

October 17, 2019

# **1RP-5554 Characterization & Closure Report Merchant Recycling Containment (1RF-29) AKA: Blueberry-Cheddar Release**



**Prepared for  
Advance Energy Partners Hat Mesa LLC  
Houston, Texas**

**Prepared by  
R.T. Hicks Consultants, Ltd.  
Albuquerque, New Mexico**

# **C-141**

## **Including Closure Form**

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

Incident ID	NDHR1917057690
District RP	1RP-5554
Facility ID	fOY1807136904
Application ID	pDHR1917056172

## Release Notification

### Responsible Party

Responsible Party: Advance Energy Partners Hat Mesa LLC	OGRID: 372417
Contact Name: David Harwell	Contact Telephone: 281-235-3431
Contact email: DHarwell@advanceenergypartners.com	Incident # (assigned by OCD) NDHR1917057690
Contact mailing address: 11490 Westheimer Rd. Suite 950. Houston, TX 77077	

### Location of Release Source

Latitude 32.4444614Longitude -103.5729915

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Merchant Recycling Containment (1RF-29)	Site Type: Layflat flow line – recycled produced water
Date Release Discovered: June 3, 2019 (15:00 hrs)	API# (if applicable)

Unit Letter	Section	Township	Range	County
P	28	T21S	R33E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private

### Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 300-500+	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

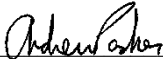
Cause of Release: Kingsley Construction Inc., under contract to Goodnight Midstream, working along a pipeline ROW punctured Advance Energy's layflat flow line transferring treated produced water from the Merchant Recycling Containment to the Dagger Recycling Containment.

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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? > 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was giving via email on 06/04/2019 at 07:00 hrs to EMNRD-OCD-District1spills@state.nm.us by Andrew Parker of R.T. Hicks Consultants on the behalf of Advance Energy Partners Hat Mesa, LLC.	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:  Released produced water soak into the ground. No freestanding liquid to recover.	
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: <u>Andrew Parker</u>	Title: <u>Sr. Env. Specialist</u>
Signature: <u></u>	Date: <u>June 4, 2019 (07:00 hrs)</u>
email: <u>andrew@rthicksconsult.com</u>	Telephone: <u>970-570-9535</u>
<b><u>OCD Only</u></b>	
Received by: <u>Dylan Rose-Coss</u>	Date: <u>06/19/2019</u>



Incident ID	
District RP	
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? (Plates 2 and 3)	<u>214</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? (Plate 5)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)? (Plates 5)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? (Plate 6)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? (Plates 4)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? (Plates 4)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? (Plate 4)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland? (Plate 7)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine? (Plate 8) <u>In a Potash District</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology? (Plate 9)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain? (Plate 10)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.

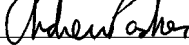
- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile 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.

Incident ID	
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: Andrew Parker Title: Sr. Env. Specialist

Signature:  Date: October 17, 2019

email: andrew@rthicksconsult.com Telephone: 970-570-9535

**OCD Only**

Received by: Cristina Eads Date: 01/24/2020

Incident ID	
District RP	
Facility ID	
Application ID	

## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Andrew Parker Title: Sr. Env. Specialist

Signature:  Date: October 17, 2019

email: andrew@rthicksconsult.com Telephone: 970-570-9535

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NDHR1917057690
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Application ID	pDHR1917056172

## Closure

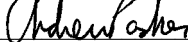
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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: Andrew Parker Title: Sr. Env. Specialist

Signature:  Date: October 17, 2019

email: andrew@rthicksconsult.com Telephone: 970-570-9535

### OCD Only

Received by: Cristina Eads Date: 01/24/2020

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: 02/07/2020

Printed Name: Cristina Eads Title: Environmental Specialist

**andrew@rthicksconsult.com**

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**From:** Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>  
**Sent:** Tuesday, August 27, 2019 9:40 AM  
**To:** andrew@rthicksconsult.com; EMNRD-OCD-District1spills; Griswold, Jim, EMNRD  
**Cc:** dharwell@advanceenergypartners.com; 'Connolly, Leslie M.'  
**Subject:** RE: 1RP-5554 request for extension RE: [EXT] Merchant Layflat Line Release 06/03/2019

**Flag Status:** Flagged

Hello,

Thanks for the information. Time extension of 45 days from August 20, 2109 (request date) is granted for stated purposes.

Please keep us informed of any additional issues if the arise.

Sincerely,

Bradford G. Billings

EMNRD/OCD  
Santa Fe

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**From:** andrew@rthicksconsult.com <andrew@rthicksconsult.com>  
**Sent:** Tuesday, August 27, 2019 7:00 AM  
**To:** EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>  
**Cc:** dharwell@advanceenergypartners.com; 'Connolly, Leslie M.' <lconnolly@hselaw.com>  
**Subject:** RE: 1RP-5554 request for extension RE: [EXT] Merchant Layflat Line Release 06/03/2019

Jim:

I did not received a response for the request for an extension of time. We talked on the phone about the extension last week. Just checking on the status. FYI: Remediation resumed yesterday (08/27/2019).

Thanks.

Andrew Parker  
R.T. Hicks Consultants  
Durango Field Office  
Cell: (970) 570-9535

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**From:** [andrew@rthicksconsult.com](mailto:andrew@rthicksconsult.com) <[andrew@rthicksconsult.com](mailto:andrew@rthicksconsult.com)>  
**Sent:** Tuesday, August 20, 2019 8:24 AM  
**To:** 'EMNRD-OCD-District1spills@state.nm.us' <[EMNRD-OCD-District1spills@state.nm.us](mailto:EMNRD-OCD-District1spills@state.nm.us)>; 'Jim.Griswold@state.nm.us' <[Jim.Griswold@state.nm.us](mailto:Jim.Griswold@state.nm.us)>  
**Cc:** 'dharwell@advanceenergypartners.com' <[dharwell@advanceenergypartners.com](mailto:dharwell@advanceenergypartners.com)>; 'Mann, Ryan'

<[rmann@slo.state.nm.us](mailto:rmann@slo.state.nm.us)>; 'Connolly, Leslie M.' <[lconnolly@hselaw.com](mailto:lconnolly@hselaw.com)>

**Subject:** 1RP-5554 request for extension RE: [EXT] Merchant Layflat Line Release 06/03/2019

NMOCD:

On the behalf of Advance Energy Partners Hat Mesa, R.T. Hicks Consultants respectfully requests for an extension of time for 1RP-5554 from the 90-day final closure report submission. The 90-day remediation and closure report is due on September 1, 2019. We ask for a 45-day extension to complete the remediation and submit a closure report without having to submit a workplan for NMOCD approval.

The remediation is approximately 90% complete with the exception of two areas approximately 15x15x4.5 feet.

The reasons for the extension request:

1. One of the two remaining areas may be within a co-mingled area of an Enterprise Pipeline Release (1RP-5510)
2. Disagreement with Closure Criteria per Table 1 of 19.15.29 NMAC between the construction company, pipeline company, and adjacent land owner whom also has the grazing lease.

The remediation work is currently on hold until the pipeline construction contractor's legal counsel resolves these issues. We anticipate remediation will resume within the next 15-days.

Per 19.15.29.12.B

***B. Remediation requirements.***

*(1) Unless remediation is completed, and a final closure report submitted, within 90 days of discovery of the release, the responsible party must complete division-approved remediation for releases either pursuant to a remediation plan approved pursuant to 19.15.29.12 NMAC or pursuant to an abatement plan in accordance with 19.15.30 NMAC. If the director determines that the release has caused water pollution in excess of the standards and requirements of 19.15.30 NMAC, the director may notify the responsible party that an abatement plan may be required pursuant to 19.15.30 NMAC.*

*(2) Any remediation under 19.15.29 NMAC should be completed as soon as practicable. Any remediation that exceeds 90 days must follow the division-approved timeline in the remediation plan. The responsible party may request an extension of time to remediate upon a showing of good cause as determined by the division.*

Please contact me with any questions.

Thank you.

Andrew Parker  
R.T. Hicks Consultants  
Durango Field Office  
Cell: (970) 570-9535

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**From:** Rose-Coss, Dylan H, EMNRD <[DylanH.Rose-Coss@state.nm.us](mailto:DylanH.Rose-Coss@state.nm.us)>

**Sent:** Wednesday, June 19, 2019 4:40 PM

**To:** Andrew Parker <[andrew@rthicksconsult.com](mailto:andrew@rthicksconsult.com)>; Mann, Ryan <[rmann@slo.state.nm.us](mailto:rmann@slo.state.nm.us)>

**Cc:** [धारwell@advanceenergypartners.com](mailto:धारwell@advanceenergypartners.com); 'Marcos Briceno' <[mbriceno@advanceenergypartners.com](mailto:mbriceno@advanceenergypartners.com)>; 'Jared Newman' <[jared.newman@rocketmail.com](mailto:jared.newman@rocketmail.com)>; daniel martin <[danielnmartin53@gmail.com](mailto:danielnmartin53@gmail.com)>

**Subject:** RE: [EXT] Merchant Layflat Line Release 06/03/2019

All,

The NMOCD tracking number for this release is 1RP-5554. Please refer to this number in all future correspondence. Additionally, the division requests a spill volume calculation be submitted with the remediation report for this release and requests that one be submitted with the initial C-141 in the future.

Thanks,

**Dylan Rose-Coss**

*Environmental Scientist*  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

(505) 476-3488

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**From:** Andrew Parker <[andrew@rthicksconsult.com](mailto:andrew@rthicksconsult.com)>

**Sent:** Tuesday, June 4, 2019 7:42 AM

**To:** EMNRD-OCD-District1spills <[EMNRD-OCD-District1spills@state.nm.us](mailto:EMNRD-OCD-District1spills@state.nm.us)>; Griswold, Jim, EMNRD <[Jim.Griswold@state.nm.us](mailto:Jim.Griswold@state.nm.us)>

**Cc:** [धारwell@advanceenergypartners.com](mailto:धारwell@advanceenergypartners.com); 'Marcos Briceno' <[mbriceno@advanceenergypartners.com](mailto:mbriceno@advanceenergypartners.com)>; 'Jared Newman' <[jared.newman@rocketmail.com](mailto:jared.newman@rocketmail.com)>; daniel martin <[danielnmartin53@gmail.com](mailto:danielnmartin53@gmail.com)>

**Subject:** [EXT] Merchant Layflat Line Release 06/03/2019

Mr. Griswold and District 1:

On the behalf of Advance Energy Partners Hat Mesa, LLC; R.T. Hicks Consultants submits the attached C-141. Please consider this email as the 24-hour release notification reporting for a major release.

Please contact me with any questions.

Andrew Parker  
R.T. Hicks Consultants  
Durango Field Office  
970-570-9535

# **Closure Report**

## **Characterization and Remediation**

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104



# R. T. HICKS CONSULTANTS, LTD.

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901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996  
Artesia ▲ Carlsbad ▲ Durango ▲ Midland

October 17, 2019

NMOCD District 1 (vacant)  
District 1 - HOBBS  
1625 N. French Drive  
Hobbs, New Mexico 88240  
Via Email:  
Electronic Submittal  
emnrd-ocd-district1spills@state.nm.us

RE: 1RP-5554 - Characterization and Closure Report  
Merchant Recycling Containment (1RF-29)  
AKA: Blueberry-Cheddar Release  
Advance Energy Partners Hat Mesa, LLC

NMOCD:

R.T. Hicks Consultants submits this characterization and closure report on the behalf of Advance Energy Partners Hat Mesa, LLC (Advance Energy) and Kingsley Constructors Inc (KCI).

The produced water release occurred on June 3<sup>rd</sup>, 2019. Initial characterization was conducted by eTech Environmental on June 4-6<sup>th</sup>. Excavation of impacted soil began on June 4<sup>th</sup> and was stockpiled on location and within the release extent. Andrew Parker of R.T. Hicks Consultants performed third-party characterization on June 5<sup>th</sup> and 6<sup>th</sup>. On June 10<sup>th</sup>, R.T. Hicks Consultants took over characterization and remediation operations.

Remediation was completed by October 1, 2019. The C-141 including the Characterization and Closure Forms is attached. We respectfully ask NMOCD for closure of the regulatory file.

Hick Consultants relied on 19.15.29 NMAC for characterization, remediation, and closure reporting for 1RP-5554.

The location of the release is 32.4444614, -103.5729915 (Latitude/Longitude; NAD 83). The release occurred within silty sands from the surface to 5-feet below ground surface where a hard caliche layer was encountered.

The report is divided into three sections:

- I. Initial Response
- II. Characterization
- III. Remediation and Closure

*Plates*

- Plate 1 – Site Map
- Plates 2 through 10 – As labeled on the C-141 Characterization Checklist
- Plate 11 – Release Extent and Sample Locations
- Plate 12 – Northern Excavation Extent and Sample Locations
- Plate 13 – Southern Excavation Extent and Sample Locations

*Tables*

- Table 1 – Nearby OSE Well Summary
- Table 2 – Final Excavation Confirmation Sampling Data Summary

*Appendices*

- Appendix A – OSE Well Logs
- Appendix B – EM Survey Calibration Data
- Appendix C - Laboratory Certificate of Analyses

## I. Initial Response

The release occurred on June 3, 2019 during surface restoration activities of a newly installed produced water pipeline owned and operated by Goodnight Midstream. Construction crews punctured Advance Energy's recycled produced water transfer layflat line (Figure 1 and Figure 2) at approximately 3:00pm.



**Figure 1: Recycled produced water releasing from Advance Energy's layflat line. Photo is viewing west along Goodnight Midstream's pipeline right-of-way. Date: June 3, 2019. GPS: not recorded.**



**Figure 2: Release area viewing east along the newly installed Goodnight Midstream pipeline right-of-way. Date: June 3, 2019 @ 4:15pm. GPS: not recorded.**

During initial response Kingsley Constructors Inc. (KCI) built a containment berm around the southern end of the north half of the release area (Figure 3).



**Figure 3: Photograph of containment berm along southern half of northern portion of release area. Containment berm was constructed during the initial response on June 3rd. Photograph is the day R.T. Hicks Consultants took over remedial activities on June 10th. Date/Time: 2019-06-10 17:51:14. GPS: 32.4440167 N, 103.5732583 W.**

## **II. Characterization**

The following sections address items as described in 19.15.29.11.A, paragraphs 1- 4. Please refer to the C-141 characterization checklist for additional setback criteria and verification (Plates 2-10).

### **1. Site Map**

On June 5<sup>th</sup> and 6<sup>th</sup>, Mr. Parker characterized the release extent by conducting an electromagnetic (EM) survey with a Geonics EM-38. Plate 1 shows the delineation of the EM Survey (see Appendix B for a discussion on EM surveys) relative to the final excavation extent and pipelines. The release extent was delineated to a temperature corrected electrical conductivity (EC) reading of 0.20 dS/m. As discussed in Appendix B, an EC reading of 0.20 dS/m correlates with chloride concentrations below 600 mg/kg.

### **2. Depth to Ground Water**

Most recent depth to water data was queried from the USGS and New Mexico Office of the State Engineer (OSE) online databases (Plate 2). Spatial analysis shows:

- The nearest water well is located 0.2-miles southwest of the release; identified as CP-00854 POD1. Depth to water at this well 600 ft.
- The next two nearest water wells with recorded depth to water are located
  - 0.35-miles southeast (CP-01356 POD 1) with a depth to water of 555-feet.
  - 0.48-miles northeast (CP-01355 POD 1) with a depth to water of 582- feet.

Review of well logs available from the New Mexico Office of the State Engineer (OSE) online database (see Table 1, below) shows that the depth to the top of the water-bearing zone, for wells under Artesian pressure, exceeds 700 feet below land surface, as shown in the “top of water bearing strata” column. Appendix A contains well logs available online from the OSE.

OSE well logs show that the nearby wells have a minimum of 155 feet of pressure head above the confining layer. It is important to recognize that at CP-00854 ground water is at a depth of 755 feet and confining pressure causes the water column to rise 155 feet for a perceived depth to water of 600 feet bgs.

We recognize that thin water-bearing units above the regional water-bearing zone may not have been recorded by the well drillers. However, more shallow water-bearing zones would be sandstone units within the Dockum Group redbeds and, like the regional water-bearing zone, would be under artesian pressure.

Ground water flow is to the south-southwest as demonstrated on the potentiometric map (Plate 3). We relied on the USGS water wells to generate the potentiometric surface. Regionally, USGS water wells show that ground water is within the Santa Rosa and Chinle Formation.

The potentiometric surface indicates that the depth to water, which is under artesian flow, is approximately 214 feet below ground surface, where  
 $214 \text{ feet} = 3664 \text{ ft surface elevation} - 3450 \text{ ft potentiometric surface}.$

### 3. **Wellhead Protection Area**

Plate 4 shows that the release extent is not:

- Within incorporated municipal boundaries or within a defined municipal fresh water well field.
- Within ½-mile private and domestic water sources (wells and springs).
  - CP-854, CP-1355, and CP-1356 are within ½-mile from the release extent. However, these wells are classified for exploration and commercial use.
- 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
- Within 1000 feet of any other fresh water well or spring

### 4. **Distance to Nearest Significant Water Course**

Plate 5 shows that the release extent is:

- Within ½ mile of a significant watercourse (intermittent stream). The intermittent stream is 930-ft southwest of the southwest edge of the release extent
- **Not** within 300 feet of a continuously flowing watercourse or any other significant watercourse.
- **Not** within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

### 5. **Soil/Waste Characteristics**

The release occurred in an area where depth to water is greater than 100 ft below ground surface (bgs) and within:

- A pipeline right-of-way (ROW), and
- Pasture land south of the ROW.

According to Table 1 of 19.15.29 NMAC, closure criteria limits are as follows:

<b>Table 1 19.15.29 NMAC</b>		<b>Chloride</b>	<b>GRO+DRO</b>	<b>TPH+Ext</b>	<b>BTEX</b>	<b>Benzene</b>
<b>DTW &gt; 100ft</b>		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
<b>Closure Criteria</b>	<b>0-4 ft (not in-use)</b>	<b>600</b>	<b>1,000</b>	<b>2,500</b>	<b>50</b>	<b>10</b>
<b>Closure Criteria</b>	<b>&gt;4 ft or "in-use"</b>	<b>20,000</b>	<b>1,000</b>	<b>2,500</b>	<b>50</b>	<b>10</b>

Soil sampling, an EM Survey, and field screening for EC was employed to characterize and delineate the release extent.

Initial soil sampling for characterization was obtained by eTECH. eTECH's sampling data identified chloride as the constituent of concern. eTECH's Certificate of Analyses and site map are located in Appendix C.

TPH and BTEX concentrations were below laboratory detection levels and are not evaluated further.

Initial sampling, EM Survey, and field screening for EC showed that chloride within the upper 4-feet exceeded the 600 mg/kg closure limit throughout the EM Survey area where EM readings for EC exceeded 0.20 dS/m.



### III. Remediation and Closure

#### 1. *Excavation Protocol*

Excavation of impacted material was determined by field screening with an EM-38 or a Hanna HI98304 DiST 4 handheld meter. EC readings  $>0.20$  dS/m indicated that chloride concentrations are likely to exceed 600 mg/kg. With respect to the upper 4-feet, excavation continued until EC readings showed concentrations  $<0.20$  dS/m within the area of concern – at which time a 5-point composite soil sample was collected for laboratory confirmation via EPA Method 200.1 or SM4500.

If soil confirmation sample results exceeded 600 mg/kg chloride at the excavation walls, the excavation wall was extended horizontally and resampled. Horizontal excavation continued until subsequent laboratory confirmation showed chloride below 600 mg/kg in the upper 4-feet.

Excavation depth was determined by 5-point composite sampling of the base. Vertical excavation continued until the base of the excavation exhibited chloride less than 600 mg/kg at 5.5 feet bgs or less. Below 4-feet, allowable chloride concentrations per Table 1 of 19.15.29 NMAC is  $<20,000$  mg/kg.



**Figure 4: Northern part of excavation viewing from southeast corner of N-S Trench area. The pipeline valve/riser is visible in photo background left edge. Date/Time: 2019-09-11 08:03:01. GPS: 32.4438972 N, 103.5728917 W.**

Excavated soil was transported to Lea Land, Inc., Sundance Services, or R360 for proper disposal. Clean backfill soil was purchased from Merchant Livestock Company under a Surface Use Agreement.

#### 2. *Remediation Activities*

The excavation extent is irregular in shape and covers a surface area of approximately 7,500 square yards with a volume of approximately 8,000 cu. yds. As shown on Plate 11 the excavation consists of:



- The primary excavation extent with a depth ranging from 1.5-feet to 5-feet below ground surface.
- The RS-01 Trench Area with a depth of 9-feet below ground surface.
- The N-N Trench Area with a depth ranging from 1.5 to 5-feet below ground surface.
- The N-S Trench Area with a depth ranging from 2 to 4-feet below ground surface.

The soil sample centroids represent a sampling radius of approximately 38-feet (+/- 10 ft) on center.

Plate 12 shows the northern half sampling locations. Plate 13 shows the southern half sampling locations. The G-## (i.e. G-02) sample series and RS-06 compose the southern half extent.

Table 2 is a summary of analytical results showing final confirmation sampling of the excavation walls and bases.

- All sampled locations show chloride concentrations below 600 mg/kg in the upper 4 feet.
- All sampled locations from 5 to 9 ft were below 20,000 mg/kg with the highest area of concentration at the east wall (RS-01 E. Wall) which exhibits 4,720 mg/kg.
- At RS-01 base sample at 9 feet exhibited 688 mg/kg chloride.

Laboratory Certificate of Analyses are in Appendix D.

Figure 5, below, shows final restoration after seeding and surface contouring to blend with the surrounding topography.



**Figure 5: Final reclamation. Photograph is taken near the northeast corner of the release extent viewing southwest. Date/Time: 2019-10-02 12:18:38. GPS: 32.4442639 N, 103.5727972 W**

### **3. Closure**

As discussed above, the release has been reclaimed and restored to meet closure requirements per 19.15.29.12 and 19.15.29.13 NMAC. Therefore, we respectfully request closure of the regulatory file.

Please contact me with any questions at [andrew@rthicksconsult.com](mailto:andrew@rthicksconsult.com) or 970-570-9535.

Sincerely,  
R.T. Hicks Consultants, Ltd.



Andrew Parker  
Sr. Env. Specialist

Copy: David Harwell (DHarwell@advanceenergypartners.com);  
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Clabe Pearson (clabe@merchantlivestock.com ); Merchant Livestock  
Brad Blevins (bblevins5252@gmail.com); Merchant Livestock  
Brad Kingsley (bradckingsley@gmail.com); Kingsley Constructors Inc.  
Mark King (mking@goodnightmidstream.com); Goodnight Midstream  
Connolly, Leslie (lconnolly@hselaw.com); Harter Secrest & Emery LLP

# Plates

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

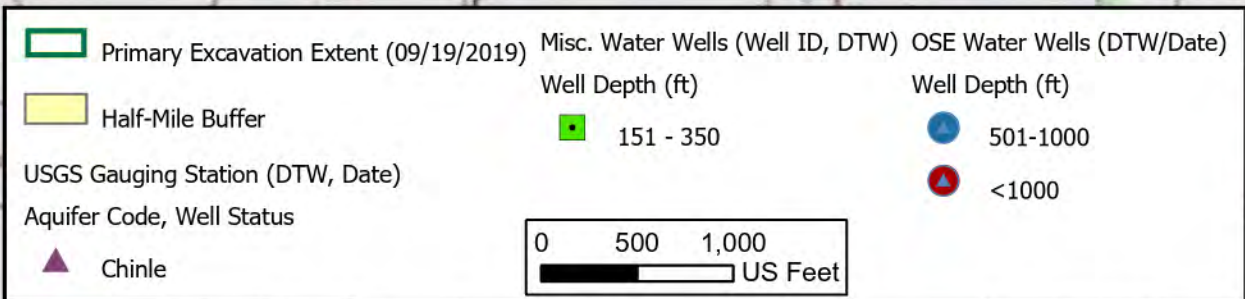
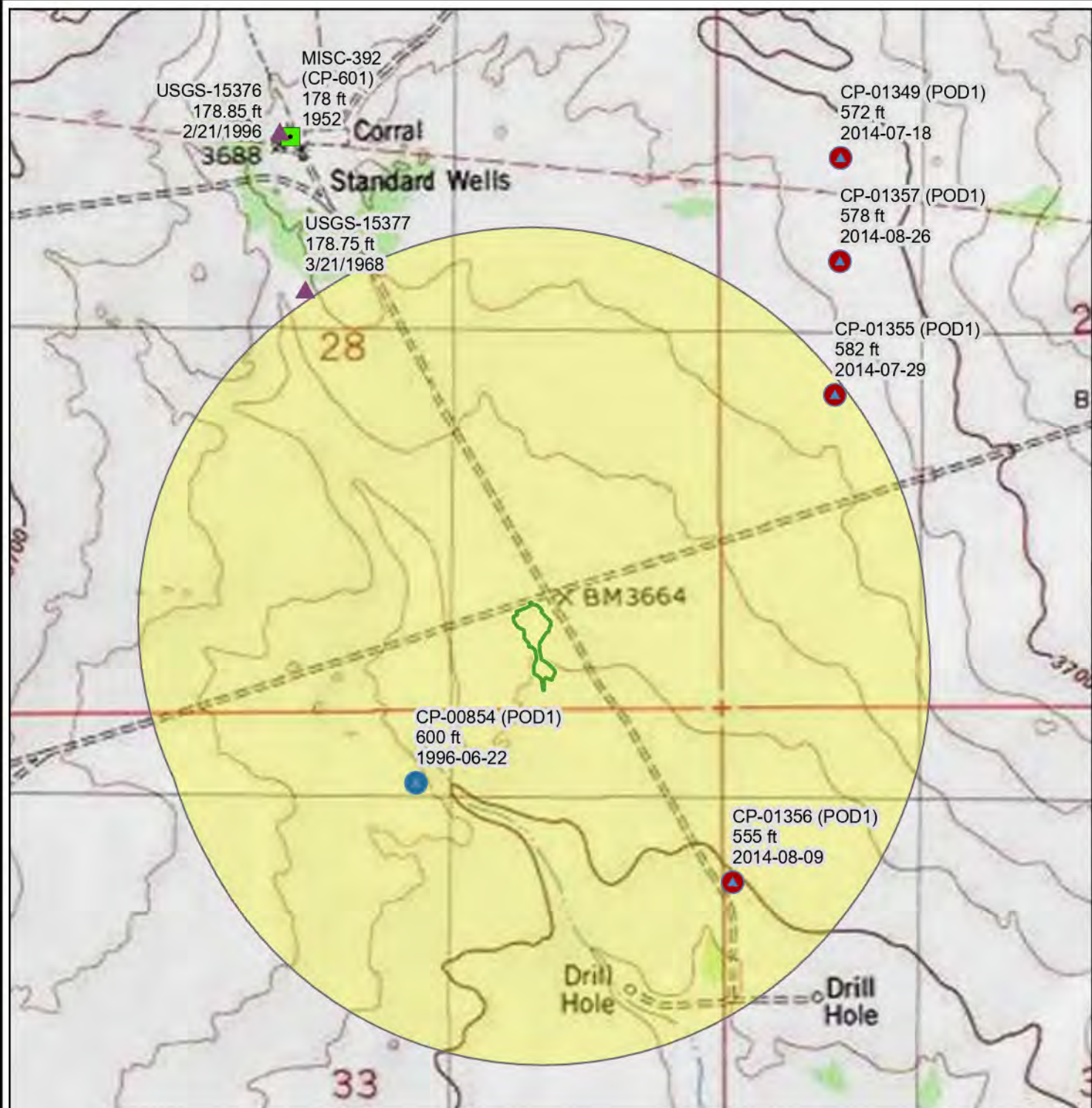


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EM Survey Relative to Excavation Extent  
Advance Energy Partners Hat Mesa LLC  
1RP-5554 Dagger to Merchant Lay Flat Release

Plate 1  
Oct. 10, 2019



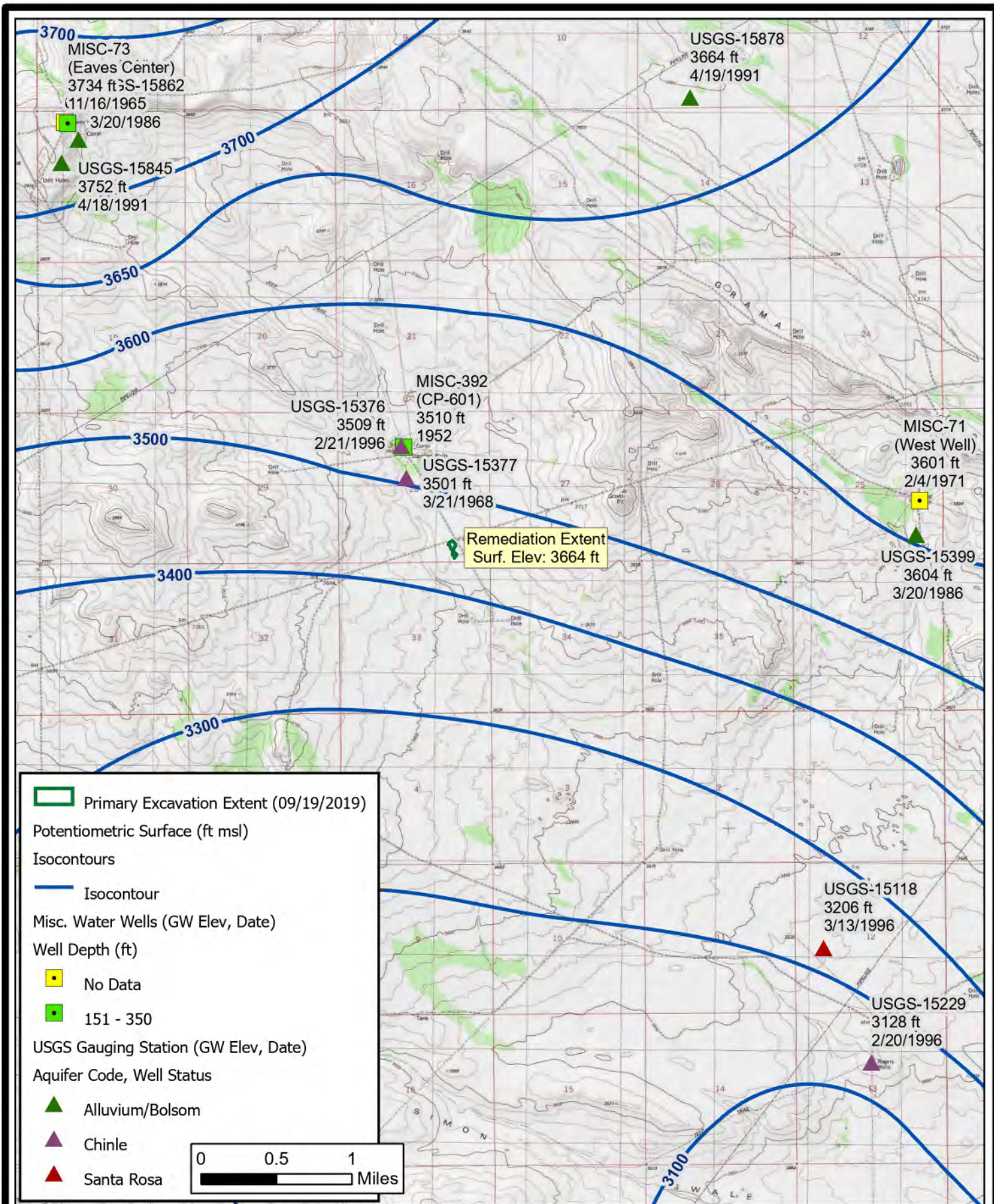


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Depth to Water  
 Advance Energy Partners Hat Mesa LLC  
 1RP-5554 Dagger to Merchant Lay Flat Release

Plate 2  
 Oct. 10, 2019



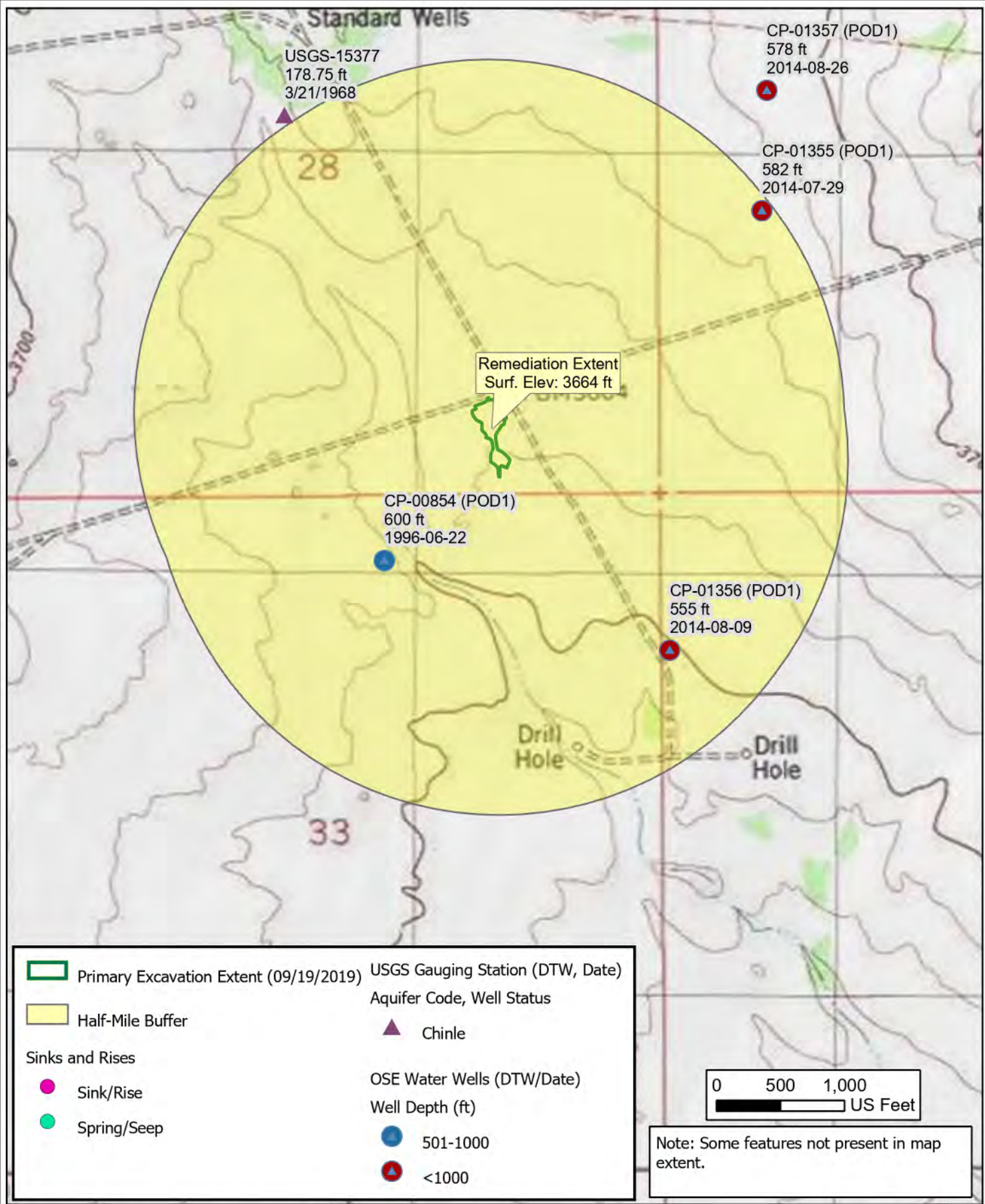


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**Potentiometric Surface**  
 Advance Energy Partners Hat Mesa LLC  
 1RP-5554 Dagger to Merchant Lay Flat Release

**Plate 3**  
 Oct. 10, 2019





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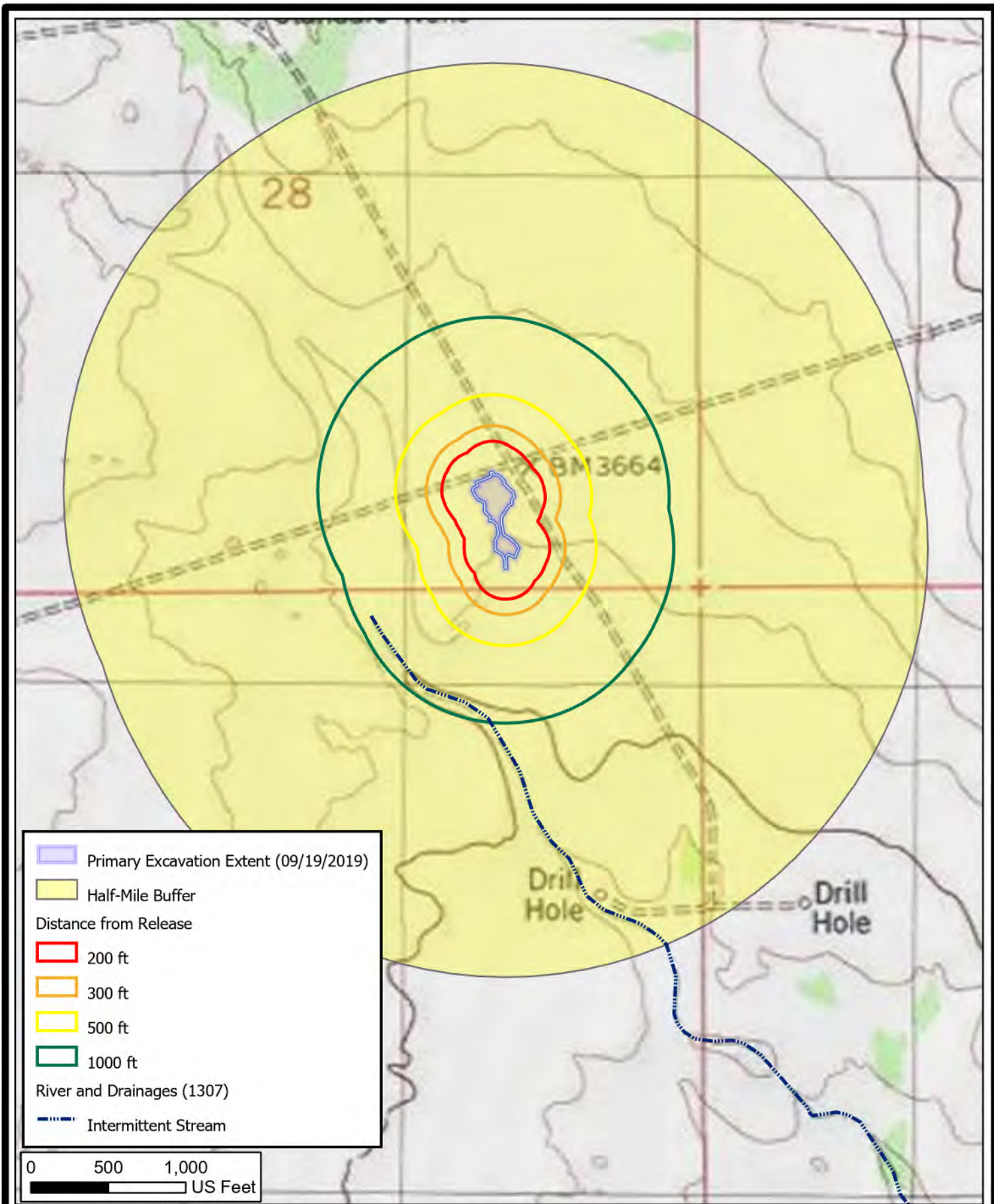
**Wellhead Protection**

**Advance Energy Partners Hat Mesa LLC**  
1RP-5554 Dagger to Merchant Lay Flat Release

**Plate 4**

**Oct. 10, 2019**





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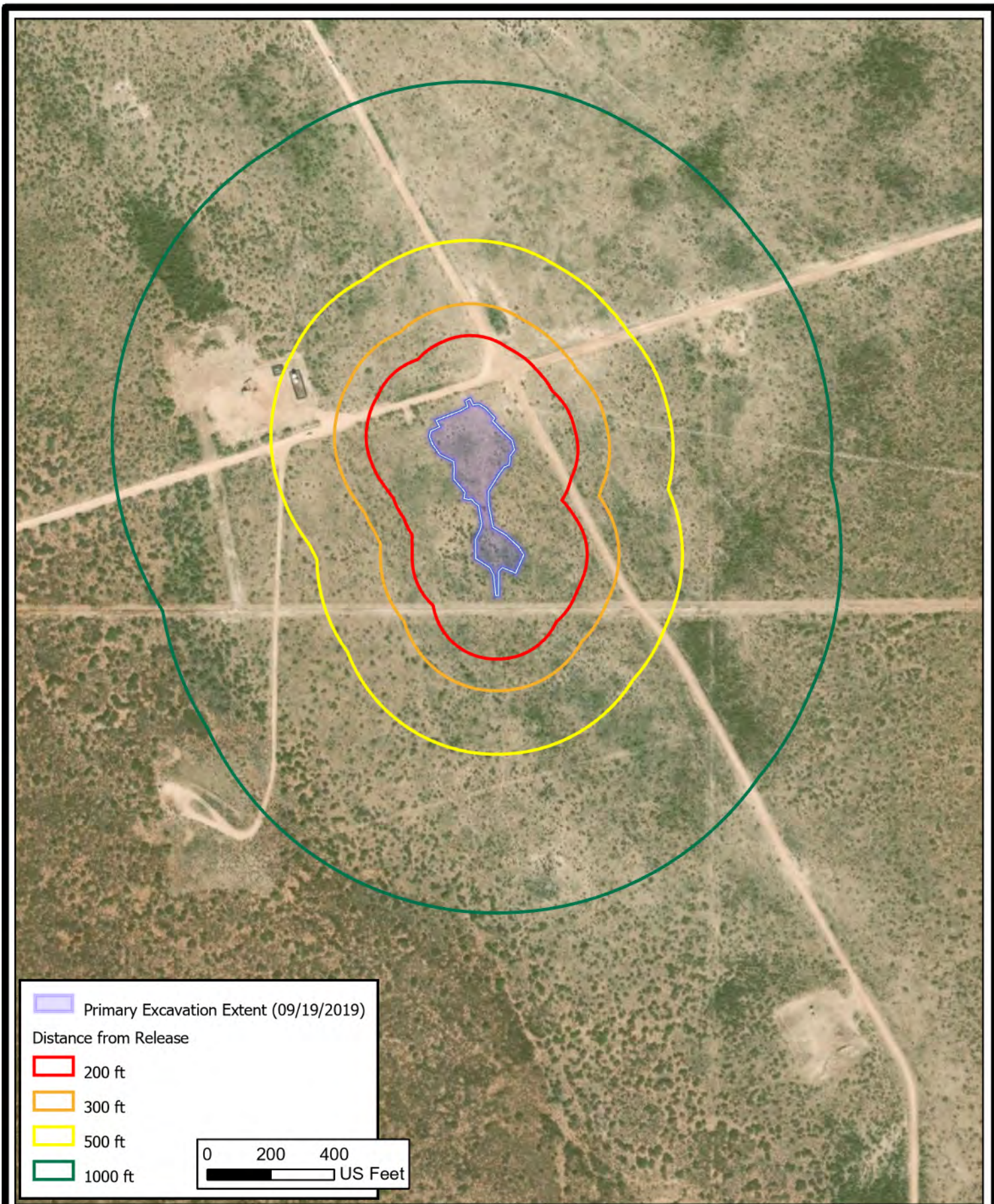
Significant Water Courses

Advance Energy Partners Hat Mesa LLC  
 1RP-5554 Dagger to Merchant Lay Flat Release

Plate 5

Oct. 10, 2019





 Primary Excavation Extent (09/19/2019)

Distance from Release

 200 ft

 300 ft

 500 ft

 1000 ft

0 200 400  
US Feet



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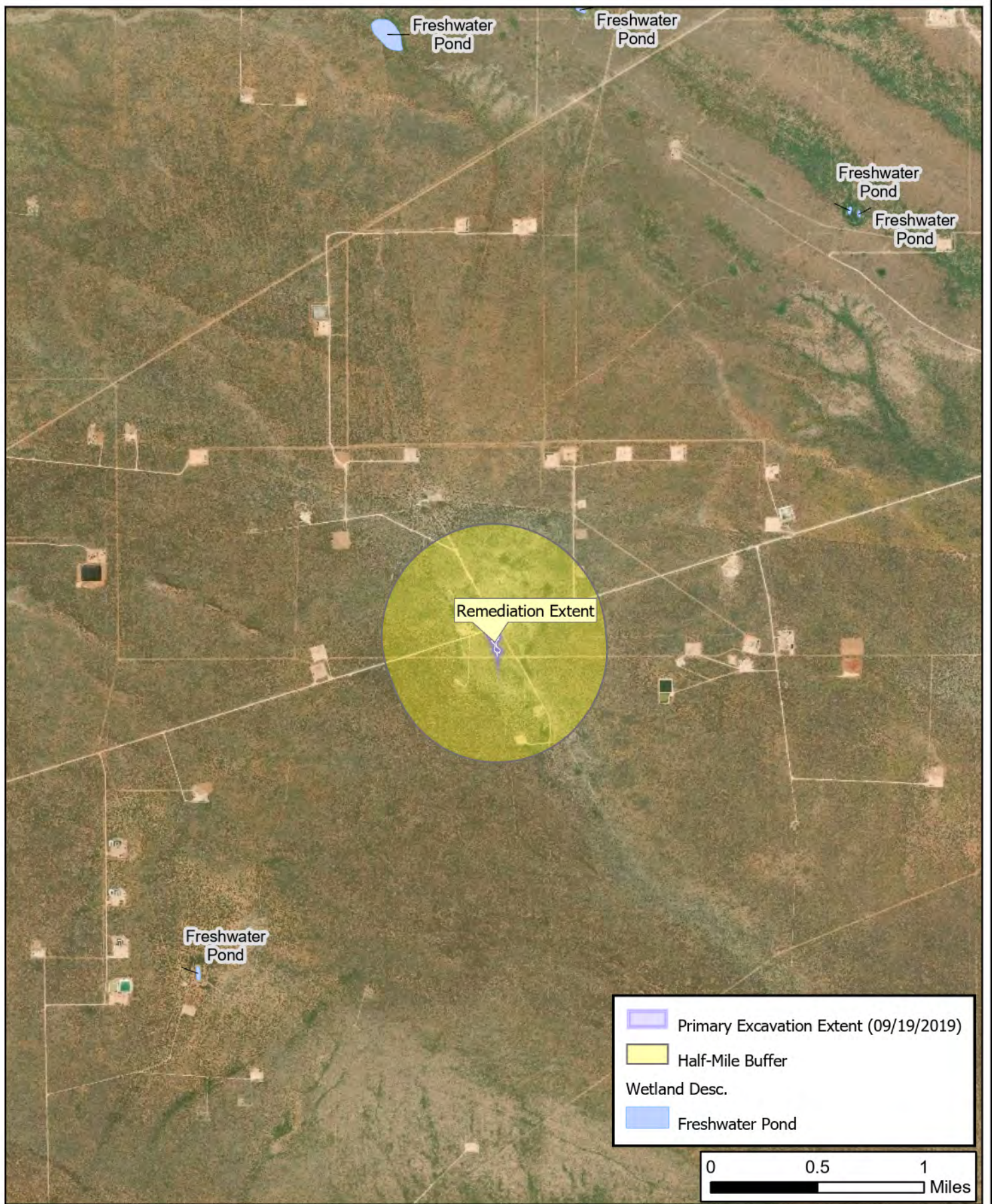
Nearby Structures

Advance Energy Partners Hat Mesa LLC  
1RP-5554 Dagger to Merchant Lay Flat Release

Plate 6

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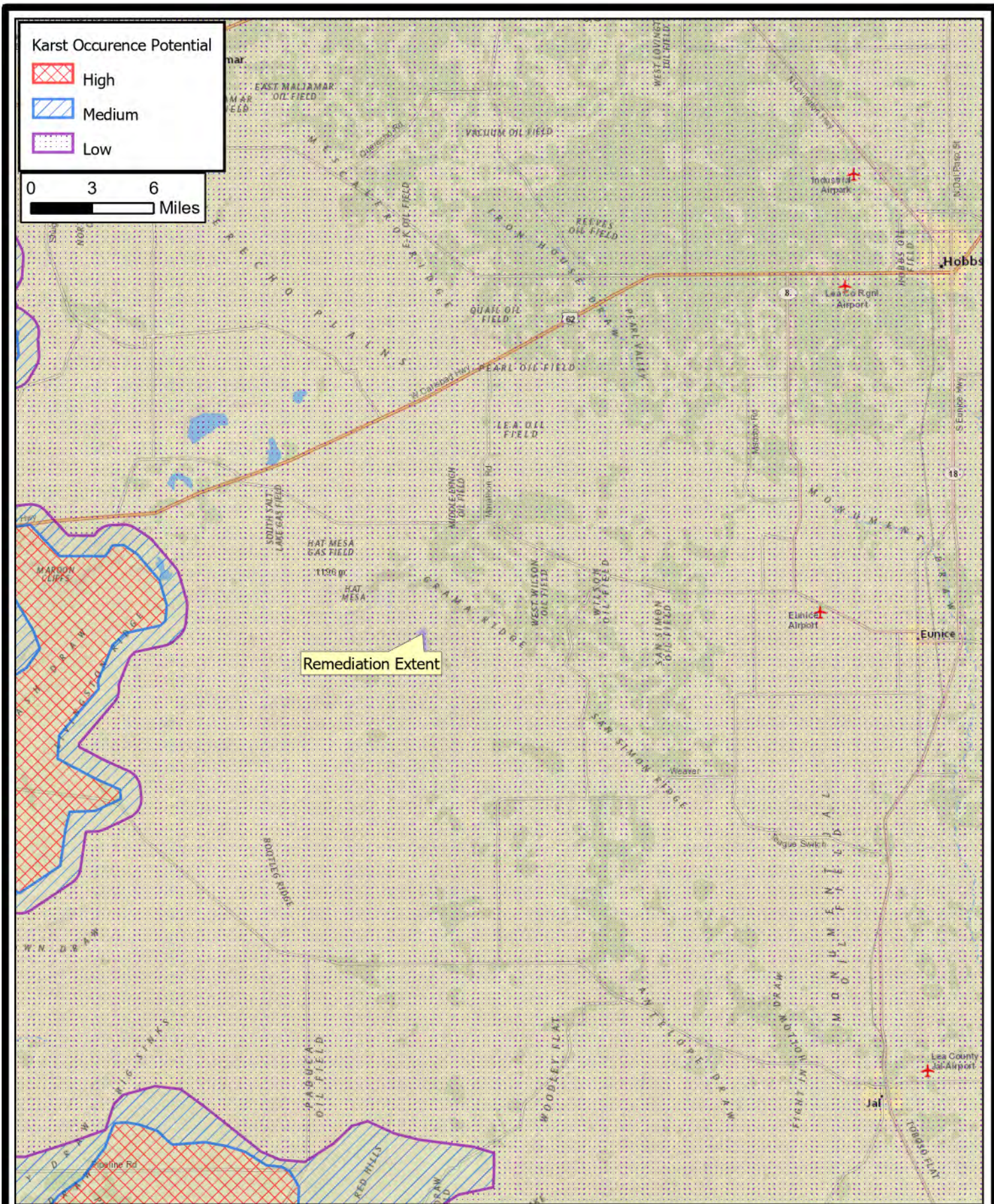
**Nearby Wetlands**  
 Advance Energy Partners Hat Mesa LLC  
 1RP-5554 Dagger to Merchant Lay Flat Release

**Plate 7**  
 Oct. 10, 2019

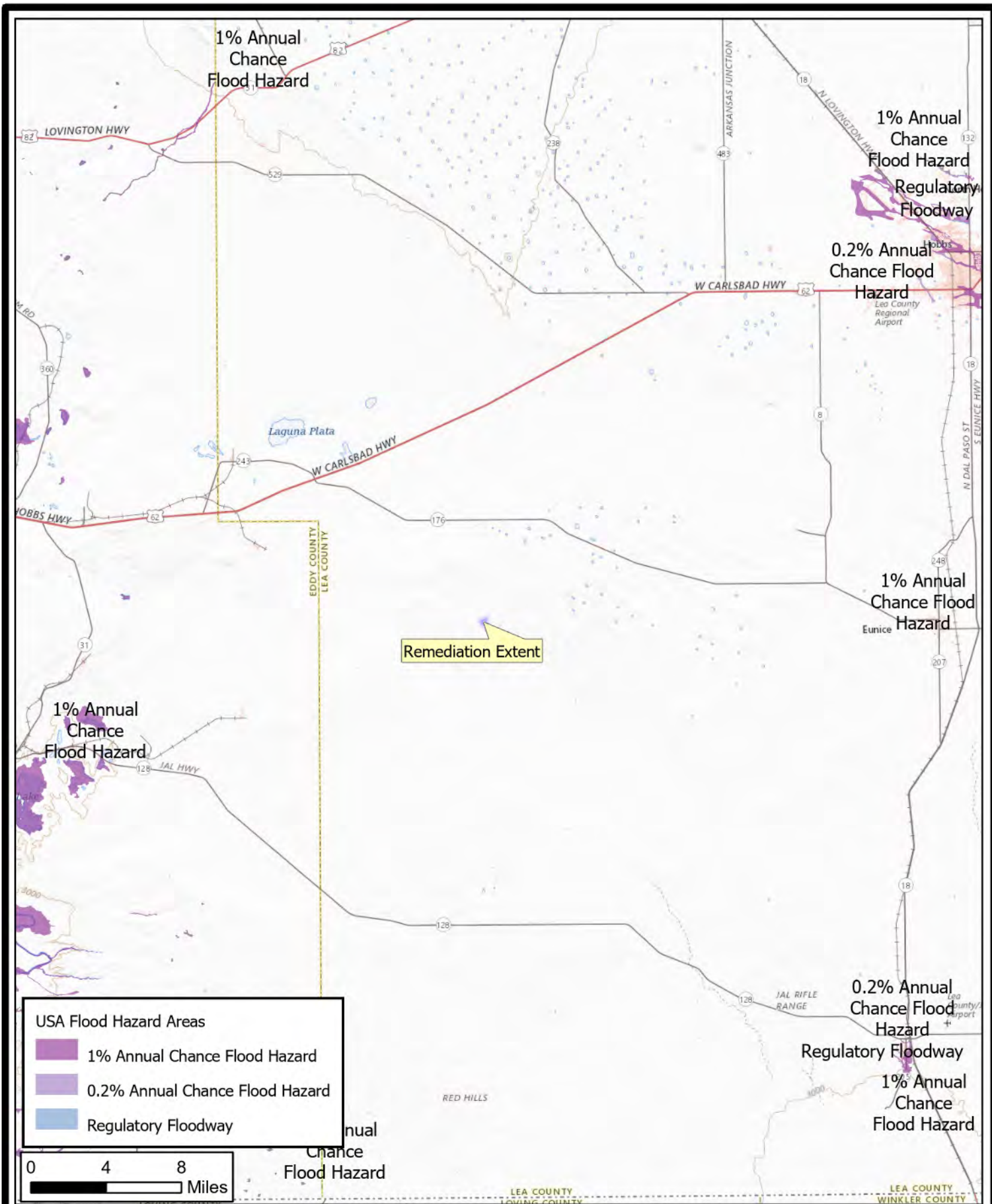








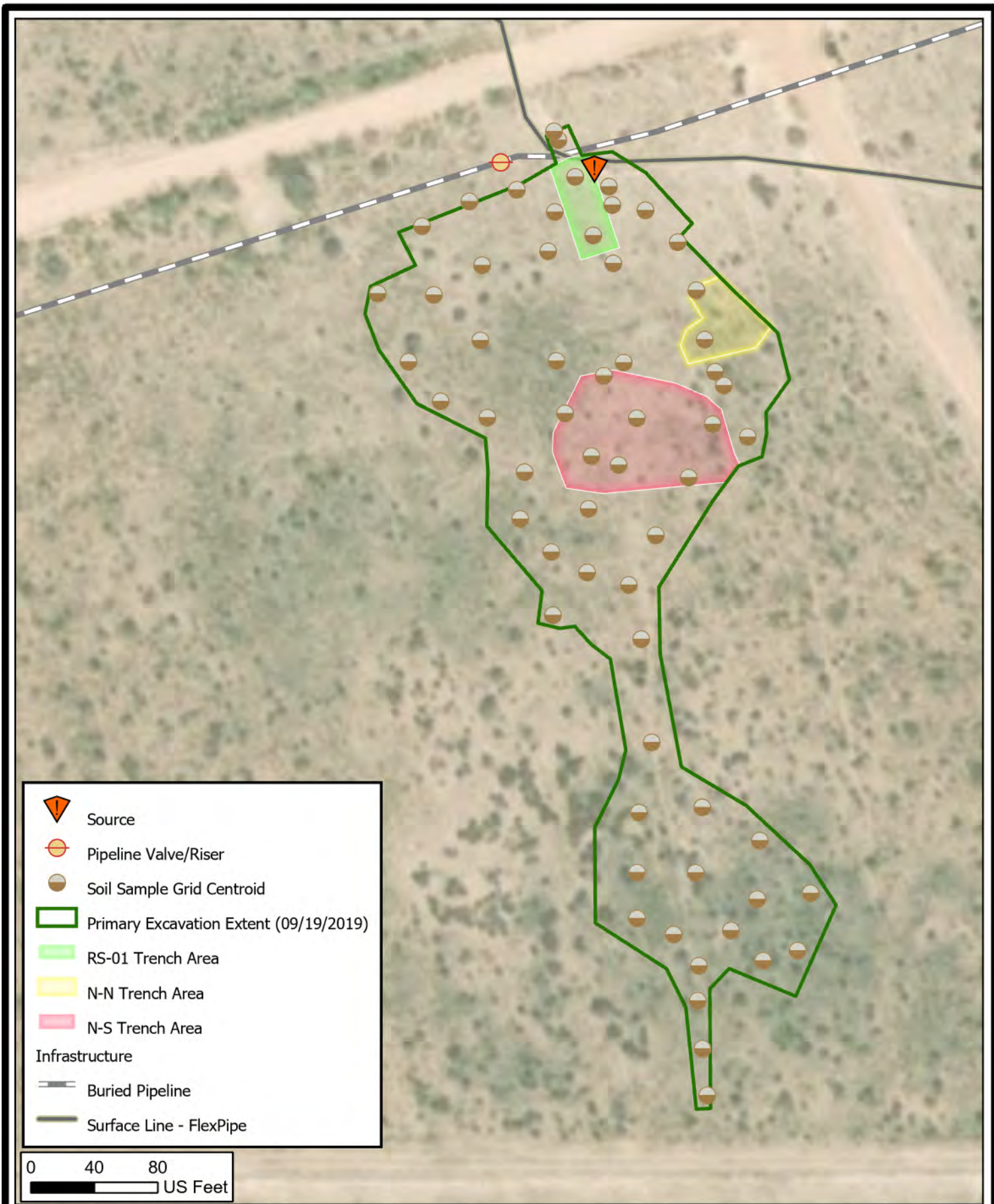




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**Flood Hazards (FEMA)**  
 Advance Energy Partners Hat Mesa LLC  
 1RP-5554 Dagger to Merchant Lay Flat Release

**Plate 10**  
 Oct. 10, 2019

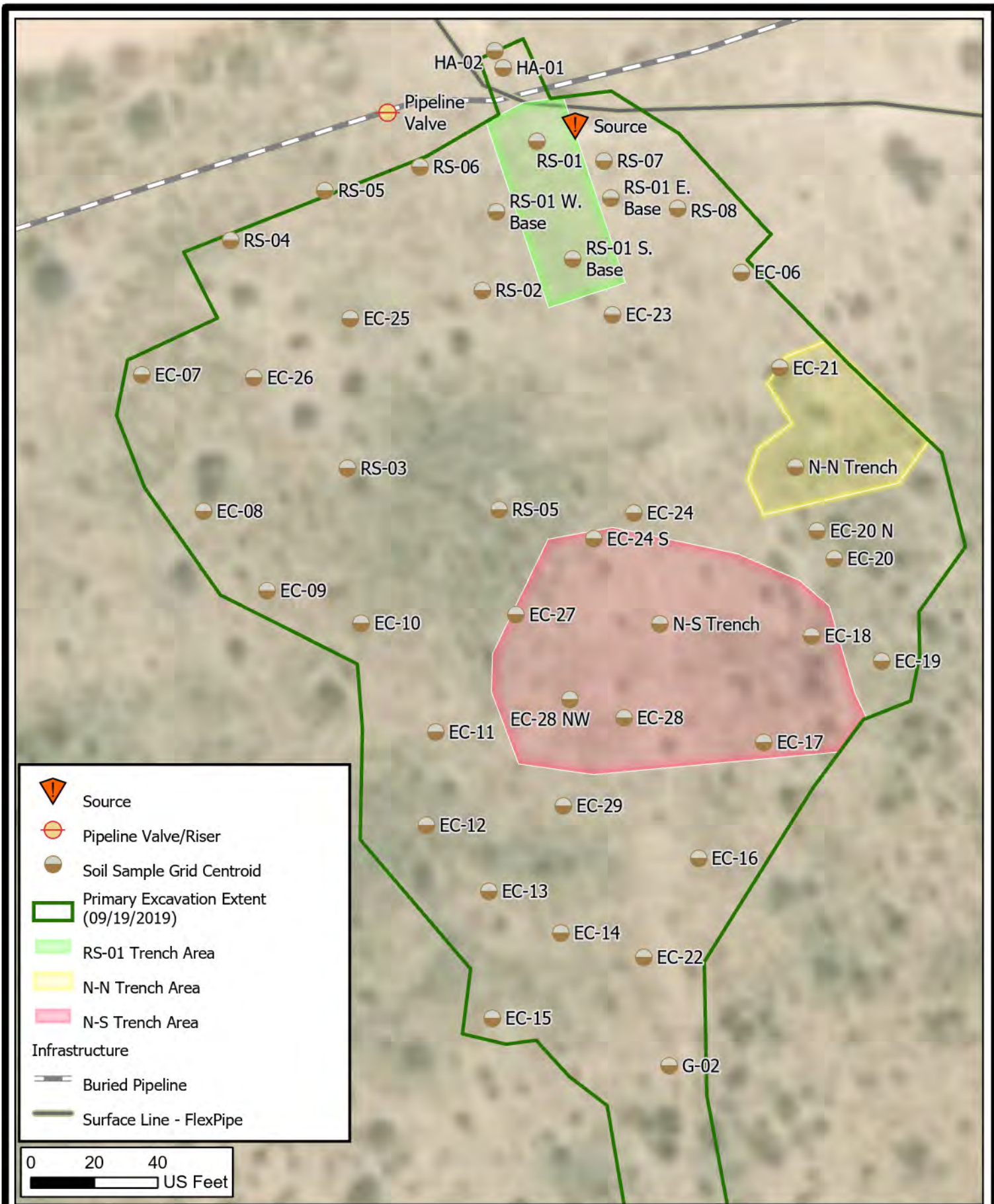


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Excavation Extent and Sample Centroid Locations  
Advance Energy Partners Hat Mesa LLC  
1RP-5554 Dagger to Merchant Lay Flat Release

Plate 11  
Oct. 10, 2019



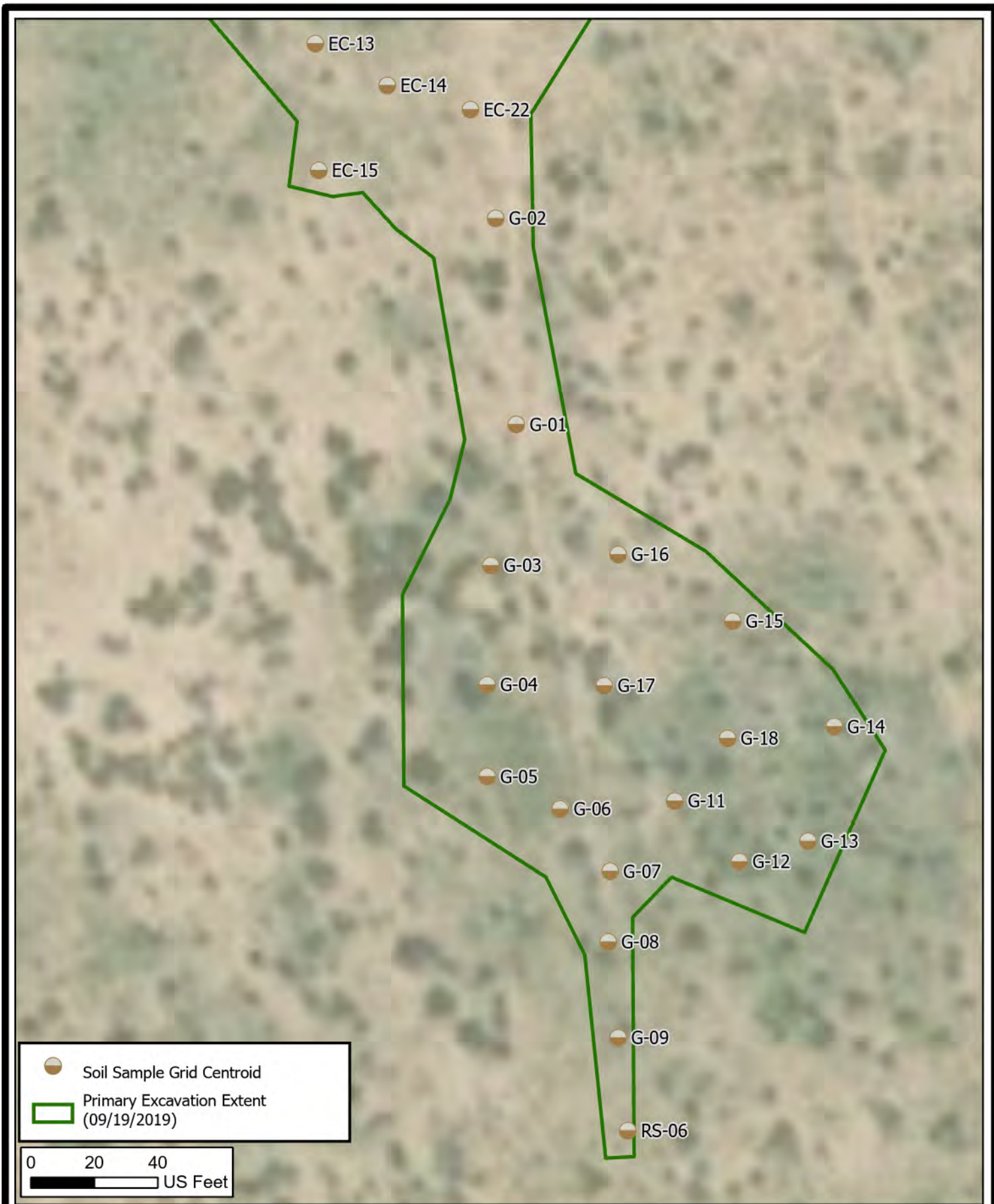


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**Northern Excavation Extent and  
 Sample Centroid Locations**  
 Advance Energy Partners Hat Mesa LLC  
 1RP-5554 Dagger to Merchant Lay Flat Release

**Plate 12**  
 Oct. 10, 2019







# Tables

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

POD Number	Date	Top of Water Bearing Strata	Bottom of Water Bearing Strata	Depth to Water	Source	Height Above Confining Layer
		Feet	Feet	Feet		Feet
CP-00601	1952		223	178		
CP 00854	6/22/1996	755	890	600	Artesian	155
CP 01349 POD 1	7/18/2014	990	1188	572	Artesian	418
CP 01355 POD 1	7/29/2014	925	1185	582	Artesian	343
CP 01356 POD 1	8/9/2014	765	1092	555	Artesian	210
CP 01357 POD 1	8/26/2014	945	1286	578	Artesian	367

Sample ID	Date	Discrete Depth (Feet)	Top Depth (Feet)	Bottom Depth (Feet)	EC (Hanna) dS/m	Chloride (PPM)	Comments	Lab (Hall/Cardinal)	Lab #
NMOCD Limits									
0 - 4 feet & "not in-use"						600			
> 4 ft or "in-use"						20,000			
EC-06 Base	6/10/2019	4.0			0.1	32		Cardinal	H902018
EC-06 E. Wall	6/26/2019		0.0	4.0		32		Cardinal	H902201
EC-06 N. Wall	6/26/2019		0.0	4.0	0.24	432		Cardinal	H902201
EC-07 Base	6/10/2019	3.5			0.13	80		Cardinal	H902018
EC-07 N. Wall	6/10/2019		0.0	3.5	0.07	32		Cardinal	H902018
EC-08 Base	9/3/2019	2.0			0.1	32		Cardinal	H903036
EC-08 W. Wall	6/20/2019		0.0	2.0	0.09	32		Cardinal	H902137
EC-09 Base	9/3/2019	4.0			0.11	48		Cardinal	H903036
EC-09 W. Wall	6/22/2019		0.0	4.0	0.08	16		Cardinal	H902153
EC-10 Base	9/3/2019	4.0			0.1	32		Cardinal	H903036
EC-10 W. Wall	6/22/2019		0.0	4.0	0.1	48		Cardinal	H902153
EC-11 Base	9/3/2019	3.0			0.11	32		Cardinal	H903036
EC-11 S. Wall	6/26/2019		0.0	3.0	0.08	48		Cardinal	H902201
EC-12 Base	8/29/2019	5.0			0.18	32	Against Wall	Cardinal	H903017
EC-12 Base	9/4/2019	3.5				32	20ft from wall	Cardinal	H903062
EC-12 S. Wall	8/29/2019		0.0	4.0	0.14	32		Cardinal	H903017
EC-13 Base	8/29/2019	5.0			0.14	32	Against Wall	Cardinal	H903017
EC-13 Base	9/4/2019	3.5				64	20ft from wall	Cardinal	H903062
EC-13 S. Wall	8/29/2019		0.0	4.0	0.22	80		Cardinal	H903017
EC-14 Base	9/4/2019	3.5				16		Cardinal	H903062
EC-14 S. Wall	8/26/2019		1.3	4.0	0.11	16	Upper 1.3 Ft Removed	Cardinal	H902938
EC-15 Base	8/26/2019	1.3			0.13	80		Cardinal	H902938
EC-15 E. Wall	8/26/2019		0.0	1.3	0.1	64		Cardinal	H902938
EC-15 S. Wall	8/26/2019		0.0	1.3	0.08	48		Cardinal	H902938
EC-15 W. Wall	8/26/2019		0.0	1.3	0.13	16		Cardinal	H902938
EC-16 Base	8/28/2019	2.0			0.13	32		Cardinal	H902992
EC-16 E. Wall	8/28/2019		0.0	2.0	0.12	64		Cardinal	H902992
EC-17 Base	8/28/2019	2.0			0.25	176		Cardinal	H902992
EC-17 E. Wall	8/28/2019		0.0	2.0	0.25	384		Cardinal	H902992
EC-18 Base	9/3/2019	2.5			0.09	<16		Cardinal	H903036
EC-19 Base	8/28/2019	2.5			0.07	32		Cardinal	H902992
EC-19 E. Wall	8/28/2019		0.0	2.5	0.1	80		Cardinal	H902992
EC-20 Base	9/4/2019	2.0			0.09	<16		Cardinal	H903062
EC-20 E. Wall	9/4/2019		0.0	2.0	0.09	128		Cardinal	H903062
EC-20 Trench Base	9/4/2019	4.5			0.09	16		Cardinal	H903062
EC-20 Trench Wall	9/5/2019		2.0	4.0	0.14	128	Upper 2ft Removed	Cardinal	H903078
EC-20N	9/10/2019	5.0			0.09	32	eTech's F24	Cardinal	H903127
EC-21 Base	9/4/2019	2.5			0.08	<16		Cardinal	H903062
EC-21 E. Wall	9/4/2019		1.0	2.5	0.09	<16	Upper 1 Ft Removed	Cardinal	H903062
EC-21 N. Wall	9/4/2019		2.5	4.0	0.08	<16	Upper 2.5 Ft Removed	Cardinal	H903062
EC-21 W. Wall	9/4/2019		1.5	2.5	0.11	32	Upper 1.5 Ft Removed	Cardinal	H903062
EC-21 Trench	9/4/2019	4.5			0.16	<16		Cardinal	H903062
EC-22 Base	8/28/2019	2.0			0.13	48		Cardinal	H902992
EC-22 E. Wall	8/28/2019		0.0	2.0	0.09	<16		Cardinal	H902992
EC-23 Base	8/28/2019	3.5			0.24	176		Cardinal	H902992
EC-24 Base	8/28/2019	4.5				48		Cardinal	H902992
EC-24S	9/10/2019	5.0			0.08	32	eTech's F29	Cardinal	H903127
EC-25 Base	8/28/2019	4.5				64		Cardinal	H902992
EC-26 Base	8/28/2019	4.5				48		Cardinal	H902992
EC-27 Base	8/28/2019	4.5				208		Cardinal	H902992
EC-28 Base	8/28/2019	4.0				64		Cardinal	H902992
EC-28 NW	9/10/2019	6.0			0.08	32	eTech's F26	Cardinal	H903127
EC-29 Base	8/28/2019	4.0				16		Cardinal	H902992
G-01 Base	6/25/2019	2.0				16		Cardinal	H902173
G-01 E. Wall	6/25/2019		0.0	2.0		32		Cardinal	H902173
G-01 W. Wall	6/25/2019		0.0	2.0		32		Cardinal	H902173
G-02 Base	6/25/2019	2.0				32		Cardinal	H902173
G-02 E. Wall	6/18/2019		0.0	1.0		64		Cardinal	H902108
G-02 W. Wall	6/18/2019		0.0	1.0		48		Cardinal	H902108
G-03 Base	6/22/2019	3.5				<16		Cardinal	H902153
G-03 W. Wall	6/18/2019		0.0	3.0		32		Cardinal	H902108
G-04 Base	6/22/2019	3.0				32		Cardinal	H902153
G-04 W. Wall	6/18/2019		0.0	3.0		32		Cardinal	H902108
G-05 Base	6/18/2019	2.0				48		Cardinal	H902108
G-05 S. Wall	6/18/2019		0.0	2.0		<16		Cardinal	H902108
G-06 Base	6/18/2019		0.0	2.5		176		Cardinal	H902108
G-06 S. Wall	6/18/2019		0.0	2.5		<16		Cardinal	H902108
G-07 Base	6/18/2019	2.5				<16		Cardinal	H902108
G-07 E. Wall	6/22/2019		0.0	3.0		<16		Cardinal	H902153

Sample ID	Date	Discrete Depth (Feet)	Top Depth (Feet)	Bottom Depth (Feet)	EC (Hanna) dS/m	Chloride (PPM)	Comments	Lab (Hall/Cardinal)	Lab #
NMOCD Limits									
0 - 4 feet & "not in-use"						600			
> 4 ft or "in-use"						20,000			
G-07 W. Wall	6/18/2019		0.0	2.5		<16		Cardinal	H902108
G-08 Base	6/18/2019	2.5				16		Cardinal	H902108
G-08 E. Wall	6/22/2019		0.0	2.5		<16		Cardinal	H902153
G-08 W. Wall	6/18/2019		0.0	2.5		<16		Cardinal	H902108
G-09 Base	6/18/2019	2.0				<16		Cardinal	H902108
G-09 E. Wall	6/18/2019		0.0	2.0		<16		Cardinal	H902108
G-09 W. Wall	6/18/2019		0.0	2.0		<16		Cardinal	H902108
G-10							Does Not Exist		
G-11 Base	6/18/2019	2.0				32		Cardinal	H902108
G-11 S. Wall	6/18/2019		0.0	2.0		48		Cardinal	H902108
G-12 Base	6/19/2019	2.0				32		Cardinal	H902119
G-12 S. Wall	6/19/2019		0.0	2.0		16		Cardinal	H902119
G-12 W. Wall	6/19/2019		0.0	2.0		208		Cardinal	H902119
G-13 Base	6/19/2019	2.5				48		Cardinal	H902119
G-13 E. Wall	6/19/2019		0.0	2.5		16		Cardinal	H902119
G-13 S. Wall	6/19/2019		0.0	2.5		16		Cardinal	H902119
G-14 Base	6/22/2019	4.0				16		Cardinal	H902153
G-14 E. Wall	6/19/2019		0.0	2.0		16		Cardinal	H902119
G-14 N. Wall	6/22/2019		0.0	4.0		<16		Cardinal	H902153
G-15 Base	6/19/2019	3.0				176		Cardinal	H902119
G-15 N. Wall	6/19/2019		0.0	3.0		80		Cardinal	H902119
G-16 Base	6/22/2019	4.0				48		Cardinal	H902153
G-16 N. Wall	6/22/2019		0.0	4.0		<16		Cardinal	H902153
G-17 Base	6/19/2019	3.0				208		Cardinal	H902119
G-18 Base	6/19/2019	2.5				32		Cardinal	H902119
HA-01 E. Wall	9/19/2019		0.0	3.5	0.12	160		Cardinal	H903256
HA-01 W. Wall	9/19/2019		0.0	3.5	0.2	144		Cardinal	H903256
HA-01 Base	9/19/2019	3.5			0.17	160		Cardinal	H903256
HA-02	6/26/2019		0.0	2.0	0.17	160	Hand Auger Sample	Cardinal	H902201
HA-02	6/26/2019		2.0	4.0	0.09	48	Hand Auger Sample	Cardinal	H902201
N-N Trench Base	9/4/2019	5			0.15	16		Cardinal	H903062
N-N Trench E. Wall	9/4/2019		1.5	4	0.11	<16		Cardinal	H903062
N-N Trench N. Wall	9/4/2019		2.5	4	0.14	16		Cardinal	H903062
N-N Trench S. Wall	9/4/2019		1.5	4	0.12	64		Cardinal	H903062
N-N Trench W. Wall	9/4/2019		2	4	0.12	32		Cardinal	H903062
N-S Trench Base	8/28/2019	4			0.16	48		Cardinal	H902992
N-S Trench E. Wall	8/27/2019		0	3	0.09	32		Cardinal	H902960
N-S Trench N. Wall	8/28/2019		2	4	0.25	272	Upper 2ft Removed	Cardinal	H902992
N-S Trench S. Wall	8/28/2019		2	4	0.12	48	Upper 2ft Removed	Cardinal	H902992
N-S Trench W. Wall	8/28/2019		2	4	0.15	48	Upper 2ft Removed	Cardinal	H902992
RS-01 E. Wall	6/20/2019		5.0	8.0		4720	Select Release	Cardinal	H902137
RS-01 N. Wall	6/20/2019		5.0	8.0		240	Select Release	Cardinal	H902137
RS-01 Trench Base	6/27/2019	9.0			0.35	688		Cardinal	H902229
RS-01 Trench Base	8/28/2019	9.0			0.45	672	Resampled	Cardinal	H902992
RS-01 W. Wall	6/20/2019		5.0	8.0		400	Select Release	Cardinal	H902137
RS-01 S. Base	9/10/2019	9.0			0.15	112	eTech's F37	Cardinal	H903127
RS-01 W. Base	9/10/2019	6.5			0.2	176		Cardinal	H903127
RS-01 E. Base	9/10/2019	6.5			0.22	240		Cardinal	H903127
RS-01 S. Wall	9/10/2019	7.0			0.25	192		Cardinal	H903127
RS-02 Base	6/13/2019	3.0				64		Cardinal	H902066
RS-03 Base	6/13/2019	3.0				32		Cardinal	H902066
RS-04 Base	6/13/2019	5.0				80		Cardinal	H902066
RS-04 N. Wall	6/20/2019		0.0	4.0	0.15	80		Cardinal	H902137
RS-04 W. Wall	6/20/2019		0.0	4.0	0.04	16		Cardinal	H902137
RS-05 Base	6/13/2019	3.5				32		Cardinal	H902066
RS-05 N. Wall	6/20/2019		0.0	4.0	0.1	32		Cardinal	H902137
RS-06 Base	6/13/2019	1.5			0.05	<16		Cardinal	H902108
RS-06 E. Wall	6/18/2019		0.0	1.5		<16		Cardinal	H902108
RS-06 N. Wall	6/20/2019		0.0	4.0	0.25	192		Cardinal	H902137
RS-06 S. Wall	6/13/2019		0.0	1.5	0.05	<16		Cardinal	H902066
RS-06 W. Wall	6/18/2019		0.0	1.5		<16		Cardinal	H902108
RS-07 N. Wall	6/26/2019		0.0	4.0	0.15	192		Cardinal	H902201
RS-08 N. Wall	6/26/2019		0.0	4.0	0.1	64		Cardinal	H902201

# **Appendix A**

## **OSE Well Logs**

**R.T. Hicks Consultants, Ltd.**  
901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

SF

Revised December 1975

IMPORTANT — READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM.

# Declaration of Owner of Underground Water Right

CAPITAN BASIN  
BASIN NAME

Declaration No. CP-601

Date received April 17, 1979

STATE ENGINEER OFFICE  
SANTA FE, N.M. 87501

## STATEMENT

- Name of Declarant THE MERCHANT LIVESTOCK COMPANY  
Mailing Address P.O. Box 548 Carlsbad  
County of Eddy, State of New Mexico
- Source of water supply shallow  
(artesian or shallow water aquifer)
- Describe well location under one of the following subheadings:
  - $\frac{1}{4}$  NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  of Sec. 28 Twp. 21S Rge. 33-E N.M.P.M., in Lea County.
  - Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_
  - X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N. M. Coordinate System \_\_\_\_\_ Zone \_\_\_\_\_ in the \_\_\_\_\_ Grant.  
On land owned by \_\_\_\_\_
- Description of well: date drilled 1952 driller \_\_\_\_\_ depth 2231 feet.  
outside diameter of casing 6 5/8 inches; original capacity \_\_\_\_\_ gal. per min.; present capacity 3 gal. per min.; pumping lift \_\_\_\_\_ feet; static water level 178 feet (above) (below) land surface;  
make and type of pump \_\_\_\_\_  
make, type, horsepower, etc., of power plant \_\_\_\_\_  
Fractional or percentage interest claimed in well 100%
- Quantity of water appropriated and beneficially used up to 3  
(~~acre feet per annum~~) (acre feet per annum)  
for stock water purposes.
- Acreage actually irrigated \_\_\_\_\_ acres, located and described as follows (describe only lands actually irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner
			<u>stock only</u>		<u>The Merchant Livestock Co.</u>

(Note: location of well and acreage actually irrigated must be shown on plat on reverse side.)

- Water was first applied to beneficial use \_\_\_\_\_ month \_\_\_\_\_ day \_\_\_\_\_ year 1952 and since that time has been used fully and continuously on all of the above described lands or for the above described purposes except as follows: \_\_\_\_\_

- Additional statements or explanations \_\_\_\_\_

name of well - Standard

I, J. D. Merchant, Jr., President being first duly sworn upon my oath, depose and say that the above is a full and complete statement prepared in accordance with the instructions on the reverse side of this form and submitted in full and complete ownership of a valid underground water right, that I have carefully read each and all of the items contained therein and that the same are true to the best of my knowledge and belief.

THE MERCHANT LIVESTOCK CO. declarant.

by: J. D. Merchant, Jr., President  
day of April, A.D. 1979

Subscribed and sworn to before me this 12th

My commission expires March 2, 1980

John F. Saunders Notary Public

FILED

UNDER NEW MEXICO LAW A DECLARATION IS ONLY A STATEMENT OF DECLARANT'S CLAIM. ACCEPTANCE FOR FILING DOES NOT CONSTITUTE APPROVAL OR REJECTION OF THE CLAIM.

563298

Locate well and areas actually irrigated as accurately as possible on following plat:

Section (s) \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_ N. M. P. M.


#### INSTRUCTIONS

Declaration shall be executed (preferably typewritten) in triplicate and must be accompanied by a \$1.00 filing fee. Each of triplicate copies must be properly signed and attested.

A separate declaration must be filed for each well in use.

All blanks shall be filled out fully. Required information which cannot be sworn to by declarant shall be supplied by affidavit of person or persons familiar with the facts and shall be submitted herewith.

Secs. 1-3. Complete all blanks.

Sec. 4. Fill out all blanks applicable as fully as possible.

Sec. 5. Irrigation use shall be stated in acre feet of water per acre per year applied on the land. If used for domestic, municipal, or other purposes, state total quantity in acre feet used annually.

Sec. 6. Describe only the acreage actually irrigated. When necessary to clearly define irrigated acreages, describe to nearest  $2\frac{1}{2}$  acre subdivision. If located on unsurveyed lands, describe by legal subdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily-located natural object.

Sec. 7. Explain and give dates as nearly as possible of any years when all or part of acreage claimed was not irrigated.

Sec. 8. If well irrigates or supplies supplemental water to any other land than that described above, or if land is also irrigated from any other source, explain under this section. Give any other data necessary to fully describe water right.

If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

SF

EL

\*70 APR 20 PM 3 00

April 17, 1979

STATE ENGINEER OFFICE  
CARLSBAD, N.M. 81501

Files: CP-584; CP-585; CP-586; CP-587; CP-588;  
CP-589; CP-590; CP-591; CP-592; CP-593;  
CP-594; CP-595; CP-596; CP-597; CP-598;  
CP-599; CP-600; CP-601; CP-602

The Merchant Livestock Company  
P. O. Box 548  
Carlsbad, NM 88220

Gentlemen:

Enclosed are your copies of Declarations of Owner of Underground Water Right as numbered above, which have been filed for record in the office of the State Engineer.

Please refer to each individual number in all future correspondence concerning these declarations.

The filing of these declarations does not indicate affirmation or rejection of the statements contained therein.

Yours very truly,

J. C. Groseclose  
Basin Supervisor

JCG/fh  
Encls.  
cc: Santa Fe

563298





# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
CP 00854	POD1	1 1 2	33	21S	33E	633879	3590223

**Driller License:** 421 **Driller Company:** GLENN'S WATER WELL SERVICE

**Driller Name:** GLENN, CLARK A."CORKY" (LD)

<b>Drill Start Date:</b> 06/22/1996	<b>Drill Finish Date:</b> 06/22/1996	<b>Plug Date:</b>
<b>Log File Date:</b> 07/11/1996	<b>PCW Rcv Date:</b> 10/17/2013	<b>Source:</b> Shallow
<b>Pump Type:</b> SUBMER	<b>Pipe Discharge Size:</b> 2.875	<b>Estimated Yield:</b> 100 GPM
<b>Casing Size:</b> 6.63	<b>Depth Well:</b> 950 feet	<b>Depth Water:</b> 600 feet

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	755	805	Sandstone/Gravel/Conglomerate
	860	890	Sandstone/Gravel/Conglomerate

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	760	950

<b>Meter Number:</b> 8514	<b>Meter Make:</b> BLANCETT
<b>Meter Serial Number:</b> 040711711	<b>Meter Multiplier:</b> 1.0000
<b>Number of Dials:</b> 7	<b>Meter Type:</b> Diversion
<b>Unit of Measure:</b> Barrels 42 gal.	<b>Return Flow Percent:</b>
<b>Usage Multiplier:</b>	<b>Reading Frequency:</b> Quarterly

### Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount
03/15/2004	2004	121	A	jw		0
03/29/2004	2004	69871	A	jw		0
05/17/2004	2004	8758	A	jw		2.651
06/11/2004	2004	79641	A	jw		2.998
01/27/2012	2012	18062553	A		RPT Initial reading	0
03/01/2012	2012	19039807	A		RPT	2.999
05/29/2013	2013	179696	A		RPT initial reading	0
10/07/2013	2013	460774	A		RPT Qtr IV 2013	36.229
11/11/2013	2013	540326	A		RPT	10.254
01/01/2014	2013	614283	A		RPT	9.533
10/01/2014	2014	1122654	A		RPT	65.526
01/01/2015	2014	1212343	A		RPT	11.560
03/31/2015	2015	1307063	A		RPT	12.209
06/27/2015	2015	1369556	A		RPT	8.055

**Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount
09/30/2015	2015	1371471	A	RPT	0.247
10/22/2015	2015	1400502	A	RPT	3.742
11/30/2015	2015	1400502	A	RPT	0
04/28/2016	2016	1464116	A	RPT "JD33 Well"	8.199
06/01/2016	2016	1464116	A	RPT	0
07/27/2016	2016	1496980	A	RPT JD33 Well	4.236
09/01/2016	2016	1510835	A	RPT JD 33 Well	1.786
09/30/2016	2016	1517146	A	RPT	0.813
10/31/2016	2016	1531178	A	RPT JD 33 well	1.809
11/29/2016	2016	1553285	A	RPT JD33 Well	2.849
03/01/2017	2017	1583100	A	RPT	3.843

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<b>**YTD Meter Amounts:</b>	<b>Year</b>	<b>Amount</b>
	2004	5.649
	2012	2.999
	2013	56.016
	2014	77.086
	2015	24.253
	2016	19.692
	2017	3.843

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# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4 Sec Tws Rng</b>	<b>X</b>	<b>Y</b>
CP 01349	POD1	2 3 1 27 21S 33E	635304	3591576 

**Driller License:** 421 **Driller Company:** GLENN'S WATER WELL SERVICE

**Driller Name:** GLENN, CLARK A."CORKY"

**Drill Start Date:** 07/12/2014

**Drill Finish Date:** 07/18/2014

**Plug Date:**

**Log File Date:** 08/04/2014

**PCW Rcv Date:**

**Source:** Artesian

**Pump Type:**

**Pipe Discharge Size:**

**Estimated Yield:**

**Casing Size:** 7.00

**Depth Well:** 1188 feet

**Depth Water:** 572 feet

**Water Bearing Stratifications:** **Top Bottom Description**

990 1188 Sandstone/Gravel/Conglomerate

**Casing Perforations:** **Top Bottom**

721 1188



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

STATE ENGINEER OFFICE  
SOSWELL, NEW MEXICO

2014 SEP 10 PM 2:15

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP-1355 (East Standard South) *** Revised 09/09/14 ***				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS P. O. Box 692				CITY Tatum	STATE NM	ZIP 88267	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 26	SECONDS 54.8 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE1/4NW1/4SW1/4 Section 27, Township 21 South, Range 33 East on Merchants Livestock Land								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 07/22/14		DRILLING ENDED 07/29/14		DEPTH OF COMPLETED WELL (FT) 1,192'	BORE HOLE DEPTH (FT) 1,192'	DEPTH WATER FIRST ENCOUNTERED (FT) 925'	
	COMPLETED WELL IS: <input checked="" type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) 582'	
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0'	40'	20"	16"	None	15 1/2"	.250	
	0'	757'	14 3/4"	9 5/8"	Thread & Collar	8.921"	36 lbs.	none
	690'	1,192'	8 3/4"	7" (502.14' Total)	Thread & Collar	6.366"	23 lbs.	1/8"
			317.96 perforated					
			on bottom of liner					
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0'	40'	20"	Cemented	2 yds.	Top Pour		
	0	757'	14 3/4"	Float and shoe cemented to surface	962	Circulated		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1355	POD NUMBER	1	TRN NUMBER	549450
LOCATION	Expl	215.33E.27.312			PAGE 1 OF 2

	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
4. HYDROGEOLOGIC LOG OF WELL	0	4'	4'	Sand	<input type="radio"/> Y <input checked="" type="radio"/> N	
	4'	28'	24'	Caliche	<input type="radio"/> Y <input checked="" type="radio"/> N	
	28'	120'	92'	Sand & Clay	<input type="radio"/> Y <input checked="" type="radio"/> N	
	120'	260'	140'	Red Clay	<input type="radio"/> Y <input checked="" type="radio"/> N	
	260'	757'	497'	Red & Brown Shale, and Clay (some blue)	<input type="radio"/> Y <input checked="" type="radio"/> N	
	757'	815'	58'	Red & Brown Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
	815'	840'	25'	Blue Clay & Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
	840'	925'	85'	Red and Brown Shale (some sandrock)	<input type="radio"/> Y <input checked="" type="radio"/> N	
	925'	975'	50'	Watersand and Gravel	<input checked="" type="radio"/> Y <input type="radio"/> N	
	975'	1,185'	210'	Watersand (brown sandrock)	<input checked="" type="radio"/> Y <input type="radio"/> N	
	1,185'	1,192'	7'	Red Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
					<input type="radio"/> Y <input checked="" type="radio"/> N	
					<input type="radio"/> Y <input checked="" type="radio"/> N	
					<input type="radio"/> Y <input checked="" type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input checked="" type="radio"/> PUMP					TOTAL ESTIMATED WELL YIELD (gpm):
<input type="radio"/> AIR LIFT <input type="radio"/> BAILER <input type="radio"/> OTHER - SPECIFY:						
5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION:					
	0' to 757' drilled with mud. 757' to 1192' drilled with air and foam.					
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:						
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:					
	<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             SIGNATURE OF DRILLER / PRINT SIGNED NAME         </div> <div style="text-align: center;">             DATE         </div> </div>					

FOR USE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	CP-1355	POD NUMBER	1
LOCATION	215.33E.27.312	TRN NUMBER	549450
			PAGE 2 OF 2



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP - 1355 East Standard (South)				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants Livestock/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) (575)398-2424			
	WELL OWNER MAILING ADDRESS P.O. Box 692				CITY Tatum		STATE NM	ZIP 88267
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 26	SECONDS 54.8	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84		
		LONGITUDE 103	33	58.3	W			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE/NW/SW Sec. 27, T21S, R33E on Merchants Livestock Land								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 7/29/14		DRILLING ENDED 8/2/14		DEPTH OF COMPLETED WELL (FT) 1192'		BORE HOLE DEPTH (FT) 1192'	
					DEPTH WATER FIRST ENCOUNTERED (FT) 925'			
	COMPLETED WELL IS: <input checked="" type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) 582'	
	DRILLING FLUID: <input type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0'	40'	20"	16"	None	15 1/2"	.250	
	0'	757'	14 3/4"	9 5/8"	Thread and Collar	.352	36 lbs.	none
757'	1192'	8 3/4"	7"	Thread and Collar	6.5"	23 lbs.	1/8"	
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0'	40'	20"	Cemented	2 yds	Top Pour		
	0'	757'	14 3/4"	Float and Shoe Cemented to Surface	1034	Circulated		



FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1355	POD NUMBER	1	TRN NUMBER	549450
LOCATION	Exp	21S.33E.27.312			PAGE 1 OF 2

DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
FROM	TO				
0'	4'	4'	Soil	<input type="radio"/> Y <input checked="" type="radio"/> N	
4'	28'	24'	Caleche	<input type="radio"/> Y <input checked="" type="radio"/> N	
28'	120'	92'	Sand and Clay	<input type="radio"/> Y <input checked="" type="radio"/> N	
120'	260'	140'	Red Clay	<input type="radio"/> Y <input checked="" type="radio"/> N	
260'	757'	497'	Red and Brown Shale and Clay(some blue)	<input type="radio"/> Y <input checked="" type="radio"/> N	
757'	815'	58'	Red and Brown Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
815'	840'	25'	Blue Clay and Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
840'	925'	85'	Red and Brown Shale(some sandrock)	<input type="radio"/> Y <input checked="" type="radio"/> N	
925'	975'	50'	Watersand and Gravel	<input checked="" type="radio"/> Y <input type="radio"/> N	
975'	1185'	210'	Watersand(brown sandrock)	<input checked="" type="radio"/> Y <input type="radio"/> N	
1185'	1192'	7'	Red Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:			<input checked="" type="radio"/> PUMP	TOTAL ESTIMATED WELL YIELD (gpm): 50	
<input type="radio"/> AIR LIFT <input type="radio"/> BAILER <input type="radio"/> OTHER – SPECIFY:					

5. TEST RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION:	
	0' to 757' drilled with mud. 757' to 1192' drilled with air and foam.	
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:		

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER / PRINT SIGNEE NAME	 DATE




# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
CP 01356	POD1	4 2 2	33	21S	33E	634560	3590014 

**Driller License:** 421 **Driller Company:** GLENN'S WATER WELL SERVICE

**Driller Name:** GLENN, CLARK A."CORKY"

**Drill Start Date:** 08/01/2014

**Drill Finish Date:** 08/09/2014

**Plug Date:**

**Log File Date:** 08/25/2014

**PCW Rcv Date:**

**Source:** Artesian

**Pump Type:**

**Pipe Discharge Size:**

**Estimated Yield:**

**Casing Size:** 6.37

**Depth Well:** 1098 feet

**Depth Water:** 555 feet

### Water Bearing Stratifications:

Top	Bottom	Description
765	795	Sandstone/Gravel/Conglomerate
795	825	Shale/Mudstone/Siltstone
825	920	Sandstone/Gravel/Conglomerate
920	935	Shale/Mudstone/Siltstone
935	968	Sandstone/Gravel/Conglomerate
968	976	Shale/Mudstone/Siltstone
976	1005	Sandstone/Gravel/Conglomerate
1005	1092	Sandstone/Gravel/Conglomerate

### Casing Perforations:

Top	Bottom
735	1098






# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
CP 01357	POD1	4	3	1	27 21S 33E	634782	3591347 

**Driller License:** 421 **Driller Company:** GLENN'S WATER WELL SERVICE

**Driller Name:** GLENN, CLARK A."CORKY"

**Drill Start Date:** 08/16/2014

**Drill Finish Date:** 08/26/2014

**Plug Date:**

**Log File Date:** 09/10/2014

**PCW Rcv Date:**

**Source:** Artesian

**Pump Type:**

**Pipe Discharge Size:**

**Estimated Yield:**

**Casing Size:** 6.37

**Depth Well:** 1286 feet

**Depth Water:** 578 feet

**Water Bearing Stratifications:**

**Top Bottom Description**

945	960	Sandstone/Gravel/Conglomerate
960	1077	Shale/Mudstone/Siltstone
1077	1215	Sandstone/Gravel/Conglomerate
1215	1286	Shale/Mudstone/Siltstone

**Casing Perforations:**

**Top Bottom**

846	1286
-----	------

# **Appendix B**

## **EM Survey**

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745  
✱ Durango, CO ✱ Carlsbad, NM ✱ Midland, TX

## ELECTROMAGNETIC SURVEY

### RELATIONSHIP WITH ELECTRICAL CONDUCTIVITY AND CHLORIDE

Revised: October 12, 2019 (DRAFT)

Electromagnetic surveys (EM Survey) are commonly used to measure electrical conductivity (EC, “soil salinity”) in soils. Employing a Geonics EM38 (Exhibit 1), field personnel can effectively delineate the horizontal extent of a produced water release by measuring EC and monitoring for EC changes between background and higher EC readings. Increasing EC measurements suggest that the edge of the release extent is approaching.

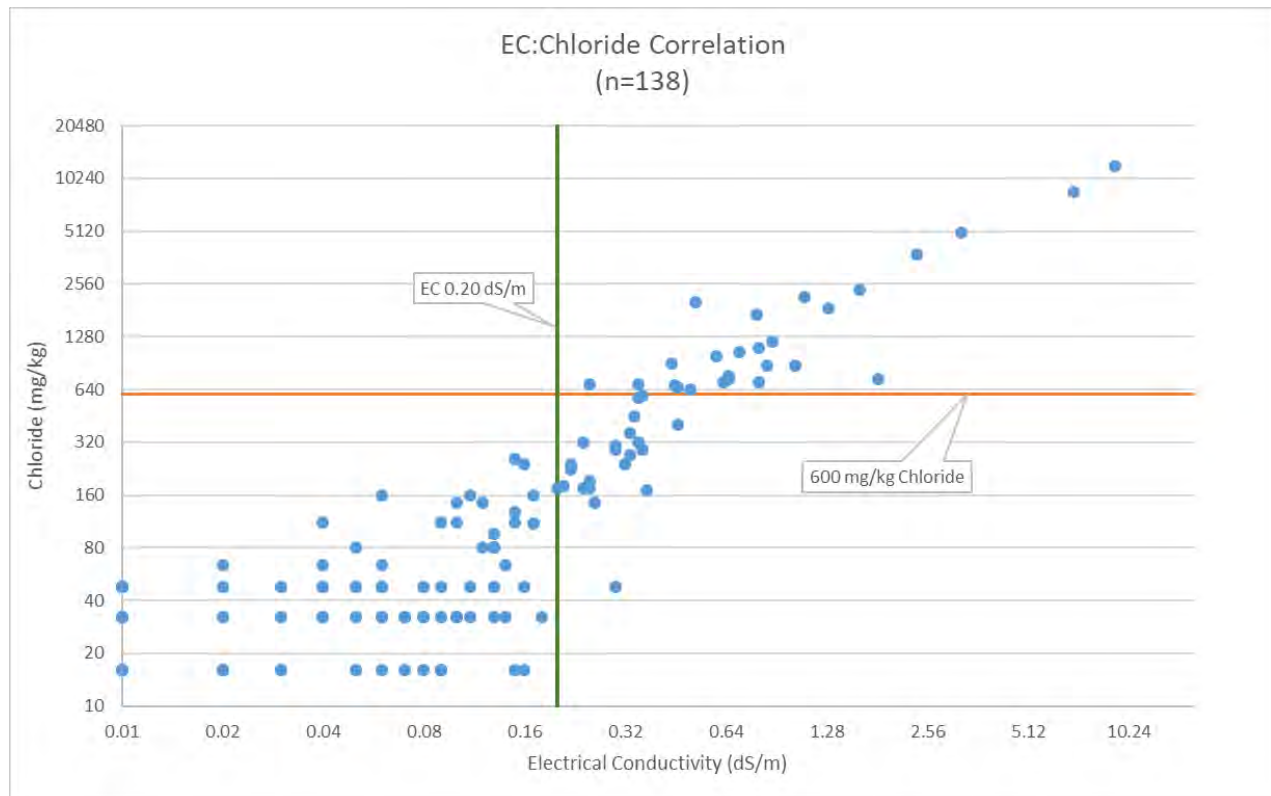


**Exhibit 1: Measuring EC with the EM38 in the vertical position.**

The EM38 detects EC from the surface to a depth of approximately 4-feet. EC measurements can be obtained in the vertical or horizontal positions. In the vertical position, EC readings are weighted toward the lower depths of 3 to 4 feet. In the horizontal position, EC readings are weighted toward the upper 0 to 2 feet. If a higher EC reading is obtained in the horizontal position than the vertical position, produced water has likely impacted the upper surface more than at lower depths. If a higher EC reading is obtained in the vertical position than the horizontal position, produced water has likely impacted lower soils than the upper surface soils.

The below charts show the correlation between EC and Chloride (Cl) measurements measured over 139 sample points (n=138). The EC measurements collected in the field are temperature corrected (TC) to 25° Celsius.

Analysis of data shows that an EC values greater than 0.20 dS/m is the delineation threshold where chloride in soil has a potential to be greater than 600 mg/kg. Furthermore, field personnel can survey a release and identify “hot spots” with the highest EC readings. These hot spots are likely areas where impacted to near surface soils (0 to 4 feet) from released produced water will be the greatest.



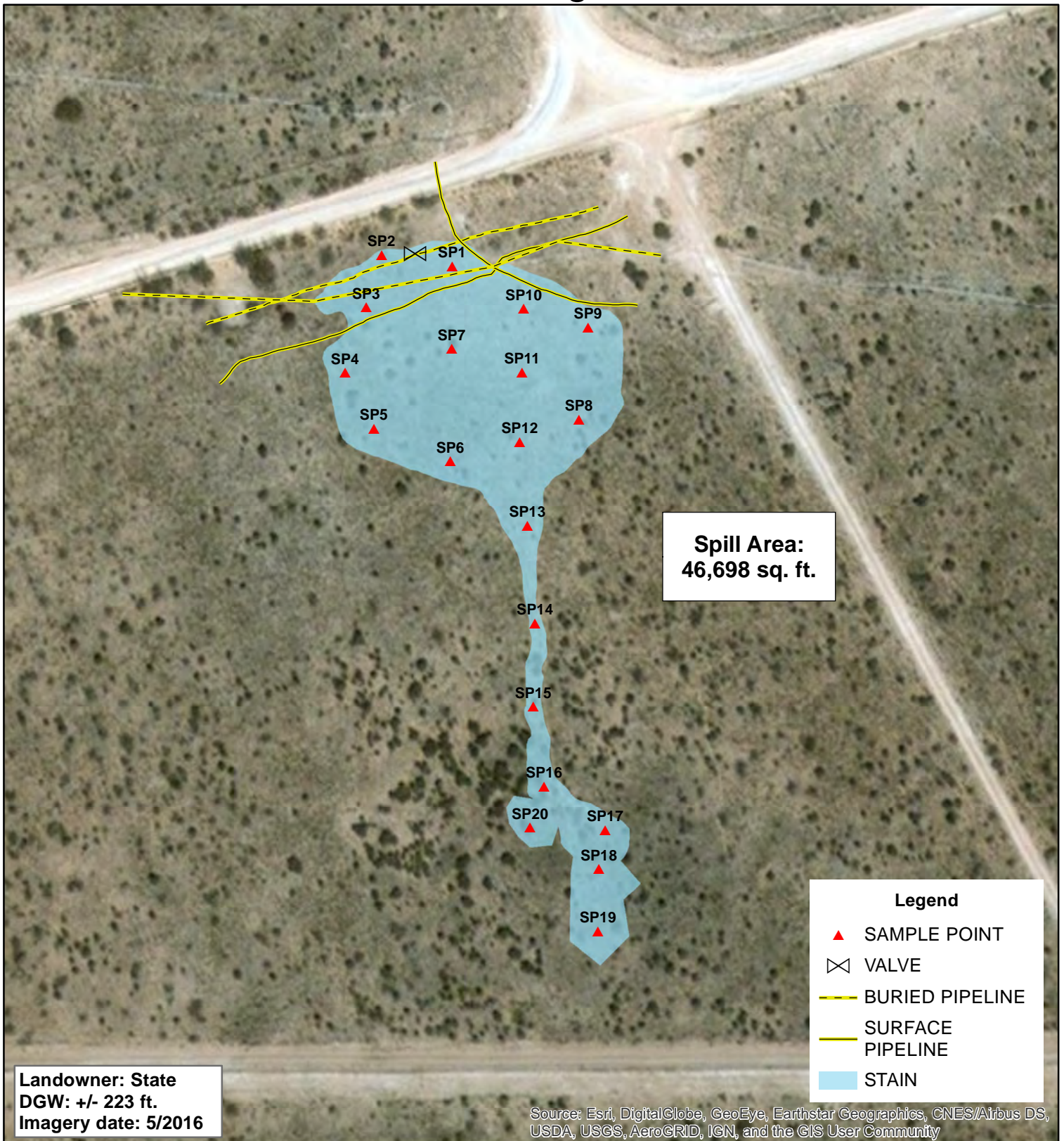
# **Appendix C**

## **eTECH Sampling Data**

**R.T. Hicks Consultants, Ltd.**  
901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104



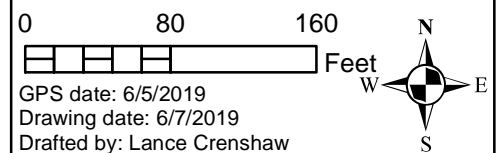
# Site Diagram



*Advance Energy Partners  
(Kingsley Construction)  
Merchant Recycling Containment  
(Blueberry to Cheddar)*

**UL/P, Sec. 28 T21S R33E  
Lea County, NM**

**GPS: 32.4444614, -103.5729915**





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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June 13, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: BLUEBERRY TO CHEDDAR

Enclosed are the results of analyses for samples received by the laboratory on 06/06/19 15:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 1 @ 1' (H901988-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 99.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 1 @ 2' (H901988-02)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 90.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 2 @ SURFACE (H901988-03)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 2 @ 1' (H901988-04)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 87.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 3 @ 3' (H901988-05)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 95.0 % 41-142

Surrogate: 1-Chlorooctadecane 98.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 3 @ 4' (H901988-06)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 97.3 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 4 @ 2' (H901988-07)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 4 @ 3' (H901988-08)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 97.9 % 37.6-147

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Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 5 @ 1' (H901988-09)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 88.5 % 37.6-147

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Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 5 @ 2' (H901988-10)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 78.4 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 6 @ 3' (H901988-11)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29	
Total BTX	<0.300	0.300	06/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2019	ND	244	122	200	1.39	
DRO >C10-C28*	<10.0	10.0	06/08/2019	ND	221	111	200	0.645	
EXT DRO >C28-C36	<10.0	10.0	06/08/2019	ND					

Surrogate: 1-Chlorooctane 88.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 6 @ 4' (H901988-12)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	06/11/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 7 @ 3' (H901988-13)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 98.5 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 7 @ 4' (H901988-14)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/11/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 8 @ 4' (H901988-15)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/12/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 8 @ 5' (H901988-16)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/12/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/12/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 90.1 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 9 @ SURFACE (H901988-17)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	2.37	118	2.00	1.09		
Toluene*	<0.050	0.050	06/12/2019	ND	2.37	119	2.00	0.114		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.23	111	2.00	1.10		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	6.70	112	6.00	1.29		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	06/11/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.0 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 9 @ 1' (H901988-18)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/12/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/12/2019	ND	6.70	112	6.00	1.29	
Total BTEX	<0.300	0.300	06/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 10 @ 2' (H901988-19)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2019	ND	2.37	118	2.00	1.09	
Toluene*	<0.050	0.050	06/12/2019	ND	2.37	119	2.00	0.114	
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.23	111	2.00	1.10	
Total Xylenes*	<0.150	0.150	06/12/2019	ND	6.70	112	6.00	1.29	
Total BTEx	<0.300	0.300	06/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 95.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/05/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 10 @ 3' (H901988-20)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96	QR-03	
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73	QR-03	
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11	QR-03	
Total BTEx	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/11/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 97.5 % 41-142

Surrogate: 1-Chlorooctadecane 97.0 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 14 @ 2' (H901988-21)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 98.4 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 14 @ 3' (H901988-22)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 94.8 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 15 @ 1' (H901988-23)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	06/11/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 15 @ 2' (H901988-24)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 16 @ 3' (H901988-25)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 98.5 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 16 @ 4' (H901988-26)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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P.O. Box 301  
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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 17 @ 2' (H901988-27)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/11/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/11/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/11/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 87.3 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 17 @ 3' (H901988-28)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 124 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.7 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 18 @ 2' (H901988-29)**

BTEx 8021B		mg/kg		Analyzed By: BF				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 144 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	96.0	16.0	06/11/2019	ND	400	100	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68		
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54		
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND						

Surrogate: 1-Chlorooctane 97.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.8 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 18 @ 3' (H901988-30)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	228	114	200	6.68	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	202	101	200	9.54	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.9 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 11 @ 3' (H901988-31)**

BTEx 8021B		mg/kg		Analyzed By: BF				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 140 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	64.0	16.0	06/11/2019	ND	400	100	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	240	120	200	5.09		
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	212	106	200	4.86		
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND						

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 11 @ 4' (H901988-32)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 121 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2019	ND	250	125	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/09/2019	ND	222	111	200	6.64	
EXT DRO >C28-C36	<10.0	10.0	06/09/2019	ND					

Surrogate: 1-Chlorooctane 79.2 % 41-142

Surrogate: 1-Chlorooctadecane 80.9 % 37.6-147

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Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 12 @ 2' (H901988-33)**

BTX 8021B		mg/kg		Analyzed By: BF				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 135 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	496	16.0	06/11/2019	ND	400	100	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54		
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64		
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND						

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 96.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 12 @ 3' (H901988-34)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64	
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 13 @ 4' (H901988-35)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64	
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND					

Surrogate: 1-Chlorooctane 90.4 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 19 @ 1' (H901988-36)**

BTEx 8021B		mg/kg		Analyzed By: BF				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 145 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	16.0	16.0	06/11/2019	ND	400	100	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54		
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64		
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND						

Surrogate: 1-Chlorooctane 85.0 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 19 @ 2' (H901988-37)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46	
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96	
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73	
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11	
Total BTEX	<0.300	0.300	06/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64	
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

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LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 20 @ 2' (H901988-38)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEX	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64	
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND					

Surrogate: 1-Chlorooctane 97.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Etech Environmental & Safety Solutions  
LANCE CRENSHAW  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/13/2019	Sampling Type:	Soil
Project Name:	BLUEBERRY TO CHEDDAR	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

**Sample ID: SP 20 @ 3' (H901988-39)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2019	ND	1.93	96.5	2.00	2.46		
Toluene*	<0.050	0.050	06/12/2019	ND	1.63	81.4	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/12/2019	ND	2.11	106	2.00	4.73		
Total Xylenes*	<0.150	0.150	06/12/2019	ND	5.53	92.2	6.00	8.11		
Total BTEx	<0.300	0.300	06/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2019	ND	250	125	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/10/2019	ND	222	111	200	6.64	
EXT DRO >C28-C36	<10.0	10.0	06/10/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report



---

Celey D. Keene, Lab Director/Quality Manager



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476







101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

# BILL TO

## ANALYSIS REQUEST

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476





# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Kingstey</b>		P.O. #: <b>etcct</b>		ANALYSIS REQUEST																																			
Project Manager: <b>large denshaw</b>		Company: <b>etcct</b>																																					
Address:		City: <b>etcct</b>																																					
City: <b>etcct</b>		State: <b>etcct</b>																																					
Phone #: <b>etcct</b>		Fax #: <b>etcct</b>																																					
Project #: <b>etcct</b>		Project Owner: <b>etcct</b>																																					
Project Name: <b>Blueberry to Cheddar</b>		City: <b>etcct</b>																																					
Project Location: <b>etcct</b>		State: <b>etcct</b>																																					
Sample Name: <b>catalina villa</b>		Phone #: <b>etcct</b>																																					
FOR LAB USE ONLY		Fax #: <b>etcct</b>																																					
Lab I.D. <b>H901988</b>	Sample I.D. <b>31 SP 11031</b> <b>32 SP 11041</b> <b>33 SP 12021</b> <b>34 SP 12031</b> <b>35 SP 13041</b>	(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476





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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:		P.O. #:		BILL TO		ANALYSIS REQUEST																																			
Project Manager:		Company:																																							
Address:		Attn:																																							
City:		State:		Zip:																																					
Phone #:		Fax #:		Address:																																					
Project #:		Project Owner:		City:																																					
Project Name:		State:		Zip:																																					
Project Location:		Phone #:																																							
Sampler Name:		Fax #:																																							
FOR LAB USE ONLY																																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS	
H901988		SP09011										X		X		X		X		X		X		X		X		X		X		X		X		X					
36		SP09021										X		X		X		X		X		X		X		X		X		X		X		X		X					
37		SP09021										X		X		X		X		X		X		X		X		X		X		X		X		X					
38		SP20021										X		X		X		X		X		X		X		X		X		X		X		X		X					
39		SP20023										X		X		X		X		X		X		X		X		X		X		X		X		X					

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Relinquished By:	Date:	Received By:	Date:
Catalina Cuellar	6-19-19	Juanita Elidaga	6-19-19
Relinquished By:	Date:	Received By:	Date:
	15:20		
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	(Initials)	
4.50 #97	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Phone Result: ☐ Yes ☒ No Add'l Phone #:

Fax Result: ☐ Yes ☒ No Add'l Fax #:

REMARKS:

email results

lance@efekenu.com

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



# **Appendix D**

## **Laboratory Certificates of Analyses**

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

September 23, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 09/20/19 15:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/20/2019  
Reported: 09/23/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: HA - 01 EAST WALL 0-3.5' (H903256-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/23/2019	ND	416	104	400	0.00	

**Sample ID: HA - 01 WEST WALL 0-3.5' (H903256-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/23/2019	ND	416	104	400	0.00	

**Sample ID: HA - 01 BASE 3.5' (H903256-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/23/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



CARDINAL  
laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

September 11, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 09/10/19 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received:	09/10/2019	Sampling Date:	09/10/2019
Reported:	09/11/2019	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	KINGSLEY ( KCI )	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: RS - 01 S. BASE 9' (H903127-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/11/2019	ND	416	104	400	0.00	

**Sample ID: RS - 01 W.B. 6.5' (H903127-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/11/2019	ND	416	104	400	0.00	

**Sample ID: RS - 01 E.B. 6.5' (H903127-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/11/2019	ND	416	104	400	0.00	

**Sample ID: RS - 01 S. W. 7' (H903127-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/11/2019	ND	416	104	400	0.00	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/10/2019  
Reported: 09/11/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 09/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: EC 20N 5' (H903127-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/11/2019	ND	416	104	400	0.00		

**Sample ID: EC 24S 6' (H903127-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/11/2019	ND	416	104	400	0.00	

**Sample ID: EC 28NW 6' (H903127-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/11/2019	ND	416	104	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

(575) 393-2326 FAX (575) 393-2416

BILL TO

ANALYSIS REQUEST

Company Name: R.T. Hicks

Project Manager: Andrew Parker

Address: ON FILE

City: State: Zip:

Phone #: Fax #:

Project #:

Project Name: Advance Energy

Project Location: Kingsley (K&I)

Sample Name: SACOB SALTZ

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

P.O. #:

Company: R.T. Hicks

Attn: Send to ABA office

Address:

City:

State: Zip:

Phone #:

Fax #:

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

MATRIX

PRESERV.

SAMPLING

Chloride

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Relinquished By:

Date: 9/10/19

Time: 10:40

Received By:

Date:

Time:

Delivered By: (Circle One) + corrected

Sample Condition  
Cool Intact  
☒ Yes ☐ No

CHECKED BY:  
(initials)  
RSTHII

REMARKS:  
RF NNA



September 06, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 09/06/19 8:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/06/2019  
Reported: 09/06/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 09/05/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 20 TRENCH WALL 2-4' (H903078-01)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>128</b>	16.0	09/06/2019	ND	400	100	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]

September 05, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 09/04/19 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	09/04/2019	Sampling Date:	09/04/2019
Reported:	09/05/2019	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	** (See Notes)
Project Number:	KINGSLEY ( KCI )	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EC - 12 BASE 3.5' (H903062-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/05/2019	ND	432	108	400	3.77	

**Sample ID: EC - 13 BASE 3.5' (H903062-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/05/2019	ND	432	108	400	3.77	

**Sample ID: EC - 14 BASE 3.5' (H903062-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/05/2019	ND	432	108	400	3.77	

**Sample ID: EC - 20 BASE 2' (H903062-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/05/2019	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/04/2019  
Reported: 09/05/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 09/04/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 20 E. WALL 0-2' (H903062-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/05/2019	ND	432	108	400	3.77	

**Sample ID: EC - 20 TRENCH BASE 4.5' (H903062-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/05/2019	ND	432	108	400	3.77	

**Sample ID: EC - 21 W. WALL 1.5-2.5' (H903062-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/05/2019	ND	432	108	400	3.77	

**Sample ID: EC - 21 N. WALL 2.5-4' (H903062-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/05/2019	ND	432	108	400	3.77		

**Sample ID: EC - 21 E. WALL 1-2.5' (H903062-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/05/2019	ND	432	108	400	3.77		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/04/2019  
Reported: 09/05/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 09/04/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 21 TRENCH 4.5' (H903062-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/05/2019	ND	432	108	400	3.77		

**Sample ID: EC - 21 BASE 2.5' (H903062-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: N-N TRENCH W. WALL 2-4' (H903062-12)**

Chloride, SM4500Cl-B		mg / kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: N-N TRENCH E. WALL 1.5-4' (H903062-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: N-N TRENCH N. WALL 2.5-4' (H903062-14)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/05/2019	ND	416	104	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/04/2019  
Reported: 09/05/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 09/04/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: N-N TRENCH BASE 5' (H903062-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/05/2019	ND	416	104	400	0.00		

**Sample ID: N-N TRENCH S. WALL 1.5-4' (H903062-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/05/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> RT Hicks Consultancy <b>Project Manager:</b> Andrew Parker <b>Address:</b> on-fire <b>City:</b> State: Zip: <b>Phone #:</b> Fax #: <b>Project #:</b> Project Owner: <b>Project Name:</b> Advance Energy <b>Project Location:</b> Kingsley (KSL) <b>Sample Name:</b> Andrew Parker <b>FOR LAB USE ONLY</b>				<b>P.O. #:</b> <b>Company:</b> RT Hicks <b>Attn:</b> Maud to <b>Address:</b> A180 <b>City:</b> State: Zip: <b>Phone #:</b> Fax #:			
<b>Lab I.D.</b> Sample I.D. H903062 1 EC-12 Base 3.5 FT 2 EC-13 Base 3.5 FT 3 EC-14 Base 3.5 FT 4 EC-20 Base 2 FT 5 EC-20 E. WALL 0-2 FT 6 EC-20 Trench Base 4.5 FT 7 EC-21 W. WALL 1.5-2.5 FT 8 EC-21 N. WALL 2.5-4 FT 9 EC-21 E. WALL 1-2.5 FT 10 EC-21 Trench 4.5 FT				(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :		MATRIX PRESERV. SAMPLING	
				DATE TIME		Chloride	
<b>Delivered By:</b> (Circle One) 22.22 22.22 Sample Condition Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <b>Checked By:</b> (Initials) 22.22 1/2				<b>REMARKS:</b> PAVE 1/2 RFLN			



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

RFM

September 04, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 09/03/19 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/03/2019  
Reported: 09/04/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/30/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 08 BASE 2' (H903036-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/04/2019	ND	432	108	400	3.77	

**Sample ID: EC - 09 BASE 4' (H903036-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/04/2019	ND	432	108	400	3.77	

**Sample ID: EC - 10 BASE 4' (H903036-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/04/2019	ND	432	108	400	3.77	

**Sample ID: EC - 11 BASE 3' (H903036-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/04/2019	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 09/03/2019  
Reported: 09/04/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/30/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 18 BASE 2.5' (H903036-05)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/04/2019	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>RT Hicks</b>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>			
Project Manager: <b>Andrew Parker</b>				P.O. #:							
Address: <b>on file</b>				Company: <b>RT Hicks</b>							
City: _____				Attn: <b>Mail to ASG</b>							
Phone #: <b>970-570-9535</b>				Address:							
Fax #: _____				City:							
Project #: _____				State:							
Project Owner: _____				Zip:							
Project Name: <b>Adventure Energy</b>				Phone #:							
Project Location: <b>Kingsley (KCI)</b>				Fax #:							
Sample Name: <b>Andrew Parker</b>											

FOR LAB USE ONLY		LAB I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME			
<b>H903036</b>	EC-08 Base 2 FT		1										8:30-19	15:06	X	Chloride	
	EC-09 Base 4 FT		1											15:10			
	EC-10 Base 4 FT		1											15:20			
	EC-11 Base 3 FT		1											15:30			
	EC-18 Base 2.5 FT		1											15:40			

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Relinquished By: <b>Cashin</b>		Date: <b>5-3-19</b>		Received By: <b>Andrew Parker</b>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
Relinquished By: _____		Date: _____		Received By: _____		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	

Delivered By: (Circle One) <b>3.8c</b>	Sample Condition	CHECKED BY: (Initials)
UPS - Bus - Other: <b>Powerful 14.2c</b>	<input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>40</b>

REN



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

August 30, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 08/30/19 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/30/2019  
 Reported: 08/30/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/29/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EC - 12 S. WALL 0-4' (H903017-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/30/2019	ND	400	100	400	0.00	

**Sample ID: EC - 12 BASE 5' (H903017-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/30/2019	ND	400	100	400	0.00	

**Sample ID: EC - 13 S. WALL 0-4' (H903017-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/30/2019	ND	400	100	400	0.00	

**Sample ID: EC - 13 BASE 5' (H903017-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/30/2019	ND	400	100	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]

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Reinquinished By:	Date:	8/30/2015	Received By:	
	Time:	9:15		
	Date:			
Reinquinished By:	Time:		Received By:	
Delivered By: (Circle One)	3.0c	#97	Sample Condition Cool    Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) VP
Sampler - UPS - Bus - Other:	Completed 3.4c			

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:  RPN			



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

August 29, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 08/29/19 9:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/29/2019  
 Reported: 08/29/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/28/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: RS - 01 TRENCH BASE 9' (H902992-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: N-S TRENCH BASE 4' (H902992-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: N-S TRENCH N. WALL 2- 4' (H902992-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: N-S TRENCH S. WALL 2- 4' (H902992-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/29/2019  
 Reported: 08/29/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/28/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: N-S TRENCH W. WALL 2- 4' (H902992-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 16 BASE 2' (H902992-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 16 E. WALL 0-2' (H902992-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 17 BASE 2' (H902992-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 17 E. WALL 0-2' (H902992-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	08/29/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/29/2019  
 Reported: 08/29/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/28/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: EC - 18 BASE 2' (H902992-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 18 E. WALL 0-2' (H902992-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 19 BASE 2.5' (H902992-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 19 E WALL 0-2.5' (H902992-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 20 BASE 1' (H902992-14)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	08/29/2019	ND	416	104	400	3.92		

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/29/2019  
 Reported: 08/29/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/28/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: EC - 20 E. WALL 0.5' (H902992-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 21 BASE 1' (H902992-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 21 E. WALL 1' (H902992-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	08/29/2019	ND	432	108	400	7.69		

**Sample ID: EC - 21 N. WALL 1' (H902992-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 22 BASE 2' (H902992-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	432	108	400	7.69	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/29/2019  
Reported: 08/29/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/28/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 22 E. WALL 0-2' (H902992-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 23 BASE 3.5' (H902992-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 24 BASE 4.5' (H902992-22)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 25 BASE 4.5' (H902992-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 26 BASE 4.5' (H902992-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	432	108	400	7.69	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/29/2019  
Reported: 08/29/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/28/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 27 BASE 4.5' (H902992-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 28 BASE 4' (H902992-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 29 BASE 4' (H902992-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/29/2019	ND	432	108	400	7.69		

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: R.T. Hicks  
Project Manager: Andrew Parker  
Address: ON File  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_  
Project Name: Advance Energy  
Project Location: Kingsley (KCI)  
Sample Name: 5A10B 5A10N2

P.O. #: \_\_\_\_\_ Company: R.T. Hicks  
Attn: \_\_\_\_\_ Address: Send to PBA  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
1	RS-01 Trench Base 9FT	X	1							8/28	10:00am	Chloride
2	N-S Trench Base 4FT			X							10:10am	
3	N-S Trench N.Wall 2-4FT										10:20am	
4	N-S Trench S.Wall 2-4FT										10:30am	
5	N-S Trench W.Wall 2-4FT										10:40am	
6	EC-16 Base 2FT										10:50am	
7	EC-16 E.Wall 0-2FT										11am	
8	EC-17 Base 2FT										11:10am	
9	EC-17 E.Wall 0-2FT										11:30am	
10	EC-18 Base 2FT										11:30am	

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Relinquished By: \_\_\_\_\_ Date: 8-29-19  
Time: 0905  
Received By: Juanita S. Adams  
Time: \_\_\_\_\_

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #: \_\_\_\_\_  
Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #: \_\_\_\_\_

REMARKS:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition: ☐ Cool ☐ Intact ☐ Yes ☐ No ☐ Yes ☐ No  
CHECKED BY: (Initials) RFN

RFN Page #1





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>R.T. Hicks</u>		P.O. #:		BILL TO											
Project Manager: <u>Andrew Parker</u>		Company: <u>R.T. Hicks</u>		ANALYSIS REQUEST											
Address: <u>ON file</u>		Attn:													
City:		Address: <u>Sand to AGA</u>													
Phone #:		City:													
Project #:		State:													
Project Name: <u>Advance Energy</u>		Zip:													
Project Location: <u>Kingsly (KCI)</u>		Phone #:													
Sampler Name: <u>Jacob Sainz</u>		Fax #:													

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
<u>HP02992</u>	<u>EC-18 E. Wall 0-2 FT</u>	<u>C</u>	<u>1</u>		<u>X</u>						<u>8/28</u>	<u>11:40am</u>	<u>Chloride</u>
	<u>EC-19 Base 2.5 FT</u>	<u>C</u>	<u>1</u>									<u>11:59am</u>	
	<u>EC-19 E. Wall 0-2.5 FT</u>											<u>12:10pm</u>	
	<u>EC-20 Base 1 FT</u>											<u>12:30pm</u>	
	<u>EC-20 E. Wall 0.5 FT</u>											<u>12:30pm</u>	
	<u>EC-21 Base 1 FT</u>											<u>12:40pm</u>	
	<u>EC-21 E. Wall 1 FT</u>											<u>12:50pm</u>	
	<u>EC-21 N. Wall 1 FT</u>											<u>1:00pm</u>	
	<u>EC-22 Base 2 FT</u>											<u>1:10pm</u>	
	<u>EC-22 E. Wall 0-2 FT</u>												

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Relinquished By: <u>[Signature]</u>	Date: <u>8/29</u>	Received By: <u>[Signature]</u>	Date: <u>8/29</u>
Reinforced By: <u>[Signature]</u>	Date: <u>9:05</u>	Received By: <u>[Signature]</u>	Date: <u>9:05</u>
Time: <u>9:05</u>	Time: <u>9:05</u>	Time: <u>9:05</u>	Time: <u>9:05</u>

Delivered By: (Circle One) <u>10.22</u>	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: <u>Corrected 10.62</u>	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	<u>RFN</u>
	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>Page #2</u>

REMARKS:



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>R.T. Hicks</u>		P.O. #:		BILL TO												ANALYSIS REQUEST																									
Project Manager: <u>Andrew Parker</u>		Company: <u>R.T. Hicks</u>																																							
Address: <u>ON File</u>		Attn:																																							
City:		Address: <u>Sent to ALB</u>																																							
Phone #:		City:																																							
Project #:		State:																																							
Project Name: <u>Advance Energy</u>		Zip:																																							
Project Location: <u>Kinsley (KCI)</u>		Phone #:																																							
Sample Name: <u>SALON SAEN2</u>		Fax #:																																							
FOR LAB USE ONLY																																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME													
11902992		EC-23 Base 3.5 FT		✓		1		X																		4/18		1:30pm		Chloride											
21		EC-24 Base 4.5 FT		✓				X																		4/18		1:30pm													
22		EC-25 Base 4.5 FT		✓				X																		4/18		1:40pm													
23		EC-26 Base 4.5 FT		✓				X																		4/18		1:50pm													
24		EC-27 Base 4.5 FT		✓				X																		4/18		2:10pm													
25		EC-28 Base 4.5 FT		✓				X																		4/18		2:20pm													
26		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
27		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
28		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
29		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
30		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
31		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
32		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
33		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
34		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
35		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
36		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
37		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
38		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
39		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
40		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
41		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
42		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
43		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
44		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
45		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
46		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
47		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
48		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
49		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
50		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
51		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
52		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
53		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
54		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
55		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
56		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
57		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
58		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
59		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
60		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
61		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
62		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
63		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
64		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
65		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
66		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
67		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
68		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
69		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
70		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
71		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
72		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
73		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
74		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
75		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
76		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
77		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
78		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
79		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
80		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
81		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
82		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
83		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
84		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
85		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
86		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
87		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													
88		EC-29 Base 4.5 FT		✓				X																		4/18		2:20pm													



August 29, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 08/29/19 9:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

Received:	08/29/2019	Sampling Date:	08/28/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	** (See Notes)
Project Number:	KINGSLEY ( KCI )	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: RS - 01 TRENCH BASE 9' (H902992-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: N-S TRENCH BASE 4' (H902992-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: N-S TRENCH N. WALL 2- 4' (H902992-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: N-S TRENCH S. WALL 2- 4' (H902992-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/29/2019  
 Reported: 08/29/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/28/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: N-S TRENCH W. WALL 2- 4' (H902992-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 16 BASE 2' (H902992-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 16 E. WALL 0-2' (H902992-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 17 BASE 2' (H902992-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 17 E. WALL 0-2' (H902992-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	08/29/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/29/2019  
 Reported: 08/29/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY ( KCI )  
 Project Location: NOT GIVEN

 Sampling Date: 08/28/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: EC - 18 BASE 2' (H902992-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 18 E. WALL 0-2' (H902992-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 19 BASE 2.5' (H902992-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 19 E WALL 0-2.5' (H902992-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 20 BASE 1' (H902992-14)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	08/29/2019	ND	416	104	400	3.92		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/29/2019  
Reported: 08/29/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/28/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 20 E. WALL 0.5' (H902992-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 21 BASE 1' (H902992-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/29/2019	ND	416	104	400	3.92	

**Sample ID: EC - 21 E. WALL 1' (H902992-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 21 N. WALL 1' (H902992-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 22 BASE 2' (H902992-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	432	108	400	7.69	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/29/2019  
Reported: 08/29/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/28/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 22 E. WALL 0-2' (H902992-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2019	ND	432	108	400	7.69		

**Sample ID: EC - 23 BASE 3.5' (H902992-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 24 BASE 4.5' (H902992-22)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 25 BASE 4.5' (H902992-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 26 BASE 4.5' (H902992-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2019	ND	432	108	400	7.69	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/29/2019  
Reported: 08/29/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY ( KCI )  
Project Location: NOT GIVEN

Sampling Date: 08/28/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 27 BASE 4.5' (H902992-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 28 BASE 4' (H902992-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2019	ND	432	108	400	7.69	

**Sample ID: EC - 29 BASE 4' (H902992-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2019	ND	432	108	400	7.69	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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---

Celey D. Keene, Lab Director/Quality Manager





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: R.T. Hicks  
Project Manager: Andrew Parker  
Address: ON File  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_  
Project Name: Advance Energy  
Project Location: Kingsley (KCI)  
Sample Name: 3A10B 5A12N2

P.O. #: \_\_\_\_\_ Company: R.T. Hicks  
Attn: \_\_\_\_\_ Address: Send to PBA  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	DATE
1	RS-01 Trench Base 9FT	X	1							8/28
2	N-5 Trench Base 4FT			X						10:00am
3	N-5 Trench N.Wall 2-4FT									10:30am
4	N-5 Trench S.Wall 2-4FT									10:40am
5	N-5 Trench W.Wall 2-4FT									10:50am
6	EC-16 Base 2FT									11am
7	EC-16 E.Wall 0-2FT									11:10am
8	EC-17 Base 2FT									11:30am
9	EC-17 E.Wall 0-2FT									11:30am
10	EC-18 Base 2FT									11:30am

Chloride

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: \_\_\_\_\_ Date: 8-29-19  
Time: 0905

Received By: \_\_\_\_\_  
Time: \_\_\_\_\_

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #: \_\_\_\_\_  
Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #: \_\_\_\_\_

REMARKS:

RFN Page #1

Delivered By: (Circle One) 10.2i #47  
Cool ☐ Intact ☒ Yes ☐ No ☐ Yes ☐ No ☐ No  
Sample Condition (Initials) YB

Sampler - UPS - Bus - Other: Connected 10.6i



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

RFN Page #2

101 East Marland, Hobbs, NM 88240  
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RFN Page #3





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

August 28, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 08/28/19 8:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/28/2019  
Reported: 08/28/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 08/27/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: N-N TRENCH N. WALL 0-3' (H902960-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	08/28/2019	ND	432	108	400	7.69	

**Sample ID: N-N TRENCH E. WALL 0-3' (H902960-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/28/2019	ND	432	108	400	7.69	

**Sample ID: N-N TRENCH S. WALL 0-3' (H902960-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/28/2019	ND	432	108	400	7.69	

**Sample ID: N-N TRENCH W. WALL 0-3' (H902960-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/28/2019	ND	432	108	400	7.69	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/28/2019  
Reported: 08/28/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 08/27/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: N-S TRENCH E. WALL 0-3' (H902960-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/28/2019	ND	432	108	400	7.69		

**Sample ID: N-N TRENCH BASE 3' (H902960-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	592	16.0	08/28/2019	ND	400	100	400	0.00	QM-07	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



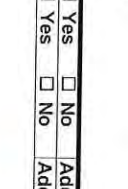
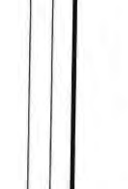
101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>R.T. Hicks</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
Project Manager: <b>Andrew Parker</b>		P.O. #:			
Address: <b>ON FILE</b>		Company: <b>RT Hicks</b>			
City:		Attn: <b>Mel to ABC</b>			
State:		Address:			
Phone #:		City:			
Fax #:		State:			
Project #:		Zip:			
Project Name: <b>Advantage Energy</b>		Phone #:			
Project Location: <b>KINGSLEY</b>		Fax #:			
Sampler Name: <b>SALES SALENZ</b>					

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<b>H902960</b>														
1	N-W Trench N.W./ALL 0-3 FT	C	1			X						8/27	12:00 pm	Chloride
2	N-W Trench E.W./ALL 0-3 FT												12:10 pm	
3	N-W Trench S.W./ALL 0-3 FT												12:20 pm	
4	N-W Trench N.W./ALL 0-3 FT												12:30 pm	
5	N-W Trench E.W./ALL 0-3 FT												12:40 pm	
6	N-W Trench Base 3 FT	C	1			X						8/27	12:50 pm	

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Relinquished By: 	Received By: 
Date: <b>8/28</b>	Date: <b>8/28</b>
Time: <b>8:35</b>	Time: <b>8:35</b>
Refiniquished By: 	Received By: 
Date:	Date:
Time:	Time:
Delivered By: (Circle One) <b>0.62</b>	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sampler - UPS - Bus - Other: <b>Collected 10:00</b>	CHECKED BY: (Initials) <b>VS</b>
REMARKS: <b>Rush !!</b>	
Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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August 28, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 08/27/19 9:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 08/27/2019  
 Reported: 08/28/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY  
 Project Location: NOT GIVEN

 Sampling Date: 08/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EC 14 S. WALL 1.3-4' (H902938-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/28/2019	ND	432	108	400	0.00	

**Sample ID: EC 15 S. WALL 0-1.3' (H902938-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/28/2019	ND	432	108	400	0.00	

**Sample ID: EC 15 E. WALL 0-1.3' (H902938-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/28/2019	ND	432	108	400	0.00	

**Sample ID: EC 15 W. WALL 0-1.3' (H902938-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/28/2019	ND	432	108	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 08/27/2019  
Reported: 08/28/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 08/26/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: EC 15 BASE 1.3' (H902938-05)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>80.0</b>	16.0	08/28/2019	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
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[illegible]

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Relinquished By:	Date: 8-27-19	Received By:	Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Time: 0925	Received By:	Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:			
Relinquished By:	Time:	Received By:	RFN			
Delivered By: (Circle One)	0.02	#97				
Sample Condition	Cool	Intact				
<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes				
<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No				
CHECKED BY:	(Initials)					
Delivered By: (Circle One)	0.02	#97				
Sample Condition	Cool	Intact				
<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes				
<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No				
CHECKED BY:	(Initials)					



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

July 10, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 07/09/19 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 07/09/2019  
Reported: 07/10/2019  
Project Name: ADVANCE ENERGY  
Project Number: KCI  
Project Location: NOT GIVEN

Sampling Date: 07/09/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: ML - 01 0' (H902344-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/10/2019	ND	432	108	400	3.77	

**Sample ID: ML - 01 2' (H902344-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/10/2019	ND	432	108	400	3.77	

**Sample ID: ML - 02 0' (H902344-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/10/2019	ND	432	108	400	3.77	

**Sample ID: ML - 02 2' (H902344-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/10/2019	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 07/09/2019  
 Reported: 07/10/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 07/09/2019  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: ML - 03 0' (H902344-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/10/2019	ND	432	108	400	3.77	

**Sample ID: ML - 03 2' (H902344-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/10/2019	ND	432	108	400	3.77	

**Sample ID: ML - 04 0' (H902344-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/10/2019	ND	432	108	400	3.77		

**Sample ID: ML - 04 2' (H902344-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/10/2019	ND	432	108	400	3.77	

**Sample ID: ML - 05 0' (H902344-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/10/2019	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 07/09/2019  
Reported: 07/10/2019  
Project Name: ADVANCE ENERGY  
Project Number: KCI  
Project Location: NOT GIVEN

Sampling Date: 07/09/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: ML - 05 2' (H902344-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/10/2019	ND	432	108	400	3.77		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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---

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name:						R.T. Hicks Consultants							
Project Manager:						P.O.#:							
Address:						Company: RT Hicks							
City:						Attn: Joel To ABQ							
Phone #:						State: Zip:							
Fax #:						Address:							
Project #:						City:							
Project Owner:						State: Zip:							
Project Location:						Phone #:							
Sample Name:						Fax #:							
FOR LAB USE ONLY													
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER :	PRESERV.	SAMPLING	DATE	TIME	Chloride		
H902-344	ML-01	OFT.	b	1	K'	X	7/9	10:30	*				
	ML-01	2 FT.						10:35					
	ML-02	0 FT.						10:40					
	ML-02	2 FT.						10:45					
	ML-03	0 FT.						10:50					
	ML-03	2 FT.						10:55					
	ML-04	0 FT.						11:00					
	ML-04	2 FT.						11:05					
	ML-05	0 FT.						11:10					
	ML-05	2 FT.						11:15					
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Relinquished By:								Date: 7/9	Received By:				
Time: 16:30								Signature: [Handwritten]					
Date:								Received By:					
Time:													
Delivered By: (Circle One)													
Sampler - UPS - Bus - Other: 7.0°C #97													
Cool Intact Yes No													
Checked BY: (initials) T.B.													
REMARKS:													
RTN													

June 28, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/28/19 9:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/28/2019  
Reported: 06/28/2019  
Project Name: ADVANCE ENERGY  
Project Number: KCI  
Project Location: NOT GIVEN

Sampling Date: 06/27/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: RS - 01 TRENCH BASE 9' (H902229-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	06/28/2019	ND	400	100	400	3.92	

**Sample ID: EC - 12 S. WALL 0-4' (H902229-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/28/2019	ND	400	100	400	3.92	

**Sample ID: EC - 13 S. WALL 0-4' (H902229-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/28/2019	ND	400	100	400	3.92	

**Sample ID: EC - 14 S. WALL 0-4' (H902229-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	06/28/2019	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RT Hicks Consultants		P.O. #:		BILL TO												ANALYSIS REQUEST													
Project Manager: Andrew Parker				Company: RT Hicks																									
Address: on-File				Attn: Mail to																									
City:		State:		Zip:																									
Phone #:		Fax #:		Address: ABC office																									
Project #:		Project Owner:		City:																									
Project Name: Advance Energy				State:																									
Project Location: KCI				Phone #:																									
Sampler Name: Andrew Parker		Fax #:																											
FOR LAB USE ONLY																													
Lab I.D.		Sample I.D.																											
H902229				(G)RAB OR (C)OMP.																									
				# CONTAINERS																									
				GROUNDWATER																									
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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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June 27, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/27/19 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/27/2019  
Reported: 06/27/2019  
Project Name: ADVANCE ENERGY  
Project Number: KCI  
Project Location: NOT GIVEN

Sampling Date: 06/26/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: HA - 01 0-3' (H902201-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: HA - 01 3-4' (H902201-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: HA - 02 0-2' (H902201-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: HA - 02 2-4' (H902201-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/27/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/27/2019  
 Reported: 06/27/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 06/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: RS - 07 N. WALL 0-4' (H902201-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: RS - 08 N. WALL 0-4' (H902201-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: EC - 06 N. WALL 0-4' (H902201-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: EC - 06 E. WALL 0-4' (H902201-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: EC - 12 S. WALL 0-3' (H902201-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	06/27/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/27/2019  
 Reported: 06/27/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 06/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EC - 11 S. WALL 0-3' (H902201-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: EC - 13 S. WALL 0-3' (H902201-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/27/2019	ND	416	104	400	0.00	

**Sample ID: EC - 14 S. WALL 0-3' (H902201-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	880	16.0	06/27/2019	ND	416	104	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>RT Hicks Consultants</u>		P.O. #:		<b>BILL TO</b>											
Project Manager: <u>Andrew Parker</u>		Company: <u>RT Hicks</u>		<b>ANALYSIS REQUEST</b>											
Address: <u>on-File</u>		Attn:													
City:		Address: <u>Mail to ABC</u>													
Phone #:		City:													
Fax #:		State:													
Project #: <u>Advance Energy</u>		Zip:													
Project Location: <u>KC1</u>		Phone #:													
Sampler Name: <u>Andrew Parker</u>		Fax #:													
FOR LAB USE ONLY															
Lab I.D.		Sample I.D.													
<u>H902201</u>															
		(G)RAB OR (C)OMP.													
		# CONTAINERS													
		GROUNDWATER													
		WASTEWATER													
		SOIL													
		OIL													
		SLUDGE													
		OTHER:													
		ACID/BASE:													
		ICE / COOL													
		OTHER:													
		DATE													
		TIME													
<u>1 HA-01 0-3 FT</u>		<u>14:00</u>		<u>Chloride</u>											
<u>2 HA-01 3-4 FT</u>		<u>14:05</u>													
<u>3 HA-02 0-2 FT</u>		<u>14:10</u>													
<u>4 HA-02 2-4 FT</u>		<u>14:15</u>													
<u>5 RS-07 N.W. 4th 0-4 FT</u>		<u>14:20</u>													
<u>6 RS-08 N.W. 4th 0-4 FT</u>		<u>14:25</u>													
<u>7 EC-06 N.W. 4th 0-4 FT</u>		<u>14:30</u>													
<u>8 EC-06 E.W. 4th 0-4 FT</u>		<u>14:35</u>													
<u>9 EC-12 S.W. 4th 0-3 FT</u>		<u>14:40</u>													
<u>10 EC-11 S.W. 4th 0-3 FT</u>		<u>14:45</u>													

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Relinquished By: <u>[Signature]</u>		Date: <u>6.27.19</u>		Received By: <u>[Signature]</u>		Date: <u>08.15</u>		Time: <u>08:45</u>		Sample Condition		CHECKED BY: <u>[Signature]</u>		REMARKS:	
Relinquished By:		Time:		Received By:		Time:		Time:		Cool <input type="checkbox"/> Intact <input type="checkbox"/>		(Initials)			
Delivered By: (Circle One)		Time:		Time:		Time:		Time:		Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>			
Sampler - UPS - Bus - Other: <u>-3.3c #47</u>		Time:		Time:		Time:		Time:		Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>			

RFN



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Page 2/2



June 26, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/26/19 8:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/26/2019  
 Reported: 06/26/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 06/25/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: G 1 E WALL 0-2' (H902173-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/26/2019	ND	416	104	400	0.00	

**Sample ID: G 1 BASE 2' (H902173-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/26/2019	ND	416	104	400	0.00	

**Sample ID: G 1 W WALL 0-2' (H902173-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/26/2019	ND	416	104	400	0.00	

**Sample ID: G 2 BASE 2' (H902173-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/26/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]

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Relinquished By:	Date: 6-20-19	Received By:
Reinquinshed By:	Time: 08:30	
	Date:	
	Time:	
Delivered By: (Circle One)		
Sampler - UPS - Bus - Other:		

-S.I.C #77	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) R.F.N.
------------	--	-------------------------------------

Phone Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
REMARKS: PUSH!!		

June 25, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/24/19 9:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONE

Reported:  
25-Jun-19 10:57

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
G 3 BASE 3.5'	H902153-01	Soil	22-Jun-19 10:00	24-Jun-19 09:50
G4 BASE 3'	H902153-02	Soil	22-Jun-19 10:15	24-Jun-19 09:50
G 7 E. WALL 0-3'	H902153-03	Soil	22-Jun-19 10:30	24-Jun-19 09:50
G 8 E. WALL 0-2.5'	H902153-04	Soil	22-Jun-19 11:00	24-Jun-19 09:50
G 14 BASE 4'	H902153-05	Soil	22-Jun-19 11:15	24-Jun-19 09:50
G 14 N. WALL 0-4'	H902153-06	Soil	22-Jun-19 11:30	24-Jun-19 09:50
G 16 BASE 4'	H902153-07	Soil	22-Jun-19 13:00	24-Jun-19 09:50
G 16 N. WALL 0-4'	H902153-08	Soil	22-Jun-19 13:30	24-Jun-19 09:50
EC -09 W. WALL 0-4'	H902153-09	Soil	22-Jun-19 13:45	24-Jun-19 09:50
EC -10 W. WALL 0-4'	H902153-10	Soil	22-Jun-19 15:00	24-Jun-19 09:50

Client revised the sample ID of -08 from E. to N. See COC. This is the revised report and will replace the one sent earlier 06/25/19.

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**G 3 BASE 3.5'**  
**H902153-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**G4 BASE 3'**  
**H902153-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	32.0		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONE

Reported:  
25-Jun-19 10:57

**G 7 E. WALL 0-3'**  
**H902153-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONE

Reported:  
25-Jun-19 10:57

**G 8 E. WALL 0-2.5'****H902153-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**G 14 BASE 4'**  
**H902153-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>16.0</b>		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**G 14 N. WALL 0-4'****H902153-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**G 16 BASE 4'****H902153-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>48.0</b>		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**G 16 N. WALL 0-4'****H902153-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	--------------------	-------	----------	-------	---------	----------	--------	-------

**Cardinal Laboratories****Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONEReported:  
25-Jun-19 10:57**EC -09 W. WALL 0-4'****H902153-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	--------------------	-------	----------	-------	---------	----------	--------	-------

**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>16.0</b>		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONE

Reported:  
25-Jun-19 10:57

**EC -10 W. WALL 0-4'****H902153-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>48.0</b>		16.0	mg/kg	4	9062501	AC	25-Jun-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

R T HICKS CONSULTANTS  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY  
Project Number: KCI  
Project Manager: ANDREW PARKER  
Fax To: NONE

Reported:  
25-Jun-19 10:57

### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9062501 - 1:4 DI Water</b>									
<b>Blank (9062501-BLK1)</b>									
					Prepared & Analyzed: 25-Jun-19				
Chloride	ND	16.0	mg/kg						
<b>LCS (9062501-BS1)</b>									
					Prepared & Analyzed: 25-Jun-19				
Chloride	400	16.0	mg/kg	400	100	80-120			
<b>LCS Dup (9062501-BSD1)</b>									
					Prepared & Analyzed: 25-Jun-19				
Chloride	400	16.0	mg/kg	400	100	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>RT Hicks Consultants</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>										
Project Manager: <b>Andrew Parker</b>		P.O. #:												
Address: <b>on file</b>		Company: <b>RT Hicks</b>												
City:		Attn:												
State:		Address: <b>Mail to ABQ</b>												
Zip:		City:												
Project #:		State:												
Project Owner:		Zip:												
Project Name: <b>Advance Energy</b>		Phone #:												
Project Location: <b>KCI</b>		Fax #:												
Sampler Name: <b>Andrew Parker</b>														
FOR LAB USE ONLY														
Lab I.D.		(G)RAB OR (C)OMP.		MATRIX		PRESERV.		SAMPLING						
Sample I.D.		# CONTAINERS		GROUNDWATER		WASTEWATER		DATE		TIME				
1 <b>1902153</b>		1		X		X		6-22-19		10:00		X Chloride		
2 <b>Base 3.5 FT</b>		1		X		X		10:15						
3 <b>Base 3.5 FT</b>		1		X		X		10:30						
4 <b>E.WALL 0-3 FT</b>		1		X		X		11:00						
5 <b>E.WALL 0-2.5 FT</b>		1		X		X		11:15						
6 <b>BASE 4 FT</b>		1		X		X		11:30						
7 <b>BASE 4 FT</b>		1		X		X		13:00						
8 <b>BASE 4 FT</b>		1		X		X		13:30						
9 <b>W.WALL 0-4 FT</b>		1		X		X		13:45						
10 <b>W.WALL 0-4 FT</b>		1		X		X		15:00						
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Relinquished By: <b>Andrew Parker</b>		Date: <b>6-24-19</b>		Received By: <b>Jamara Stalder</b>		Date: <b>6-24-19</b>		Time: <b>09:50</b>		Time: <b>09:50</b>		Time: <b>09:50</b>		
Relinquished By:		Date:		Received By:		Date:		Time:		Time:		Time:		
Delivered By: (Circle One)		Sample Condition		CHECKED BY: (Initials)		Cool		Intact		Yes		No		
Sampler - UPS - Bus - Other:		Cool		Intact		Yes		No		Yes		No		
1.16		#97		TIC		Push!!								

June 21, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/20/19 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/20/2019  
 Reported: 06/21/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 06/20/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BERM #1 (H902137-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	06/21/2019	ND	416	104	400	0.00		

**Sample ID: BERM #2 (H902137-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 04 N. WALL 0-4' (H902137-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 04 W. WALL 0-4' (H902137-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/21/2019	ND	416	104	400	0.00	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/20/2019  
 Reported: 06/21/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 06/20/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EC - 08 W. WALL 0-2' (H902137-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 05 N. WALL 0-4' (H902137-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 06 N. WALL 0-4' (H902137-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	06/21/2019	ND	416	104	400	0.00		

**Sample ID: RS - 07 N. WALL 0-4' (H902137-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10900	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 08 N. WALL 0-4' (H902137-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2880	16.0	06/21/2019	ND	416	104	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/20/2019  
 Reported: 06/21/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KCI  
 Project Location: NOT GIVEN

 Sampling Date: 06/20/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: RS - 01 0-4' N. WALL (H902137-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2560	16.0	06/21/2019	ND	416	104	400	0.00		

**Sample ID: RS - 01 E. WALL 5-8' (H902137-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4720	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 01 W. WALL 5-8' (H902137-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 01 S. WALL 5-8' (H902137-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	06/21/2019	ND	416	104	400	0.00	

**Sample ID: RS - 01 N. WALL 5-8' (H902137-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/21/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/20/2019  
Reported: 06/21/2019  
Project Name: ADVANCE ENERGY  
Project Number: KCI  
Project Location: NOT GIVEN

Sampling Date: 06/20/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: RS - 01 BASE 8' (H902137-15)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>336</b>	16.0	06/21/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

## BILL TO

## ANALYSIS REQUEST

Company Name: <u>RT Hicks Sea Consultants</u>		P.O. #:	
Project Manager: <u>Andrew Parker</u>		Company: <u>RT Hicks</u>	
Address: <u>44-File</u>		Attn:	
City:		Address: <u>mail to AGA</u>	
Phone #: _____		City: <u>APAC</u>	
Fax #: _____		State: _____	
Project #: _____		Zip: _____	
Project Name: <u>Adventure Energy</u>		Phone #: _____	
Project Location: <u>KCI</u>		Fax #: _____	
Sampler Name: <u>Andrew Parker</u>			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						
14902137	Berm #1	C	1	X								6-20-19	06:00	X	Chloride
	Berm #2												06:10		
	RS-04 N.Wall 0-4 FT												06:20		
	RS-04 W.Wall 0-4 FT												06:30		
	EC-08 W.Wall 0-2 FT												06:35		
	RS-05 N.Wall 0-4 FT												07:40		
	RS-06 N.Wall 0-4 FT												07:45		
	RS-07 N.Wall 0-4 FT												07:50		
	RS-08 N.Wall 0-4 FT												08:00		

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Relinquished By:

Date: 6-20-19

Received By:

Phone Result: ☐ Yes ☐ No Add'l Phone #:Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Relinquished By:

Date: 6-20-19

Received By:

Phone Result: ☐ Yes ☐ No Add'l Phone #:Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Delivered By: (Circle One)

Sample Condition

CHECKED BY:

Sampler - UPS - Bus - Other:

Cool Intact

(Initials)

6-20-19☐ Yes ☐ NoRFN

Page 1/2



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Page 2/2

June 20, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/19/19 12:41.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/19/2019  
 Reported: 06/20/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY  
 Project Location: NOT GIVEN

 Sampling Date: 06/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: G 1 0-1' W. WALL (H902108-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 1 E. WALL 0-1' (H902108-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 1 BASE 1' (H902108-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 2 W. WALL 0-1' (H902108-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/20/2019	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/19/2019  
Reported: 06/20/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: G 2 E. WALL 0-1' (H902108-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 2 BASE 1' (H902108-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 3 W. WALL 0-3' (H902108-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G3 BASE 3' (H902108-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1560	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 4 W. WALL 0-3' (H902108-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/20/2019	ND	400	100	400	3.92	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/19/2019  
Reported: 06/20/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: G 4 BASE 3' (H902108-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 5 S. WALL 0-2' (H902108-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 5 BASE 2' (H902108-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 6 0-2.5' BASE (H902108-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 6 S. WALL 0-2.5' (H902108-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 R T HICKS CONSULTANTS  
 ANDREW PARKER  
 901 RIO GRANDE BLVD SUITE F-142  
 ALBUQUERQUE NM, 87104  
 Fax To: NONE

 Received: 06/19/2019  
 Reported: 06/20/2019  
 Project Name: ADVANCE ENERGY  
 Project Number: KINGSLEY  
 Project Location: NOT GIVEN

 Sampling Date: 06/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: G 7 BASE 2.5' (H902108-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92		

**Sample ID: G 7 W. WALL 0-2.5' (H902108-16)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92		

**Sample ID: G 7 E. WALL 0-2.5' (H902108-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	06/20/2019	ND	400	100	400	3.92	

**Sample ID: G 8 E. WALL 0-2.5' (H902108-18)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	06/20/2019	ND	400	100	400	0.00	QR-03

**Sample ID: G 8 W. WALL 0-2.5' (H902108-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/19/2019  
Reported: 06/20/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: G 8 BASE 2.5' (H902108-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/20/2019	ND	400	100	400	0.00	

**Sample ID: G 9 2' E. WALL (H902108-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	0.00	

**Sample ID: G 9 W. WALL 0-2' (H902108-22)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	0.00	

**Sample ID: G 9 BASE 2' (H902108-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	0.00	

**Sample ID: G 11 S. WALL 0-2' (H902108-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/20/2019	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/19/2019  
Reported: 06/20/2019  
Project Name: ADVANCE ENERGY  
Project Number: KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: G 11 BASE 2' (H902108-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/20/2019	ND	400	100	400	0.00	

**Sample ID: RS - 06 E. WALL 0-1.5' (H902108-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	0.00	

**Sample ID: RS - 06 W. WALL 0-1.5' (H902108-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]

RFN



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

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RFN



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Q T Hicks Consulting</u>		P.O. #:		BILL TO																					
Project Manager: <u>Andrew Parker</u>		Company:		ANALYSIS REQUEST																					
Address:		Attn:																							
City:		Address:																							
Phone #:		City:																							
Project #:		State:																							
Project Name: <u>Atvage Energy</u>		Zip:																							
Project Location: <u>Kingsley</u>		Phone #:																							
Sampler Name:		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING	DATE	TIME													
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE					OTHER :	ACID/BASE:	ICE / COOL	OTHER :									
<u>HQ02108</u>	<u>69 2FT E WALL</u>	<u>C</u>	<u>1</u>								<u>6-18-19</u>	<u>17:00</u>	<u>1</u>	<u>Chloride</u>											
<u>21</u>	<u>69 W. WALL 0-2 FT</u>	<u>C</u>	<u>1</u>									<u>17:05</u>													
<u>23</u>	<u>69 BASE 2 FT</u>	<u>C</u>	<u>1</u>									<u>17:10</u>													
<u>24</u>	<u>611 S. WALL 0-2 FT</u>	<u>C</u>	<u>1</u>									<u>17:15</u>													
<u>25</u>	<u>611 BASE 2 FT</u>	<u>C</u>	<u>1</u>									<u>17:20</u>													
<u>26</u>	<u>RS-06 E. WALL 0-1.5 FT</u>	<u>C</u>	<u>1</u>									<u>17:25</u>													
<u>27</u>	<u>RS-06 W. WALL 0-1.5 FT</u>	<u>C</u>	<u>1</u>									<u>18:30</u>	<u>1</u>												

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Relinquished By: <u>Andrew Parker</u>	Date: <u>6-19-19</u>	Received By: <u>Guicart</u>	Date: <u>6-19-19</u>
Relinquished By: <u>Guicart</u>	Date: <u>6-19-19</u>	Received By: <u>Guicart</u>	Date: <u>6-19-19</u>
Delivered By: (Circle One) <u>Guicart</u>	Time: <u>18:45</u>	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: <u>Guicart</u> (Initials)
Sampler - UPS - Bus - Other: <u>-3.5E #97</u>			

REMARKS: Page 3/3

RFN



June 14, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/13/19 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/13/2019  
Reported: 06/14/2019  
Project Name: ADVANCE ENERGY  
Project Number: ADVANCE - KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/13/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: RS - 01 BASE 5' (H902066-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	06/14/2019	ND	416	104	400	3.92	

**Sample ID: RS - 02 BASE 3' (H902066-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/14/2019	ND	416	104	400	3.92	

**Sample ID: RS - 03 BASE 3' (H902066-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/14/2019	ND	416	104	400	3.92	

**Sample ID: RS - 04 BASE 5' (H902066-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/14/2019	ND	384	96.0	400	0.00	QR-03

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/13/2019  
Reported: 06/14/2019  
Project Name: ADVANCE ENERGY  
Project Number: ADVANCE - KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/13/2019  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: RS - 05 BASE 3.5' (H902066-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/14/2019	ND	384	96.0	400	0.00	

**Sample ID: RS - 06 BASE 1.5' (H902066-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/14/2019	ND	384	96.0	400	0.00	

**Sample ID: RS - 06 S. WALL 0-1.5' (H902066-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/14/2019	ND	384	96.0	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

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June 12, 2019

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: ADVANCE ENERGY

Enclosed are the results of analyses for samples received by the laboratory on 06/11/19 9:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received:	06/11/2019	Sampling Date:	06/10/2019
Reported:	06/12/2019	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	ADVANCE - KINGSLEY	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EC - 06 BASE 4' (H902018-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/12/2019	ND	384	96.0	400	4.08		

**Sample ID: EC - 06 E. WALL 0-3' (H902018-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/12/2019	ND	384	96.0	400	4.08	

**Sample ID: EC - 06 N. WALL 0-4' (H902018-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	06/12/2019	ND	384	96.0	400	4.08	

**Sample ID: EC - 07 N. WALL 0-3.5' (H902018-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/12/2019	ND	384	96.0	400	4.08	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

R T HICKS CONSULTANTS  
ANDREW PARKER  
901 RIO GRANDE BLVD SUITE F-142  
ALBUQUERQUE NM, 87104  
Fax To: NONE

Received: 06/11/2019  
Reported: 06/12/2019  
Project Name: ADVANCE ENERGY  
Project Number: ADVANCE - KINGSLEY  
Project Location: NOT GIVEN

Sampling Date: 06/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: EC - 07 BASE 3.5' (H902018-05)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>80.0</b>	16.0	06/12/2019	ND	384	96.0	400	4.08	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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