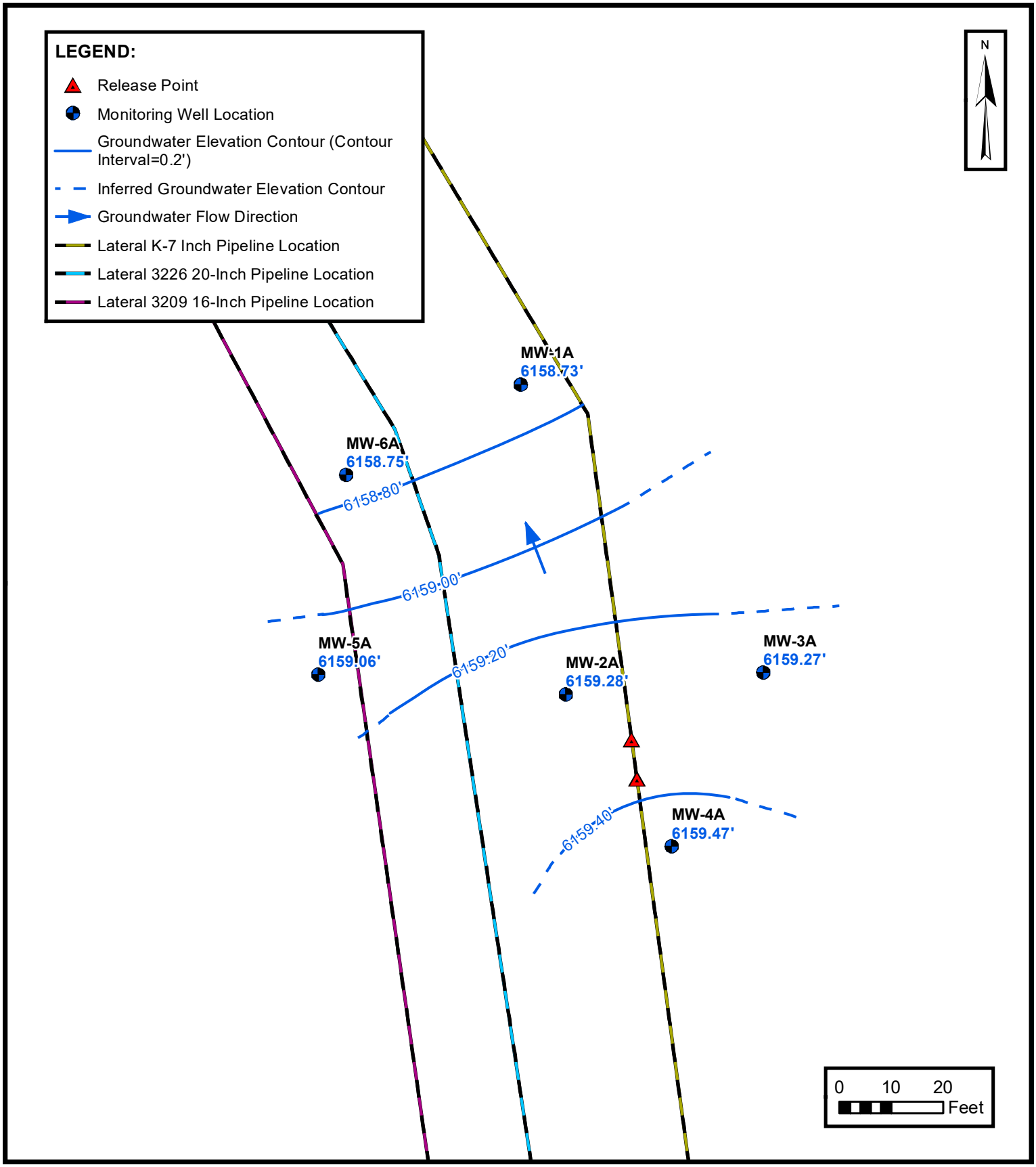
ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER GRADIENT MAP (SEPTEMBER 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
4C



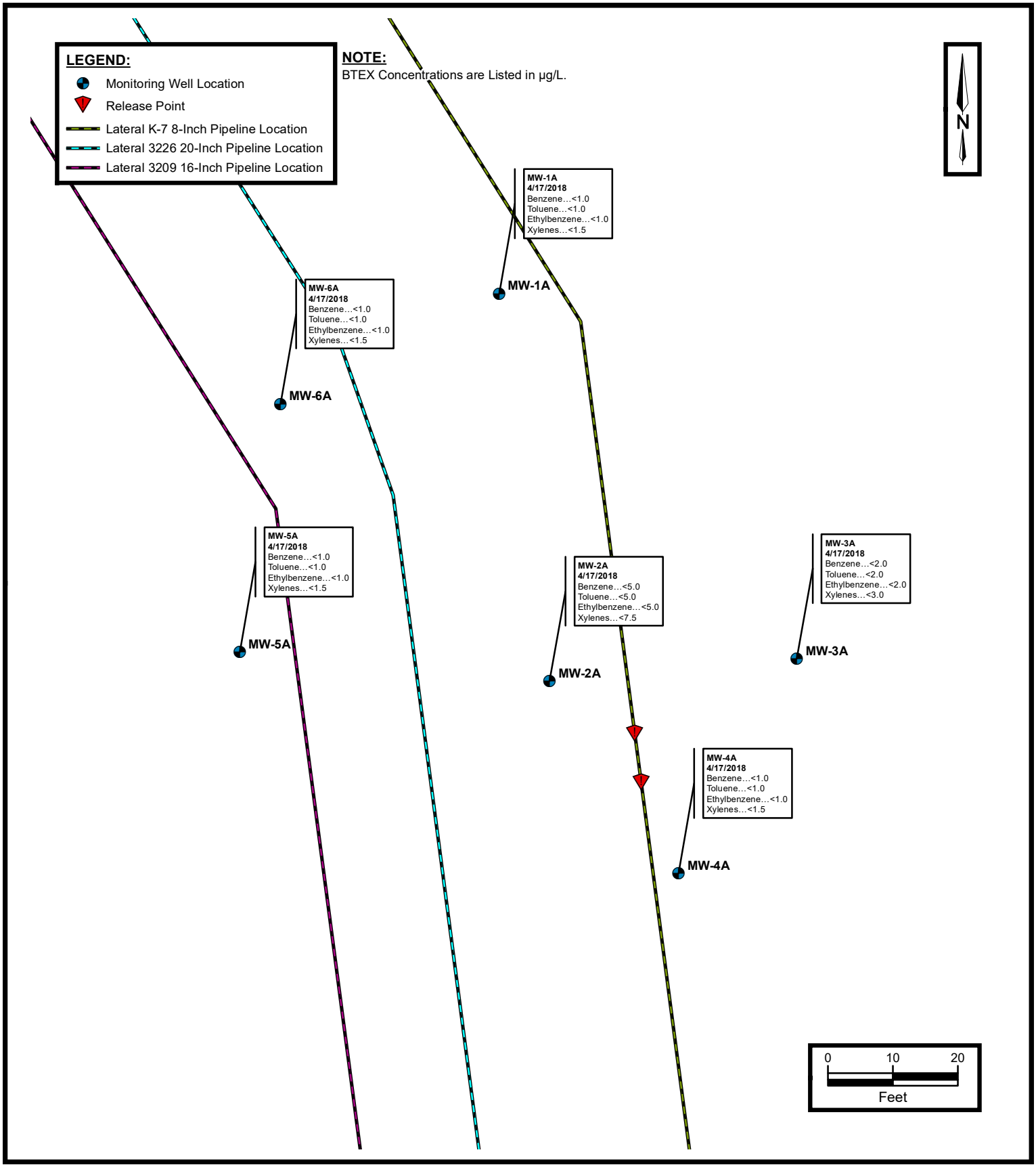
ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER GRADIENT MAP (DECEMBER 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
4D



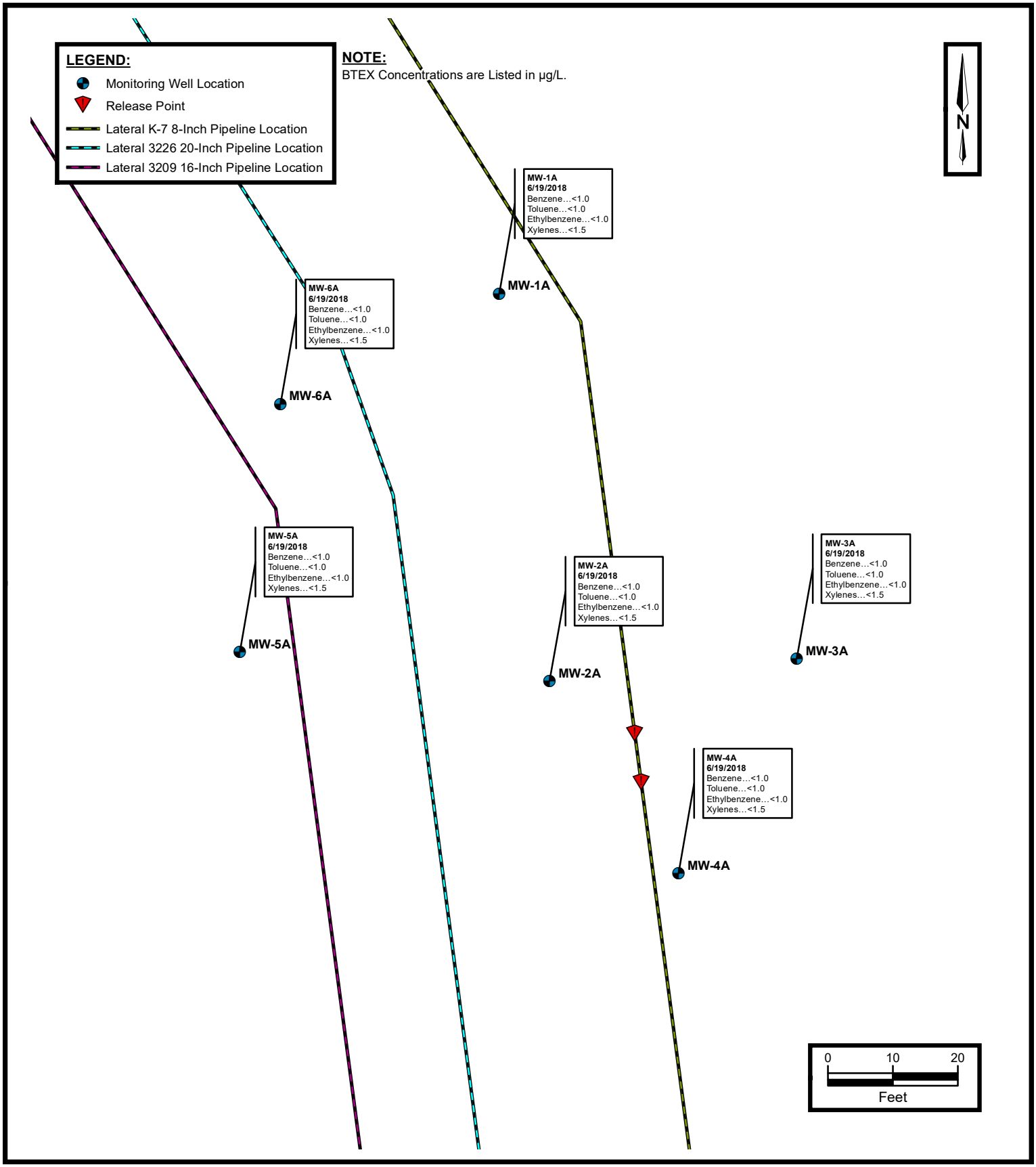
ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER ANALYTICAL DATA MAP
(APRIL 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE
5A



ENSOLUM
Environmental & Hydrogeologic Consultants

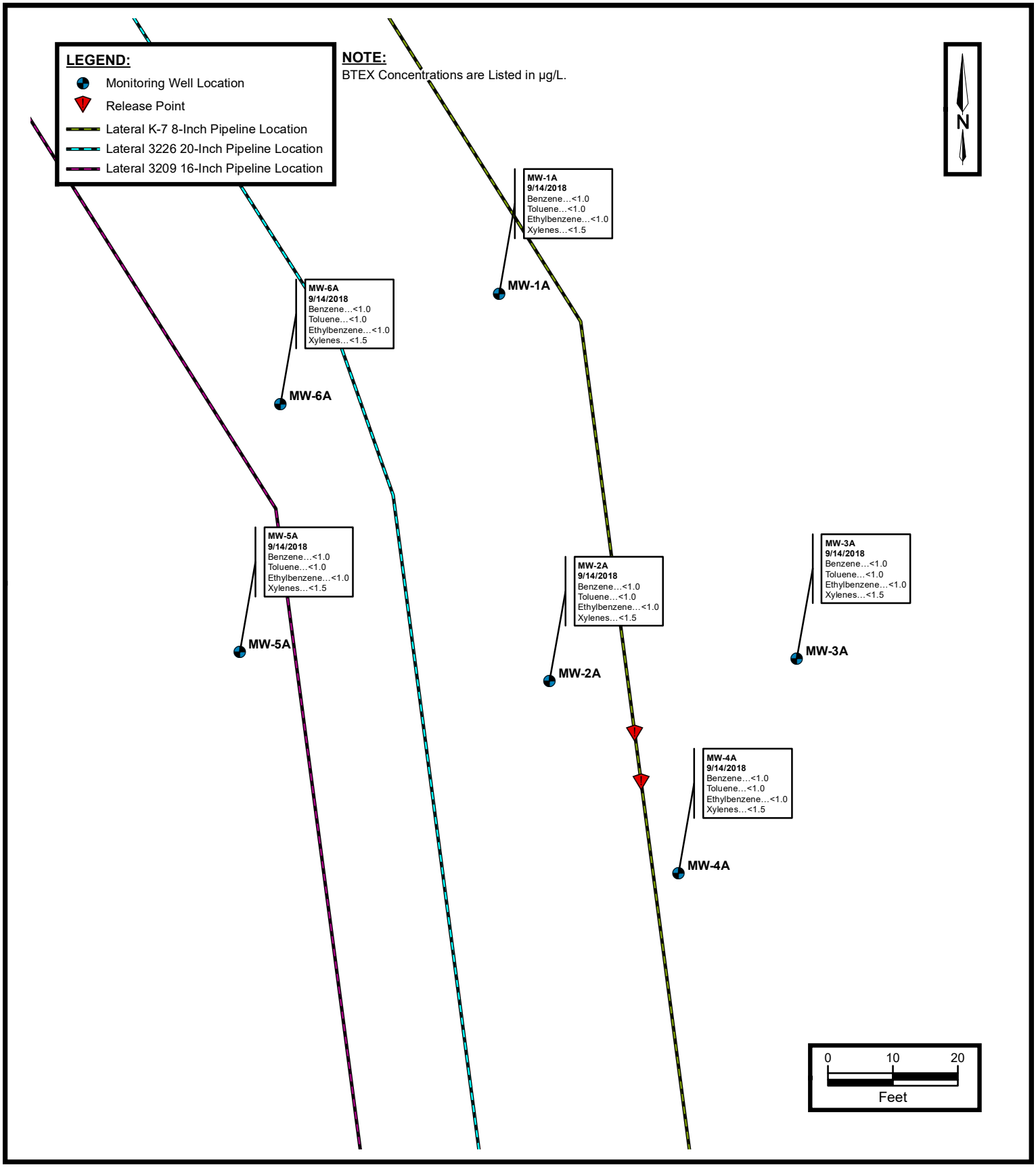
GROUNDWATER ANALYTICAL DATA MAP
(JUNE 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE

5B



ENSOLUM
Environmental & Hydrogeologic Consultants

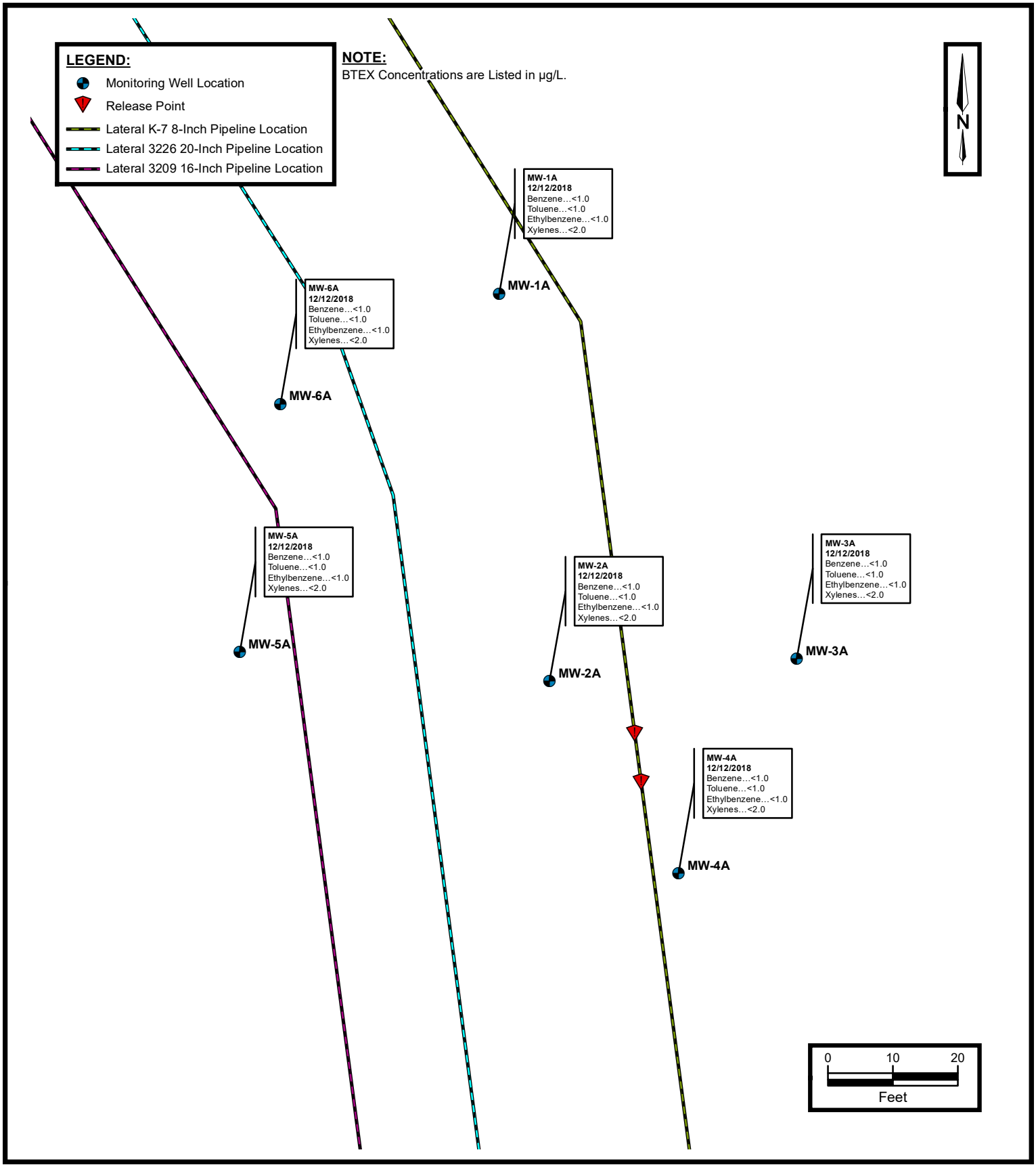
GROUNDWATER ANALYTICAL DATA MAP (SEPTEMBER 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE

5C



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER ANALYTICAL DATA MAP (DECEMBER 2018)

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-7 (2012) PIPELINE RELEASE
NW ¼, S27 T26N R7W, Rio Arriba County, Texas
36.46422° N, 107.56505° W

PROJECT NUMBER: 05A1226007

FIGURE

5D

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APPENDIX B

Tables

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TABLE 1
Lateral K-7 September 2012 Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		5	700	1,000	620	NE	NE	NE
Monitoring Wells Installed by AES								
MW-1	11.20.13	**35**	140	5.3	77	0.69	<1.0	NA
	2.18.14	**34**	96	4	58	NA	NA	NA
	11.11.14	**39**	240	10	170	NA	NA	NA
	6.23.15	7.4	14	<1.0	8.9	NA	NA	NA
	Monitor well removed to allow soil remediation during August 2015							
MW-2	11.20.13	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	NA
	2.18.14	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	11.11.14	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	6.23.15	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	Monitor well removed to allow soil remediation during August 2015							
MW-3	11.20.13	**15**	31	<2.0	17	0.25	<1.0	NA
	2.18.14	**21**	33	<1.0	21	NA	NA	NA
	11.11.14	**11**	26	<1.0	18	NA	NA	NA
	6.23.15	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	Monitor well removed to allow soil remediation during August 2015							
MW-4	11.20.13	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	NA
	2.18.14	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	11.11.14	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	6.23.15	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	Monitor well removed to allow soil remediation during August 2015							
MW-5	11.20.13	**90**	340	9.6	200	1.7	<1.0	NA
	2.18.14	**54**	200	10	150	NA	NA	NA
	11.11.14	Unable to remove bailer from well						
	6.23.15	Unable to remove bailer from well						
	Monitor well removed to allow soil remediation during August 2015							
Monitoring Wells Installed by Apex								
MW-1A	12.13.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	3.28.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	7.03.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.22.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.14.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	4.17.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.19.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.14.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.12.18	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
MW-2A	12.13.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	3.28.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	7.03.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.22.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.14.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	4.17.18	<5.0	<5.0	<5.0	<7.5	NA	NA	NA
	6.19.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.14.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.12.18	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
MW-3A	12.13.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	3.28.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	7.03.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.22.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.14.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	4.17.18	<2.0	<2.0	<2.0	<3.0	NA	NA	NA
	6.19.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.14.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.12.18	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
MW-4A	12.13.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	3.28.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	7.03.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.22.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.14.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	4.17.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.19.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.14.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.12.18	<1.0	<1.0	<1.0	<2.0	NA	NA	NA

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TABLE 1
Lateral K-7 September 2012 Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		**5**	**700**	**1,000**	**620**	**NE**	**NE**	**NE**
MW-5A	12.13.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	3.28.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	7.03.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.22.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.14.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	4.17.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.19.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.14.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.12.18	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
MW-6A	12.13.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	3.28.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	7.03.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.22.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.14.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	4.17.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.19.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	9.14.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.12.18	<1.0	<1.0	<1.0	<2.0	NA	NA	NA

Note: Concentrations in **bold** and yellow exceed the applicable WQCC GQS

µg/L= micrograms per liter

mg/L= milligrams per liter

NA = Not Analyzed

NE= Not Establised

TPH = Total Petroleum Hydorcarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

<1.0 = the numeral (in this case "1.0") identifies the laboratory reporting limit or practical quantitation limit

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TABLE 2
Lateral K-7 September 2012 Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation (feet AMSL)
MW-1	11.20.13	ND	29.34	ND	6190.12	6160.78
	2.18.14	ND	29.32	ND		6160.80
	11.11.14	ND	30.14	ND		6159.98
	6.23.15	ND	30.26	ND		6159.86
	8.00.15	Monitor well removed to allow soil remediation during August 2015				
MW-2	11.20.13	ND	29.19	ND	6190.18	6160.99
	2.18.14	ND	29.17	ND		6161.01
	11.11.14	ND	29.98	ND		6160.20
	6.23.15	ND	30.11	ND		6160.07
	8.00.15	Monitor well removed to allow soil remediation during August 2015				
MW-3	11.20.13	ND	29.61	ND	6190.11	6160.50
	2.18.14	ND	29.59	ND		6160.52
	11.11.14	ND	30.41	ND		6159.70
	6.23.15	ND	30.52	ND		6159.59
	8.00.15	Monitor well removed to allow soil remediation during August 2015				
MW-4	11.20.13	ND	28.67	ND	6189.25	6160.58
	2.18.14	ND	28.65	ND		6160.60
	11.11.14	ND	29.49	ND		6159.76
	6.23.15	ND	29.58	ND		6159.67
	8.00.15	Monitor well removed to allow soil remediation during August 2015				
MW-5	11.20.13	ND	30.38	ND	6191.06	6160.68
	2.18.14	ND	30.35	ND		6160.71
	11.11.14	ND	31.20	ND		6159.86
	6.23.15	Unable to remove bailer from well				
	8.00.15	Monitor well removed to allow soil remediation during August 2015				
MW-1A	12.13.16	ND	30.84	ND	6190.15	6159.31
	3.28.17	ND	30.44	ND		6159.71
	7.03.17	ND	30.82	ND		6159.33
	10.23.17	ND	30.59	ND		6159.56
	12.14.17	ND	30.50	ND		6159.65
	4.17.18*	ND	Errant Gauge	ND		Errant Gauge
	6.19.18	ND	31.08	ND		6159.07
	9.14.18	ND	31.38	ND		6158.77
	12.12.18	ND	31.42	ND		6158.73
MW-2A	12.13.16	ND	30.44	ND	6190.25	6159.81
	3.28.17	ND	30.03	ND		6160.22
	7.03.17	ND	30.39	ND		6159.86
	10.23.17	ND	30.16	ND		6160.09
	12.14.17	ND	30.05	ND		6160.20
	4.17.18	ND	30.27	ND		6159.98
	6.19.18	ND	30.63	ND		6159.62
	9.14.18	ND	30.93	ND		6159.32
	12.12.18	ND	30.97	ND		6159.28
MW-3A	12.13.16	ND	31.64	ND	6191.49	6159.85
	3.28.17	ND	31.25	ND		6160.24
	7.03.17	ND	31.63	ND		6159.86
	10.23.17	ND	31.40	ND		6160.09
	12.14.17	ND	31.27	ND		6160.22
	4.17.18	ND	31.52	ND		6159.97
	6.19.18	ND	31.88	ND		6159.61
	9.14.18	ND	32.18	ND		6159.31
	12.12.18	ND	32.22	ND		6159.27

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TABLE 2
Lateral K-7 September 2012 Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation (feet AMSL)
MW-4A	12.13.16	ND	31.63	ND	6191.72	6160.09
	3.28.17	ND	31.24	ND		6160.48
	7.03.17	ND	31.64	ND		6160.08
	10.23.17	ND	31.41	ND		6160.31
	12.14.17	ND	31.30	ND		6160.42
	4.17.18	ND	31.54	ND		6160.18
	6.19.18	ND	31.90	ND		6159.82
	9.04.18	ND	32.20	ND		6159.52
	12.12.18	ND	32.25	ND		6159.47
MW-5A	12.13.16	ND	29.42	ND	6189.08	6159.66
	3.28.17	ND	29.04	ND		6160.04
	7.03.17	ND	29.42	ND		6159.66
	10.23.17	ND	29.20	ND		6159.88
	12.14.17	ND	29.09	ND		6159.99
	4.17.18	ND	29.32	ND		6159.76
	6.19.18	ND	29.67	ND		6159.41
	9.04.18	ND	29.97	ND		6159.11
	12.12.18	ND	30.02	ND		6159.06
MW-6A	12.13.16	ND	29.79	ND	6189.12	6159.33
	3.28.17	ND	29.40	ND		6159.72
	7.03.17	ND	29.77	ND		6159.35
	10.23.17	ND	29.53	ND		6159.59
	12.14.17	ND	29.44	ND		6159.68
	4.17.18	ND	29.69	ND		6159.43
	6.19.18	ND	30.03	ND		6159.09
	9.14.18	ND	30.33	ND		6158.79
	12.12.18	ND	30.37	ND		6158.75

BTOC - below top of casing
TOC - top of casing
AMSL - above mean sea level
ND - Not Detected
* - Aberrant Gauging Data

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APPENDIX C

Laboratory Analytical Reports & Chain-of-Custody Documentation

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 23, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: K 7 2012 OrderNo.: 1804928

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 4/18/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1804928**
Date Reported: **4/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5A
Project: K 7 2012
Collection Date: 4/17/2018 9:45:00 AM
Lab ID: 1804928-001 **Matrix:** AQUEOUS **Received Date:** 4/18/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/19/2018 3:04:06 PM	W50701
Toluene	ND	1.0		µg/L	1	4/19/2018 3:04:06 PM	W50701
Ethylbenzene	ND	1.0		µg/L	1	4/19/2018 3:04:06 PM	W50701
Xylenes, Total	ND	1.5		µg/L	1	4/19/2018 3:04:06 PM	W50701
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	4/19/2018 3:04:06 PM	W50701
Surr: Toluene-d8	102	70-130		%Rec	1	4/19/2018 3:04:06 PM	W50701

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804928**
Date Reported: **4/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-6A
Project: K 7 2012
Collection Date: 4/17/2018 10:10:00 AM
Lab ID: 1804928-002
Matrix: AQUEOUS
Received Date: 4/18/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/19/2018 4:13:32 PM	W50701
Toluene	ND	1.0		µg/L	1	4/19/2018 4:13:32 PM	W50701
Ethylbenzene	ND	1.0		µg/L	1	4/19/2018 4:13:32 PM	W50701
Xylenes, Total	ND	1.5		µg/L	1	4/19/2018 4:13:32 PM	W50701
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	4/19/2018 4:13:32 PM	W50701
Surr: Toluene-d8	101	70-130		%Rec	1	4/19/2018 4:13:32 PM	W50701

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804928**
Date Reported: **4/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1A
Project: K 7 2012
Collection Date: 4/17/2018 10:35:00 AM
Lab ID: 1804928-003
Matrix: AQUEOUS
Received Date: 4/18/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/19/2018 4:36:41 PM	W50701
Toluene	ND	1.0		µg/L	1	4/19/2018 4:36:41 PM	W50701
Ethylbenzene	ND	1.0		µg/L	1	4/19/2018 4:36:41 PM	W50701
Xylenes, Total	ND	1.5		µg/L	1	4/19/2018 4:36:41 PM	W50701
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	4/19/2018 4:36:41 PM	W50701
Surr: Toluene-d8	102	70-130		%Rec	1	4/19/2018 4:36:41 PM	W50701

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 3 of 8
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Analytical Report
Lab Order **1804928**
Date Reported: **4/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3A
Project: K 7 2012
Collection Date: 4/17/2018 11:00:00 AM
Lab ID: 1804928-004
Matrix: AQUEOUS
Received Date: 4/18/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	2.0	D	µg/L	2	4/19/2018 4:59:49 PM	W50701
Toluene	ND	2.0	D	µg/L	2	4/19/2018 4:59:49 PM	W50701
Ethylbenzene	ND	2.0	D	µg/L	2	4/19/2018 4:59:49 PM	W50701
Xylenes, Total	ND	3.0	D	µg/L	2	4/19/2018 4:59:49 PM	W50701
Surr: 4-Bromofluorobenzene	117	70-130	D	%Rec	2	4/19/2018 4:59:49 PM	W50701
Surr: Toluene-d8	100	70-130	D	%Rec	2	4/19/2018 4:59:49 PM	W50701

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804928**
Date Reported: **4/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4A
Project: K 7 2012
Collection Date: 4/17/2018 11:25:00 AM
Lab ID: 1804928-005
Matrix: AQUEOUS
Received Date: 4/18/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/19/2018 5:22:59 PM	W50701
Toluene	ND	1.0		µg/L	1	4/19/2018 5:22:59 PM	W50701
Ethylbenzene	ND	1.0		µg/L	1	4/19/2018 5:22:59 PM	W50701
Xylenes, Total	ND	1.5		µg/L	1	4/19/2018 5:22:59 PM	W50701
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	4/19/2018 5:22:59 PM	W50701
Surr: Toluene-d8	98.2	70-130		%Rec	1	4/19/2018 5:22:59 PM	W50701

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804928**
Date Reported: **4/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2A
Project: K 7 2012
Collection Date: 4/17/2018 11:50:00 AM
Lab ID: 1804928-006
Matrix: AQUEOUS
Received Date: 4/18/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	5.0	D	µg/L	5	4/19/2018 5:46:09 PM	W50701
Toluene	ND	5.0	D	µg/L	5	4/19/2018 5:46:09 PM	W50701
Ethylbenzene	ND	5.0	D	µg/L	5	4/19/2018 5:46:09 PM	W50701
Xylenes, Total	ND	7.5	D	µg/L	5	4/19/2018 5:46:09 PM	W50701
Surr: 4-Bromofluorobenzene	112	70-130	D	%Rec	5	4/19/2018 5:46:09 PM	W50701
Surr: Toluene-d8	102	70-130	D	%Rec	5	4/19/2018 5:46:09 PM	W50701

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804928**

23-Apr-18

Client: APEX TITAN

Project: K 7 2012

Sample ID	**100ng lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**W50701**	RunNo:	**50701**					
Prep Date:		Analysis Date:	**4/19/2018**	SeqNo:	**1644716**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	80	120			
Toluene	20	1.0	20.00	0	99.3	80	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	59	1.5	60.00	0	98.4	80	120			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.1	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	**1804928-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-5A**	Batch ID:	**W50701**	RunNo:	**50701**					
Prep Date:		Analysis Date:	**4/19/2018**	SeqNo:	**1644718**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	20	1.0	20.00	0.07760	99.1	80	120			
Ethylbenzene	20	1.0	20.00	0.1376	99.9	80	120			
Xylenes, Total	60	1.5	60.00	0.4770	98.8	80	120			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.7	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	**1804928-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-5A**	Batch ID:	**W50701**	RunNo:	**50701**					
Prep Date:		Analysis Date:	**4/19/2018**	SeqNo:	**1644719**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.5	80	120	9.92	20	
Toluene	20	1.0	20.00	0.07760	99.5	80	120	0.313	20	
Ethylbenzene	20	1.0	20.00	0.1376	97.6	80	120	2.38	20	
Xylenes, Total	58	1.5	60.00	0.4770	96.4	80	120	2.44	20	
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**W50701**	RunNo:	**50701**					
Prep Date:		Analysis Date:	**4/19/2018**	SeqNo:	**1644725**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804928**

23-Apr-18

Client: APEX TITAN

Project: K 7 2012

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **W50701**	RunNo: **50701**
Prep Date:	Analysis Date: **4/19/2018**	SeqNo: **1644725** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	12		10.00		119	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1804928 RcptNo: 1

Received By: Anne Thorne 4/18/2018 7:00:00 AM

Completed By: Anne Thorne 4/18/2018 8:04:19 AM

Reviewed By: ENM 4/18/18

MW 4/18/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? 4/18/18 MW

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

CUSTODY SEALS INTACT ON VOA VIALS/at 4/18/18

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A Aztec NM 87410

Project Manager K. Summers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87109

Contact: A. Freeman

Phone: 505-345-3975

PO/SO #:

Sampler's Name: CDApont

Sampler's Signature:

Proj. No. 2504011228?

Project Name: K-7 (2012)

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.1

1 | 2 | 3 | 4 | 5

Page 1 of 1

ANALYSIS REQUESTED: BTEX 8021

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	4/17/18	945			MW-5A			3					1804928-001
W	4/17/18	1010			MW-6A			3					-002
W	4/17/18	1035			MW-1A			3					-003
W	4/17/18	1100			MW-3A			3					-004
W	4/17/18	1125			MW-4A			3					-005
W	4/17/18	1150			MW-2A			3					-006

Turn around time: ☑ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4-17-18	1520		4/17/18	1520
Grant Walls	4/17/18	1540		04/18/18	0700
	Date:	Time:		Date:	Time:
	Date:	Time:		Date:	Time:

NOTES: Bill to Apex (Corp Rate)

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 25, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral K-7 2012 OrderNo.: 1806B85

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806B85**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3A
Project: Lateral K-7 2012
Collection Date: 6/19/2018 8:35:00 AM
Lab ID: 1806B85-001
Matrix: AQUEOUS
Received Date: 6/20/2018 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/21/2018 10:17:58 AM	R52146
Toluene	ND	1.0		µg/L	1	6/21/2018 10:17:58 AM	R52146
Ethylbenzene	ND	1.0		µg/L	1	6/21/2018 10:17:58 AM	R52146
Xylenes, Total	ND	1.5		µg/L	1	6/21/2018 10:17:58 AM	R52146
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	6/21/2018 10:17:58 AM	R52146
Surr: Toluene-d8	104	70-130		%Rec	1	6/21/2018 10:17:58 AM	R52146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806B85**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4A
Project: Lateral K-7 2012
Collection Date: 6/19/2018 9:30:00 AM
Lab ID: 1806B85-002 **Matrix:** AQUEOUS **Received Date:** 6/20/2018 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/21/2018 11:27:18 AM	R52146
Toluene	ND	1.0		µg/L	1	6/21/2018 11:27:18 AM	R52146
Ethylbenzene	ND	1.0		µg/L	1	6/21/2018 11:27:18 AM	R52146
Xylenes, Total	ND	1.5		µg/L	1	6/21/2018 11:27:18 AM	R52146
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	6/21/2018 11:27:18 AM	R52146
Surr: Toluene-d8	106	70-130		%Rec	1	6/21/2018 11:27:18 AM	R52146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806B85**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2A
Project: Lateral K-7 2012
Collection Date: 6/19/2018 10:25:00 AM
Lab ID: 1806B85-003 **Matrix:** AQUEOUS **Received Date:** 6/20/2018 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/21/2018 11:50:24 AM	R52146
Toluene	ND	1.0		µg/L	1	6/21/2018 11:50:24 AM	R52146
Ethylbenzene	ND	1.0		µg/L	1	6/21/2018 11:50:24 AM	R52146
Xylenes, Total	ND	1.5		µg/L	1	6/21/2018 11:50:24 AM	R52146
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	6/21/2018 11:50:24 AM	R52146
Surr: Toluene-d8	100	70-130		%Rec	1	6/21/2018 11:50:24 AM	R52146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806B85**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1A
Project: Lateral K-7 2012
Collection Date: 6/19/2018 11:20:00 AM
Lab ID: 1806B85-004
Matrix: AQUEOUS
Received Date: 6/20/2018 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/21/2018 12:13:28 PM	R52146
Toluene	ND	1.0		µg/L	1	6/21/2018 12:13:28 PM	R52146
Ethylbenzene	ND	1.0		µg/L	1	6/21/2018 12:13:28 PM	R52146
Xylenes, Total	ND	1.5		µg/L	1	6/21/2018 12:13:28 PM	R52146
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	6/21/2018 12:13:28 PM	R52146
Surr: Toluene-d8	105	70-130		%Rec	1	6/21/2018 12:13:28 PM	R52146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806B85**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5A
Project: Lateral K-7 2012
Collection Date: 6/19/2018 12:15:00 PM
Lab ID: 1806B85-005
Matrix: AQUEOUS
Received Date: 6/20/2018 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/21/2018 12:36:47 PM	R52146
Toluene	ND	1.0		µg/L	1	6/21/2018 12:36:47 PM	R52146
Ethylbenzene	ND	1.0		µg/L	1	6/21/2018 12:36:47 PM	R52146
Xylenes, Total	ND	1.5		µg/L	1	6/21/2018 12:36:47 PM	R52146
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	6/21/2018 12:36:47 PM	R52146
Surr: Toluene-d8	104	70-130		%Rec	1	6/21/2018 12:36:47 PM	R52146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806B85**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-6A
Project: Lateral K-7 2012
Collection Date: 6/19/2018 1:10:00 PM
Lab ID: 1806B85-006 **Matrix:** AQUEOUS **Received Date:** 6/20/2018 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/21/2018 12:59:53 PM	R52146
Toluene	ND	1.0		µg/L	1	6/21/2018 12:59:53 PM	R52146
Ethylbenzene	ND	1.0		µg/L	1	6/21/2018 12:59:53 PM	R52146
Xylenes, Total	ND	1.5		µg/L	1	6/21/2018 12:59:53 PM	R52146
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/21/2018 12:59:53 PM	R52146
Surr: Toluene-d8	101	70-130		%Rec	1	6/21/2018 12:59:53 PM	R52146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1806B85**
25-Jun-18

Client: APEX TITAN
Project: Lateral K-7 2012

Sample ID	**100ng btex lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**BatchQC**	Batch ID:	**R52146**	RunNo:	**52146**
Prep Date:		Analysis Date:	**6/21/2018**	SeqNo:	**1707858** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	62	1.5	60.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	9.9		10.00		99.4	70	130			

Sample ID	**1806b85-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**MW-3A**	Batch ID:	**R52146**	RunNo:	**52146**
Prep Date:		Analysis Date:	**6/21/2018**	SeqNo:	**1707860** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	22	1.0	20.00	0	108	80	120			
Xylenes, Total	64	1.5	60.00	0	106	80	120			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.5	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID	**1806b85-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**MW-3A**	Batch ID:	**R52146**	RunNo:	**52146**
Prep Date:		Analysis Date:	**6/21/2018**	SeqNo:	**1707861** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	80	120	4.43	20	
Toluene	21	1.0	20.00	0	105	80	120	0.992	20	
Ethylbenzene	20	1.0	20.00	0	102	80	120	5.69	20	
Xylenes, Total	60	1.5	60.00	0	100	80	120	5.57	20	
Surr: 4-Bromofluorobenzene	9.5		10.00		95.5	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**PBW**	Batch ID:	**R52146**	RunNo:	**52146**
Prep Date:		Analysis Date:	**6/21/2018**	SeqNo:	**1707874** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1806B85**
25-Jun-18

Client: APEX TITAN
Project: Lateral K-7 2012

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R52146**	RunNo: **52146**
Prep Date:	Analysis Date: **6/21/2018**	SeqNo: **1707874** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1806B85 RcptNo: 1

Received By: **Isaiah Ortiz** 6/20/2018 7:15:00 AM I Ortiz

Completed By: **Isaiah Ortiz** 6/20/2018 8:14:38 AM I Ortiz

Reviewed By: ENM 6/20/2018

LB: MW 6/20/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

MW 6/20/18

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: 606 S Rio Grande Suite A, Aztec, NM 87410

Project Manager: K. Summers

Laboratory: Hall Environmental / Analysis Laboratory

Address: 4901 Hawkins NE, Albuquerque, NM 87104

Contact: A. Freeman

Phone: 505-345-3975

PO/SO #: 725040122287

Sampler's Name: Ranee Deechilly

Sampler's Signature:

Proj. No.: 725040122287

Project Name: Lateral K-7 2018

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.4

1 X | 2 | 3 | 4 | 5

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	6/19/18	835			MW-3A			3					1806B85 -001
W	6/19/18	930			MW-4A			3					-002
W	6/19/18	1025			MW-2A			3					-003
W	6/19/18	1120			MW-1A			3					-004
W	6/19/18	1215			MW-5A			3					-005
W	6/19/18	1310			MW-6A			3					-006

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6/19/18	1526		6/19/18	1526
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6/19/18	1910	FedEx courier	6/20/18	07:15
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES: Bill to Apex Corporate rate

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 21, 2018

Kyle Summers

Apex Titan, Inc.
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (214) 350-5469
FAX (214) 350-2914

RE: Lateral K 7 2012 OrderNo.: 1809926

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/15/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1809926**
Date Reported: **9/21/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-3A
Project: Lateral K 7 2012 **Collection Date:** 9/14/2018 9:40:00 AM
Lab ID: 1809926-001 **Matrix:** AQUEOUS **Received Date:** 9/15/2018 10:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	9/20/2018 1:14:01 PM
Toluene	ND	1.0		µg/L	1	9/20/2018 1:14:01 PM
Ethylbenzene	ND	1.0		µg/L	1	9/20/2018 1:14:01 PM
Xylenes, Total	ND	1.5		µg/L	1	9/20/2018 1:14:01 PM
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	9/20/2018 1:14:01 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	9/20/2018 1:14:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1809926**
Date Reported: **9/21/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-4A
Project: Lateral K 7 2012 **Collection Date:** 9/14/2018 10:35:00 AM
Lab ID: 1809926-002 **Matrix:** AQUEOUS **Received Date:** 9/15/2018 10:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	9/20/2018 1:37:06 PM
Toluene	ND	1.0		µg/L	1	9/20/2018 1:37:06 PM
Ethylbenzene	ND	1.0		µg/L	1	9/20/2018 1:37:06 PM
Xylenes, Total	ND	1.5		µg/L	1	9/20/2018 1:37:06 PM
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	9/20/2018 1:37:06 PM
Surr: Toluene-d8	100	70-130		%Rec	1	9/20/2018 1:37:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1809926**
Date Reported: **9/21/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-2A
Project: Lateral K 7 2012 **Collection Date:** 9/14/2018 11:25:00 AM
Lab ID: 1809926-003 **Matrix:** AQUEOUS **Received Date:** 9/15/2018 10:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	9/20/2018 2:00:11 PM
Toluene	ND	1.0		µg/L	1	9/20/2018 2:00:11 PM
Ethylbenzene	ND	1.0		µg/L	1	9/20/2018 2:00:11 PM
Xylenes, Total	ND	1.5		µg/L	1	9/20/2018 2:00:11 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	9/20/2018 2:00:11 PM
Surr: Toluene-d8	104	70-130		%Rec	1	9/20/2018 2:00:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1809926**
Date Reported: **9/21/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-1A
Project: Lateral K 7 2012 **Collection Date:** 9/14/2018 12:05:00 PM
Lab ID: 1809926-004 **Matrix:** AQUEOUS **Received Date:** 9/15/2018 10:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	9/20/2018 2:23:14 PM
Toluene	ND	1.0		µg/L	1	9/20/2018 2:23:14 PM
Ethylbenzene	ND	1.0		µg/L	1	9/20/2018 2:23:14 PM
Xylenes, Total	ND	1.5		µg/L	1	9/20/2018 2:23:14 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	9/20/2018 2:23:14 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	9/20/2018 2:23:14 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1809926**
Date Reported: **9/21/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-5A
Project: Lateral K 7 2012 **Collection Date:** 9/14/2018 12:50:00 PM
Lab ID: 1809926-005 **Matrix:** AQUEOUS **Received Date:** 9/15/2018 10:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	9/20/2018 2:46:23 PM
Toluene	ND	1.0		µg/L	1	9/20/2018 2:46:23 PM
Ethylbenzene	ND	1.0		µg/L	1	9/20/2018 2:46:23 PM
Xylenes, Total	ND	1.5		µg/L	1	9/20/2018 2:46:23 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	9/20/2018 2:46:23 PM
Surr: Toluene-d8	99.6	70-130		%Rec	1	9/20/2018 2:46:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1809926**
Date Reported: **9/21/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-6A
Project: Lateral K 7 2012 **Collection Date:** 9/14/2018 1:35:00 PM
Lab ID: 1809926-006 **Matrix:** AQUEOUS **Received Date:** 9/15/2018 10:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	9/20/2018 3:09:19 PM
Toluene	ND	1.0		µg/L	1	9/20/2018 3:09:19 PM
Ethylbenzene	ND	1.0		µg/L	1	9/20/2018 3:09:19 PM
Xylenes, Total	ND	1.5		µg/L	1	9/20/2018 3:09:19 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	9/20/2018 3:09:19 PM
Surr: Toluene-d8	98.2	70-130		%Rec	1	9/20/2018 3:09:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809926**
21-Sep-18

Client: Apex Titan, Inc.
Project: Lateral K 7 2012

Sample ID	**100ng btex lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**BatchQC**	Batch ID:	**A54305**	RunNo:	**54305**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1797474** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.6	80	120			
Toluene	19	1.0	20.00	0	93.0	80	120			
Ethylbenzene	18	1.0	20.00	0	91.3	80	120			
Xylenes, Total	56	1.5	60.00	0	93.1	80	120			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.7		10.00		96.9	70	130			

Sample ID	**1809926-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**MW-3A**	Batch ID:	**A54305**	RunNo:	**54305**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1797476** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	80	120			
Toluene	22	1.0	20.00	0	109	80	120			
Ethylbenzene	22	1.0	20.00	0	108	80	120			
Xylenes, Total	65	1.5	60.00	0	109	80	120			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.6	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	**1809926-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**MW-3A**	Batch ID:	**A54305**	RunNo:	**54305**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1797477** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120	5.17	20	
Toluene	21	1.0	20.00	0	107	80	120	2.27	20	
Ethylbenzene	21	1.0	20.00	0	104	80	120	4.16	20	
Xylenes, Total	63	1.5	60.00	0	105	80	120	3.92	20	
Surr: 4-Bromofluorobenzene	9.2		10.00		91.8	70	130	0	0	
Surr: Toluene-d8	9.9		10.00		98.9	70	130	0	0	

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**PBW**	Batch ID:	**A54305**	RunNo:	**54305**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1797483** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809926**

21-Sep-18

Client: Apex Titan, Inc.

Project: Lateral K 7 2012

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**A54305**	RunNo:	**54305**					
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1797483**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **APEX Titan** Work Order Number: **1809926** RcptNo: **1**

Received By: **Isaiah Ortiz** **9/15/2018 10:20:00 AM** IG

Completed By: **Ashley Gallegos** **9/17/2018 12:23:18 PM** AG

Reviewed By: JAB 09/19/18

Labeled by: ag 09/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

09/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: 1006 S Rio Grande Suite A, Aztec, NM 87410

Project Manager: K. Summers

Laboratory: Hall Environmental Analysis Laboratory

Address: 4901 Hawkins NE, Albuquerque, NM 87109

Contact: A. Freeman

Phone: 505-345-3975

PO/SO #: 725040112287

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.4

1 ✓ | 2 | 3 | 4 | 5

Page 1 of 1

Sampler's Name: Ranee Deechilly

Sampler's Signature:

Proj. No.: 725040112287

Project Name: Lateral K-7 2012

No/Type of Containers

ANALYSIS REQUESTED: BTEX 8021

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	9/14/18	940			MW-3A			3					1809926-001
W	9/14/18	1035			MW-4A			3					-002
W	9/14/18	1125			MW-2A			3					-003
W	9/14/18	1205			MW-1A			3					-004
W	9/14/18	1250			MW-5A			3					-005
W	9/14/18	1335			MW-6A			3					-006

NES

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/14/18	1605		9/14/18	1605
	9/14/18	1810	IOA Courier 1030 9/15/18	9/15/18	1020
			IO 9/15		

NOTES: Bill to Apex (corporate rate)

Custody seals on Containers. mg 09/19/18

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 17, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral K-7 (2012) OrderNo.: 1812714

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/13/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812714**
Date Reported: **12/17/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3A
Project: Lateral K-7 (2012)
Collection Date: 12/12/2018 9:30:00 AM
Lab ID: 1812714-001 **Matrix:** AQUEOUS **Received Date:** 12/13/2018 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/14/2018 12:41:48 PM	R56354
Toluene	ND	1.0		µg/L	1	12/14/2018 12:41:48 PM	R56354
Ethylbenzene	ND	1.0		µg/L	1	12/14/2018 12:41:48 PM	R56354
Xylenes, Total	ND	2.0		µg/L	1	12/14/2018 12:41:48 PM	R56354
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	12/14/2018 12:41:48 PM	R56354

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812714**
Date Reported: **12/17/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4A
Project: Lateral K-7 (2012)
Collection Date: 12/12/2018 10:25:00 AM
Lab ID: 1812714-002 **Matrix:** AQUEOUS **Received Date:** 12/13/2018 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/14/2018 4:51:11 PM	R56354
Toluene	ND	1.0		µg/L	1	12/14/2018 4:51:11 PM	R56354
Ethylbenzene	ND	1.0		µg/L	1	12/14/2018 4:51:11 PM	R56354
Xylenes, Total	ND	2.0		µg/L	1	12/14/2018 4:51:11 PM	R56354
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	12/14/2018 4:51:11 PM	R56354

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812714**
Date Reported: **12/17/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2A
Project: Lateral K-7 (2012)
Collection Date: 12/12/2018 11:15:00 AM
Lab ID: 1812714-003 **Matrix:** AQUEOUS **Received Date:** 12/13/2018 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/14/2018 5:13:38 PM	R56354
Toluene	ND	1.0		µg/L	1	12/14/2018 5:13:38 PM	R56354
Ethylbenzene	ND	1.0		µg/L	1	12/14/2018 5:13:38 PM	R56354
Xylenes, Total	ND	2.0		µg/L	1	12/14/2018 5:13:38 PM	R56354
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/14/2018 5:13:38 PM	R56354

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
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
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812714**
Date Reported: **12/17/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1A
Project: Lateral K-7 (2012)
Collection Date: 12/12/2018 12:10:00 PM
Lab ID: 1812714-004 **Matrix:** AQUEOUS **Received Date:** 12/13/2018 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/14/2018 5:36:24 PM	R56354
Toluene	ND	1.0		µg/L	1	12/14/2018 5:36:24 PM	R56354
Ethylbenzene	ND	1.0		µg/L	1	12/14/2018 5:36:24 PM	R56354
Xylenes, Total	ND	2.0		µg/L	1	12/14/2018 5:36:24 PM	R56354
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/14/2018 5:36:24 PM	R56354

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812714**
Date Reported: **12/17/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5A
Project: Lateral K-7 (2012)
Collection Date: 12/12/2018 12:55:00 PM
Lab ID: 1812714-005 **Matrix:** AQUEOUS **Received Date:** 12/13/2018 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/14/2018 5:59:07 PM	R56354
Toluene	ND	1.0		µg/L	1	12/14/2018 5:59:07 PM	R56354
Ethylbenzene	ND	1.0		µg/L	1	12/14/2018 5:59:07 PM	R56354
Xylenes, Total	ND	2.0		µg/L	1	12/14/2018 5:59:07 PM	R56354
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/14/2018 5:59:07 PM	R56354

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812714**
Date Reported: **12/17/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-6A
Project: Lateral K-7 (2012)
Collection Date: 12/12/2018 1:40:00 PM
Lab ID: 1812714-006 **Matrix:** AQUEOUS **Received Date:** 12/13/2018 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/14/2018 6:21:50 PM	R56354
Toluene	ND	1.0		µg/L	1	12/14/2018 6:21:50 PM	R56354
Ethylbenzene	ND	1.0		µg/L	1	12/14/2018 6:21:50 PM	R56354
Xylenes, Total	ND	2.0		µg/L	1	12/14/2018 6:21:50 PM	R56354
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/14/2018 6:21:50 PM	R56354

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812714**

17-Dec-18

Client: APEX TITAN

Project: Lateral K-7 (2012)

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R56354**	RunNo:	**56354**					
Prep Date:		Analysis Date:	**12/14/2018**	SeqNo:	**1884513**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	26		20.00		130	80	120			S

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R56354**	RunNo:	**56354**					
Prep Date:		Analysis Date:	**12/14/2018**	SeqNo:	**1884514**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.4	80	120			
Toluene	19	1.0	20.00	0	96.4	80	120			
Ethylbenzene	20	1.0	20.00	0	99.1	80	120			
Xylenes, Total	60	2.0	60.00	0	100	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		110	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1812714 | RcptNo: 1

Received By: Anne Thorne 12/13/2018 7:50:00 AM

Completed By: Isaiah Ortiz 12/13/2018 7:57:56 AM

Reviewed By: JAB 12/13/18

LB. JU 12.13.18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? JU 12.13.18

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: MW-3A: 2vial received broken JU 12.13.18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S. Rio Grande Suite A, Aztec, NM 87410

Project Manager K. Summers

Laboratory: Hall Environmental Analysis Laboratory

Address: 4901 Hawkins NE, Albuquerque, NM 87109

Contact: A. Freeman

Phone: 505-345-3975

PO/SO #: 725040112287

Sampler's Name: Ranee Deechilly

Sampler's Signature:

Proj. No.: 725040112287

Project Name: Lateral K-7 2012

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.2C

1 | 2 | 3 | 4 | 5

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	12/12/18	930			MW-3A			3					1812714-001
W	12/12/18	1025			MW-4A			3					-002
W	12/12/18	1115			MW-2A			3					-003
W	12/12/18	1210			MW-1A			3					-004
W	12/12/18	1255			MW-5A			3					-005
W	12/12/18	1340			MW-6A			3					-006
					AFS								

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	12/12/18	1640		12/12/18	1640
	12/12/18	1821		12/13/18	0750
	Date:	Time:		Date:	Time:
	Date:	Time:		Date:	Time:

NOTES: Bill to Apex (corporate rate)

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

ENSOLUM

APPENDIX D

Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities **(included in January 21, 2016 Corrective Action Report)**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Rodney Sartor Title: Senior Director, Environmental

Signature: _____ Date: _____

email: rmsartor@eprod.com Telephone: (713) 381-6629

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	241602
	Action Number: 329608
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	The OCD has reviewed both document submissions and determined the request for abatement termination in the “no further action request” to be approved with the following conditions of approval.	12/15/2025
amaxwell	Enterprise will plug and abandon all six (6) monitoring wells within 90 days of receipt of this letter following an approved Office of State Engineering plugging plan.	12/15/2025
amaxwell	Enterprise will submit a Plugging report detailing the plugging operations to the OCD within 120 days of receipt of this letter.	12/15/2025
amaxwell	Enterprise will submit a completed Reclamation report pursuant to 19.15.29.13 NMAC within 180 days of receipt of this letter	12/15/2025