April 13, 2020
Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210

Re: Pinnacle State #009 Release Closure Request (NVV2002829022)

Mr. Bratcher,

The attached report summarizes the sampling activities at the Pinnacle State #009 well pad. WPX requests no further action be taken until the reclamation of the Pad. Please contact me with any questions or concerns.

Best regards,

Lynda Laumbach
Environmental Specialist

CC: Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:
Attachment 01 Site Characterization Report & Soil Closure Report

Incident ID	
District RP	NVV2002829022
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NVV2002829022
District RP	
Facility ID	
Application ID	

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.

Printed Name: Lynda Laumbach Title: Environmental Specialist

Signature: Lynda Laumbach Date: 04/13/2020

email: Lynda.Laumbach@wpxenergy.com Telephone: (575)725-1647

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NVV2002829022
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

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: Lynda Laumbach Title: Environmental Specialist

Signature: Lynda Laumbach Date: 04/13/2020

email: Lynda.Laumbach@wpxenergy.com Telephone: (575)725-1647

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: _____

HRL COMPLIANCE SOLUTIONS
P.O. Box 1708 • Artesia, NM 88211
www.hrlcomp.com

February 21, 2020

Ms. Lynda Laumbach
WPX Energy Permian Basin, LLC
5315 Buena Vista Drive
Carlsbad, New Mexico 88220
Email: Lynda.Laumbach@wpxenergy.com

Subject: **Closure Report**
Pinnacle State #009
API #: 30-015-27201
Eddy County, New Mexico

Dear Ms. Laumbach:

HRL Compliance Solutions, Inc. (HRL) is pleased to present this closure report for the release and subsequent remediation at the Pinnacle State #009 Production Facility (Site). The Site is located in Eddy County, New Mexico (Figure 1). Photographs of the Site can be found in Attachment A.

Release Summary and Initial Response

On January 14, 2020 a release of eight barrels of produced water was observed at the Site. The release was due to a polish rod casing leak. The produced water impacted the well pad surface. Initial response activities included the removal of the free liquids located within the impacted area.

The volume released was between five barrels and 25 barrels; therefore, this release is considered a minor release. On January 14, 2020 Lynda Laumbach of WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) District 2 on a Release Notification and Corrective Action Form (Form C-141) (Attachment B).

Item	Discussion
Site Name	Pinnacle State #009
Latitude	32.3538399
Longitude	-104.039444
Township/Range/Section/Unit	Township 22 South/Range 28 East/Section 36/Unit B
Date Release Discovered	January 14, 2020
Cause of Release	Polish rod casing leak
Type of Material Released	Produced Water

Item	Discussion
Volume Release	8 Barrels
Volume Recovered	3 Barrels
Volume Lost	5 Barrels

Initial Site Assessment

On January 15, 2020, HRL mobilized to the Site to evaluate the release. HRL utilized a Trimble GeoXT global positioning system (GPS) unit to map the surficial extent of the release (Figure 2). The release impacted an approximate area of 2,025 square feet (225.67 square yards).

New Mexico Administrative Code (NMAC) Site Characterization Criteria

Title 19, Chapter 15, Part 29, Section 11 of the New Mexico Administrative Code (NMAC) provides requirements for release characterization once the free liquids and recoverable materials have been removed from the Site.

Site Map

A scaled diagram depicting the potentially impacted area and nearby significant features has been prepared (Figure 1).

Depth to Groundwater

HRL drilled one groundwater monitoring well at the Pinnacle State #004 well pad (latitude 32.351316, -104.044205), approximately 1,700 feet southwest of the Site. The well was drilled using hollow-stem auger to a total depth of 55 feet below ground surface (bgs). The well was completed with two-inch polyvinyl chloride (PVC) factory slotted screen from 55 to 45 feet bgs and blank casing from 45 feet bgs to ground surface. The well was left undisturbed for 48-hours, at which time WPX returned to gauge the depth to water. Water was not encountered in this well; therefore, HRL has determined that the depth to groundwater is greater than 55 feet below ground surface. (Figure 3).

Wellhead Protection Area

There are no sources of water, including springs, wells, or other sources of fresh water, within one-half mile of the release.

Distance to Nearest Significant Watercourse

A significant watercourse is defined as "…a watercourse with a defined bed and bank either named or identified by a dashed blue line on a USGS 7.5-minute quadrangle map or the next lower order tributary

with a defined bed and bank" (19.15.17.7 NMAC). There are no significant watercourses within one-half mile of the extent of the release.

Additional Site Characterization Criteria

The following additional site characterization criteria were evaluated for the release.

Additional Site Characterization Criteria	Response/Discussion
Is the Site within 300 feet of continuously flowing water or other significant watercourse?	No
Is the Site within 200 feet of a lakebed, sinkhole, or playa lake?	No
Is the Site within 300 feet of an occupied permanent residence, school, hospital institution, or church?	No
Is the Site within 500 feet of a spring or private, domestic fresh water well used by less than five households for domestic or stock watering purposes?	No
Is the Site within 1,000 feet of any fresh water well or spring?	No
Within 300 feet of a wetland?	No
Within the area overlying a subsurface mine?	No
Within an unstable area?	No
Within the 100-year floodplain?	No

Closure Criteria

Based on the NMAC Site Characterization Criteria, HRL has applied the following NMOCD Closure Criteria to the Site:

Depth to Groundwater	Parameter	Closure Criteria in milligrams per kilogram (mg/kg)
51 feet to 100 feet below ground surface	Chloride	10,000 mg/kg or natural background, whichever is greater
	Total Petroleum Hydrocarbons (TPH) *[Gasoline Range Organics (GRO) + Diesel Range Organics (DRO) + Oil Range Organics (ORO)]*	2,500 mg/kg
	Gasoline Range Organics (GRO) + Diesel Range Organics (DRO)	1,000 mg/kg
	Benzene	10 mg/kg
	Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)	50 mg/kg

Remediation

Based on the presence of free liquids in the soil, it was determined that remediation of the impacted soil was necessary. Remediation activity at the Site consisted of the excavation of impacted soil and off-site disposal. WPX retained Halo Services to conduct the excavation of impacted soil. Excavation activities began on January 21, 2020. HRL provided guidance for excavation activities based on collection of soil samples for analysis in the field (field screening) using field instrumentation. Field screening activities were conducted for:

- Chloride using an electrical conductivity (EC) meter in accordance with methods recommended by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS)
- Non-specific volatile organic compounds (VOCs) using a photoionization detector (PID) with a 10.6 electron-volt (eV) lamp
- Total petroleum hydrocarbons (TPH) using a PetroFlag® field test kit in accordance with U.S. Environmental Protection Agency (EPA) Method 9074

Halo Services completed the excavation of the impacted soil to a total depth of one to two feet below ground surface (Appendix B, Photographs). All excavated soil was transported to R360 Halfway Site, an exploration and production waste disposal facility located in Hobbs, New Mexico. A total of 80-cubic yards of impacted soil were removed from the Site.

Confirmatory Soil Samples

A confirmation sample plan was implemented utilizing a five-point composite sample strategy that represented areas less than 200-square feet, in accordance with 19.15.29.12 NMAC. On January 27, 2020, sixteen confirmation soil samples (FP1 through FP14 and SW1 and SW2) were collected from the final excavation footprint (Figures 4, 5, and 6). The confirmation samples were submitted to Hall Environmental Analysis Laboratory Inc., Albuquerque, New Mexico. The soil samples were analyzed for:

- Chloride by US EPA Method 300.0
- BTEX by US EPA Method 8021B
- TPH – GRO, DRO, and ORO by US EPA Method 8015M

Final laboratory results are summarized in Table 1; analytical reports are included in Attachment C.

Conclusions and Recommendations

Due to the presence of free liquids on the soil, remediation was necessary to meet cleanup standards specified in 19.15.29.12 NMAC. Remediation included excavation of impacted soil and off-site disposal. Analytical results indicate the impacted area had been remediated to cleanup standards.

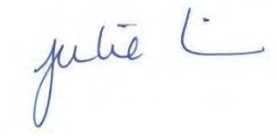
Scope and Limitations

The scope of HRL's services consists of performing site characterization, overseeing remediation activities, confirmation sampling, and preparation of this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin.

If you have any questions or concerns, please do not hesitate to contact Julie Linn at (970) 243-3271 extension 412 or via email at jlinn@hrlcomp.com.

Sincerely,

HRL Compliance Solutions, Inc.



Julie Linn, PG, RG
Project Manager

Figures:

Figure 1: Site Location Map
Figure 2: Impacted Area Map
Figure 3: Depth to Groundwater Map
Figure 4: Confirmation Sample Grid
Figure 5: Confirmation Sample Map
Figure 6: Sidewall Confirmation Sample Diagrams

Tables:

Table 1: Analytical Results Summary

Attachments:

Attachment A: Photographs
Attachment B: NMOCD Form C-141
Attachment C: Laboratory Analytical Reports

Figures

N

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Figure 1: Site Location Map

Pinnacle State #009
32.353860406, -104.039377682
Section 36, Township 22 South, Range 28 East

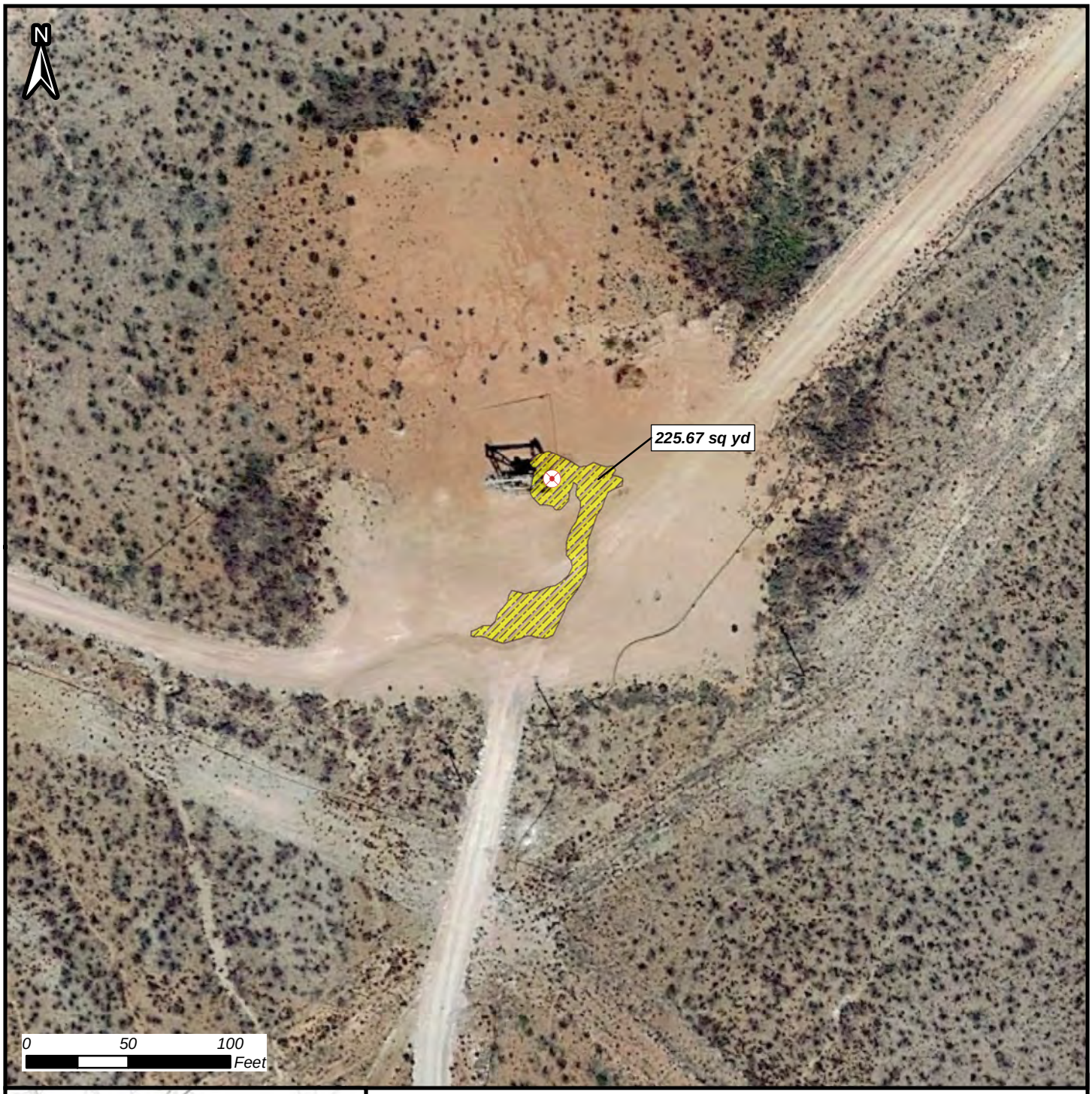
Mapped Features

Pinnacle State #009

DISCLAIMER: This representation and the Geographic Information System (GIS) used to create it are designed as a source of reference and not intended to replace official records and/or legal surveys. HRL assumes no responsibility for any risks, dangers, or liabilities that may result from its use and makes no guarantees as to the quality or accuracy of the underlying data.

HRL COMPLIANCE SOLUTIONS

Author: A. McCawley	
Rev: 0	
Date: 1/17/2020	



WPXENERGY

Figure 2: Impacted Area Map

Pinnacle State #009

32.353860406, -104.039377682
Section 36, Township 22 South, Range 28 East

NOTES / COMMENTS:

The impacted area covers an extent of roughly 225.67 square yards.

Mapped Features

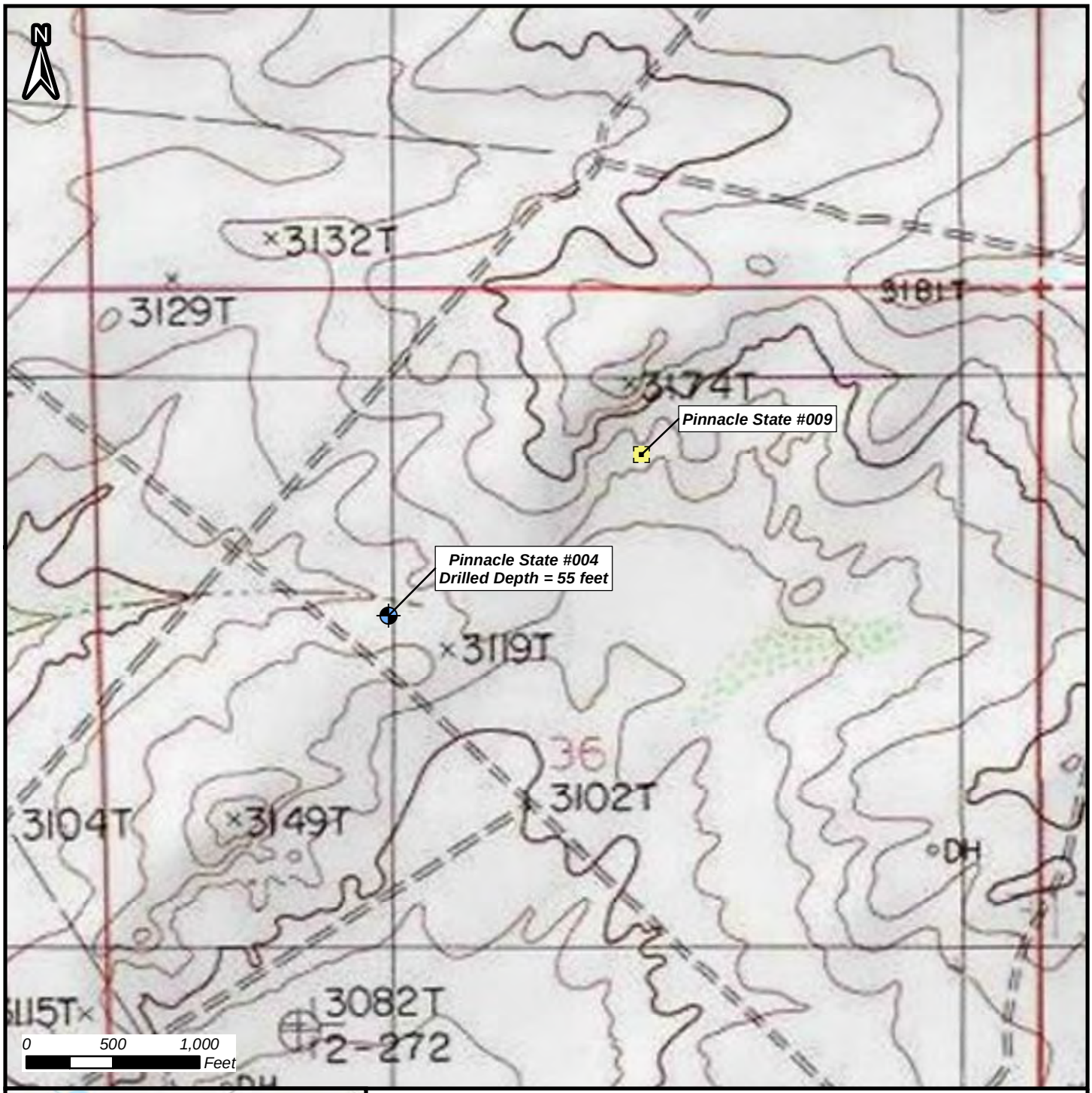
- Point of Release
- Impacted Area

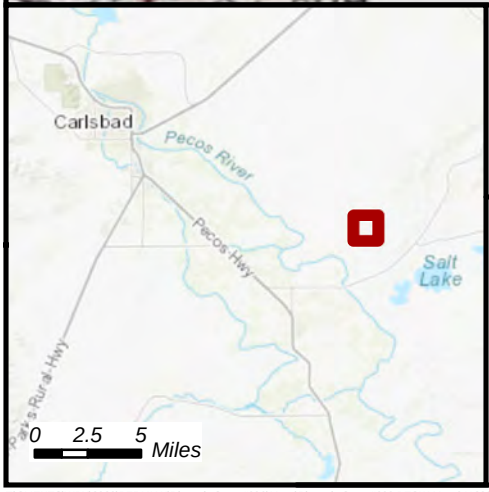
DISCLAIMER: This representation and the Geographic Information System (GIS) used to create it are designed as a source of reference and not intended to replace official records and/or legal surveys. HRL assumes no responsibility for any risks, dangers, or liabilities that may result from its use and makes no guarantees as to the quality or accuracy of the underlying data.

HRL COMPLIANCE SOLUTIONS

Author: A. Asay
Revision: 0
Date: 1/16/2020

T:\CLIENTS\WPX\2020\PERMIAN\Pinnacle State #009\Maps\Pinnacle State #009 Impacted Area Map 011620.mxd





WPXENERGY

Figure 3: Depth to Groundwater Map

Pinnacle State #009

32.351316, -104.044205
Section 36, Township 22 South, Range 28 East

NOTES / COMMENTS:

The depth to groundwater at this newly drilled well is greater then 55 feet.

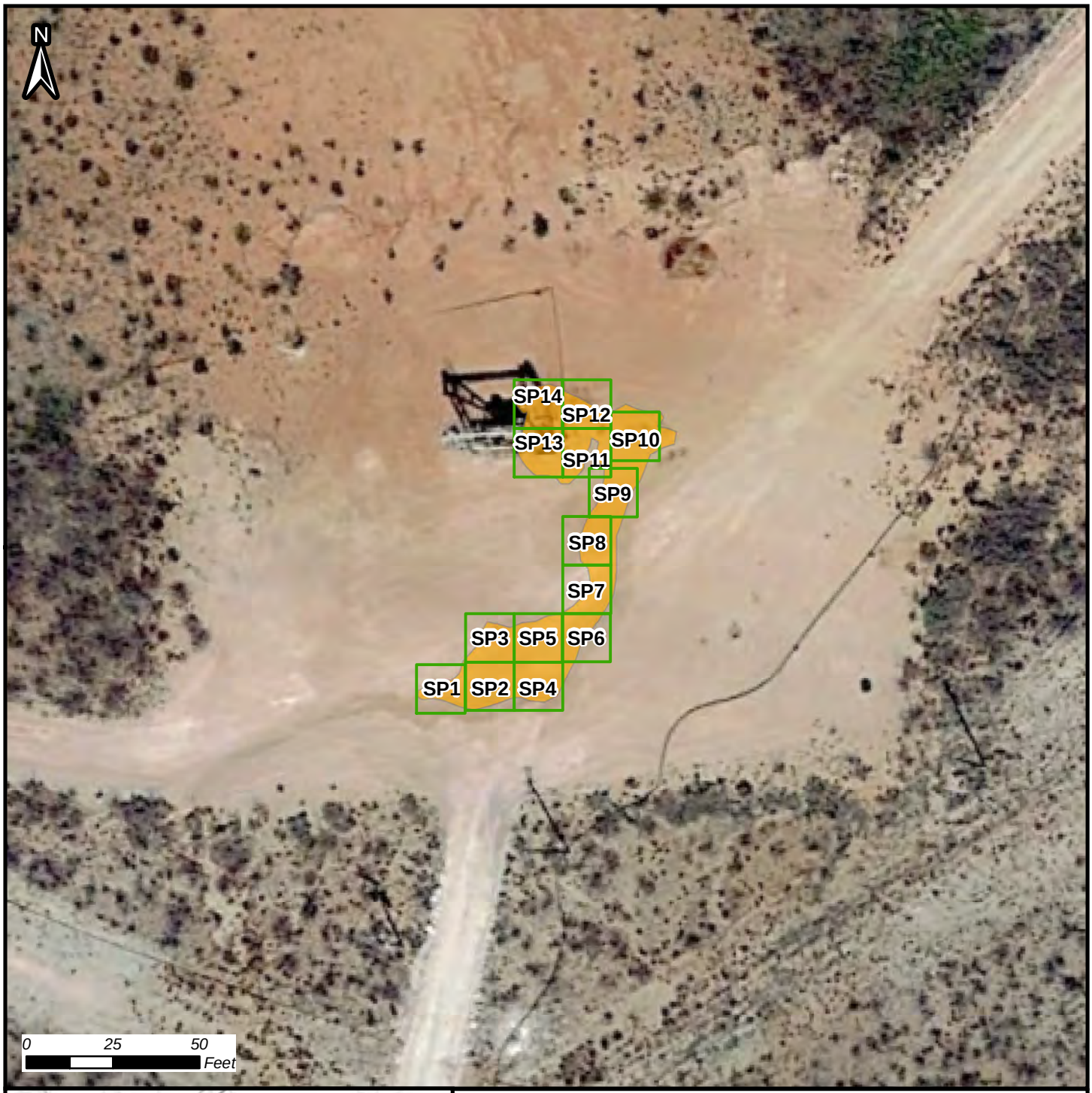
Mapped Features

- Facility Location
- Groundwater Monitoring Well

HRL COMPLIANCE SOLUTIONS

Author: A. Asay
Revision: 0
Date: 4/13/2020

T:\CLIENTS\WPX\2020\PERMIAN\Pinnacle State #009\Maps\Pinnacle State #009 DTGW Map 041320.mxd



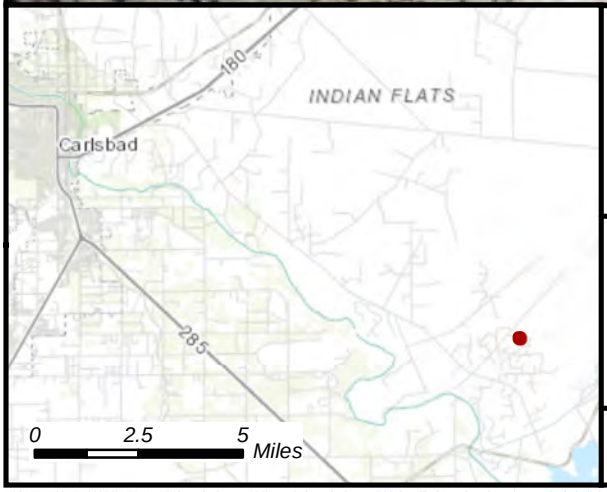


Figure 4: Confirmation Sample Grid

WPXENERGY

Pinnacle State #009
Excavation Footprint

32.353860406, -104.039377682
Section 36, Township 22 South, Range 28 East

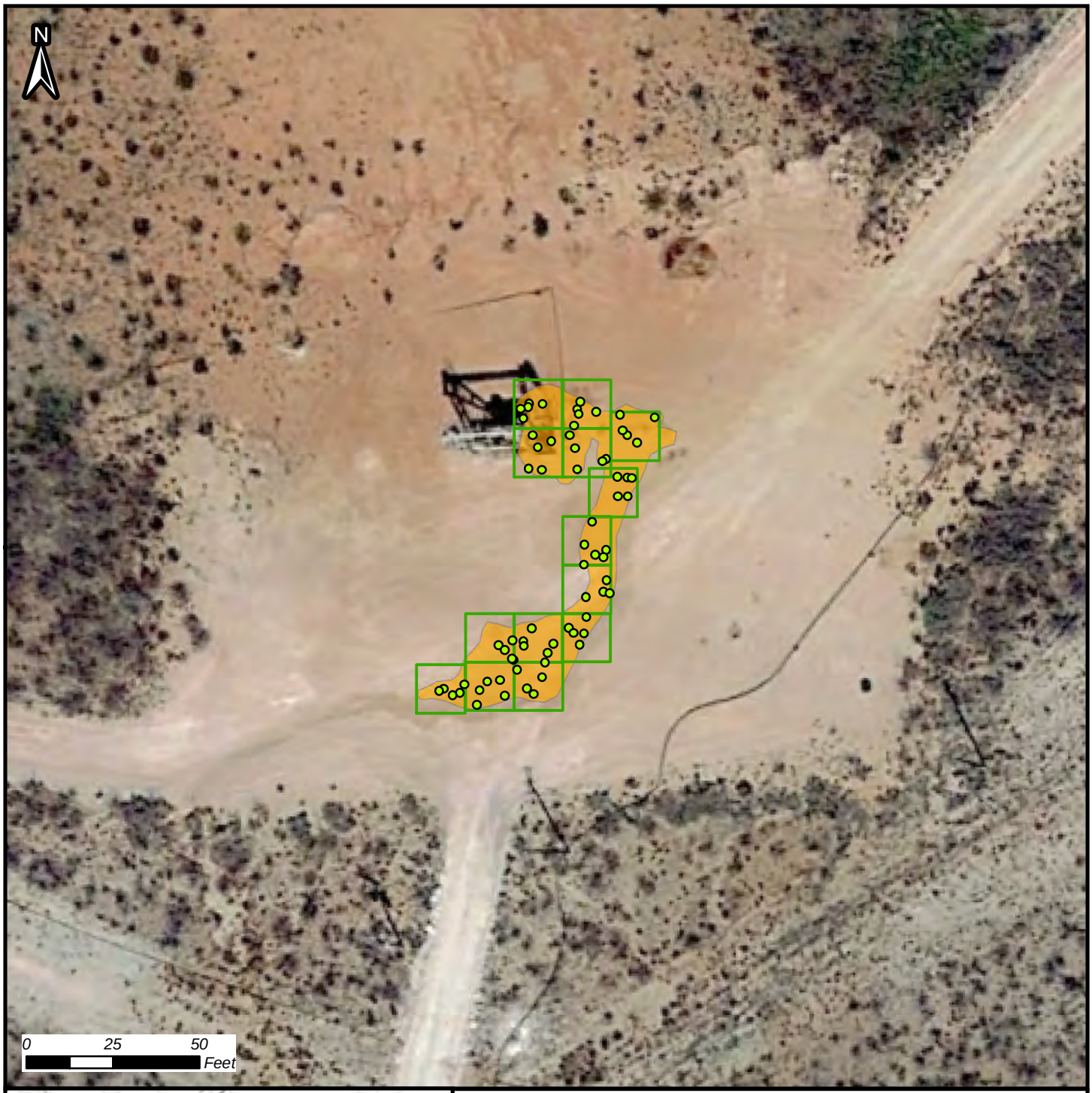
Mapped Features

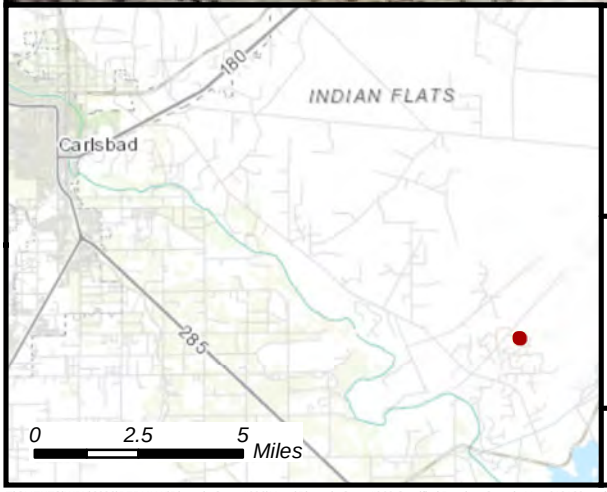
- Composite Sample Location
- 14' X 14' Grid
- Impacted Area

HRL COMPLIANCE SOLUTIONS

Author: A. Asay
Revision: 0
Date: 1/21/2020

T:\CLIENTS\WPX\2020\PERMIAN\Pinnacle State #009\Maps\Pinnacle State #009 Stratified Random Sample Map (Labeled) 012120.mxd





WPXENERGY

Figure 5: Confirmation Sample Map

Pinnacle State #009
Excavation Footprint

32.353860406, -104.039377682
Section 36, Township 22 South, Range 28 East

Mapped Features

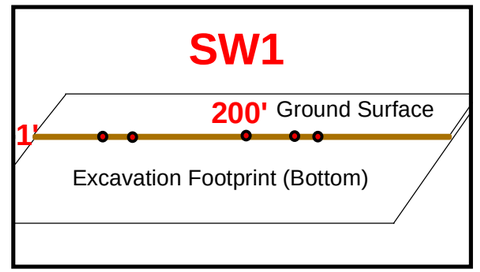
- Composite Sample Location
- 14' X 14' Grid
- Impacted Area

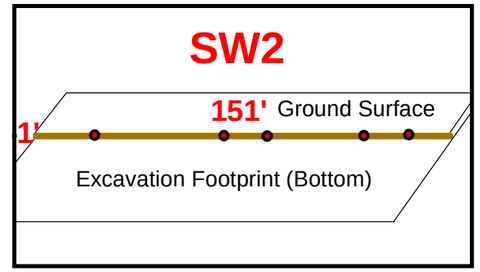
HRL COMPLIANCE SOLUTIONS

Author:	A. Asay
Revision:	0
Date:	1/21/2020

T:\CLIENTS\WPX\2020\PERMIAN\Pinnacle State #009\Maps\Pinnacle State #009 Stratified Random Sample Map 012120.mxd

Composite Sample Diagrams





WPXENERGY

Figure 6: Sidewall Confirmation Sample Diagrams

Pinnacle State #009

32.353860406, -104.039377682
Section 36, Township 22 South, Range 28 East

Mapped Features

- Sidewall Sample Location
- Impacted Area

HRL COMPLIANCE SOLUTIONS

Author: A. Asay
Revision: 0
Date: 1/21/2020

T:\CLIENTS\WPX\2020\PERMIAN\Pinnacle State #009\Maps\Pinnacle State #009 Stratified Random Sample Map (SWs Only) 11 X 17 012120.mxd

Tables

HRL COMPLIANCE SOLUTIONS

Table 1
Soil Sample Results
WPX Energy Permian Basin, LLC
Pinnacle State #009
Eddy County, New Mexico

Sample ID	Depth (feet)	Sample Date	Chloride	Benzene	BTEX	GRO + DRO	TPH
			Values are in milligrams per kilogram (mg/kg)				
NMOCD Closure Criteria (Groundwater 50 feet to 100 feet) *			10,000	10	50	1,000	2,500
FP1	1	1/27/2020	470	ND	ND	100	165
FP2	1	1/27/2020	410	ND	ND	38	38
FP3	1	1/27/2020	470	ND	ND	100	163
FP4	1	1/27/2020	ND	ND	ND	ND	ND
FP5	1	1/27/2020	280	ND	ND	89	150
FP6	1	1/27/2020	310	ND	ND	77	133
FP7	1	1/27/2020	440	ND	ND	220	350
FP8	1	1/27/2020	ND	ND	ND	ND	ND
FP9	2	1/27/2020	370	ND	ND	53	53
FP10	2	1/27/2020	340	ND	ND	45	45
FP11	2	1/27/2020	ND	ND	ND	ND	ND
FP12	2	1/27/2020	310	ND	ND	42	42
FP13	2	1/27/2020	ND	ND	ND	ND	ND
FP14	2	1/27/2020	180	ND	ND	40	40
SW1	2	1/27/2020	330	ND	ND	120	240
SW2	2	1/27/2020	190	ND	ND	130	250

Notes:

NMOCD: New Mexico Oil Conservation Division

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

TPH: Total Petroleum Hydrocarbons

Results shaded in grey exceed closure criteria

* Closure Criteria specified in 19.15.17.13 NMAC

Attachment A

Photographs

Impacted Area
January 15, 2020

Impacted Area
January 15, 2020

Impacted Area
January 15, 2020

Impacted Area
January 15, 2020

Excavation
January 27, 2020

Excavation
January 27, 2020

Excavation
January 27, 2020

Excavation
January 27, 2020

Excavation
January 27, 2020

Excavation
January 27, 2020

Attachment B

NMOCD 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	NVV2002829022
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289
Contact Name: Lynda Laumbach	Contact Telephone: (575) 725-1647
Contact email: Lynda.Laumbach@wpxenergy.com	Incident # *(assigned by OCD)*
Contact mailing address: 5315 Buena Vista Drive, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.3538449 Longitude -104.039383
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Pinnacle State #009	Site Type: Production Facility
Date Release Discovered: 01/14/2020	API# *(if applicable)*: 30-015-27201

Unit Letter	Section	Township	Range	County
B	36	22S	28E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): 8	Volume Recovered (bbls): 3
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
At 14:50 hours the polish rod casing developed a leak causing 8bbl of produced water to be released onto the pad surface. The bbl estimate was obtained using the formula below. A vacuum truck was immediately called and recovered 3bbl of fluids. A third-party contractor has been obtained to complete remediation activities.

$$bbl\ estimate = \frac{saturated\ soil\ volume\ (ft^3)}{4.21(\frac{ft^3}{bbl\ equivalent})} * estimated\ soil\ porosity(\%)$$

State of New Mexico
Oil Conservation Division

Incident ID	NVV2002829022
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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.

Printed Name: Lynda Laumbach Title: Environmental Specialist

Signature: Lynda Laumbach Date: 01/15/2020

email: Lynda.Laumbach@wpxenergy.com Telephone: (575)725-1647

OCD Only

Received by: Victoria Venegas Date: 01/28/2020

Attachment C

Laboratory Analytical Reports

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

February 04, 2020

Lynda Laumbauch

WPX Energy
5315 Buena Vista Drive
Carlsbad, NM 88220
TEL: (505) 386-9693
FAX

RE: Pinnacle State 009 OrderNo.: 2001A93

Dear Lynda Laumbauch:

Hall Environmental Analysis Laboratory received 16 sample(s) on 1/29/2020 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 **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP1
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 10:20:00 AM
Lab ID: 2001A93-001 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	470	60		mg/Kg	20	1/31/2020 2:44:34 PM	50180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	100	9.6		mg/Kg	1	1/30/2020 12:14:31 PM	50153
Motor Oil Range Organics (MRO)	65	48		mg/Kg	1	1/30/2020 12:14:31 PM	50153
Surr: DNOP	110	55.1-146		%Rec	1	1/30/2020 12:14:31 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 2:58:24 PM	50144
Surr: BFB	81.7	66.6-105		%Rec	1	1/31/2020 2:58:24 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 2:58:24 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 2:58:24 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 2:58:24 PM	50144
Xylenes, Total	ND	0.098		mg/Kg	1	1/31/2020 2:58:24 PM	50144
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	1/31/2020 2:58:24 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP2
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 10:23:00 AM
Lab ID: 2001A93-002 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	410	60		mg/Kg	20	1/31/2020 2:56:53 PM	50180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	38	9.9		mg/Kg	1	1/30/2020 12:23:36 PM	50153
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/30/2020 12:23:36 PM	50153
Surr: DNOP	90.4	55.1-146		%Rec	1	1/30/2020 12:23:36 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 3:22:02 PM	50144
Surr: BFB	79.1	66.6-105		%Rec	1	1/31/2020 3:22:02 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 3:22:02 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 3:22:02 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 3:22:02 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 3:22:02 PM	50144
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	1/31/2020 3:22:02 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: FP3
Project: Pinnacle State 009
Collection Date: 1/27/2020 10:30:00 AM
Lab ID: 2001A93-003 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	470	59		mg/Kg	20	1/31/2020 3:58:38 PM	50180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	100	9.0		mg/Kg	1	1/30/2020 12:32:43 PM	50153
Motor Oil Range Organics (MRO)	63	45		mg/Kg	1	1/30/2020 12:32:43 PM	50153
Surr: DNOP	121	55.1-146		%Rec	1	1/30/2020 12:32:43 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 3:45:35 PM	50144
Surr: BFB	78.9	66.6-105		%Rec	1	1/31/2020 3:45:35 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 3:45:35 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 3:45:35 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 3:45:35 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 3:45:35 PM	50144
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	1/31/2020 3:45:35 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP4
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 10:34:00 AM
Lab ID: 2001A93-004 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/31/2020 4:10:59 PM	50180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/30/2020 12:41:53 PM	50153
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/30/2020 12:41:53 PM	50153
Surr: DNOP	106	55.1-146		%Rec	1	1/30/2020 12:41:53 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 4:09:00 PM	50144
Surr: BFB	78.5	66.6-105		%Rec	1	1/31/2020 4:09:00 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	1/31/2020 4:09:00 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 4:09:00 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 4:09:00 PM	50144
Xylenes, Total	ND	0.098		mg/Kg	1	1/31/2020 4:09:00 PM	50144
Surr: 4-Bromofluorobenzene	89.7	80-120		%Rec	1	1/31/2020 4:09:00 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP5
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 10:40:00 AM
Lab ID: 2001A93-005 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	280	59		mg/Kg	20	1/31/2020 4:23:19 PM	50180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	89	9.9		mg/Kg	1	1/30/2020 12:51:03 PM	50153
Motor Oil Range Organics (MRO)	61	49		mg/Kg	1	1/30/2020 12:51:03 PM	50153
Surr: DNOP	113	55.1-146		%Rec	1	1/30/2020 12:51:03 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 4:32:34 PM	50144
Surr: BFB	80.8	66.6-105		%Rec	1	1/31/2020 4:32:34 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 4:32:34 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 4:32:34 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 4:32:34 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 4:32:34 PM	50144
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	1/31/2020 4:32:34 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP6
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 10:47:00 AM
Lab ID: 2001A93-006 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	310	60		mg/Kg	20	1/31/2020 4:35:39 PM	50180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	77	8.8		mg/Kg	1	1/30/2020 1:00:14 PM	50153
Motor Oil Range Organics (MRO)	56	44		mg/Kg	1	1/30/2020 1:00:14 PM	50153
Surr: DNOP	91.7	55.1-146		%Rec	1	1/30/2020 1:00:14 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 4:56:08 PM	50144
Surr: BFB	77.4	66.6-105		%Rec	1	1/31/2020 4:56:08 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 4:56:08 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 4:56:08 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 4:56:08 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 4:56:08 PM	50144
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	1/31/2020 4:56:08 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP7
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 10:56:00 AM
Lab ID: 2001A93-007 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	440	60		mg/Kg	20	1/31/2020 11:23:09 PM	50184
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	220	10		mg/Kg	1	1/30/2020 1:09:32 PM	50153
Motor Oil Range Organics (MRO)	130	50		mg/Kg	1	1/30/2020 1:09:32 PM	50153
Surr: DNOP	120	55.1-146		%Rec	1	1/30/2020 1:09:32 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 5:19:40 PM	50144
Surr: BFB	78.3	66.6-105		%Rec	1	1/31/2020 5:19:40 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 5:19:40 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 5:19:40 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 5:19:40 PM	50144
Xylenes, Total	ND	0.098		mg/Kg	1	1/31/2020 5:19:40 PM	50144
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	1	1/31/2020 5:19:40 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: FP8
Project: Pinnacle State 009
Collection Date: 1/27/2020 11:01:00 AM
Lab ID: 2001A93-008 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/31/2020 11:35:29 PM	50184
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/30/2020 1:18:48 PM	50153
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/30/2020 1:18:48 PM	50153
Surr: DNOP	105	55.1-146		%Rec	1	1/30/2020 1:18:48 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 5:43:04 PM	50144
Surr: BFB	79.3	66.6-105		%Rec	1	1/31/2020 5:43:04 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	1/31/2020 5:43:04 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 5:43:04 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 5:43:04 PM	50144
Xylenes, Total	ND	0.097		mg/Kg	1	1/31/2020 5:43:04 PM	50144
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	1/31/2020 5:43:04 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP9
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 11:04:00 AM
Lab ID: 2001A93-009 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	370	60		mg/Kg	20	2/3/2020 1:52:19 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	53	9.5		mg/Kg	1	1/30/2020 1:28:04 PM	50153
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/30/2020 1:28:04 PM	50153
Surr: DNOP	91.0	55.1-146		%Rec	1	1/30/2020 1:28:04 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 7:16:46 PM	50144
Surr: BFB	78.2	66.6-105		%Rec	1	1/31/2020 7:16:46 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 7:16:46 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 7:16:46 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 7:16:46 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 7:16:46 PM	50144
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	1/31/2020 7:16:46 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP10
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 11:11:00 AM
Lab ID: 2001A93-010 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	340	60		mg/Kg	20	2/3/2020 2:04:39 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	45	9.0		mg/Kg	1	1/30/2020 2:58:30 PM	50153
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/30/2020 2:58:30 PM	50153
Surr: DNOP	85.9	55.1-146		%Rec	1	1/30/2020 2:58:30 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2020 7:40:18 PM	50144
Surr: BFB	78.9	66.6-105		%Rec	1	1/31/2020 7:40:18 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	1/31/2020 7:40:18 PM	50144
Toluene	ND	0.049		mg/Kg	1	1/31/2020 7:40:18 PM	50144
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2020 7:40:18 PM	50144
Xylenes, Total	ND	0.098		mg/Kg	1	1/31/2020 7:40:18 PM	50144
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	1/31/2020 7:40:18 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP11
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 11:16:00 AM
Lab ID: 2001A93-011 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	2/3/2020 2:17:00 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/30/2020 1:46:32 PM	50153
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/30/2020 1:46:32 PM	50153
Surr: DNOP	84.9	55.1-146		%Rec	1	1/30/2020 1:46:32 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 8:03:48 PM	50144
Surr: BFB	80.6	66.6-105		%Rec	1	1/31/2020 8:03:48 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 8:03:48 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 8:03:48 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 8:03:48 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 8:03:48 PM	50144
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	1/31/2020 8:03:48 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP12
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 11:23:00 AM
Lab ID: 2001A93-012 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	310	60		mg/Kg	20	2/3/2020 2:29:21 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	42	8.8		mg/Kg	1	1/30/2020 1:55:45 PM	50153
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	1/30/2020 1:55:45 PM	50153
Surr: DNOP	87.6	55.1-146		%Rec	1	1/30/2020 1:55:45 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 8:27:10 PM	50144
Surr: BFB	80.7	66.6-105		%Rec	1	1/31/2020 8:27:10 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 8:27:10 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 8:27:10 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 8:27:10 PM	50144
Xylenes, Total	ND	0.10		mg/Kg	1	1/31/2020 8:27:10 PM	50144
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	1/31/2020 8:27:10 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP13
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 11:27:00 AM
Lab ID: 2001A93-013 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	2/3/2020 2:41:42 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/30/2020 2:04:56 PM	50153
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/30/2020 2:04:56 PM	50153
Surr: DNOP	77.9	55.1-146		%Rec	1	1/30/2020 2:04:56 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 8:50:36 PM	50144
Surr: BFB	77.7	66.6-105		%Rec	1	1/31/2020 8:50:36 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 8:50:36 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 8:50:36 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 8:50:36 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 8:50:36 PM	50144
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	1/31/2020 8:50:36 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** FP14
Project: Pinnacle State 009 **Collection Date:** 1/27/2020 11:34:00 AM
Lab ID: 2001A93-014 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	180	60		mg/Kg	20	2/3/2020 2:54:03 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	40	8.9		mg/Kg	1	1/30/2020 2:14:06 PM	50153
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	1/30/2020 2:14:06 PM	50153
Surr: DNOP	115	55.1-146		%Rec	1	1/30/2020 2:14:06 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 9:14:00 PM	50144
Surr: BFB	77.7	66.6-105		%Rec	1	1/31/2020 9:14:00 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 9:14:00 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 9:14:00 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 9:14:00 PM	50144
Xylenes, Total	ND	0.10		mg/Kg	1	1/31/2020 9:14:00 PM	50144
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	1/31/2020 9:14:00 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW1
Project: Pinnacle State 009
Collection Date: 1/27/2020 11:38:00 AM
Lab ID: 2001A93-015 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	330	60		mg/Kg	20	2/3/2020 3:06:24 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	120	9.9		mg/Kg	1	1/30/2020 3:07:36 PM	50153
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	1/30/2020 3:07:36 PM	50153
Surr: DNOP	88.3	55.1-146		%Rec	1	1/30/2020 3:07:36 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 9:37:23 PM	50144
Surr: BFB	80.7	66.6-105		%Rec	1	1/31/2020 9:37:23 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 9:37:23 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 9:37:23 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 9:37:23 PM	50144
Xylenes, Total	ND	0.099		mg/Kg	1	1/31/2020 9:37:23 PM	50144
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	1/31/2020 9:37:23 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2001A93**
Date Reported: **2/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW2
Project: Pinnacle State 009
Collection Date: 1/27/2020 11:44:00 AM
Lab ID: 2001A93-016 **Matrix:** SOIL **Received Date:** 1/29/2020 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	190	60		mg/Kg	20	2/3/2020 3:18:45 PM	50218
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	130	9.0		mg/Kg	1	1/30/2020 3:16:43 PM	50153
Motor Oil Range Organics (MRO)	120	45		mg/Kg	1	1/30/2020 3:16:43 PM	50153
Surr: DNOP	92.0	55.1-146		%Rec	1	1/30/2020 3:16:43 PM	50153
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2020 10:00:47 PM	50144
Surr: BFB	73.2	66.6-105		%Rec	1	1/31/2020 10:00:47 PM	50144
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	1/31/2020 10:00:47 PM	50144
Toluene	ND	0.050		mg/Kg	1	1/31/2020 10:00:47 PM	50144
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2020 10:00:47 PM	50144
Xylenes, Total	ND	0.10		mg/Kg	1	1/31/2020 10:00:47 PM	50144
Surr: 4-Bromofluorobenzene	84.8	80-120		%Rec	1	1/31/2020 10:00:47 PM	50144

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001A93**
04-Feb-20

Client: WPX Energy
Project: Pinnacle State 009

Sample ID: **MB-50180** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **50180** RunNo: **66229**
Prep Date: **1/31/2020** Analysis Date: **1/31/2020** SeqNo: **2275967** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-50180** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **50180** RunNo: **66229**
Prep Date: **1/31/2020** Analysis Date: **1/31/2020** SeqNo: **2275968** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.8	90	110			

Sample ID: **MB-50184** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **50184** RunNo: **66229**
Prep Date: **1/31/2020** Analysis Date: **1/31/2020** SeqNo: **2276027** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-50184** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **50184** RunNo: **66229**
Prep Date: **1/31/2020** Analysis Date: **1/31/2020** SeqNo: **2276028** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Sample ID: **MB-50218** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **50218** RunNo: **66267**
Prep Date: **2/3/2020** Analysis Date: **2/3/2020** SeqNo: **2276443** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-50218** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **50218** RunNo: **66267**
Prep Date: **2/3/2020** Analysis Date: **2/3/2020** SeqNo: **2276444** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001A93**
04-Feb-20

Client: WPX Energy
Project: Pinnacle State 009

Sample ID: **MB-50153** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50153** RunNo: **66185**
Prep Date: **1/30/2020** Analysis Date: **1/30/2020** SeqNo: **2273551** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.8	55.1	146			

Sample ID: **LCS-50153** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50153** RunNo: **66185**
Prep Date: **1/30/2020** Analysis Date: **1/30/2020** SeqNo: **2273552** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.0	63.9	124			
Surr: DNOP	4.1		5.000		81.0	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001A93**
04-Feb-20

Client: WPX Energy
Project: Pinnacle State 009

Sample ID: **mb-50144**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **50144**	RunNo: **66183**
Prep Date: **1/29/2020**	Analysis Date: **1/31/2020**	SeqNo: **2274193** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	760		1000		76.0	66.6	105			

Sample ID: **lcs-50144**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **50144**	RunNo: **66183**
Prep Date: **1/29/2020**	Analysis Date: **1/31/2020**	SeqNo: **2274194** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.2	80	120			
Surr: BFB	850		1000		85.3	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001A93**
04-Feb-20

Client: WPX Energy
Project: Pinnacle State 009

Sample ID: **mb-50144** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **50144** RunNo: **66183**
Prep Date: **1/29/2020** Analysis Date: **1/31/2020** SeqNo: **2274238** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		88.4	80	120			

Sample ID: **LCS-50144** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **50144** RunNo: **66183**
Prep Date: **1/29/2020** Analysis Date: **1/31/2020** SeqNo: **2274239** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	80	120			
Toluene	0.91	0.050	1.000	0	90.6	80	120			
Ethylbenzene	0.89	0.050	1.000	0	89.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.6	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	80	120			

Qualifiers:

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

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: WPX ENERGY CARLSB Work Order Number: 2001A93 RcptNo: 1

Received By: Desiree Dominguez 1/29/2020 8:55:00 AM

Completed By: Anne Thorne 1/29/2020 9:21:32 AM

Reviewed By: YG 1/29/20

Chain of Custody

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

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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: JR 1/29/20

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	2.7	Good	Yes			

Chain-of-Custody Record

Client: WPX Energy

Attn: Lynda Laumbach

Mailing Address: 5315 Buena Vista Dr.

Carlsbad, NM 88220

Phone #: (505) 885 - 1313

email or Fax#: Lynda.Laumbach@wpxenergy.com

QA/QC Package:

☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 Day TAT

☑ Standard ☐ Rush

Project Name: Pinnacle State #009

Project #:

Project Manager: Lynda Laumbach - WPX PM

Sampler: Kevin Smith: HRL

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.7-0.0=2.7°c

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001A93	BTEX MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/27/2020	10:20am	Soil	FP1	4 oz. jar	Ice	201	X	X					X			
1/27/2020	10:23am	Soil	FP2	4 oz. jar	Ice	202	X	X					X			
1/27/2020	10:30am	Soil	FP3	4 oz. jar	Ice	203	X	X					X			
1/27/2020	10:34am	Soil	FP4	4 oz. jar	Ice	204	X	X					X			
1/27/2020	10:40am	Soil	FP5	4 oz. jar	Ice	205	X	X					X			
1/27/2020	10:47am	Soil	FP6	4 oz. jar	Ice	206	X	X					X			
1/27/2020	10:56am	Soil	FP7	4 oz. jar	Ice	207	X	X					X			
1/27/2020	11:01am	Soil	FP8	4 oz. jar	Ice	208	X	X					X			
1/27/2020	11:04am	Soil	FP9	4 oz. jar	Ice	209	X	X					X			
1/27/2020	11:11am	Soil	FP10	4 oz. jar	Ice	210	X	X					X			
1/27/2020	11:16am	Soil	FP11	4 oz. jar	Ice	211	X	X					X			
1/27/2020	11:23am	Soil	FP12	4 oz. jar	Ice	212	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/28/2020	10:05	Kevin Smith			1/28/20	1005
1/28/20	1900			Courier	1/29/20	8:55

Remarks: Please email report to Kevin Smith at HRL: KSmith@hrlcomp.com and Julie Linn: jlinn@hrlcomp.com Please send invoice to WPX

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

Chain-of-Custody Record

Client: WPX Energy
attn: Lynda Laumbach
Mailing Address: 5315 Buena Vista Dr.
Carlsbad, NM 88220
Phone #: (505) 885-1313
email or Fax#: Lynda.Laumbach@wpxenergy.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 Day TAT
☒ Standard ☐ Rush
Project Name: Pinnacle State #009
Project #:
Project Manager: Lynda Laumbach - WPX PM
Sampler: Kevin Smith, HRL Compliance
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 2.7 - 0.0 = 2.7°C

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001A93	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/27/2020	11:27am	Soil	FP13	4oz jar	Ice	013	X	X					X			
1/27/2020	11:34am	Soil	FP14	4oz jar	Ice	014	X	X					X			
1/27/2020	11:38am	Soil	SW1	4oz jar	Ice	015	X	X					X			
1/27/2020	11:44am	Soil	SW2	4oz jar	Ice	016	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
1/28/2020	10:05 AM	Kevin Smith			1/28/20	1005
1/28/20	1900			courier	1/29/20	8:55

Remarks: Please email report to Kevin Smith of HRL - KSmith@hrlcomp.com
Julie Linn (HRL) - jlinn@hrlcompliance.com
Please Send invoice to WPX

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