

11490 Westheimer Road, Suite 950, Houston, Texas 77077 • Phone 832-672-4700 • Fax 832-672-4609

#### Transmittal Letter

November 11, 2021

RE: Closure report not recorded in OCD Imaging

Incident ID: nCH1903355030 AEP #: 12082018-1530-dc

Location: Release along layflat west of Dagger State Unit 2H

Frac for AO 6 501/502

#### NMOCD:

During an internal audit of closure report status Advance Energy Partners (AEP) identified eight closure reports not recorded in OCD Imaging. AEP is resubmitting these closure reports via the online fee portal.

The remediation and closure report for Incident 12082018-1530-dc was completed on March 07, 2019. Since the completion of the remediation and closure report, AEP conducted a depth-to-water determination program discussed below.

#### **Depth to Water Determination**

In September/October 2021, Advance Energy initiated a depth-to-water boring program to determine whether depth-to-water is present in the upper 100-feet of the surface soil profile. Nine (9) boreholes were advanced between 103 to 106-feet below ground surface, rested for at least 72-hours, and gauged for the presence of groundwater. The nearest boring is located 0.41-feet south-southeast of the release. The boring is identified as MISC-402 (CP-1881). No groundwater was detected within the upper 100-feet. Plate 2 (revised) is an updated depth-to-water map. The driller log is attached.

As presented in the attached closure report, soil sample confirmation samples for the remediated area meets Closure Criteria per Table 1 of 19.15.29 and 19.15.29.13 NMAC for areas off-site. The Closure Criteria is reproduced below.

Page 2 of 2

Incident ID: nCH1903355030 AEP #: 12082018-1530-dc

- ➤ Upper 4-feet
  - Chloride < 600 mg/kg
  - TPH (GRO + DRO + MRO) < 100 mg/kg
  - BTEX < 50 mg/kg
  - Benzene < 10 mg/kg
- ➤ Below 4-feet
  - Chloride < 20,000 mg/kg
  - TPH (GRO + DRO + MRO) < 2,500 mg/kg
  - TPH (GRO + DRO) < 1,000 mg/kg
  - BTEX < 50 mg/kg
  - Benzene < 10 mg/kg

AEP respectfully asks NMOCD for closure of the regulatory file. The C-141 Closure Form is attached.

Sincerely,

Andrew Parker

**Environmental Scientist** 



#### **Andrew Parker**

From: Andrew Parker <andrew@rthicksconsult.com>

**Sent:** Friday, March 8, 2019 3:07 PM

To: bradford.billings@state.nm.us; ocd-district1spills@state.nm.us

**Cc:** 'David Harwell'; Mann, Ryan

**Subject:** 1RP-5313 Closure Report - Advance Energy Partners DSU #2H

**Attachments:** Closure Report 1RP-5313 Compiled.pdf

#### Mr. Billings:

Attached is the characterization, remediation, and closure report for 1RP-5313 DSU #2H produced water release. Please consider this submittal as the final closure report that meets the 90-day submittal period. The release occurred on December 8, 2018.

Please contact me with any questions.

Thank you,

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

Incident ID	nCH1903355030
District RP	1RP-5313
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)	368 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? (Plate 5)	☐ Yes ■ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? (Plates 5)	☐ Yes ■ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? (Plate 6)	☐ Yes ■ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? (Plates 4)	☐ Yes ■ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? (Plates 4)	☐ Yes ■ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? (Plate 4)	Yes No
Are the lateral extents of the release within 300 feet of a wetland? (Plate 7)	☐ Yes ■ No
Are the lateral extents of the release overlying a subsurface mine? (Plate 8)	☐ Yes ■ No
Are the lateral extents of the release overlying an unstable area such as karst geology? (Plate 9)	☐ Yes No
Are the lateral extents of the release within a 100-year floodplain? (Plate 10)	☐ Yes ■ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	Yes No

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

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

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.

Field data

Data table of soil contaminant concentration data

Depth to water determination

Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release

Boring or excavation logs

Photographs including date and GIS information

Topographic/Aerial maps

Laboratory data including chain of custody

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

Received by OCD: 1/6/2022 8:41:31 AM State of New Mexico
Page 4 Oil Conservation Division

	Page 5 of 158
Incident ID	nCH1903355030
District RP	1RP-5313
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: Env. Scientist

Signature:

Date: \_\_11/11/2021\_\_\_\_

email: \_aparker@advanceenergypartners.com

Telephone: \_970-570-9535

OCD Only

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

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

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

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

	Page 6 of 158
Incident ID	nCH1903355030
District RP	1RP-5313
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	be included in the plan.
Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation poir Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29 Proposed schedule for remediation (note if remediation plan tin	.12(C)(4) NMAC
Deferral Requests Only: Each of the following items must be co	nfirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around predeconstruction.	production equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human healt	th, the environment, or groundwater.
rules and regulations all operators are required to report and/or file	acceptance of a C-141 report does not relieve the operator of
Printed Name: _Andrew Parker	Title:Env. Scientist
Signature: Adam of they	Date:11/11/2021
email: _aparker@advanceenergypartners.com	Telephone: <u>970-570-9535</u>
OCD Only	
Received by:	
Approved Approved with Attached Conditions of	f Approval
Signatura	Detail

f New Mexico

Incident ID nCH1903355030

District RP 1RP-5313

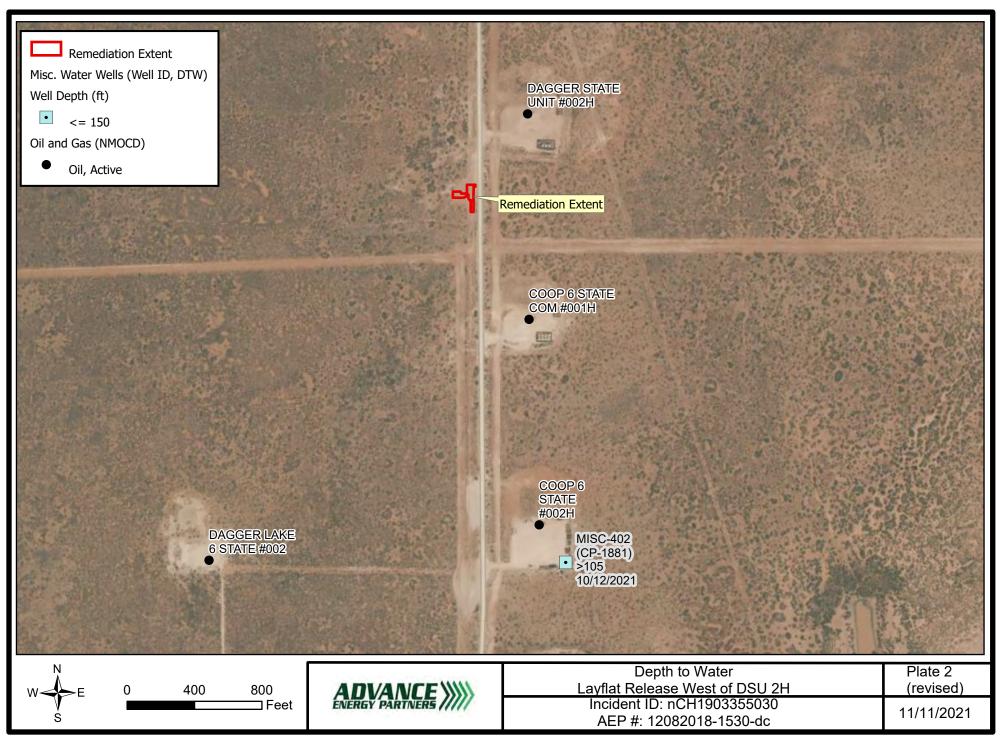
Facility ID Application ID

#### **Closure**

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

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC							
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)							
Laboratory analyse	s of final sampling (Note: appropriate OI	OC District office r	nust be notified 2 days prior to final sampling)				
Description of reme	ediation activities						
and regulations all opera- may endanger public hear should their operations houman health or the envi- compliance with any oth- restore, reclaim, and re-v	tors are required to report and/or file cert lth or the environment. The acceptance ave failed to adequately investigate and repronment. In addition, OCD acceptance cert federal, state, or local laws and/or regu	ain release notifica of a C-141 report be remediate contamin of a C-141 report do alations. The respo conditions that exis	my knowledge and understand that pursuant to OCD rules tions and perform corrective actions for releases which y the OCD does not relieve the operator of liability lation that pose a threat to groundwater, surface water, loes not relieve the operator of responsibility for insible party acknowledges they must substantially ted prior to the release or their final land use in lation and re-vegetation are complete.				
Printed Name: _Andrew	Parker	Title: <u>Env.</u>	Scientist				
Signature: Adam	Cashe,	Date:11/11	/2021				
email: <u>aparker@advanc</u>	eenergypartners.com	Telephone: _9	70-570-9535				
OCD Only							
Received by:		Date:					
and remediate contamina		, surface water, hu	ould their operations have failed to adequately investigate aman health, or the environment nor does not relieve the gulations.				
Closure Approved by:	Nelson Velez	Date:	01/18/2022				
Printed Name:	Nelson Velez	Title:	Environmental Specialist – Adv				





2904 W 2nd St. Roswell, NM 88201 voice: 575.624.2420 fax: 575.624.2421 www.atkinseng.com

10/29/2021

DII-NMOSE 1900 W 2<sup>nd</sup> Street Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record CP-1881 Pod1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, CP-1881 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

Gran Modelin

USE DE NOV 1 2021 PAGE 43



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ij	WELL OWNER MAILING ADDRESS						CTTY		STATE		ZIP	
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	24	44	20	Sand, fine-g	rained, poorly graded with o	lay, Reddish Brow	'n	y √n	
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# CP-1881\_OSE\_Well Record and Log-forsign

Final Audit Report 2021-10-29

Created: 2021-10-29

By: Lucas Middleton (lucas@atkinseng.com)

Status: Signed

Transaction ID: CBJCHBCAABAAQ3vtH-svpKXba6sweCTSv6bY9FHI1cHt

# "CP-1881\_OSE\_Well Record and Log-forsign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-10-29 3:53:42 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-10-29 3:54:01 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com)
  2021-10-29 4:18:46 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-10-29 4:19:17 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-10-29 - 4:19:17 PM GMT

OSE DIT NOU 1 2021 and 144





# PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	ENERAL / WELL OWNERSHIP:		
Well o	Engineer Well Number: CP-1881-POD1  Nowner: Advanced Energy Partners  Stuit 950  11490 Westheimer Rd. Stuit 950	Phone No.:	832.672.4700
Mailir City:	ing address: 11490 Westnemer Rd. Statt 930  Houston State:	Texas	Zip code: 77077
<u>II. W</u>	WELL PLUGGING INFORMATION:		
1)	Name of well drilling company that plugged well: Jackie D.	Atkins ( Atkins Enginee	ering Associates Inc.)
2)	New Mexico Well Driller License No.: 1249	E:	xpiration Date: 04/30/23
3)	Well plugging activities were supervised by the following we Lupe Leyba		
4)	Date well plugging began: 10/14/2021 Date	e well plugging conclud	<sub>led:</sub> 10/14/2021
5)	GPS Well Location: Latitude: 32 deg, Longitude: 103 deg, _		2 sec 2 sec, WGS 84
6)	Depth of well confirmed at initiation of plugging as:105 by the following manner: weighted tape	ft below ground le	vel (bgl),
7)	Static water level measured at initiation of plugging:n/a	ft bgl	
8)	Date well plugging plan of operations was approved by the S	tate Engineer:07/08/	2021
9)	Were all plugging activities consistent with an approved plug differences between the approved plugging plan and the well	ging plan? Yes as it was plugged (atta	If not, please describe ch additional pages as needed):
	¥		OSE DIT NOU 1 2021 PM4;44

Version: September 8, 2009

Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

#### For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement  Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
-	0-10' Hydrated Bentonite	15.6 galions	15 gallons	Augers	
_	10'-110' Drill Cuttings	Approx. 151 gallons	151 gallons	Boring	
_					
_					
-		MULTIPLY E cubic feet x 7.4 cubic yards x 201.5	3Y AND OBTAIN 805 = gallons 17 = gallons		

#### III. SIGNATURE:

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III. SIGNATURE:					OSE DITA	AU 1 2001 :	nan a
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Engineer pertaining to the plugging of v	vells and that	each and all o	f the statem	ents in this	Plugging Rec	ord and attac	hments
are true to the best of my knowledge and	belief.						

Jack Atkins		10/27/2021
Cionatura	of Wall Driller	- Date

Signature of Well Driller

Version: September 8, 2009 Page 2 of 2

# DATE\_\_WD-11 Plugging Record-forsign

Final Audit Report

2021-10-29

Created:

2021-10-29

Ву:

Lucas Middleton (lucas@atkinseng.com)

Status:

Signed

Transaction ID:

CBJCHBCAABAAtR6dClvgQcGMZKORwRcBWHfk6EYZjwn4

## "DATE\_\_WD-11 Plugging Record-forsign" History

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- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-10-29 4:18:25 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-10-29 4:18:39 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-10-29 - 4:18:39 PM GMT

OSE DIJ NOU 1 2021 PM4:44



March 7, 2019

# 1RP-5313 Characterization & Closure Report Dagger State Unit No. 002H



Sample Trenching at Point of Release

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

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

## R. T. HICKS CONSULTANTS, LTD.

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

March 7, 2018

NMOCD District 1 (vacant) District 1 - HOBBS 1625 N. French Drive Hobbs, New Mexico 88240 (575) 370-3180 Ext. 111 Via Email: ocd-district1spills@state.nm.us Bradford Billings
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Via Email:
bradford.billings@state.nm.us; emnrd-

RE: 1RP-5313 – Dagger State Unit No. 002H Advance Energy Partners Hat Mesa, LLC Characterization and Closure Report

#### NMOCD:

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

Characterization and remediation began on December 08, 2018 and was completed by February 22, 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 the Dagger State Unit No. 002H (DSU 2H) treated produced water transfer line release.

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 Initial Characterization EM Survey and Sample Results
- Plate 12 Excavation Extent Relative to Initial Release Extent
- Plate 13 Excavation Confirmation Sample Results

DSU 2H Release

#### **Tables**

- Table 1 Nearby OSE Well Summary
- Table 2 EM Survey and Initial Sampling Data
- Table 3 Final Excavation Confirmation Sampling Data

#### Appendices

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

DSU 2H Release

#### I. Initial Response

The release occurred on December 08, 2018 along a treated produced water transfer line (Plate 1) located at N 32.428738, W 103.604459 (NAD 83) on State Land. Flow was shutoff within 10 minutes of release as Select Energy personnel was on location at the time of the initial release. The layflat line was repaired with 40 minutes. Initial volume of release was estimated at less than 20 barrels. The release did not impact surface or groundwater.

The release occurred on silty sand surface soils. Free standing liquid quickly soaked into the sand. Within 15 hours, removal of surface soils within the upper 2-feet of soil column along the east-west extent of the release was excavated and temporarily stockpiled. Near surface soils along north-south release extent (Figure 1), which is along a buried pipeline, was excavated to a depth of a few inches.



Figure 1: Initial release response excavation along the north-south pipeline. Stockpiled soil is visible photo left. GPS: 32.4284833 N, -103.6045694 W

DSU 2H Release

#### 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

Horizontal extent was determined by wet soil from the release and an electromagnetic survey (EM Survey) with a field reading of 20 mS/m (30 mS/m at 25° C.)<sup>1</sup>. Plate 1 shows the release extent relative to the release point, produced water transfer line, and a subsurface pipeline. A north-south access road easement bounds the release to east.

#### 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 1.9-miles northeast of the release (OSE CP-00854) with a depth to water of 600-feet.
- The next two nearest water wells are located
  - o 2.1-miles north-northeast (USGS-14980) with a depth to water of 178.75-feet.
  - o 2.2-miles east-northeast (OSE CP-01356) with a depth to water of 555 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 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.

	Tal	ole 1: OSE Wate	er Well Log Da	ta Summa	ary	
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 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

<sup>&</sup>lt;sup>1</sup> See Appendix B for a discussion on EM Survey and calibration curves.

DSU 2H Release

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 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 368 feet below ground surface, where 368 feet = 3688 ft surface elevation – 3320 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).
- 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 not:

- Within ½ mile of any significant water course.
- Within 300 feet of a continuously flowing watercourse or any other significant watercourse.
- 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 ROW that is considered in-use for oil and gas operations, and

DSU 2H Release

• Pasture land not in-use for oil and gas operations.

Advance Energy elected to reclaim (not in-use) all impacted soils rather than to restore the surface for areas in-use.

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

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

Soil sampling and an electromagnetic survey (EM Survey) was employed to delineate the release extent. As discussed in Appendix B and verified on Plate 11,

an electrical conductivity (EC) reading from the EM Survey shows that an EC reading of >30 mS/m (temperature corrected to 25 deg. C. (TC)) correlates with a chloride concentration > 600 mg/kg. Therefore, an EC reading of >30 mS/m was used to delineate the horizontal extent.

Initial soil samples were obtained either via a grab sample or using a backhoe (trench sample, Figure 2) for testing of chloride. Soil samples where either field titrated or submitted for laboratory analysis. Table 2 shows the analytical results of the initial characterization sampling. Soil samples listed in Table 2 are categorized under their corresponding grid number as shown on Plate 12. Plate 12 also shows the initial release extent relative to the excavation extent during remedial actions.

The Laboratory Certificate of Analyses is located in Appendix C.

Initial sampling showed that chloride in the upper 4-feet exceeded the 600 mg/kg closure limit. "S3 Trench" showed the highest



Figure 2: Sample Trench 7. Total depth 6-ft. Photo viewing west. GPS: 32.4286333 N, -103.6049194 W

chloride concentration of 18,000 mg/kg from 6 to 7 feet bgs; at 9-feet bgs, chloride

DSU 2H Release

decreased to 64 mg/kg. No soil sample exceeded the 20,000 mg/kg chloride closure limit.

Trench sampling and excavation showed the lithology as:

0 - 4.5 ft : Silty Sand, medium brown, loose.

5 - 9 ft : Caliche, white, dense.

DSU 2H Release

#### III. Remediation and Closure

#### 1. Excavation Protocol

Excavation extent of impacted soils was determined by chloride concentrations via laboratory confirmation via EPA Method 200.1 or SM4500. TPH, BTEX, and Benzene were below Closure Criteria Limits and are not discussed further.

All surfaces were remediated in accordance with 19.15.29.13 NMAC. Advance Energy elected to reclaim surface soils within the pipeline right-of-way rather than to defer and restore the area as in-use (Figure 3). Surface soils that were reclaimed

to Table 1 19.15.29 NMAC limits with the upper 4-feet of soil containing less than 600 mg/kg chloride. Below 4-feet, chloride limit is 20,000 mg/kg.

Five-point composite soil samples were collected at the north, south, east, and west walls of the excavation from 0 to 4 feet. If soil sample results exceeded 600 graphs ghour from 0 to 4 feet for the soil sample results exceeded 600 graphs ghour from 0 to 4 feet. If soil sample results exceeded 600 graphs ghour from 6 feet for the soil sample results exceeded 600 graphs ghour from 6 feet for the soil sample results exceeded 600 graphs ghour from 6 feet for the soil sample results exceeded 600 graphs graphs



Figure 3: Excavation along the pipeline ROW. The pipeline is 4.5 feet below ground surface. Photograph is viewing north from the southern edge of Grid 4. Grid 5 is visible photo top right. GPS 32.428561 N, -103.6045389 W.

the excavation walls, the excavation wall was extended horizontally and resampled. Horizontal excavation continued until subsequent sampling 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 4.5 feet bgs. At all grid locations, excavation depth was at least 4.5-feet bgs, with the exception of Grid 1 where the base at 2-feet exhibit 48 mg/kg chloride (Plate 11). Excavated soil was transported to Lea Land, Inc. or R-360 for proper disposal. Clean backfill soil was purchased from the land owner under a Surface Use Agreement.

#### 2. Remediation Activities

The excavation extent is irregular in shape and covers a surface area of 802 yards with a volume of 3,608 cu. yrds. Five-point composite confirmation sampling shows that the north, south, east, and west walls of each grid from 0 to 4 ft below ground surface (bgs) are less than 600 mg/kg chloride – with a maximum concentration of 544 mg/kg at Grid 6 South Wall. Five-point composite sample at

DSU 2H Release

the base (4.5 ft gbs) of each grid shows that chloride is below 20,000 mg/kg – with a maximum concentration of 11,200 mg/kg at Grid 4.

Table 3 is a summary of analytical results showing final confirmation for the excavation walls and bases.

Figures 4 and 5, below, are photographs of the excavation prior to backfilling.



Figure 4: Photo of complete excavation prior to backfilling. Photo is viewing east from Grid 8 west wall. Excavation depth is 4.5-feet. GPS: 32.4286333 N, -103.6049278 W



Figure 5: Photograph of excavation along pipeline. Pipeline is at the excavation wall, photo right. Photo is viewing south from the north edge of Grid 2. GPS: 32.4285778~N, - 103.6049417~W

DSU 2H Release

The excavation was backfilled with clean fill dirt (Figure 6). Final surface seeding and contouring will occur during the next favorable growing season in Spring 2019.



Figure 6: Backfilled excavation. Photo is viewing north from the south end of Grid 1. GPS: 32.4281806 N, -103.6044833 W

Please contact me with any questions at <u>andrew@rthicksconsult.com</u> or 970-570-9535.

Sincerely,

R.T. Hicks Consultants, Ltd.

Andrew Parker Sr. Env. Specialist

Copy: David Harwell (DHarwell@advanceenergypartners.com)

Advance Energy Partners Hat Mesa, LLC

Ryan Mann (rmann@slo.state.nm.us); State Land Office

# C-141 Including Closure Form

R.T. Hicks Consultants, Ltd.

901 Rio Grande Blvd. NW, Suite F-142 Albuquerque, NM 87104 District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NCH1903355030
District RP	1RP-5313
Facility ID	
Application ID	pCH1903356077

## **Release Notification**

#### **Responsible Party**

Responsible	Party: Adv	ance Energy Parti	ners Hat Mesa, L	LC	OGRID	372417
Contact Nan	ne: David	Harwell			Contact T	elephone: 832-672-460 <b>4</b>
Contact ema	il: DHarw	ell@advanceenerg	gypartners.com		Incident #	NCH1903355030 BSU 2H @
Contact mail Houston, TX		: 11490 Westheir	ner Rd. STE 950	),		30-025-41178
			Location	n of R	elease S	ource
Latitude N 32	2.428738		(NAD 83 in a	decimal de	Longitude grees to 5 decir	W 103.604459 mal places)
Site Name:	BSU 2H				Site Type:	Transfer pipe
Date Release	Discovered	: Dec. 08, 2018 (	15:30)		API# (if app	plicable) 30-025-41178
Unit Letter	Section	Township	Range		Cour	
P	31	21 S.	33 E.	Lea	County	
	Materia		Nature an	ıd Vol		justification for the volumes provided below)
Crude Oil		Volume Release				Volume Recovered (bbls)
X Produced V	Water	Volume Release				Volume Recovered (bbls)
Treated PW		Is the concentrate produced water	tion of dissolved >10.000 mg/l?	chloride	in the	X Yes No
Condensa	ite	Volume Release				Volume Recovered (bbls)
☐ Natural G	as	Volume Release	ed (Mcf)			Volume Recovered (Mcf)
Other (des	scribe)	Volume/Weigh	t Released (provi	de units)		Volume/Weight Recovered (provide units)
806 Frac on t	in layflat tr he 501/502		utoff within 10 n	ninutes c		nates at the Dagger State frac pond and terminates at the Select Energy personnel was on location at the time of

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Page 2

State of New Mexico
Oil Conservation Division

Page	<i>29</i>	of	158
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Incident ID		
District RP		
Facility ID		
Application ID		

Was this a major release as defined 19.15.29.7(A) No ☐ Yes ☒ No ☐ If YES, was imm	d by
	Initial Response
The re	sponsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
	the release has been stopped.
<u> </u>	area has been secured to protect human health and the environment.  erials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
l <u> </u>	ds and recoverable materials have been removed and managed appropriately.
The release was in within the upper soils along north-progress and excaps [SEE ATTACHE Release character	rization and remediation will occur under NMAC 19.15.29.
has begun, please	. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation e attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred nationment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
regulations all oper public health or the failed to adequately	the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and rators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In eptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
Printed Name:	David Harwell Title:Vice President
Signature:	mel Samell Date:Dec 12 2018
email: DHarw	ell@advanceenergypartners.com Telephone:832-672-460 <u>\frac{\fin}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fin}{\frac{\frac{\fin}{\fint}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\fin}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fin}}{\frac{\frac{\fin}}}}}{\frac}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fi</u>
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Page 3 Oil Conservation Division

	Page 30 of 158
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)	368 (ft bgs)
Did this release impact groundwater or surface water?	Yes No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? (Plate 5)	☐ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? (Plates 5)	☐ Yes ■ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? (Plate 6)	☐ Yes ■ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? (Plates 4)	☐ Yes ■ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? (Plates 4)	Yes No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? (Plate 4)	☐ Yes ■ No
Are the lateral extents of the release within 300 feet of a wetland? (Plate 7)	☐ Yes No
Are the lateral extents of the release overlying a subsurface mine? (Plate 8)	Yes No
Are the lateral extents of the release overlying an unstable area such as karst geology? (Plate 9)	☐ Yes No
Are the lateral extents of the release within a 100-year floodplain? (Plate 10)	☐ Yes No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes No

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

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

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.

Field data

Data table of soil contaminant concentration data

Depth to water determination

Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release

Boring or excavation logs

Photographs including date and GIS information

Topographic/Aerial maps

Laboratory data including chain of custody

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

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# State of New Mexico Oil Conservation Division

Incident ID	NCH1903355030
District RP	1RP-5313
Facility ID	
Application ID	pCH1903356077

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.

Signature: Sand Harwell	Title: VP Eng. 4 Ops  Date: 3-7-19
omail: dharwell @ advanceenergy parts	As Tolophone: 832 - 677 - 46 24
mail. What well to caronce energy party	Wers comi elephone
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Page 5 Oil Conservation Division

	Page 32 of 158
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 Proposed schedule for remediation (note if remediation plan time	2(C)(4) NMAC
Deferral Requests Only: Each of the following items must be conj	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around prodeconstruction.	oduction equipment where remediation could cause a major facility
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 rules and regulations all operators are required to report and/or file control which may endanger public health or the environment. The acceptant liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD a responsibility for compliance with any other federal, state, or local later.	ertain release notifications and perform corrective actions for releases ace of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, cceptance of a C-141 report does not relieve the operator of
Printed Name: _David Harwell	Title:Vice President
Signature:	Date:
email: <u>dharwell@advanceenergypartners.com</u>	Telephone: <u>832-672-4604</u>
OCD Only	
Received by:	Date:
☐ Approved ☐ Approved with Attached Conditions of A	Approval

Date:

Signature:

### State of New Mexico Oil Conservation Division

Incident ID	NCH1903355030
District RP	1RP-5313
Facility ID	
Application ID	pCH1903356077

# Remediation Plan

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age 3	Oil Conservation Division	The second secon	istrict RP	1RP-5313
12.7	a car for an action and Albania.		acility ID	LIN SOID
		A	pplication ID	pCH190335607
Form C-141 lage 5	Remediati	on Plan		
	cklist: Each of the following items must be inco	uded in the plan.		
Scaled sitemap with Estimated volume of Closure criteria is to	of proposed remediation technique GPS coordinates showing delineation points f material to be remediated Table 1 specifications subject to 19.15.29.12(C) or remediation (note if remediation plan timeline		OCD approval is	required)
	: Each of the following items must be confirm		Market and a	
Contamination must deconstruction.	be in areas immediately under or around produc	ion equipment where r	remediation coul	d cause a major facilit
T Extents of contamina	ation must be fully delineated.			
_ Datems of containing	ition must be fully defineded.			
Contamination does	not cause an imminent risk to human health, the	environment, or ground	dwater.	
hereby certify that the in	nformation given above is true and complete to t			
rules and regulations all of which may endanger publiability should their oper surface water, human hearesponsibility for compliant Printed Name:	operators are required to report and/or file certain plic health or the environment. The acceptance of rations have failed to adequately investigate and rations have failed to adequately investigate and ration of the environment. In addition, OCD acceptance with any other federal, state, or local laws a rid Harwell Tied Harwell Dawley of Advance on the partners. Com Telegraphy of the company o	f a C-141 report by the remediate contamination transce of a C-141 report and/or regulations.  tte: VP Eng. tte: 3-7-19	OCD does not non that pose a that does not relieve	relieve the operator of reat to groundwater, e the operator of
rules and regulations all of which may endanger publiability should their oper surface water, human hearesponsibility for compliant Printed Name: Pav Signature: Dave mail: Abarwe//	olic health or the environment. The acceptance of rations have failed to adequately investigate and rations have failed to adequately investigate and ration of the environment. In addition, OCD acceptance with any other federal, state, or local laws a rid Harwell Ti	f a C-141 report by the remediate contamination tance of a C-141 report and/or regulations.  tte: VP Eng. tte: 3-7-19	OCD does not non that pose a that does not relieve	relieve the operator of reat to groundwater, e the operator of
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rules and regulations all owhich may endanger publiability should their oper surface water, human heavesponsibility for complia Printed Name:	olic health or the environment. The acceptance of rations have failed to adequately investigate and rations have failed to adequately investigate and rath or the environment. In addition, OCD acceptance with any other federal, state, or local laws a rid Harwell Ti	fa C-141 report by the remediate contamination ance of a C-141 report and/or regulations.  tle: VP Eng. te: 3-7-19  lephone: 832	OCD does not report that pose a third does not relieved.  A Dps.	relieve the operator of reat to groundwater, e the operator of

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# State of New Mexico Oil Conservation Division

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

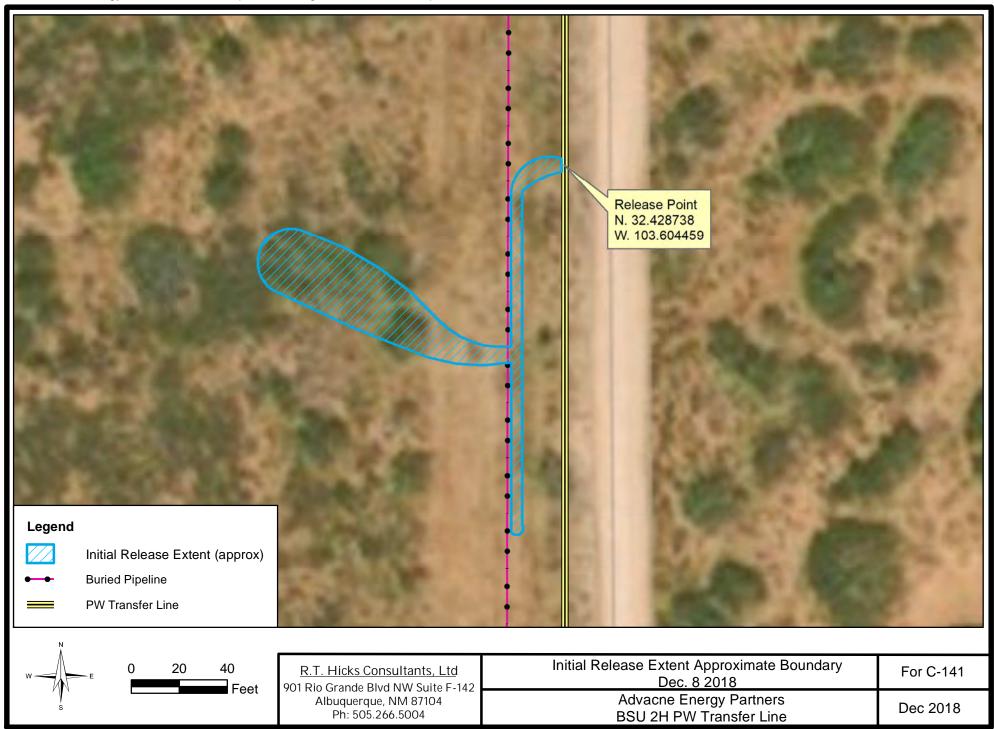
Incident ID	NCH1903355030	
District RP	1RP-5313	
Facility ID		
Application ID	pCH1903356077	

## 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.

Received by: Date:  Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.  Closure Approved by: Date:	☐ A scaled site and sampling diagram as described in 1	19.15,29.11 NMAC
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: David Harwell Title: VP Eng. + Ops.  Signature: David Harwell Dadvance energypathers. com Telephone: B3Z - 672 - 4/6 04  OCD Only  Received by: Date: Da		or photos of the liner integrity if applicable (Note: appropriate OCD District office
Thereby 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: David Harwell Title: VP Eng. + Ops.  Signature: David Harwell Date Parameters. com Telephone: B3Z - 672 - 4604  OCD Only  Received by: Date:	☐ Laboratory analyses of final sampling (Note: appropri	riate ODC District office must be notified 2 days prior to final sampling)
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: David Harwell Title: VP Eng. + Ops.  Signature: David Harwell Date: 3-7-19  email: dharwell Dadvanceenergypartners. com Telephone: 832 -672 -4604  OCD Only  Received by: Date: Dat	☐ Description of remediation activities	
Received by: Date:  Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.  Closure Approved by: Date:	and regulations all operators are required to report and/or f may endanger public health or the environment. The accep should their operations have failed to adequately investigat human health or the environment. In addition, OCD accep compliance with any other federal, state, or local laws and/ restore, reclaim, and re-vegetate the impacted surface area accordance with 19.15.29.13 NMAC including notification	file certain release notifications and perform corrective actions for releases which plance of a C-141 report by the OCD does not relieve the operator of liability te and remediate contamination that pose a threat to groundwater, surface water, plance of a C-141 report does not relieve the operator of responsibility for vor regulations. The responsible party acknowledges they must substantially to the conditions that existed prior to the release or their final land use in the OCD when reclamation and re-vegetation are complete.
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:	OCD Only	
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:	Received by:	Date:
	remediate contamination that poses a threat to groundwater,	surface water, human health, or the environment nor does not relieve the responsible
	Closure Approved by:	Date:
Printed Name: Title:	Printed Name:	Title:

#### M:\Advance Energy\BSU 2H Release\ap\_nmGIS\Figure C141\C141 Map.mxd

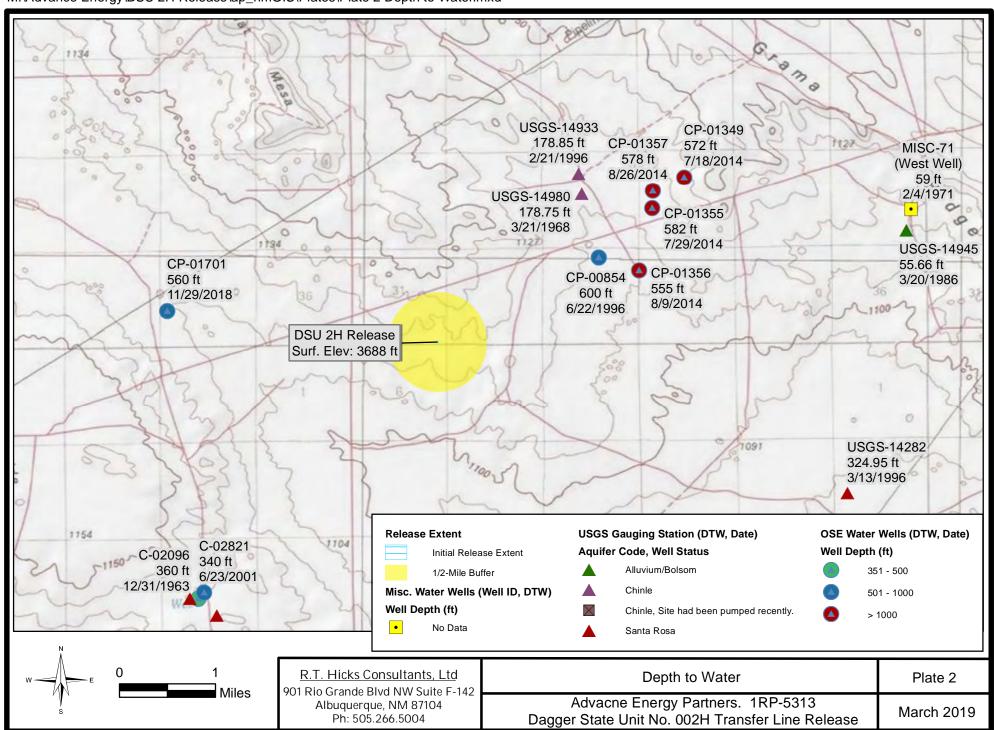


# **Plates**

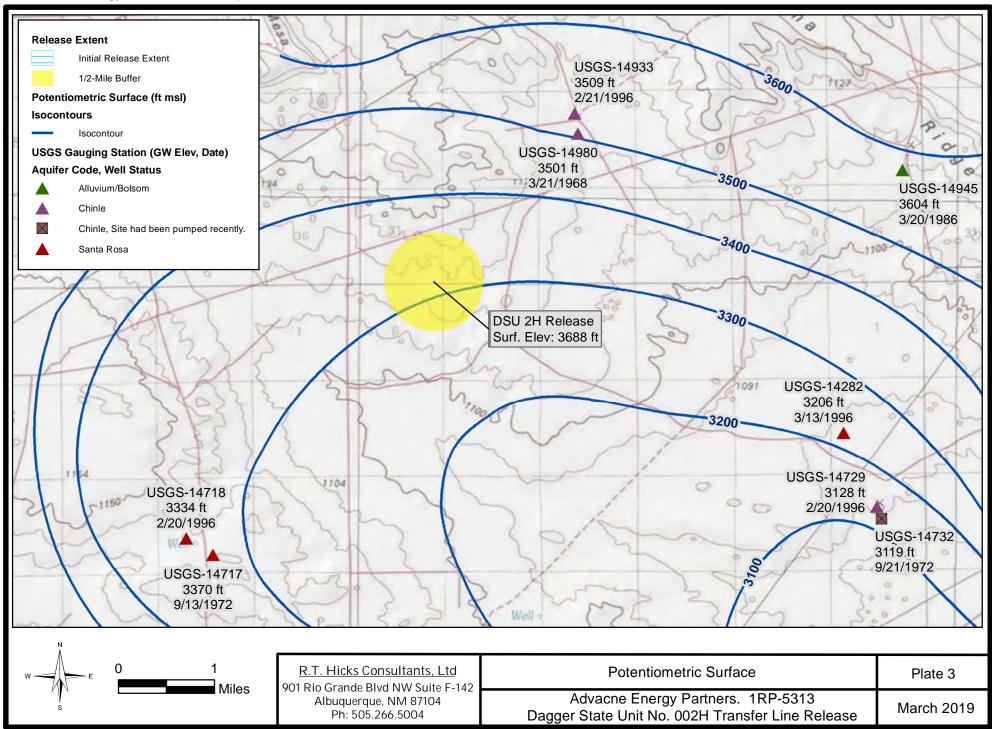
R.T. Hicks Consultants, Ltd. 901 Rio Grande Blvd. NW, Suite F-142

Albuquerque, NM 87104

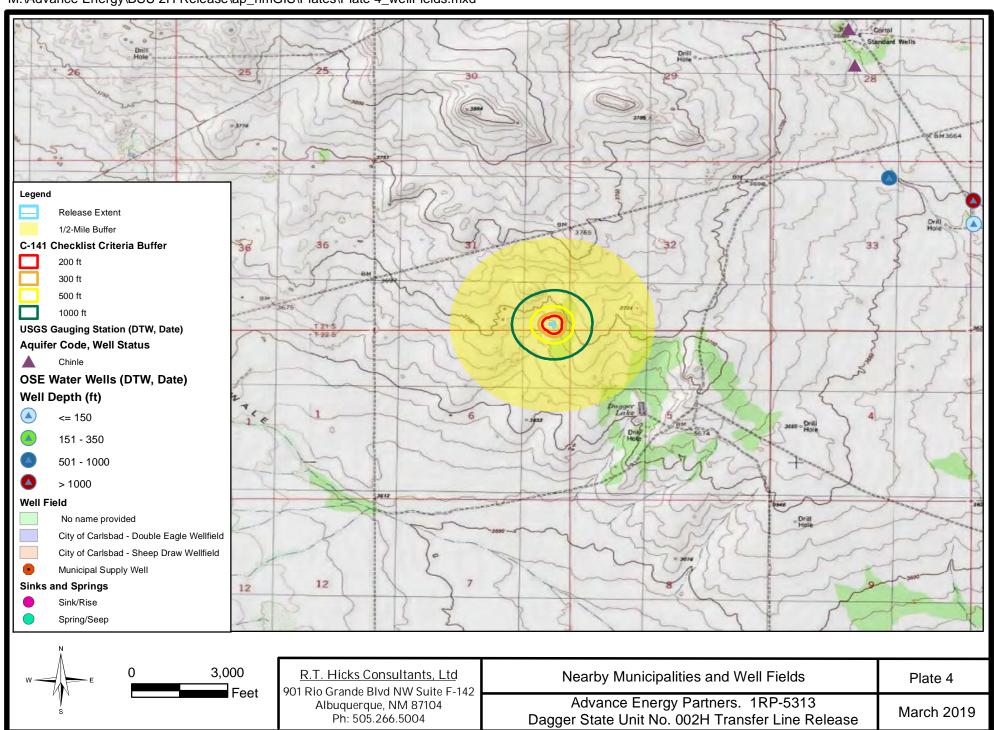
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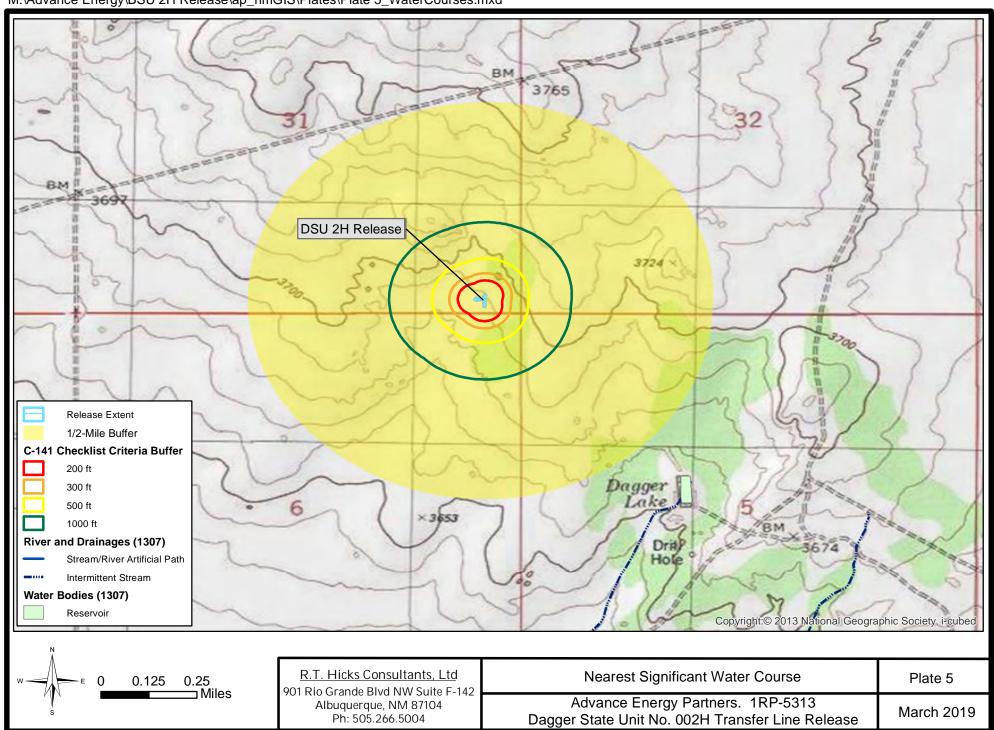
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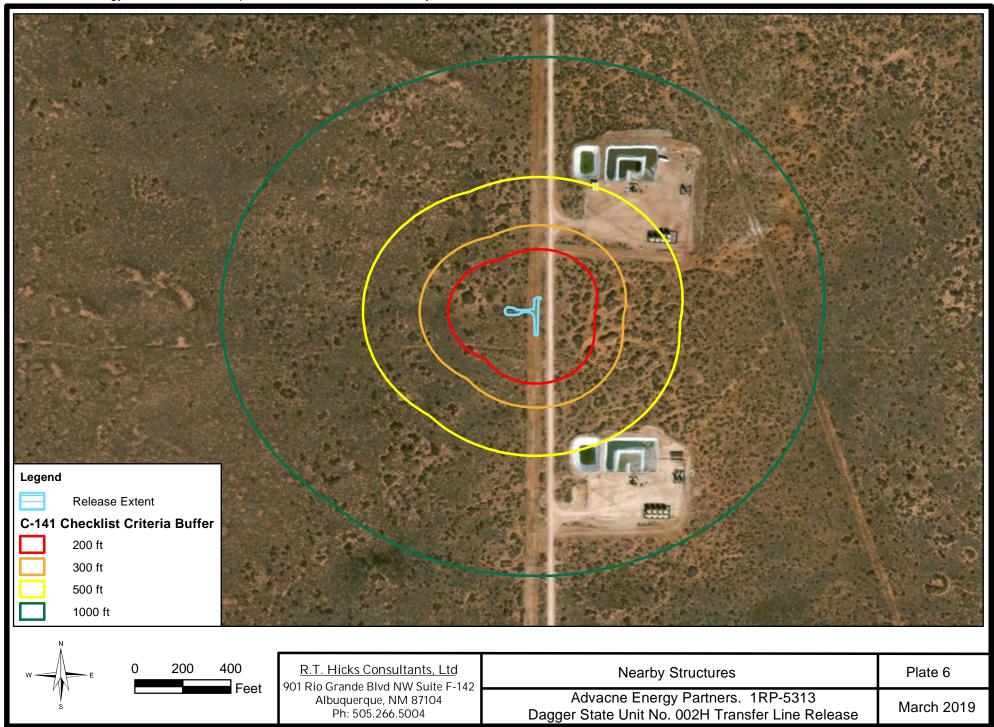
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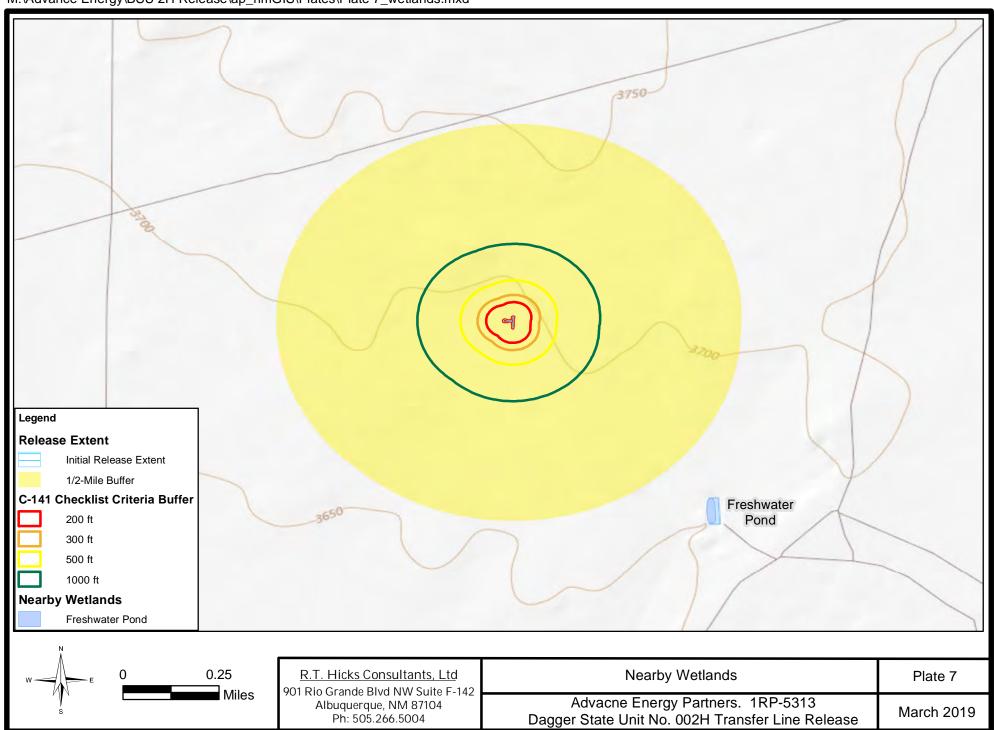
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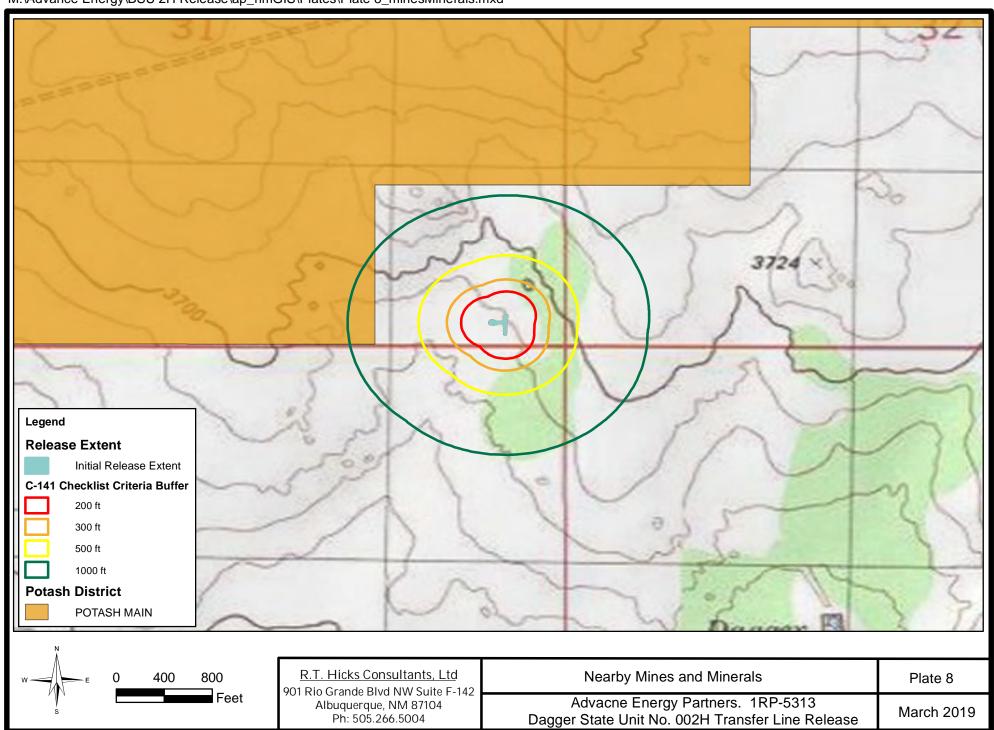
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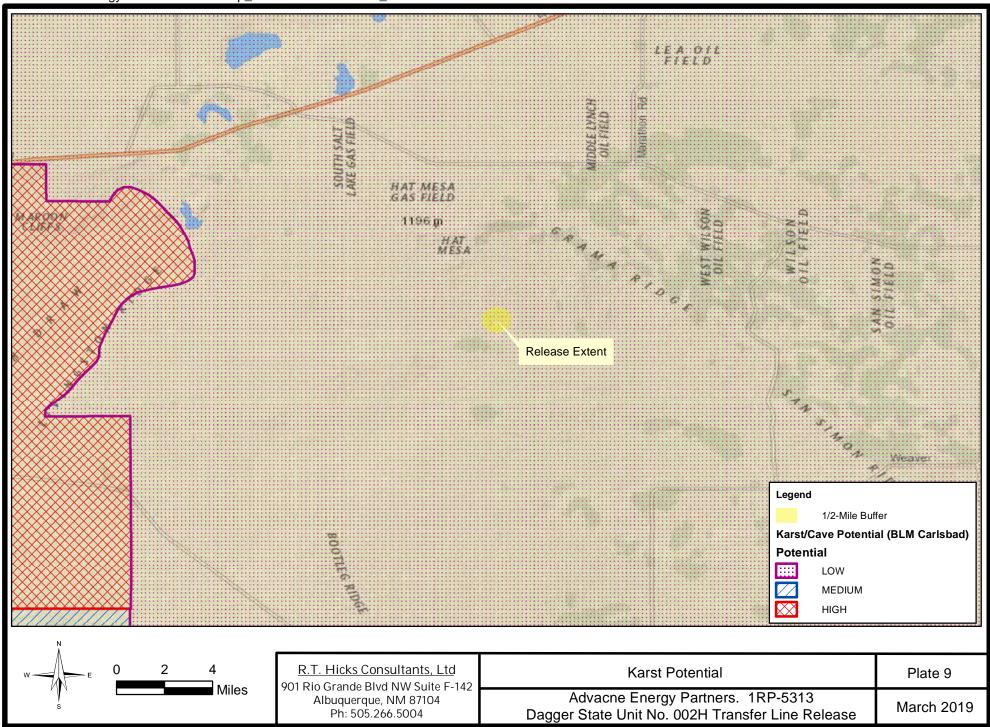
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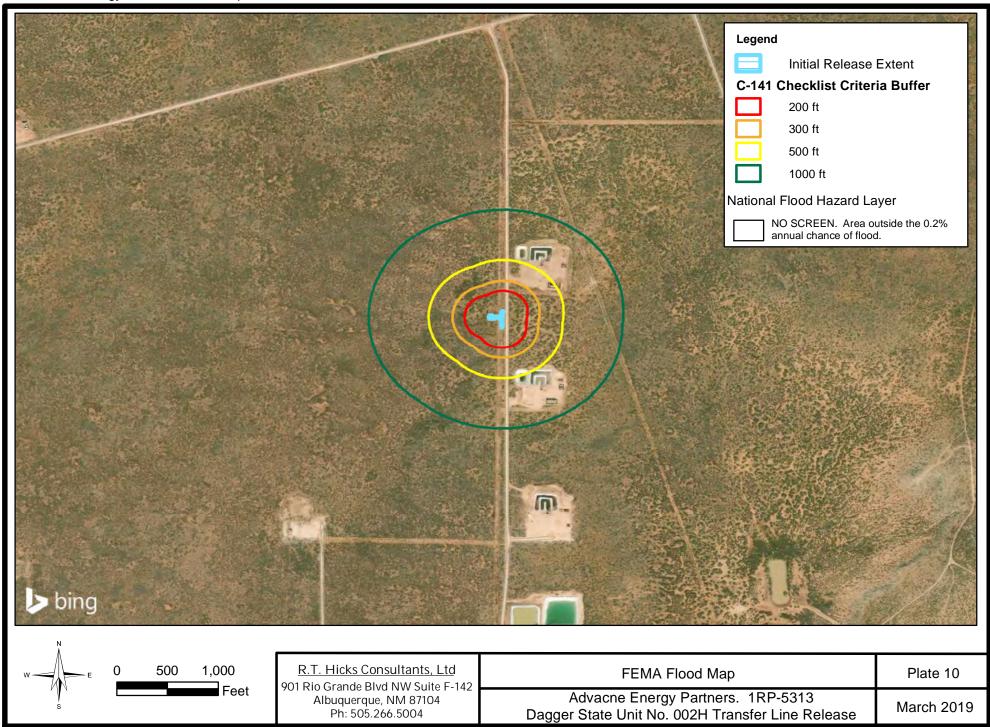
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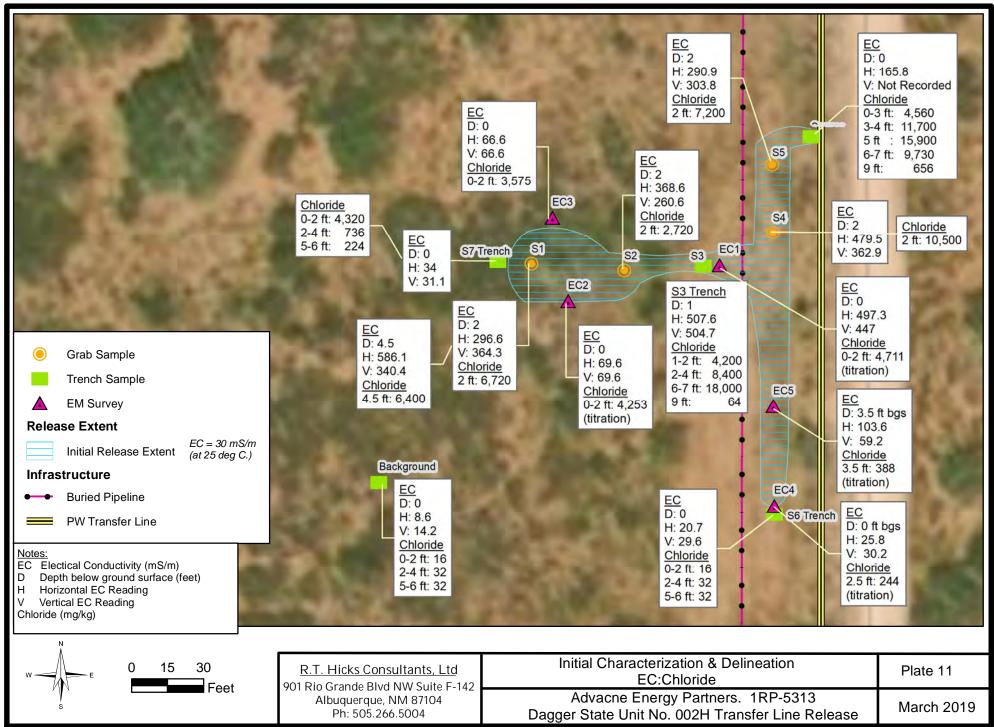
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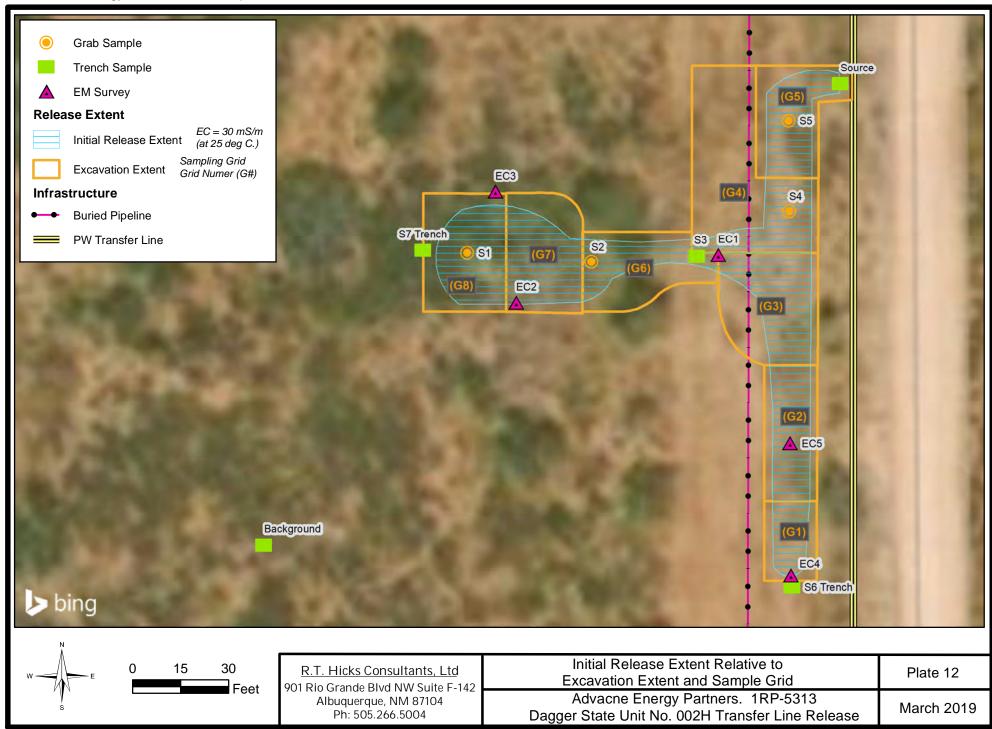
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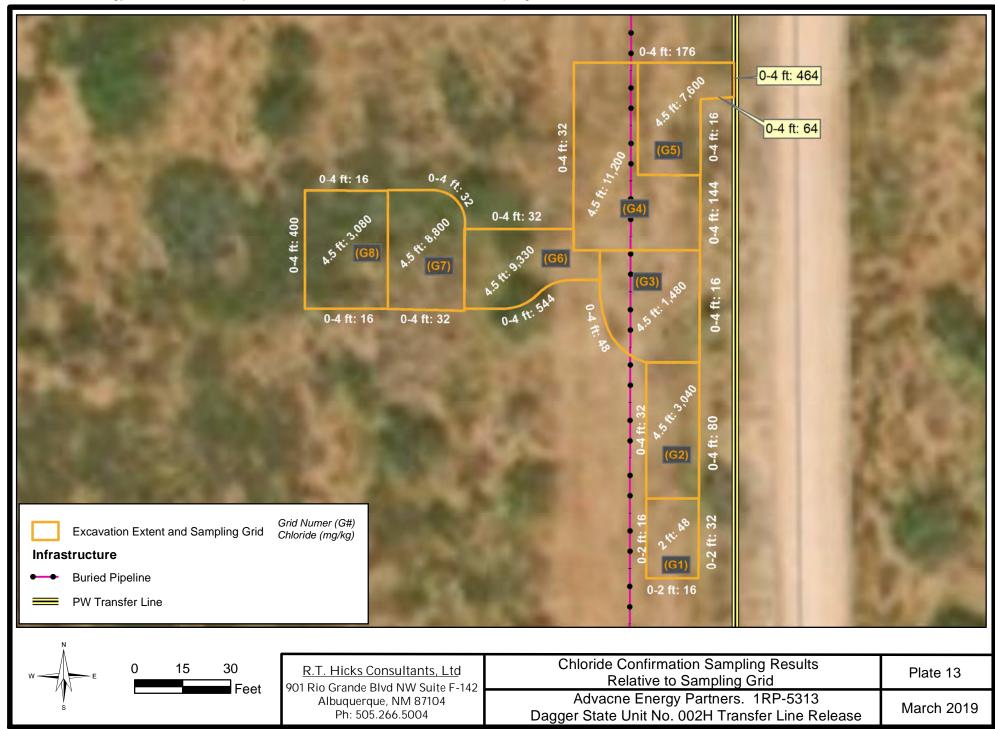
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#### M:\Advance Energy\BSU 2H Release\ap\_nmGIS\Plates\Plate 12 Release Extend and Grid.mxd



M:\Advance Energy\BSU 2H Release\ap\_nmGIS\Plates\Plate 13 Confirmation Sampling.mxd



## **Tables**

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

Albuquerque, NM 87104

Table 2
Initial Characterization Sampling

Sample Name	Date	Depth	In-Use	EM 38	EM 38	EM 38 TC	EM 38 TC	Cl	Cl
		(ft)	(Yes/No)	mS/m	mS/m	mS/m	mS/m	titration	mg/kg
NMOCD Limits				Horizontal	Vertical	Horizontal	Vertical		
0 - 4 feet & "not in-use"				100mS/m	100mS/m	100mS/m	100mS/m		600
> 4 ft or "in-use"									20,000
Background	12/12/2018	0	No	5.8	9.6	8.6	14.2		
Background	12/17/2018	0 - 2	No						16
Background	12/17/2018	2 - 4	No						32
Background	12/17/2019	5 - 6	No						32
Grid 1 (EC4; S6 Trench)									
EC4	12/01/2018	0	No	17.9	21	25.8	30.2		
EC4	12/01/2018	2.5	No					244	
S6 Trench (Grid 1 S. Wall)	12/17/2018	0	No	14	20	20.7	29.6		
S6 Trench (Grid 1 S. Wall)	12/17/2018	0 - 2	No						16
S6 Trench (Grid 1 S. Wall)	12/17/2018	2 - 4	No						32
S6 Trench	12/17/2018	5 - 6	No						32
Grid 2 (EC5)									
EC-5	12/19/2018	3.5	Yes	70	40	103.6	59.2	388	
Grid 3									
Grid 4 (S4)									
S4 Base	12/10/2018	2	Yes	333	252	479.5	362.9		10,500
S4 Wall	12/10/2018	0 - 1	Yes						5,330
S4 Wall	12/10/2018	0 - 2	Yes						8,530
G5 (Source Area, S5)									
S5 Base	12/10/2018	2	Yes	202	211	290.9	303.8		7,200
S5 Wall	12/10/2018	0 - 1	Yes						4,800
S5 Wall	12/10/2018	1 - 2	Yes						7,860
Source (at metal coupling)	12/11/2018		Yes	112		165.8			
Source Wall	12/11/2018	0 - 3	Yes						4,560
Source Wall	12/11/2018	3 - 4	Yes						11,700
Source Base	12/11/2018	5	Yes						15,900
Source Wall	12/19/2018	6 - 7	Yes						9,730
Source Wall	12/19/2018	9	Yes						656
Source Wall (sluffing from wall)	12/19/2018	12	Yes						7,060

Table 2
Initial Characterization Sampling

Sample Name	Date	Depth	In-Use	EM 38	EM 38	EM 38 TC	EM 38 TC	Cl	Cl
		(ft)	(Yes/No)	mS/m	mS/m	mS/m	mS/m	titration	mg/kg
NMOCD Limits				Horizontal	Vertical	Horizontal	Vertical		
0 - 4 feet & "not in-use"				100mS/m	100mS/m	100mS/m	100mS/m		600
> 4 ft or "in-use"									20,000
Grid 6 (S2, S3, EC1)									
S2 Base	12/10/2018	2	No	256	181	368.6	260.6	1,355	2,720
S2 N. Wall	12/10/2018	0 - 2	No						5,760
S2 S. Wall	12/10/2018	0 - 2	No						5,840
EC1	12/11/2018	0	No	336	302	497.3	447.0		
EC1	12/11/2018	0 - 2	No					4,711	
S3 Base	12/10/2018	2	No	277	250	398.9	360.0	5,575	8,000
S3 N. Wall	12/10/2018	0 - 2	No						96
S3 S. Wall	12/10/2018	0 - 2	No						48
S3 Trench	12/17/2018	1	No	343	341	507.6	504.7		
S3 Trench	12/17/2018	1 - 2	No						4,200
S3 Trench	12/17/2018	2 - 4	No						8,400
S3 Trench	12/17/2018	6 - 7	No						18,000
S3 Trench	12/17/2018	9	No						64
Grid 7 (EC2)									
EC-2	12/11/2018	0	No	47	47	69.6	69.6		
EC-2	12/11/2018	0 - 2	No					4,253	
Grid 8 (S1, EC3)									
S1 N. Wall	12/10/2018	0 - 2	No						5,280
S1 S. Wall	12/10/2018	0 - 2	No						832
S1 Base	12/10/2018	2	No	206	253	296.6	364.3	4,992	6,720
S1 Base	12/17/2018	4.5	No	396	230	586.1	340.4	4,588	6,400
EC3	12/11/2018	0	No	45	45	66.6	66.6		
EC3	12/11/2018	0 - 2	No					3,575	
S7 Trench	12/17/2018	0	No	23	21	34.0	31.1		
S7 Trench	12/17/2018	0 - 2	No						4,320
S7 Trench	12/17/2018	2 - 4	No						736
S7 Trench	12/17/2018	5 - 6	No						224

Table 3
Excavation Confirmation Sample Data

DSU #2H 1RP-5313

Sample Name	Date	Depth	In-Use	Cl	GRO+DRO	TPH Ext	BTEX	Benzene
·		(ft)	(Yes/No)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NMOCD Limits								
0 - 4 feet & "not in-use"				600		2,500	10	50
> 4 ft or "in-use"				20,000	1,000	2,500	10	50
Grid 1 (EC4; S6 Trench)								
S6 Trench (Grid 1 S. Wall)	12/17/2018	0 - 2	No	16				
S6 Trench (Grid 1 S. Wall)	12/17/2018	2 - 4	No	32				
Grid 1 (G1) E. Wall	12/18/2018	0 - 2	Yes	32				
Grid 1 (G1) W. Wall	12/18/2018	0 - 2	Yes	16				
Grid 1 (G1) Base	12/18/2018	2	Yes	48				
Grid 2 (EC5)								
Grid 2 (G2) E. Wall	01/21/2019	0-4	Yes	80	<20	<30	<0.3	<0.05
Grid 2 (G2) W. Wall	01/30/2019	0-4	Yes	32	<20	<30	<0.3	<0.05
Grid 2 (G2) Base	01/21/2019	4.5	Yes	3,040	<20	<30	<0.3	<0.05
Grid 3								
Grid 3 (G3) SW Wall	01/30/2019	0-4	Yes	48	<20	<30	<0.3	<0.05
Grid 3 (G3) E. Wall	01/21/2019	0-4	Yes	16	<20	<30	<0.3	<0.05
Grid 3 (G3) Base	01/21/2019	4.5	Yes	1,480	<20	<30	<0.3	<0.05
Grid 4 (S4)								
Grid 4 (G4) W. Wall	01/29/2019	0-4	Yes	32	<20	<30	<0.3	<0.05
Grid 4 (G4) E. Wall	01/21/2019	0-4	Yes	144	<20	<30	<0.3	<0.05
Grid 4 (G4) Base	01/21/2019	4.5	Yes	11,200	<20	<30	<0.3	<0.05
G5 (Source Area, S5)								
Grid 5 (G5) N. Wall	01/21/2019	0-4	Yes	176	<20	<30	<0.3	<0.05
Grid 5 (G5) S. Wall	01/21/2019	0-4	Yes	64	<20	<30	<0.3	<0.05
Grid 5 (G5) SE Wall	01/30/2019	0-4	Yes	16	<20	<30	<0.3	<0.05
Grid 5 (G5) NE Wall	01/30/2019	0-4	Yes	464	<20	<30	<0.3	<0.05
Grid 5 (G5) Base	01/21/2019	4.5	Yes	7,600	<20	<30	<0.3	<0.05

Table 3
Excavation Confirmation Sample Data

DSU #2H 1RP-5313

Sample Name	Date	Depth	In-Use	Cl	GRO+DRO	TPH Ext	BTEX	Benzene
		(ft)	(Yes/No)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NMOCD Limits								
0 - 4 feet & "not in-use"				600		2,500	10	50
> 4 ft or "in-use"				20,000	1,000	2,500	10	50
Grid 6 (S2, S3, EC1)								
Grid 6 (G6) N. Wall	01/29/2018	0-4	No	32	<20	<30	<0.3	<0.05
Grid 6 (G6) S. Wall	01/21/2019	0-4	No	544	<20	<30	<0.3	<0.05
Grid 6 (G6) Base	01/21/2019	4.5	No	9,330	<20	<30	<0.3	<0.05
Grid 7 (EC2)								
Grid 7 (G7) S. Wall	01/29/2019	0-4	No	32	<20	<30	<0.3	<0.05
Grid 7 (G7) N. Wall	01/21/2019	0-4	No	32	<20	<30	<0.3	<0.05
Grid 7 (G7) Base	01/21/2019	4.5	No	8,800	<20	<30	<0.3	<0.05
Grid 8 (S1, EC3)								
Grid 8 (G8) N. Wall	01/21/2019	0-4	No	16	<20	<30	<0.3	<0.05
Grid 8 (G8) S. Wall	01/29/2019	0-4	No	16	<20	<30	<0.3	<0.05
Grid 8 (G8) W. Wall	01/21/2019	0-4	No	400	<20	<30	<0.3	<0.05
Grid 8 (G8) Base	01/21/2019	4.5	No	3,080	<20	<30	<0.3	<0.05

# Appendix A OSE Well Logs

R.T. Hicks Consultants, Ltd.

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



### 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)

Well Tag POD Number

Q64 Q16 Q4 Sec Tws Rng

X Y

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)

**Drill Start Date:** 06/22/1996 **Drill Finish Date:** 06/22/1996 **Plug Date:** 

Log File Date: PCW Rcv Date: 10/17/2013 Source: Shallow 07/11/1996 **Pump Type:** Pipe Discharge Size: Estimated Yield: 100 GPM **SUBMER** 2.875 **Casing Size: Depth Well:** 6.63 950 feet **Depth Water:** 600 feet

Water Bearing Stratifications: Top Bottom Description

755 805 Sandstone/Gravel/Conglomerate860 890 Sandstone/Gravel/Conglomerate

Casing Perforations: Top Bottom

760 950

Meter Number:8514Meter Make:BLANCETTMeter Serial Number:040711711Meter Multiplier:1.0000Number of Dials:7Meter Type:Diversion

Unit of Measure: Barrels 42 gal. Return Flow Percent:

Usage Multiplier: Reading Frequency: Quarterly

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

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

3/5/19 1:48 PM Page 1 of 2 POD SUMMARY - CP 00854 POD1

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

Read Date	Year	Mtr Reading	Flag	g Rdr Comment	Mtr Amount
09/30/2015	2015	1371471	Α	RPT	0.247
10/22/2015	2015	1400502	Α	RPT	3.742
11/30/2015	2015	1400502	Α	RPT	0
04/28/2016	2016	1464116	Α	RPT "JD33 Well"	8.199
06/01/2016	2016	1464116	Α	RPT	0
07/27/2016	2016	1496980	Α	RPT JD33 Well	4.236
09/01/2016	2016	1510835	Α	RPT JD 33 Well	1.786
09/30/2016	2016	1517146	Α	RPT	0.813
10/31/2016	2016	1531178	Α	RPT JD 33 well	1.809
11/29/2016	2016	1553285	Α	RPT JD33 Well	2.849
03/01/2017	2017	1583100	Α	RPT	3.843
**YTD Meter	r Amount	s: Year		Amount	
		2004		5.649	
		2012		2.999	
		2013		56.016	
		2014		77.086	
		2015		24.253	
		2016		19.692	
		2017		3.843	

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/5/19 1:48 PM



# 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)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

Υ X

CP 01349 POD1

27 21S 33E

635304 3591576

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

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

08/04/2014

7.00

Drill Start Date: 07/12/2014

**Drill Finish Date:** 

07/18/2014

Plug Date:

Artesian

Log File Date: **Pump Type:** 

**PCW Rcv Date:** 

**Depth Well:** 

Source: **Estimated Yield:** 

**Casing Size:** 

Pipe Discharge Size:

1188 feet

**Depth Water:** 

572 feet

Water Bearing Stratifications:

**Top Bottom Description** 

990

1188 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

721 1188



STATE ENGINEER OFFICE

2014 SEP 10 PM 2: 15

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OQ	Merchar	its/Gle	nn's	Water Well Serv	rice, Inc.			57	75-398-2	424		
TI	WELL OWN		JNG A	ADDRESS				1	TY		STATE	ZIP
¥.	Р. О. Вох	692						la	atum		NM 88	3267
GENERAL AND WELL LOCATION	WELL			DEGREES	MINUTES	SECONI	OS .	<del>i</del>			· · · · · · · · · · · · · · · · · · ·	
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Ē				TITUDE 103				<u>Ļ</u> ,		***************************************		
	i				T ADDRESS AND COMM							
-	NE1/4NV	V1/4S\	N1/4	Section 27, Tov	vnship 21 South	, Range 33 Eas	t on Merc	char	nts Lives	tock Land		
	LICENSE N	UMBER		NAME OF LICENSED	DRILLER					NAME OF WELL DI	RILLING COMPANY	· · · · · · · · · · · · · · · · · · ·
	.WD 421		4	Corky Glenn						Glenn's Water		IC.
11	DRILLING S	TARTEL	$\perp$	DRILLING ENDED	DEPTH OF COMPLET	ED WELL (FT)	BORE HO	ĹĘD	EPTH (FT)	DEPTH WATER FII	ST ENCOUNTERED	(ET)
	07/22/14			i	1,192'		1,192'		( /	925'		(* *)
- :							1			STATIC WATER I F	VEL IN COMPLETED	WELL (ET)
	COMPLETE	D WELL	ıs: (	ARTESIAN	C DRY HOLE C	SHALLOW (UNC	ONFINED)			582'	VEE IN COMPLETED	WELL (FI)
NO										502		
ΑTJ	DRILLING I	FLUID:	<u> </u>	AIR	C MUD	ADDITIVES - SP	ECIFY:		···			
RM	DRILLING N	METHOD	. (	ROTARY	C HAMMER C	CABLE TOOL	C OTHE	BR - 8	SPECIFY:			
VFO	DEPTH	(feet bg	(l)	BORE HOLE	CASING MATE	RIAL AND/OR		. an	10	CASING	CACINICAWAI	
e n	FROM	TO	)	DIAM	GRA		CON	ASIN NEC		INSIDE DIAM.	CASING WAL	10 mm C 1
NIS				(inches)	(include each ca note section		Г	ΓΥΡΙ	E	(inches)	(inches)	(inches)
2. DRILLING & CASING INFORMATION	0'	40'		20"	16"		None			15 1/2"	.250	
જ	0'	757'		14 3/4"	9 5/8"		Thread	2. C	ollar	8.921"	36 lbs.	2000
S	690,	1,19	יי	8 3/4"	7" (502.14' Tot		Thread			6.366"	23 lbs.	1/8"
RIE	020	1,12.		0 3/4	317.96 perfora	-	rmeau	Q C	Ollai	0.500	23 103.	1/8
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	DEPTH	(feet bg	I)	BORE HOLE		NULAR SEAL M.				AMOUNT	I	HOD OF
IAL	FROM	TC	)	DIAM. (inches)	GRAVEL P.	ACK SIZE-RANG	E BY INTE	RV	AL	(cubic feet)	PLAG	CEMENT
ER	0'	40'		20"	Cemented					2 yds.	Top Pou	r
TA1	0 -	757'		14 3/4"	Float and shoe	cemented to	surface			962	Circulate	ed
ANNULAR MATERIAL	FF 4 - 7- (7-4				77 77111					THE STATE OF THE S	*****	WT - 2-1
OLA												
Z									<del></del>			<del></del>
3. A						* * *						· · · · · · · · · · · · · · · · · · ·
									.			**************************************
EOP	OOE BYTTE	NIAT 17:	or:	I	<u> </u>				1177 66	HELL PROPER	0.1.00.00	C 10 0 10 0 1 7 1
	OSE INTER	IVAL U	e l	)		POD NUMBER				WELL RECORD	& LUG (Version (	6/08/2012)
	ATION	<u></u>	1	<u> </u>	· · · · · · · · · · · · · · · · · · ·					7 3 5	77420	OF 1 OF 2
LUC	AHON	CXI	21			<u>215.</u>	<u> 33</u>	<u>_</u>	ا کھ،	1.512	PA	GE 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)
	0	4'	4'	Sand	CY ON	
	4'	28'	24'	Caliche	CYON	
	28'	120'	92'	Sand & Clay	CY 6 N	
	120'	260'	140'	Red Clay	CY ON	
	260'	757'	497'	Red & Brown Shale, and Clay (some blue)	CY © N	
	757'	815'	58'	Red & Brown Shale	CY ON	
4 HYDROGEOLOGIC LOG OF WELL	815'	840'	25'	Blue Clay & Shale	CY ON	
OF.	840'	925'	85'	Red and Brown Shale (some sandrock)	CY 6 N	
၁၀	925'	975'	50'	Watersand and Gravel	© Y C N	
12	975'	1,185'	210'	Watersand (brown sandrock)	© Y O N	
901	1,185¹	1,192'	7'.	Red Shale	CY ON	
103					CY © N	
8					CY © N	
					CY ON	·
4					CY ON	
					$C \cdot C N$	
				·	OY,ON	
					$C_A C_N$	
					O Y O N	
					$O_A O_N$	
					$O_A O_N$	
	METHOD U	JSED TO ES	STIMATE YIELD	· · · · · · · · · · · · · · · · · · ·	TAL ESTIMATED	
19. A.V.	C AIR LIF	т	BAILER C	OTHER - SPECIFY:	ELL YIELD (gpm):	
NO	WELL TES			ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLU ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER T		
TEST; RIG SUPERVISION	MISCELLA	NEOUS IN	FORMATION:		en e	
PER	AL 353		ot. d			
ns s		drilled wi 192' drilled	ith muα. d with air and	foam.		
, RIC						
EST	PRINT NA	ME(S) OF D	RILL RIG SUPE	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTR	UCTION OTHER TH	IAN LICENSEE:
Ş				•		
	N + +				· · · · · · · · · · · · · · · · · · ·	
E				FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECO		
SIGNATURE				20 DAYS AFTER COMPLETION OF WELL DRILLING:		
SNA	a	1	0.1		11.	
6. SIC	Con	Ry 1	Flem	CONKY 6/RMX 9	19/14	<del></del>
	(	SIGNAT	URE OF DRILL	ER / PRINT SIGNER NAME	DATE	
ł						with a spirit as

POD NUMBER

Released to Imaging: 1/18/2022 2:19:06 PM

FILE NUMBER

LOCATION

1.51

49450

TRN NUMBER 5 4945

PAGE 2 OF 2



### WELL RECORD & LOG

#### OFFICE OF THE STATE ENGINEER

#### www.ose.state.nm.us

	OSE POD N	UMBER (W	ELL NUMBER)	um a si in mar. i		, , , , , , , , , , , , , , , , , , ,	OSE FILE NU	MBER(S)				
z	CP ~ 135	5 East St	andard (South)							- ≥	3	л I
ĭ	WELL OWN						PHONE (OPTI	ONAL)		·		H4-F
2	Merchan	its Lives	tock/Glenn's Wate	r Well Service, Ir	nc.		(575)398-2					
7			NG ADDRESS		-		CITY		STA			Z ZIP
AND WELL LOCATION	P.O. Box						Tatum		NM	Ċ	882 <del>6</del>	7
×	·			·			<u> </u>		<del></del>			n
N.	WELL		DEGREES			OS				- 786		0
	LOCATIO	ON L	ATITUDE 32	26	54.8	N	4	REQUIRED: ONE TE	NTH OF	A SECO	<b>ω</b> ∰⊆	Ē
GENERAL	(FROM G	PS) L	ONGITUDE 103	33	58.3	W	* DATUM RE	QUIRED: WGS 84		رب س	35	2
	DESCRIPTIO	N RELATING	WELL LOCATION TO STREE	T ADDRESS AND COMM	ON LANDMARKS - PL	S (SECTION, T	OWNSHJIP, RANG	SE) WHERE AVAILABLE	<u> </u>	. Jak. militi	والم المهد المراث	
i	NE/NW/	SW Sec.	27, T21S, R33E on	Merchants Lives	tock Land							
* Additional control	LICENSE N	UMBER	NAME OF LICENSED	DRILLER	dannaman en 1995 er 2 sjok saffir	d	W#3486	NAME OF WELL D	RILLIN	3 COMPA	NY	
	WD 421		Corky Glenn					Glenn's Water	Well	Service	e, Inc.	
	DRILLING	STARTED		DEPTH OF COMPLET	ED WELL (FT)	1	LE DEPTH (FT)	DEPTH WATER FI	RST EN	COUNTE	RED (FT)	
	7/29/14		8/2/14	1192'		1192'		925'				
					`	•		STATIC WATER L	EVEL IN	COMPLE	TED WE	LL (FT)
Z	COMPLETE	D WELL IS	: • ARTESIAN	C DRY HOLE C	SHALLOW (UNC	ONFINED)		582'	-			
TIO	DRILLING I	LUID:	C AIR	Смир	ADDITIVES - SP	ECIFY:		·				
CASING INFORMATION	DRILLING N	METHOD:	© ROTARY	C HAMMER C	CABLE TOOL	С отне	R - SPECIFY:					
FO	DEPTH	(feet bgl)	POPERIORE	CASING MATE	RIAL AND/OR			C. CDIO	Τ.		10 177	
Z.	FROM	TO	BORE HOLE DIAM	GR/			ASING NECTION	CASING INSIDE DIAM.		SING V HICKN		SLOT SIZE
Ĭ	, inclui		(inches)	(include each ca		1	YPE	(inches)	'	(inche		(inches)
Š	01			note section	is of screen)	ļ.,			+			
3	0'	40'	20"	16"		None		15 1/2"	.2			
ž	0'	757'	14 3/4"	9 5/8"			and Collar	.352		lbs.		none
DRILLING &	757'	1192'	8 3/4'	7"		Inread	and Collar	6.5"	23	lbs.		1/8"
ă												
7					*							
4 3				•								
										····		
				, , ,	<del></del>				<u> </u>			
in d						<u> </u>						
	DEPTH	(feet bgl)	BORE HOLE	LIST AN	NULAR SEAL M	ATERIAL A	AND	AMOUNT	mtylefer of A simol	h	ÆTHO	D OF
ا ال	FROM	ТО	DIAM. (inches)		ACK SIZE-RANG			(cubic feet)			LACEM	
KI,	0'	40'	20"	Cemented	-			2 yds		Top F	Our	
AT.	0'	757'	14 3/4"	Float and Sho	Cemented to	Surface		1034		Circu		
X	<u> </u>	, , , ,	173/7	Tiodt and Silo	e cemented to	Juriace		1034		Circa	ateu	
AR									<u> </u>			
55		ļ				·						<u>. :</u>
ANNULAR MATERIAL	,		·					:				
က												
FOR	OSE INTER	NAL USI	Ε .				WR-20	0 WELL RECORD	& LO	G (Versi	on 06/0	8/2012)
	NUMBER		P-1266	•	POD NUMBER		<del></del>	NUMBER <		450		
LOC	ATION	Ex		-	1015	336	- 40	3/2	7-7	<del>ر ر</del> ر	PAGE	1 OF 2
		CX	<b>Y</b>	<del></del>	$-\alpha U$	216	~ /	1.0				

	and the state of t	Country's Series Street Series	China Caracter Commence	The state of the s	Add to a manager of the control of t	
	DEPTH (	feet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED	- WATER	ESTIMATED
			THICKNESS	INCLUDE WATER-BEARING CAVITIES OR FRACTURE Z	- Trible	YIELD FOR WATER-
	FROM	ТО	(feet)	(attach supplemental sheets to fully describe all units)	(YES/NO)	BEARING ZONES (gpm)
	0'	4'	4'	Soil	CY © N	(86)
	4'	28'	24'	Caleche	CYON	
	28'	120'	92'	Sand and Clay	C Y O N	
	120'	260'	140'	Red Clay	CY 6 N	
Constant Constant	260'	757'	497'	Red and Brown Shale and Clay(some blue)	CY @ N	
	757¹	815'	58'	Red and Brown Shale	CY ON	
	815'	840'	25'	Blue Clay and Shale	OY 6 N	
. S	840'	925'	85'	Red and Brown Shale(some sandrock)	CY 6 N	
9	925'	975'	50'	Watersand and Gravel	© Y C N	
3	975'	1185'	210'	Watersand(brown sandrock)	© Y C N	
Ö	1185'	1192'	7'	Red Shale	C Y © N	
5					$O_{\Lambda}$ $O_{N}$	
4. HYDROGEOLOGIC LOG OR WEL	:				$O^{Y} O^{N}$	
2					CYCN	* 7
4.	1				$O_{X} O_{N}$	
					$C^{Y} C^{N}$	
					CYCN	
					OY ON	
and the second	<u> </u>				$O^{Y} O^{N}$	:
AV STORES					$C^{Y}$	
					$C^{Y}$	
	METHOD U	JSED TO ES	TIMATE YIELD	D OF WATER-BEARING STRATA: PUMP	TOTAL ESTIMATED	
	C AIR LIF	т О	BAILER (	OTHER - SPECIFY:	WELL YIELD (gpm): 5	50
		·				s un or e ou kolik lik
	WELL TES			ACH A COPY OF DATA COLLECTED DURING WELL TESTING ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN		
SION	MICORYYA		Table 19 - Chief Co., San Head	Salar 1821 - 1877 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 - 1878 -	to the control of the	State from the other
RIG SUPERVI	MISCELLA	NEOUS INI	FORMATION:			
ians	0' to 757	7° drilled w	ith mud 757	' to 1192' drilled with air and foam.		
uG S	0 10 737	diffica v	ilii iiidd. 737	to 1132 dillica with all a fourth.		
I.I						
TEST;	PRINT NA	ME(S) OF D	RILL RIG SUPE	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL	CONSTRUCTION OTHER TH	AN LICENSEE:
'n						
1.91.95 e.;	THE UNDE	RSIGNED I	IFREBY CERTII	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND	BELIEF THE FOREGOING IS	A TRUE AND
₽.	CORRECT	RECORD O	F THE ABOVE I	DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WE		
SIGNATURE	AND THE	PERMITHO	LDEK WITHIN.	20 DAYS AFTER COMPLETION OF WELL DRILLING:		0 0
- <u>Š</u>	A	0	40	0 4 //	a/h/10	
. S.	10	Jag.	1 com	Corky Gless	0/1/14	
SyrX*:	make entry . The second	SIGNAT	URE OF DRILLI	ER / PRINT SIGNEE NAME	DATE	<u> </u>
FOI	R OSE INTER			WR-20	WELL RECORD & LOG (Ver	rsion 06/08/2012)
FIL	E NUMBER	10-	-1355	POD NUMBER / TRN N	TUMBER 5 49 US	$\overline{\mathcal{O}}$

TRN NUMBER

PAGE 2 OF 2

LOCATION



# 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)

Well Tag POD Number

Q64 Q16 Q4 Sec Tws Rng

X Y

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"

08/25/2014

6.37

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

**Drill Finish Date:** 

**PCW Rcv Date:** 

08/09/2014

Plug Date:

Source:

Artesian

Log File Date: Pump Type:

Released to Imaging: 1/18/2022 2:19:06 PM

Pipe Discharge Size:

Estimated Yield:

**Casing Size:** 

Depth Well:

1098 feet

Depth Water: 555

555 feet

Water Bearing Stratifications: Top Bottom Description

765 795 Sandstone/Gravel/Conglomerate795 825 Shale/Mudstone/Siltstone

795 825 Shale/Mudstone/Siltstone825 920 Sandstone/Gravel/Conglomerate

920 935 Shale/Mudstone/Siltstone

935 968 Sandstone/Gravel/Conglomerate

968 976 Shale/Mudstone/Siltstone

976 1005 Sandstone/Gravel/Conglomerate1005 1092 Sandstone/Gravel/Conglomerate

**Casing Perforations:** 

Top Bottom

735 1098

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability for any particular purpose of the data.



# 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)

**Well Tag POD Number**  Q64 Q16 Q4 Sec Tws Rng

Υ X

CP 01357 POD1

27 21S 33E

634782 3591347

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

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

09/10/2014

6.37

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

**Drill Finish Date:** 

08/26/2014

Plug Date:

Source:

Artesian

Log File Date: **Pump Type:** 

**PCW Rcv Date:** 

**Depth Well:** 

**Estimated Yield:** 

**Casing Size:** 

Pipe Discharge Size:

1286 feet

**Depth Water:** 

578 feet

**Top Bottom Description** Water Bearing Stratifications:

945

960 Sandstone/Gravel/Conglomerate

960

Shale/Mudstone/Siltstone 1077

1077

1215 Sandstone/Gravel/Conglomerate

1215

1286 Shale/Mudstone/Siltstone

**Casing Perforations:** 

Top Bottom

846

1286

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/5/19 2:11 PM

# **Appendix B**

**EM Survey Calibration** 

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 CALIBRATION TO CHLORIDE

Revised: March 7, 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 appoximtely 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.

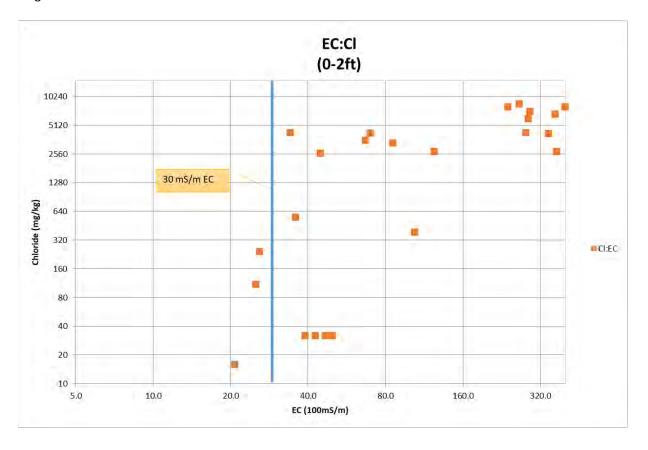
The below charts show the correlation between EC and Chloride (Cl) measurements. The EC measurements collected in the field were temperature corrected (TC) to 25° Celsius. Table 1 shows

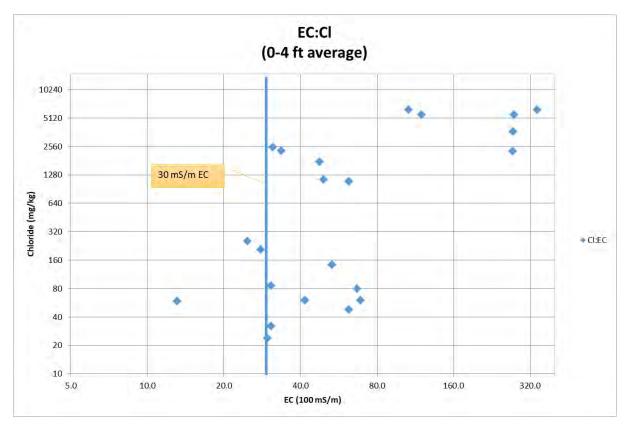
7 March 2019 Page 2

the data, collected by R.T. Hicks Consultants, which was used for the EC:Cl correlation. Table 2 shows the temperature correction factor.

Analysis of data shows that an  $EC_{tc}$  value greater than 30 mS/m is the delineation curve where chloride in soil will 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.

7 March 2019 Page 3





R.T. Hicks Consultants, LTD

Table 1 EM 38 Survey EC:Cl

Control   Cont	
Background         12/12/2018         0         No         4.2         6.8         6.2         10.1           Background         12/17/2018         0 - 2         No         -         1.0         -         1.0         -         1.0         -         1.0         -         1.0         -         1.0         -         -         1.0         -	21
Background         12/12/2018         0         No         4.2         6.8         6.2         10.1           Background         12/17/2018         0 - 2         No         1           Background         12/17/2018         2 - 4         No         3           Background         12/17/2018         5 - 6         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/17/2018         2         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/17/2018         4.5         No         396         230.0         586.1         340.4         4,588         6,5           S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,5           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1 - 2         No         343         341.0         343         341.0           S3 Trench         12/17/2018         2 - 4         No         8	1
Background         12/17/2018         0 - 2         No         Inchest           Background         12/17/2018         2 - 4         No         3           Background         12/17/2018         5 - 6         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/17/2018         2         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/17/2018         4.5         No         396         230.0         586.1         340.4         4,588         6,7           S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,7           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1 - 2         No         343         341.0         343         341.0           S3 Trench         12/17/2018         2 - 4         No         8,6         8,7         8,7           S4 Base         12/10/2018         2         Yes         333         252.0	/kg
Background         12/17/2018         2 - 4         No         3           Background         12/17/2018         5 - 6         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/10/2018         2         No         396         230.0         586.1         340.4         4,588         6,7           S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,7           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1         No         343         341.0         343         341.0           S3 Trench         12/17/2018         1 - 2         No         8,6         4,5         8,6           S4 Base         12/10/2018         2 - 4         No         8,6         479.5         362.9         10,0	
Background         12/17/2018         5 - 6         No         3           S1 Base         12/10/2018         2         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/17/2018         4.5         No         396         230.0         586.1         340.4         4,588         6,6           S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,7           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1         No         343         341.0         343         341.0           S3 Trench         12/17/2018         1 - 2         No         8,6           S4 Base         12/10/2018         2 - 4         No         8,6           S4 Base         12/10/2018         2         Yes         333         252.0         479.5         362.9         10,	6
S1 Base         12/10/2018         2         No         206         253.0         296.6         364.3         4,992         6,7           S1 Base         12/17/2018         4.5         No         396         230.0         586.1         340.4         4,588         6,6           S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,7           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1         No         343         341.0         343         341.0           S3 Trench         12/17/2018         1 - 2         No         4,3           S4 Base         12/10/2018         2 - 4         No         8,6           S4 Base         12/10/2018         2         Yes         333         252.0         479.5         362.9         10,	2
S1 Base         12/17/2018         4.5         No         396         230.0         586.1         340.4         4,588         6,4           S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,7           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1         No         343         341.0         343         341.0           S3 Trench         12/17/2018         1 - 2         No         4,2         4,2           S3 Trench         12/17/2018         2 - 4         No         8,6           S4 Base         12/10/2018         2         Yes         333         252.0         479.5         362.9         10,	2
S2 Base         12/10/2018         2         No         256         181.0         368.6         260.6         1,355         2,7           S3 Base         12/10/2018         2         No         277         250.0         398.9         360.0         5,575         8,6           S3 Trench         12/17/2018         1         No         343         341.0         343         341.0           S3 Trench         12/17/2018         1 - 2         No         4,7         4,7           S3 Trench         12/17/2018         2 - 4         No         8,6           S4 Base         12/10/2018         2         Yes         333         252.0         479.5         362.9         10,	20
S3 Base     12/10/2018     2     No     277     250.0     398.9     360.0     5,575     8,6       S3 Trench     12/17/2018     1     No     343     341.0     343     341.0       S3 Trench     12/17/2018     1 - 2     No     4,7       S3 Trench     12/17/2018     2 - 4     No     8,6       S4 Base     12/10/2018     2     Yes     333     252.0     479.5     362.9     10,	.00
S3 Trench         12/17/2018         1         No         343         341.0         343         341.0           S3 Trench         12/17/2018         1 - 2         No         4,7           S3 Trench         12/17/2018         2 - 4         No         8,6           S4 Base         12/10/2018         2         Yes         333         252.0         479.5         362.9         10,	20
S3 Trench     12/17/2018     1 - 2     No     4,3       S3 Trench     12/17/2018     2 - 4     No     8,4       S4 Base     12/10/2018     2     Yes     333     252.0     479.5     362.9     10,	000
S3 Trench         12/17/2018         2 - 4         No         8,4           S4 Base         12/10/2018         2         Yes         333         252.0         479.5         362.9         10,	
S4 Base 12/10/2018 2 Yes 333 252.0 479.5 362.9 10,	.00
	.00
	500
S5 Base   12/10/2018   2   Yes   202   211.0   290.9   303.8   7,3	.00
S6 Trench   12/17/2018   0   No   14   20.0   20.7   29.6	
S6 Trench 12/17/2018 0 - 2 No 1	6
S6 Trench 12/17/2018 2 - 4 No 3	2
S6 Trench 12/17/2018 5 - 6 No 3	2
S7 Trench 12/17/2018 0 No 23 21.0 34.0 31.1	
S7 Trench 12/17/2018 0 - 2 No 4,	20
S7 Trench 12/17/2018 2 - 4 No 7	36
S7 Trench 12/17/2018 5 - 6 No 2	24
EC-1 12/11/2018 0 No 336 302.0 497.3 447.0	
EC-1 12/11/2018 0 - 2 No 4,711	
EC-2   12/11/2018   0   No   47   47.0   69.6   69.6   4,253	
EC-2 12/11/2018 0 - 2 No 4,253	
EC-3   12/11/2018   0   No   45   66.6	
EC-3 12/11/2018 0 - 2 No 3,575	
EC-4 12/01/2018 2.5 No 17.9 21.0 25.8 30.2	
EC-4 12/01/2018 2.5 No 244	
EC-5 12/19/2018 3.5 Yes 70 40.0 103.6 59.2	
EC-5 12/19/2018 3.5 Yes 388	

Table 1 EM 38 Survey EC:Cl

			<u> </u>	EC:Cl					
Sample Name	Date	Depth	In-Use	EM38	EM38	EM38 TC	EM38 TC	Cl	Cl
Sample I tame	Bate			(Horizontal	(vertical)	(Horizontal	(vertical)		
		(ft)	(Yes/No)	100mS/m	100mS/m	100mS/m	100mS/m	(titration)	mg/kg
Tee (release origin)	12/15/2018	0	Yes	189.6	153.4	280.6	227.0		
Tee (release origin)	04/26/2018	0-0.5	Yes	10,10	10011	200.0	22710		4,800
Tee (release origin)	04/26/2018	0.5-1.0	Yes						830
Tee (release origin)	04/26/2018	1-2	Yes						1,100
Tee (release origin)	04/26/2018	2-3	Yes						1,100
Tee (release origin)	04/26/2018	3-4	Yes						1,500
Tee (release origin)	04/26/2018	4-5	Yes						1,600
83 ft East (of origin)	12/15/2018	0		193.8	185.2	286.8	274.1		ĺ
83 ft East (of origin)	01/16/2019	0-2	Yes						6,000
83 ft East (of origin)	01/16/2019	2-4	Yes						1,420
83 ft East (of origin)	01/16/2019	5	Yes						1,760
35 ft Northeast (of origin)	12/15/2018	0	No	189.8	186.3	280.9	275.7		
35 ft Northeast (of origin)	01/16/2019	0-2	No						4,320
35 ft Northeast (of origin)	01/16/2019	2-4	No						3,920
35 ft Northeast (of origin)	01/16/2019	0-4	No						5,600
35 ft Northeast (of origin)	01/16/2019	5	No						5,040
230 ft East (of origin)	12/15/2018	0		178.8	71.8	264.6	106.3		ĺ
230 ft East (of origin)	01/16/2019	0-2	Yes						8,660
230 ft East (of origin)	01/16/2019	2-4	Yes						960
230 ft East (of origin)	01/16/2019	0-4	Yes						6,320
230 ft East (of origin)	01/16/2019	5	Yes						368
390 ft East (of origin)	12/15/2018	0		161.5	80.8	239.0	119.6		
390 ft East (of origin)	01/16/2019	0-2							8,000
390 ft East (of origin)	01/16/2019	2-4							624
390 ft East (of origin)	01/16/2019	0-4							5,600
390 ft East (of origin)	01/16/2019	4.3							3,360
Background	12/15/2018	0	No	16.9	20.7	25.0	30.6		
Background	01/30/2019	0-2	No						110
Background	01/30/2019	2-4	No						61
Background	01/30/2019	5	No						120
EC-01	12/15/2018	0	No	30.1	33.3	44.5	49.3		
EC-01	01/16/2019	0-2	No						2,600
EC-01	01/16/2019	2-4	No						352
EC-01	01/16/2019	0-4	No						1,140
EC-01	01/16/2019	4.3	No						64
EC-02	12/15/2018	0	No	18.3	16.7	27.1	24.7		
EC-02	01/16/2019	0-4	No						256
EC-02	01/16/2019	4.3	No						7,200
EC-03	12/15/2018	0	No	21.8	20.7	32.3	30.6		
EC-03	01/16/2019	0-4	No						32
EC-03	01/16/2019	5.0	No						48
EC-04	12/15/2018	0	No	83.4	22.7	123.4	33.6		
EC-04	01/16/2019	0-2	No						2,720
EC-04	01/16/2019	2-4	No						688
EC-04	01/16/2019	0-4	No						2,320
EC-04	01/16/2019	5.0	No						192
EC-05	12/15/2018	0	No	57.4	32.1	85.0	47.5		
EC-05	01/16/2019	0-2	No						3,360
EC-05	01/16/2019	2-4	No						1,010
EC-05	01/16/2019	0-4	No						1,760
EC-05	01/16/2019	5.0	No			<u> </u>			704

Table 1 EM 38 Survey EC:Cl

		1		LC.CI					
Sample Name	Date	Depth	In-Use	EM38	EM38	EM38 TC	EM38 TC	C1	C1
<u>-</u>				(Horizontal	(vertical)	(Horizontal	(vertical)		
		(ft)	(Yes/No)	100mS/m	100mS/m	100mS/m	100mS/m	(titration)	mg/kg
HA1	1/9/2019	0	Yes	27.5	18.0	42.6	27.9		
HA1	1/23/2019	0-2	Yes						32
HA1	1/23/2019	2-4	Yes						304
HA1	1/23/2019	0-4	Yes						208
HA2	1/9/2019	0	Yes	25.0	34.3	38.8	53.2		
HA2	1/23/2019	0-2	Yes						32
HA2	1/23/2019	2-4	Yes						160
HA2	1/23/2019	0-4	Yes						144
HA3	1/9/2019	0	Yes	23.0	40.0	35.7	62.0		
HA3	1/23/2019	0-2	Yes						560
HA3	1/23/2019	2-4	Yes						1840
HA3	1/23/2019	0-4	Yes						1100
HA1	1/9/2019	0	Yes	30.0	40.0	46.5	62.0		
HA1	1/23/2019	0-2	Yes						32
HA1	1/23/2019	2-4	Yes						64
HA1	1/23/2019	0-4	Yes						48
HA1	1/23/2019	4-4.2	Yes						64
HA2	1/23/2019	0	Yes	32.0	43.0	49.6	66.7		
HA2	1/23/2019	0-2	Yes						32
HA2	1/23/2019	2-4	Yes						112
HA2	1/23/2019	0-4	Yes						80
HA2	1/23/2019	0-4.4	Yes						96
Trench 1	2/24/2019	0	Yes	187.0	145.0	273.0	211.7		
Trench 1	2/24/2019	0-4	Yes						2300
Trench 1	2/24/2019	4.5	Yes						<60
Trench 2	2/24/2019	0	Yes	6.0	9.0	8.8	13.1		
Trench 2	2/24/2019	0-4	Yes						<59
Trench 2	2/24/2019	4.5	Yes						<60
HA-01	2/24/2019	1	No	32.7	47.2	47.7	68.9		
HA-01	2/24/2019	1-4	No						<60
HA-01	2/24/2019	4.5	No						<60
HA-02	2/24/2019	0	No	18.0	28.5	26.3	41.6		30
HA-02	2/24/2019	0-4	No	10.0	20.0				<60
HA-02	2/24/2019	4.5	No						<60

Table 2 EC Temperature Correction Factor

Date	Correction Factor
01/01	1.55
01/01	1.55
01/02	1.55
01/04	1.55
01/05	1.55
01/05	1.55
01/00	1.55
01/07	1.55
01/08	1.55
01/09	1.55
01/10	1.56
01/11	1.56
01/12	1.56
01/13	1.56
01/14	1.56
01/15	1.56
01/10	1.56
	1.56
01/18	1.56
01/19	1.56
01/20	
01/21	1.55
01/22	1.55
01/23	1.55
01/24	1.55
01/25	1.55
01/26	1.55
01/27	1.55
01/28	1.55
01/29	1.55
01/30	1.55
01/31	1.55
02/01	1.53
02/02	1.53
02/03	1.53
02/04	1.53
02/05	1.53
02/06	1.53
02/07	1.53
02/08	1.53
02/09	1.53
02/10	1.53
02/11	1.5
02/12	1.5
02/13	1.5
02/14	1.5
02/15	1.5
02/16	1.5
02/17	1.5
02/18	1.5
02/19	1.5
02/20	1.5
02/21	1.46
02/22	1.46
02/23	1.46
02/24	1.46
02/25	1.46
02/26	1.46
02/27	1.46
02/28	1.46
02/29	1.46

Table 2 EC Temperature Correction Factor

Data	Commention Footon
Date	Correction Factor
03/01	1.42 1.42
03/02 03/03	1.42
03/03	1.42
03/04	1.42
03/03	1.42
03/00	1.42
03/07	1.42
03/09	1.42
03/10	1.42
03/11	1.36
03/12	1.36
03/13	1.36
03/14	1.36
03/15	1.36
03/16	1.36
03/17	1.36
03/18	1.36
03/19	1.36
03/20	1.36
03/21	1.3
03/22	1.3
03/23	1.3
03/24	1.3
03/25	1.3
03/26	1.3
03/27	1.3
03/28	1.3
03/29	1.3
03/30	1.3
03/31	1.3
04/01	1.24
04/02	1.24
04/03	1.24
04/04	1.24
04/05 04/06	1.24 1.24
04/06	1.24
04/07	1.24
04/08	1.24
04/09	1.24
04/10	1.18
04/12	1.18
04/13	1.18
04/14	1.18
04/15	1.18
04/16	1.18
04/17	1.18
04/18	1.18
04/19	1.18
04/20	1.18
04/21	1.13
04/22	1.13
04/23	1.13
04/24	1.13
04/25	1.13
04/26	1.13
04/27	1.13
04/28	1.13
04/29	1.13
04/30	1.13

Table 2 EC Temperature Correction Factor

Data	Commention Footon
Date OF /01	Correction Factor
05/01 05/02	1.08 1.08
05/02	1.08
05/03	1.08
05/05	1.08
05/06	1.08
05/07	1.08
05/07	1.08
05/09	1.08
05/10	1.08
05/11	1.04
05/12	1.04
05/13	1.04
05/14	1.04
05/15	1.04
05/16	1.04
05/17	1.04
05/18	1.04
05/19	1.04
05/20	1.04
05/21	1
05/22	1
05/23	1
05/24	1
05/25	1
05/26	1
05/27	1
05/28	1
05/29	1
05/30	1
05/31	1
06/01	0.97
06/02	0.97
06/03	0.97
06/04	0.97
06/05	0.97
06/06	0.97
06/07	0.97
06/08	0.97
06/09	0.97
06/10	0.97
06/11 06/12	0.94
06/12	0.94 0.94
06/14	0.94
	0.94
06/15 06/16	0.94
06/17	0.94
06/17	0.94
06/19	0.94
06/20	0.94
06/21	0.92
06/22	0.92
06/23	0.92
06/24	0.92
06/25	0.92
06/26	0.92
06/27	0.92
06/28	0.92
06/29	0.92
06/30	0.92
- 5, 50	0.02

Table 2 EC Temperature Correction Factor

07/01	Date	Correction Factor
07/02         0.91           07/03         0.91           07/04         0.91           07/05         0.91           07/06         0.91           07/07         0.91           07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92 </th <th></th> <th></th>		
07/03         0.91           07/04         0.91           07/05         0.91           07/06         0.91           07/07         0.91           07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92 </td <td></td> <td></td>		
07/04         0.91           07/05         0.91           07/06         0.91           07/07         0.91           07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92 </td <td></td> <td></td>		
07/05         0.91           07/06         0.91           07/07         0.91           07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92 </td <td></td> <td></td>		
07/06         0.91           07/07         0.91           07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92 </td <td>•</td> <td></td>	•	
07/07         0.91           07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92 </td <td></td> <td></td>		
07/08         0.91           07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/10         0.92 </td <td></td> <td></td>		
07/09         0.91           07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/10         0.92           08/11         0.93 </td <td></td> <td></td>		
07/10         0.91           07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93 </td <td></td> <td></td>		
07/11         0.91           07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93 </td <td></td> <td></td>		
07/12         0.91           07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93 </td <td></td> <td></td>		
07/13         0.91           07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93 </td <td></td> <td></td>		
07/14         0.91           07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93 </td <td></td> <td></td>		
07/15         0.91           07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93 </td <td></td> <td></td>		
07/16         0.91           07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93 </td <td>•</td> <td></td>	•	
07/17         0.91           07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93 </td <td></td> <td></td>		
07/18         0.91           07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93 </td <td></td> <td></td>		
07/19         0.91           07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93 </td <td></td> <td></td>		
07/20         0.91           07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91 </td <td></td> <td></td>		
07/21         0.91           07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/19         0.93           08/20         0.93 </td <td>•</td> <td></td>	•	
07/22         0.91           07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/19         0.93           08/20         0.93           08/21         0.91 </td <td></td> <td>0.91</td>		0.91
07/23         0.91           07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91 </td <td></td> <td>0.91</td>		0.91
07/24         0.91           07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/26         0.91 </td <td></td> <td>0.91</td>		0.91
07/25         0.91           07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91 </td <td></td> <td>0.91</td>		0.91
07/26         0.91           07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/26         0.91           08/27         0.91           08/28         0.91 </td <td>07/24</td> <td>0.91</td>	07/24	0.91
07/27         0.91           07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91 </td <td>07/25</td> <td>0.91</td>	07/25	0.91
07/28         0.91           07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91 </td <td>07/26</td> <td>0.91</td>	07/26	0.91
07/29         0.91           07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/25         0.91           08/26         0.91           08/28         0.91           08/29         0.91           08/30         0.91		0.91
07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/23         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91	07/28	0.91
07/30         0.91           07/31         0.91           08/01         0.92           08/02         0.92           08/03         0.92           08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/23         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91		0.91
08/01 0.92 08/02 0.92 08/03 0.92 08/04 0.92 08/05 0.92 08/06 0.92 08/07 0.92 08/07 0.92 08/08 0.92 08/09 0.92 08/11 0.93 08/12 0.93 08/13 0.93 08/14 0.93 08/15 0.93 08/16 0.93 08/16 0.93 08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/29 0.91 08/29 0.91 08/29 0.91 08/29 0.91 08/29 0.91		0.91
08/02	07/31	0.91
08/03	08/01	0.92
08/04         0.92           08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91	08/02	0.92
08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/28         0.91           08/29         0.91           08/30         0.91	08/03	0.92
08/05         0.92           08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/28         0.91           08/29         0.91           08/30         0.91	08/04	0.92
08/06         0.92           08/07         0.92           08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/28         0.91           08/29         0.91           08/30         0.91		0.92
08/07 0.92 08/08 0.92 08/09 0.92 08/10 0.92 08/11 0.93 08/12 0.93 08/13 0.93 08/14 0.93 08/15 0.93 08/16 0.93 08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/29 0.91		0.92
08/08         0.92           08/09         0.92           08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/28         0.91           08/29         0.91           08/30         0.91		0.92
08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91		0.92
08/10         0.92           08/11         0.93           08/12         0.93           08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91	08/09	0.92
08/11 0.93 08/12 0.93 08/13 0.93 08/14 0.93 08/15 0.93 08/16 0.93 08/17 0.93 08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91		0.92
08/12 0.93 08/13 0.93 08/14 0.93 08/15 0.93 08/16 0.93 08/17 0.93 08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91		0.93
08/13         0.93           08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91		
08/14         0.93           08/15         0.93           08/16         0.93           08/17         0.93           08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91		
08/15 0.93 08/16 0.93 08/17 0.93 08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91		
08/16 0.93 08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91		
08/17 0.93 08/18 0.93 08/19 0.93 08/20 0.93 08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91		
08/18         0.93           08/19         0.93           08/20         0.93           08/21         0.91           08/22         0.91           08/23         0.91           08/24         0.91           08/25         0.91           08/26         0.91           08/27         0.91           08/28         0.91           08/29         0.91           08/30         0.91		
08/19 0.93 08/20 0.93 08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91		
08/20     0.93       08/21     0.91       08/22     0.91       08/23     0.91       08/24     0.91       08/25     0.91       08/26     0.91       08/27     0.91       08/28     0.91       08/29     0.91       08/30     0.91		
08/21 0.91 08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/22 0.91 08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/23 0.91 08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/24 0.91 08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/25 0.91 08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/26 0.91 08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/27 0.91 08/28 0.91 08/29 0.91 08/30 0.91		
08/28 0.91 08/29 0.91 08/30 0.91		
08/29 0.91 08/30 0.91		
08/30 0.91		
-		
U8/31 0.91	_	
	08/31	0.91

Table 2 EC Temperature Correction Factor

Data	Composition Footon
Date 00/01	Correction Factor
09/01 09/02	0.98 0.98
09/02	0.98
09/03	0.98
09/04	0.98
09/03	0.98
09/07	0.98
09/08	0.98
09/09	0.98
09/10	0.98
09/11	1.01
09/12	1.01
09/13	1.01
09/14	1.01
09/15	1.01
09/16	1.01
09/17	1.01
09/18	1.01
09/19	1.01
09/20	1.01
09/21	1.05
09/22	1.05
09/23	1.05
09/24	1.05
09/25	1.05
09/26	1.05
09/27	1.05
09/28	1.05
09/29	1.05
09/30	1.05
10/01	1.09
10/02	1.09
10/03	1.09
10/04	1.09
10/05	1.09
10/06	1.09
10/07	1.09
10/08	1.09
10/09	1.09
10/10	1.09
10/11	1.14
10/12	1.14
10/13	1.14
10/14	1.14
10/15	1.14
10/16 10/17	1.14 1.14
10/17	1.14
10/18	1.14
	1.14
10/20 10/21	1.14
10/21	1.2
10/22	1.2
10/23	1.2
10/24	1.2
10/25	1.2
10/20	1.2
10/27	1.2
10/28	1.2
10/30	1.2
10/31	1.2
-0,01	1.2

Table 2 EC Temperature Correction Factor

Data	Commention Footon
Date	Correction Factor
11/01 11/02	1.26 1.26
11/02	1.26
11/03	1.26
11/04	1.26
11/03	1.26
11/07	1.26
11/07	1.26
11/09	1.26
11/10	1.26
11/11	1.32
11/12	1.32
11/13	1.32
11/14	1.32
11/15	1.32
11/16	1.32
11/17	1.32
11/18	1.32
11/19	1.32
11/20	1.32
11/21	1.38
11/22	1.38
11/23	1.38
11/24	1.38
11/25	1.38
11/26	1.38
11/27	1.38
11/28	1.38
11/29	1.38
11/30	1.38
12/01	1.44
12/02	1.44
12/03	1.44
12/04	1.44
12/05	1.44
12/06	1.44
12/07	1.44
12/08	1.44
12/09	1.44
12/10	1.44
12/11	1.48
12/12	1.48
12/13	1.48
12/14	1.48
12/15	1.48
12/16 12/17	1.48
12/17	1.48
12/18	1.48 1.48
12/19	1.48
12/20	1.52
12/21	1.52
12/22	1.52
12/23	1.52
12/25	1.52
12/25	1.52
12/27	1.52
12/27	1.52
12/28	1.52
12/23	1.52
12/31	1.52
12/31	1.52

# **Appendix C**

**Laboratory Certificates of Analyses** 

R.T. Hicks Consultants, Ltd.

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



December 11, 2018

ANDREW PARKER
R T HICKS CONSULTANTS
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE, NM 87104

RE: DAGGER 2H PW

Enclosed are the results of analyses for samples received by the laboratory on 12/10/18 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keine

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: 12/10/2018 Sampling Date: 12/10/2018
Reported: 12/11/2018 Sampling Type: Soil

Project Name: DAGGER 2H PW Sampling Condition: \*\* (See Notes)
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: LEA COUNTY, NM

### Sample ID: S 1 BASE @ 2' (H803613-01)

Chloride, SM4500CI-B	mg,	mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6720	16.0	12/11/2018	ND	432	108	400	3.77	
Sample ID: S 1 S. WALL	-	-							
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	12/11/2018	ND	432	108	400	3.77	
Sample ID: S 1 N. WALL	a 0-2' (H8036	(13-03)							
-	@ <b>0-2' (H803</b> 6 mg	-	Analyze	d By: AC					
-	-	-	<b>Analyze</b> Analyzed	d By: AC  Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sample ID: S 1 N. WALL ( Chloride, SM4500Cl-B  Analyte  Chloride	mg	/kg	-	-	BS 432	% Recovery	True Value QC 400	RPD 3.77	Qualifier
Chloride, SM4500CI-B  Analyte  Chloride	mg, Result <b>5280</b>	Reporting Limit	Analyzed	Method Blank		,	·		Qualifier
Chloride, SM4500CI-B  Analyte  Chloride  Sample ID: S 2 BASE @ 2	mg, Result <b>5280</b>	Reporting Limit 16.0	Analyzed 12/11/2018	Method Blank		,	·		Qualifier
Chloride, SM4500CI-B  Analyte	mg, Result <b>5280</b>	Reporting Limit 16.0	Analyzed 12/11/2018	Method Blank ND		,	·		Qualifier

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 12/10/2018 Sampling Date: 12/10/2018
Reported: 12/11/2018 Sampling Type: Soil

Project Name: DAGGER 2H PW Sampling Condition: \*\* (See Notes)
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: LEA COUNTY, NM

### Sample ID: S 2 N. WALL @ 0-2' (H803613-05)

Chioride, SM4500CI-B	mg/kg		Anaiyze	yzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5760	16.0	12/11/2018	ND	448	112	400	0.00	QM-07

### Sample ID: S 2 S. WALL @ 0- 2' (H803613-06)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5840	16.0	12/11/2018	ND	448	112	400	0.00	

### Sample ID: S 3 BASE @ 2' (H803613-07)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8000	16.0	12/11/2018	ND	448	112	400	0.00	

### Sample ID: S 3 S. WALL @ 0-2' (H803613-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/11/2018	ND	448	112	400	0.00	

### Sample ID: S 3 N. WALL @ 0-2' (H803613-09)

Chloride, SM4500Cl-B	14500Cl-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	12/11/2018	ND	448	112	400	0.00	

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Celey D. Keene



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 12/10/2018 Sampling Date: 12/10/2018
Reported: 12/11/2018 Sampling Type: Soil

Project Name: DAGGER 2H PW Sampling Condition: \*\* (See Notes)
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: LEA COUNTY, NM

### Sample ID: S 4 BASE @ 2' (H803613-10)

Chloride, SM4500Cl-B	mg	mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10500	16.0	12/11/2018	ND	448	112	400	0.00	
Sample ID: S / 1-2' (H9)	N3612-11\								

### Sample ID: S 4 1-2' (H803613-11)

Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8530	16.0	12/11/2018	ND	448	112	400	0.00	

### Sample ID: S 4 0-1' (H803613-12)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5330	16.0	12/11/2018	ND	448	112	400	0.00	

### Sample ID: S 5 BASE @ 2' (H803613-13)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7200	16.0	12/11/2018	ND	448	112	400	0.00	

### Sample ID: S 5 1-2' (H803613-14)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7860	16.0	12/11/2018	ND	448	112	400	0.00	

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Celey D. Keene



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 12/10/2018 Sampling Date: 12/10/2018

Reported: 12/11/2018 Sampling Type: Soil

Project Name: DAGGER 2H PW Sampling Condition: \*\* (See Notes)
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: LEA COUNTY, NM

### Sample ID: S 5 0-1' (H803613-15)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	12/11/2018	ND	448	112	400	0.00	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



### **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



# **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Released to Imaging: 1/18/2022 2:19:06 PM

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

Company Name	: RT Hicks Consultonts									BI	LL TO					Α	NALY	SIS R	REQU	EST		
Project Manage	r: Andrew Parker							P.O	. #:								11/1				1	
Address: Or	- Ale							Cor	mpai	ny:	RT Hick	7										
City:	State:	Zip	):								new Pa											
Phone #:	Fax #:							4.00	dress													
Project #:	Project Owne	r:						City	<b>/</b> :													
Project Name:							-	Sta	te:		Zip:											
Project Location	n: Dagger 2H PW							Pho	one #	<b>#</b> :						est l				7	1	
Sampler Name:	Moder							Fax								Zenc						
FOR LAB USE ONLY	1	0.			MA	TRI	X		PRES	SERV.	SAMPLI	NG	5			1Sen 2						
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:	DATE	TIME	(0084) 12	-		15 18 X, 18						
	51 Base @ 2 ft	6			X						122/0.18	13:00	*	X								
2	51 0A S,WALL 0-2A	C			-4						- 7	13:05		1								
3	51 N. WALL 0-2	C										13:10	Ш	-1								
4	52 Bax 02ft	11							4	4		13:15							-4-			
5	S2 NWALL 0-2	H	-	⊢								13:20								_		
6	52 SWALL 0-2	H	$\vdash$	-		-	-					13.30							-	-		
7	53 Bise @ 2A	+	-	-			-	_	-			13:40		-	1				-			
8	53 S. WALL 0-2 Pt	1		-	-1				4			13:45	4	-					-			
9	53 N WALL 0-2 St	V			V						A	13:50	4	A	A							

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 consequental 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: 12-10/-15	Received By:	(11/1)	Phone Result: Fax Result:	☐ Yes	□ No	Add'l Phone #: Add'l Fax #:	
Relinquished By:	Time: 16:30 Date:	Received By:	Market 1	REMARKS:	CHLOR	105	Rush!	Text when c1.
	Time:				1/10		17.77	are emailed to
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	13.2°	Sample Condition Cool Intact Yes Yes No No	CHECKED BY: (Initials)	HGLD	TPH	£ 137	TEX, Ben /	970-570-9535

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:



# **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Released to Imaging: 1/18/2022 2:19:06 PM

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

	RT Hicks Cons	v Monts						111111			BI	LL TO		+				ANA	LYS	IS R	EQU	EST			
Project Manager:	Morew Parker							1	P.0	. #:								11							34
Address:								(	Cor	npa	ny: Æ	T Hick	5												
City:		State:	Zip	c					Attr			rew Pa								1					
Phone #:		Fax #:							Add	dres														1	
Project #:		Project Owne	r:					0	City	<b>/</b> :															
Project Name:									Stat	te:		Zip:				(	2	1							
roject Location:	: Dogger 211	pw						I	Pho	ne i	<b>#</b> :					7.11.71 6.11.70	77								
ampler Name:	3,5							F	ax	#:						Ü	4			18					
FOR LAB USE ONLY						MAT	RIX		4	PRE	SERV.	SAMPL	ING		-	7	12								
Lab I.D.	Sample I	.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:	DATE	TIME	Ü	TPH EXT	RTEV	1								
10	S4 Base @ 2	A	6			X						12-10	14:00	X	X	X	(								
	54 1-25		1			1		4					14:05												
12	S4 0-1 F	~	$\vdash$	-	_	+	+	+	4	4	+		14:10		$\vdash$				-		4				
13	S5 Bax @ 2 S5 1-2 ft	4	H		=	+	+		$\dashv$	-			14:15	$\vdash$		$\rightarrow$	-		-	-	4	1			
	S5 0-1 A		V			1	+		+		+	V	14:20	1	1	1	-		-	-	+	+	-	-	-
15	25 U-1 F4				+	V	7	Ħ	+	-		-	14:25		Y	V	-		+		+	1	+	-	-
																				$\top$					
																									1

CHECKED BY:

(Initials)

HOLD BTEX, TPH, BENZENE

Sample Condition

Cool Intact
Yes Yes
No No



December 12, 2018

ANDREW PARKER
R T HICKS CONSULTANTS
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE, NM 87104

RE: DAGGER 2H PW

Enclosed are the results of analyses for samples received by the laboratory on 12/11/18 16:25.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keene

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: 12/11/2018 Sampling Date: 12/11/2018

Reported: 12/12/2018 Sampling Type: Soil
Project Name: DAGGER 2H PW Sampling Condition: \*\* (S

Project Name: DAGGER 2H PW Sampling Condition: \*\* (See Notes)
Project Number: ADVANCE ENERGY Sample Received By: Jodi Henson

Project Location: LEA COUNTY, NM

### Sample ID: SOURCE BASE @ 5' (H803623-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15900	16.0	12/12/2018	ND	416	104	400	0.00	

### Sample ID: SOURCE 0-3' (H803623-02)

Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	12/12/2018	ND	416	104	400	0.00	

### Sample ID: SOURCE 3-4' (H803623-03)

Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11700	16.0	12/12/2018	ND	416	104	400	0.00	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



### **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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Celeg D. Freene

Relinquished By:

Date: Time: 16:25

Received By:

Fax Result: REMARKS:

724

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RFN

Time:

and

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	RT Hicks Consultant		1000	BIL	BILL TO	And the second s	ANA	ANALYSIS REQUEST	JEST
Project Manager:	Andrew Parker		P	P.O. #:					
Address:			C	Company:					
City:	State:	Zip:	Þ	Attn:					
Phone #:	Fax #:		Þ	Address:		200			
Project #:	Project Owner:	ier:	0	City:					
Project Name: /	Advance Energy		S	State: Z	Zip:				
Project Location:	52000		70	Phone #:					
Sampler Name:	more Parker		'n	Fax #:					
FOR LAB USE ONLY		•. 	MATRIX	PRESERV.	SAMPLING				
Lab I.D. H%0%/23	Sample I.D.	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER	WASTEWATER SOIL OIL SLUDGE OTHER:	ACID/BASE: ICE / COOL OTHER :	DATE	Chloride			
	Source & Box @ 5 A	6	×		12-11 10	10:30 X			
		6	×			10:35 X			
(a)	3-4	6	×		))	X 0401			
PLEASE NOTE: Liability and I analyses, All claims including t service. In no event shall Card	PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive ternedy 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 consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	or any claim erising wheth be deemed waived unless ding without limitation, bus	ner based in contract or s made in writing and re siness interruptions, loss	tort, shall be limited to to ceived by Cardinal withing of use, or loss of profit	ne amount paid by the n 30 days after compl s incurred by client, its	s client for the letion of the applicable s subsidiaries,			
Relinquished By;	Relinquished By:    Date:   Phone Result:   Fax Result:   Pax Result:	Received By:	Y: Y		Pho	ılt: □ Yes	□ No Add'	Add'l Phone #: Add'l Fax #:	
	-			2 /2 /2	1				

+ Cardinal cannot accept varial channes Blasca fav written channes to IETEI 2002/2726

497

Sample Condition
Cool Intact
Yes Yes
No No

Sampler - UPS - Bus - Other: 17.4°

Delivered By: (Circle One)



December 18, 2018

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 12/18/18 8:05.

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 <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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: 12/18/2018 Sampling Date: 12/17/2018

Reported: 12/18/2018 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: Cool & Intact
Project Number: BSU 2H Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: S 3 TRENCH 1-2' (H803671-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	12/18/2018	ND	448	112	400	0.00	
Sample ID: S 3 TRENCH	2-4' (H80367	1-02)							
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
a	0.400	16.0	12/18/2018	ND	448	112	400	0.00	
Chloride	8400	10.0	12/10/2010	ND					
			12, 10, 2010	No					
Sample ID: S 3 TRENCH		1-03)		d By: AC					
Sample ID: S 3 TRENCH	6-7' (H80367	1-03)			BS	% Recovery	True Value QC	RPD	Qualifier
Sample ID: S 3 TRENCH Chloride, SM4500CI-B  Analyte Chloride	6-7' (H80367 mg/	1-03) /kg	Analyze	d By: AC		% Recovery	True Value QC 400	RPD 0.00	Qualifier
Sample ID: S 3 TRENCH Chloride, SM4500Cl-B  Analyte Chloride	6-7' (H80367 mg/ Result 18000	1-03) /kg Reporting Limit 16.0	<b>Analyze</b> Analyzed	d By: AC  Method Blank	BS	•	•		Qualifier
Sample ID: S 3 TRENCH Chloride, SM4500Cl-B  Analyte Chloride  Sample ID: S 3 TRENCH	6-7' (H80367 mg/ Result 18000	1-03) /kg  Reporting Limit 16.0	Analyzed Analyzed 12/18/2018	d By: AC  Method Blank	BS	•	•		Qualifier
Sample ID: S 3 TRENCH Chloride, SM4500Cl-B Analyte	6-7' (H80367 mg, Result 18000	1-03) /kg  Reporting Limit 16.0	Analyzed Analyzed 12/18/2018	d By: AC  Method Blank  ND	BS	•	•		Qualifier

### Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 12/18/2018 Sampling Date: 12/17/2018

Reported: 12/18/2018 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: Cool & Intact
Project Number: BSU 2H Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: S 6 TRENCH 0-2' (H803671-05)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: S 6 TRENCH 2-4' (H803671-06)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: S 6 TRENCH 5-6' (H803671-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: S 7 TRENCH 0-2' (H803671-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4320	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: S 7 TRENCH 2-4' (H803671-09)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	12/18/2018	ND	448	112	400	0.00	

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Celey D. Kune



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 12/18/2018 Sampling Date: 12/17/2018

Reported: 12/18/2018 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: Cool & Intact
Project Number: BSU 2H Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: S 7 TRENCH 5-6' (H803671-10)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: BACKGROUND 0-2' (H803671-11)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: BACKGROUND 2-4' (H803671-12)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: BACKGROUND 5-6' (H803671-13)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/18/2018	ND	448	112	400	0.00	

### Sample ID: S 1 TRENCH 4.5' (H803671-14)

Chloride, SM4500Cl-B	` mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	12/18/2018	ND	448	112	400	0.00	

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Celeg D. Freene



### **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

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 whistoever 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 related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene

Sampler - UPS - Bus - Other:



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Text when routs emailed,

Released to Imaging: 1/18/2022 2:19:06 PM

ON	(575) 393-2326 FAX (575) 393-247						1			-																	
Company Name	KI HICK CONSCITONID						-			ВІ	LL 70		1			_		ANA	ALY	SIS	R	EQU	ES	Т	_	_	_
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roject Locatio							F	Pho	ne #	19	70-57	-9535	1									1				V.	
ampler Name:	Andrew Parker						F	ax												d		Ø.				li .	
FOR LAB USE ONLY					MAT	RIX	-	F	PRES	SERV	SAMPL	ING	-	2					1	N							
Lab I.D.	Sample I.D.	(G)RAB-OR-(C)OMP.	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:	DATE	TIME		Chloride										1			
1	53 Trench 1-2 ft	6			X						12-17-18	12:30	Г	X													
2	53 Trench 2-4 ft	1			1							12:35	T	1											100		
3	53 Trench 6-7 A											12:45															
4	S3 Trench 9 ft				1							12:40		HULE											1		
5	Sto Trench G-2 ft										1	公3:0															
6	Sto Trench 2-4 ft	1										13:15															
7	Slo Trench 5-6 ft	1										1310							4								
8	S7 Trench 0-2 ft	1			1		4	4				15:15														Щ.	
9	S7 Trench 2-4 ft	4			1			4			1	15:05							4			-				4	
I EASE NOTE: Liebille	S7 Trench 5-6 ft and Damages. Cardinal's liability and client's exclusive remedy for	V	m aria	ing whether	V	in con	tract o	r lort	chall b	a limitad	I to the amount of	15:0	1														
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filiates or successors aris	sing out of or related to the performance of services hereunder by	Cardina	l, rega	rdless of wh	nether:							easons or otherwi	ise.			_											
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(Initials)

TO.

Cool Intact

Yes Yes
No No

<sup>+</sup> Cardinal cannot accent verbal changes Please fav written changes to (575) 393-2326



Company Name:

Project Manager:

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

Released to Imaging: 1/18/2022 2:19:06 PM

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

Hicks consultants

Address:	on-file						C	ompa	any:	ST Hick		1 1											
City:		State:	Zip	):			А	ttn:	S	Drew Po	inter												
Phone #:		Fax #:					А	ddres	ss:							1							
Project #: A	duance Enero	Project Owne	r:				c	ity:															
Project Name:	BSU 217 -	)/					s	tate:		Zip:													
Project Location							P	hone	#: 9	70-570	-5353												
Sampler Name:	Andrew Par	-ker						ax #:															
FOR LAB USE ONLY	Sample	.ID	OR (C)OMP.	NERS	WATER	MATRI	X		SERV	. SAMPL	NG	chloride											
HS03671	Sample	1.0.	(G)RAB	# CONT	GROUNDWATER	SOIL	SLUDGE .	ACID/BASE:	ICE / COOL OTHER:	DATE	TIME	chlo											
11	Background	0-2 ft	6			X				12-17-18	15:40	X		_									
12		2-4 ft	11								15:35												
13	Background	5-6 ft	11								15:30												
14	SI Trench	4.5 ft	11			V		+			16:10	V											
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analyses. All claims includi service. In no event shall C affiliates or successors arisi	nd Damages. Cardinal's liability and ng those for negligence and any ot ardinal be liable for incidental or co ing out of or related to the performa	ther cause whatsoever shall be onsequental damages, including ance of services hereunder by	deeme g witho Cardina	ed walve ut limita al, rega	ed unless ation, busing dless of w	made in writ ness interrup hether such	ing and re ptions, loss	ceived by s of use, o	Cardinal or loss of	within 30 days after profits incurred by	r completion of the client, its subsidia asons or otherwise	he applicabl aries, se.											
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BILL TO

P.O. #:



December 19, 2018

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 12/18/18 17:15.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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:
 12/18/2018
 Sampling Date:
 12/18/2018

 Reported:
 12/19/2018
 Sampling Type:
 Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)
Project Number: BSU 2H Sample Received By: Jodi Henson

Project Location: NOT GIVEN

Sample ID: G1 BASE @ 2' (H803694-01)

Chloride, SM4500Cl-B Analyzed By: AC Reporting Limit Analyzed Method Blank BS % Recovery True Value OC RPD Oualifier Analyte Result Chloride 48.0 16.0 12/19/2018 ND 416 104 400 0.00

Sample ID: G1 E WALL 0- 2' (H803694-02)

Chloride, SM4500Cl-B Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 32.0 16.0 12/19/2018 ND 416 104 400 0.00

Sample ID: G1 W WALL 0- 2' (H803694-03)

Chloride, SM4500Cl-B Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 16.0 16.0 12/19/2018 400 0.00 ND 416 104

Cardinal Laboratories \*=Accredited Analyte

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Celey & Keene



### **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

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 whistoever 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



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

Company Name	" RT Hicks Consultants						The Later of the L	BILL TO				ANALYSIS REQUEST								
Project Manage	r: Andrew Parker						P.	O. #:											-1	
Address:							C	Company: RT Hicks Consult												
City:	State:	Zip	):				Attn: Andrew Parter													
Phone #:	Fax #:					A	ddres	ss:												
Project #: Project Owner:						Ci	ty:													
Project Name:	Advance Energy						St	ate:		Zip:										
Project Location	n: BSU 2H						PI	none	#: 9	70-570-	9535									
Sampler Name:	Andrew Parker						Fa	x #:												
FOR LAB USE ONLY		0.			MAT	RIX		PRE	ESERV	. SAMPL	NG									
Lab I.D.	Sample I.D.	C (G)RAB-OR (C)OMP.	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE OTHER:	ACID/BASE:	ICE / COOL OTHER:	DATE	TIME	Chloride								
1	BSE 61 Base 2ft		j		X					10-18-18	15:20	X								
23	61 E. WALL 0-2 Pt	C	1							12-18-18	15.25								1.5	
3	G1 W. WALL G-2ft	C	1		1					12:848	15:30	+								
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Relinquished By:	Date:	Received By:	Ased upon any of the above stated i	Phone Result:	□ Yes □	□ No Add'l Phone #:	
and on	12.18.18 Time:	hodi s	enson	Fax Result: REMARKS:	□ Yes □	No Add'l Fax#:	- 10
Relinquished By:	Date:	Received By:	-,	Sample just	to r	RFN	Notify email sent
Delivered By: (Circle One) Sampler - UPS - Bus - Other	4.32/#	Sample Condition Cool Intact See Yes No No	CHECKED BY:	16°C Samp	Le tak	thonks en a brough	970-570-9535 ht directly to



December 20, 2018

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 12/19/18 16:10.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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: 12/19/2018 Sampling Date: 12/19/2018

Reported: 12/20/2018 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: Cool & Intact
Project Number: BSU 2H Sample Received By: Jodi Henson

Project Location: NOT GIVEN

Sample ID: SOURCE 6-7' (H803725-01)

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier

**Chloride** 9730 16.0 12/20/2018 ND 400 100 400 3.92

Sample ID: SOURCE 9' (H803725-02)

Chloride, SM4500Cl-B Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 656 16.0 12/20/2018 ND 400 100 400 3.92

Sample ID: SOURCE 12' (H803725-03)

Chloride, SM4500Cl-B Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 7060 16.0 12/20/2018 400 3.92 ND 400 100

Cardinal Laboratories \*=Accredited Analyte

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Celey & Keene



### **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



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

Common Nome	(575) 393-2326 FAX (575) 393			ent Crisciani and Line							762765	
Company Name	11 11 11			BILL TO						ANALYSIS REQ	JEST	
Project Manage	/ Ichie			P.O. #:								
	n-file			Compa	any: K	T Hick	5	4				
City:	State:	Zip;		Attn: /	todre	ew Park	et			1 1 1 1		
Phone #:	Fax #:			Addres	ss:							
Project #:	Project O	wner:		City:						1 1 1 1		
Project Name:	Advance Energy			State:		Zip:			1 1			
Project Location	n: 1530 ZA			Phone	#;							
Sampler Name:	Andrew Parket			Fax #:					1 1			
FOR LAB USE ONLY			MATRIX	PRE	SERV.	SAMPLI	NG		1 1	1 1 1 1		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER	SUL SOIL	OTHER: ACID/BASE:	ICE / COOL OTHER:	DATE	TIME	Chloride				
1	Source 6-7 ft	61	X			12-19-18	14:10	X				
23	Source 6-7 ft Source 9 ft	61					14:15					
3	Source 12 Pt	61	4			1	14:30	V				
				-	-				-			
					-							
nalyses. All claims includi ervice. In no event shall C	nd Damages, Cardinal's liability and client's exclusive rem ng those for negligence and any other cause whatsoever ardinal be liable for incidental or consequental damages,	shall be deemed waived unless ma including without limitation, busine	de in writing and is interruptions,	received by oss of use, o	Cardinal v	within 30 days after rofits incurred by	er completion of t client, its subsidia	the applicable aries,				
Relinquished B	ing out of or related to the performance of services hereun	Received By:		1			Phone Re	esult: 🗆 Y	es 🗆 No	Add'l Phone #:		

affiliates or successors arising out of or related to the perform	mance of services hereunder by 0	Cardinal, regardless of whether such claim is based upon any of the above s	tated reasons or otherwise.	
Relinquished By:	Date:	Received By:	Phone Result:   Yes   No	Add'l Phone #:
0 ()	12-19-18	1000 M-11101	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
( Bull Colum	Time:	MURIL ASENDOVI	REMARKS:	- 1 1 2 1
Relinquished By:	Date:	Received By:	(PEN)	Text when Results emailed
	Time:		N N	970-570-9535
Delivered By: (Circle One)	200 H	Sample Condition CHECKED BY	1	
Sampler - UPS - Bus - Other:	SAC H	Cool Intact (Initials)	Sampled and bro	ought directly to lab



January 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 01/22/19 15:40.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: G2 EW 0-4 (H900221-01)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 73.3-12	9						
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	01/23/2019	ND	416	104	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	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	87.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	94.6	% 37.6-14	7						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

 Received:
 01/22/2019
 Sampling Date:
 01/21/2019

 Reported:
 01/29/2019
 Sampling Type:
 Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)
Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: G2 WW (H900221-02)

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	01/23/2019	ND	416	104	400	3.92	

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Celey D. Keene



### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: NOT GIVEN

ma/ka

### Sample ID: G2 B (H900221-03)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
urrogate: 4-Bromofluorobenzene (PID 101 % 73.3-12		9							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	01/23/2019	ND	416	104	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	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	89.2	% 41-142	•						
Surrogate: 1-Chlorooctadecane	86.7	% 37.6-14	7						

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Celey D. Keene



#### Analytical Results For:

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

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil Project Name: ADVANCE ENERGY Sampling Condition: \*\*(

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: G3 SW (H900221-04)

Chloride, SM4500CI-B	mg	mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS % Recover	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	01/23/2019	ND	416	104	400	3.92	
Sample ID: G3 WW 0-4 (	H900221-05)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	01/23/2019	ND	416	104	400	3.92	

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Celey D. Keene



#### Analytical Results For:

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

 Received:
 01/22/2019
 Sampling Date:
 01/21/2019

 Reported:
 01/29/2019
 Sampling Type:
 Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)
Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G3 EW 0-4 (H900221-06)

BTEX 8021B	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	< 0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/23/2019	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	92.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	91.4	% 37.6-14	7						

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\*=Accredited Analyte

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Celey D. Keine



#### Analytical Results For:

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

 Received:
 01/22/2019
 Sampling Date:
 01/21/2019

 Reported:
 01/29/2019
 Sampling Type:
 Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: NOT GIVEN

ma/ka

#### Sample ID: G3 B (H900221-07)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.4	% 73.3-12	9						
Chloride, SM4500CI-B	mg	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1480	16.0	01/23/2019	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	89.3	% 41-142	ı						
Surrogate: 1-Chlorooctadecane	86.5	% 37.6-14	7						

# Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil
Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker
Project Location: NOT GIVEN

#### Sample ID: G4 WW 0-4 (H900221-08)

Cilioride, SM4500CI-B	oride, SM4500CI-B IIIg/kg			u by: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10900	16.0	01/23/2019	ND	400	100	400	3.92	OM-07	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)
Project Number: BSU #2 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: NOT GIVEN

mg/kg

### Sample ID: G4 EW 0-4 (H900221-09)

BTEX 8021B

DILX GOZID	11197	ng .	Allulyzo	a by. 1-15					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	< 0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.2	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	88.0	% 41-142							
Surrogate: 1-Chlorooctadecane	83.5	% 37.6-14	7						

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#### Analytical Results For:

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

Received: 01/22/2019 Sampling Date: 01/21/2019 Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes) Tamara Oldaker Project Number: BSU #2 Sample Received By:

Project Location: NOT GIVEN

#### Sample ID: G4 B (H900221-10)

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	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.1	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11200	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	91.2	% 41-142	!						
Surrogate: 1-Chlorooctadecane	86.8	% 37.6-14	7						

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: NOT GIVEN

#### Sample ID: G5 NW 0-4 (H900221-11)

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.9	% 73.3-12	9						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	91.8	% 41-142	•						
Surrogate: 1-Chlorooctadecane	88.3	% 37.6-14	7						

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

 Received:
 01/22/2019
 Sampling Date:
 01/21/2019

 Reported:
 01/29/2019
 Sampling Type:
 Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker
Project Location: NOT GIVEN

Sample ID: G5 WW 0-4 (H900221-12)

Chioride, SM45UUCI-B	oride, SM4500CI-B mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	01/23/2019	ND	400	100	400	3.92	

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Celey D. Kreene



Tamara Oldaker

#### Analytical Results For:

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

Applyzod By: MC

Received: 01/22/2019 Sampling Date: 01/21/2019 Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes) Sample Received By:

Project Location: NOT GIVEN

BSU #2

#### Sample ID: G5 SW 0-4 (H900221-13)

Project Number:

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.1	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	92.8	% 41-142	•						
Surrogate: 1-Chlorooctadecane	88.5	% 37.6-14	7						
-									

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil Project Name: ADVANCE ENERGY Sampling Condition: \*\*(

Fax To:

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)
Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: G5 EW 0-4 (H900221-14)

Chioride, SM4500CI-B	кg	Anaiyze	а ву: АС						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1960	16.0	01/23/2019	ND	400	100	400	3.92	

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes) Project Number: Sample Received By: BSU #2 Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G5 B (H900221-15)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	88.9	% 41-142	ı						
Surrogate: 1-Chlorooctadecane	84.3	% 37.6-14	7						

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G6 NW 0-4 (H900221-16)

Chloride, SM4500CI-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	01/23/2019	ND	400	100	400	3.92	

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil Project Name: ADVANCE ENERGY Sampling Condition: \*\*(

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Analyzed By: MC

Project Location: NOT GIVEN

ma/ka

### Sample ID: G6 SW 0-4 (H900221-17)

RTFY 8021R

	mg/	9	7	а ву: мѕ					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2019	ND	221	110	200	0.996	
DRO >C10-C28*	<10.0	10.0	01/28/2019	ND	217	108	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	01/28/2019	ND					
Surrogate: 1-Chlorooctane	93.8	% 41-142	•						
Surrogate: 1-Chlorooctadecane	90.4	% 37.6-14	7						

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#### Analytical Results For:

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

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes) Project Number: Sample Received By: BSU #2 Tamara Oldaker

Project Location: NOT GIVEN

### Sample ID: G6 B (H900221-18)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2019	ND	222	111	200	3.58	
DRO >C10-C28*	<10.0	10.0	01/29/2019	ND	244	122	200	16.4	
EXT DRO >C28-C36	<10.0	10.0	01/29/2019	ND					
Surrogate: 1-Chlorooctane	87.8	% 41-142	!						
Surrogate: 1-Chlorooctadecane	84.1	% 37.6-14	7						

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#### Analytical Results For:

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

Fax To: NON

 Received:
 01/22/2019
 Sampling Date:
 01/21/2019

 Reported:
 01/29/2019
 Sampling Type:
 Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)
Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G7 SW 0-4 (H900221-19)

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2480	16.0	01/23/2019	ND	400	100	400	3.92	

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#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: NOT GIVEN

#### Sample ID: G7 NW 0-4 (H900221-20)

RTFY 8021R

BTEX 8021B mg/kg	/ kg	Anaiyze	а ву: м5						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2019	ND	222	111	200	3.58	
DRO >C10-C28*	<10.0	10.0	01/29/2019	ND	244	122	200	16.4	
EXT DRO >C28-C36	<10.0	10.0	01/29/2019	ND					
Surrogate: 1-Chlorooctane	90.0	% 41-142	•						
Surrogate: 1-Chlorooctadecane	87.0	% 37.6-14	7						

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Celey D. Keene



#### Analytical Results For:

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

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: NOT GIVEN

ma/ka

### Sample ID: G7 B (H900221-21)

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	ea By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.1	% 73.3-12	9						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2019	ND	182	91.2	200	0.296	
DRO >C10-C28*	<10.0	10.0	01/29/2019	ND	200	100	200	0.940	
EXT DRO >C28-C36	<10.0	10.0	01/29/2019	ND					
Surrogate: 1-Chlorooctane	93.2	% 41-142	ı						
Surrogate: 1-Chlorooctadecane	83.3	% 37.6-14	7						

# Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Freene



#### Analytical Results For:

R T HICKS CONSULTANTS ANDREW PARKER 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Fax To: NONE

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: NOT GIVEN

#### Sample ID: G8 NW 0-4 (H900221-22)

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.4	% 73.3-12	9						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2019	ND	182	91.2	200	0.296	
DRO >C10-C28*	<10.0	10.0	01/29/2019	ND	200	100	200	0.940	
EXT DRO >C28-C36	<10.0	10.0	01/29/2019	ND					
Surrogate: 1-Chlorooctane	89.5	% 41-142	•						
Surrogate: 1-Chlorooctadecane	84.1	% 37.6-14	7						

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Celeg D. Freene



#### Analytical Results For:

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

Fax To: NON

Received: 01/22/2019 Sampling Date: 01/21/2019

Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G8 SW 0-4 (H900221-23)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	01/23/2019	ND	400	100	400	3.92	

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Celey D. Keene



#### Analytical Results For:

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

Received: 01/22/2019 Sampling Date: 01/21/2019
Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes)

Project Number: BSU #2 Sample Received By: Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G8 WW 0-4 (H900221-24)

BTEX 8021B mg/kg	/kg	Analyze	ed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	<0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	88.6	% 73.3-12	9						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2019	ND	182	91.2	200	0.296	
DRO >C10-C28*	<10.0	10.0	01/29/2019	ND	200	100	200	0.940	
EXT DRO >C28-C36	<10.0	10.0	01/29/2019	ND					
Surrogate: 1-Chlorooctane	88.2	% 41-142	?						
Surrogate: 1-Chlorooctadecane	78.8	% 37.6-14	7						

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\*=Accredited Analyte

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Celey D. Keine

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: 01/22/2019 Sampling Date: 01/21/2019 Reported: 01/29/2019 Sampling Type: Soil

Project Name: ADVANCE ENERGY Sampling Condition: \*\* (See Notes) Project Number: Sample Received By: BSU #2 Tamara Oldaker

Project Location: NOT GIVEN

#### Sample ID: G8 B (H900221-25)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2019	ND	1.85	92.7	2.00	0.379	
Toluene*	<0.050	0.050	01/28/2019	ND	1.97	98.3	2.00	0.292	
Ethylbenzene*	<0.050	0.050	01/28/2019	ND	2.06	103	2.00	1.82	
Total Xylenes*	< 0.150	0.150	01/28/2019	ND	5.94	99.0	6.00	3.01	
Total BTEX	<0.300	0.300	01/28/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	01/23/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2019	ND	182	91.2	200	0.296	
DRO >C10-C28*	<10.0	10.0	01/29/2019	ND	200	100	200	0.940	
EXT DRO >C28-C36	<10.0	10.0	01/29/2019	ND					
Surrogate: 1-Chlorooctane	87.0	% 41-142							
Surrogate: 1-Chlorooctadecane	79.3	% 37.6-14	7						

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Celey D. Keene



#### **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

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Celeg D. Freene



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (ETE) 202 2226 EAV (ETE) 202 2476

Company Name:	R.T. Hicks C	onsultants	Ī							BIL	L TO					ANALY	SIS R	EQUES	T		
Project Manager:								P.O.	#:					6					- 13		
Address: on-	file							Con	npany	/: R	T. Hick	cs	1	180					- 6	1 1	
City:		State:	Zip	):				Attn	: Ar	dre	w Parke	a <b>r</b>			V			1 1	1		
Phone #:		Fax #:							ress:				12	0	3						
Project #:	Advance	Project Own	er:					City	:				ersh	0	15			1 1			
Project Name:	Advanace Energ	v	1 %					Stat	e:		Zip:		03	S. S.	to	4	-1				
Project Location	Company Company Company		VD T	rei	ich 5	-		Pho	ne #:	97	0-570-9	535	1	0	1						
Sampler Name:	Erica Hart							Fax	#:				3								
FOR LAB USE ONLY			1.		F	MATR	IX	F	PRESE	RV.	SAMPLIN	NG	13		1			1 1			
Lab I.D.	Sample I	.D.	(G)RAB OR (C)OMP.	Z	GROUNDWATER	SOIL	SLUDGE	OTHER:	ACID/BASE: ICE / COOL	OTHER:	DATE	TIME	Chlonder	B.TEX	TPHEX						
1	GZEWO-4			1		1					1/21/19			V	V						
2	G2WW			1		V					1										
3	G2B			1		1								/	V						
4	G35W	1		1		V			$\perp$								_	1			
3	63 WWO-4		_	1		1		Н		Н			$\perp$								
4	G3EWO-L	<u> </u>		1	$\vdash$	/	-	Н	_	$\sqcup$			+	V	-						
7	G3B			1		0				$\sqcup$			$\vdash$	V	V	1		1			
8	G4 WW 0-4	T.		1		1		Н		$\sqcup$			+	-			-				
9	G4EWO-	1		1		1		Н		$\sqcup$			1	V	-						
10	64B					V				1 1				V	1						

Relinquished By: /	Date: 1/22/19	Received By:	11,1	Phone Result:	☐ Yes	□ No	Add'l Phone #:	
EricoHent	Time: 15:40	Jamara 1016	late sel	Fax Result: REMARKS:	□ Yes	□ No	Add'i Fax #:	
Relinquished By:	Date:	Received By:	9	Email re	esults to	andre	ew@rthicksconsult.com	
	Time:							
Delivered By: (Circle One)		Sample Condition	CHECKED BY: (Initials)	1				
Sampler - UPS - Bus - Other:	15.10 F	Yes Yes	70-					



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Released to Imaging: 1/18/2022 2:19:06 PM

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

Company Name:	R.T. Hicks Consultants									LL TO					ANALYS	SIS RE	EQUES	T		
Project Manager	: Andrew Parker						P.O	). #:						-1						
Address: on-	file						Cor	mpar	ıy:	R.T. Hic	ks		0				1 1			
ity:	State:	Zip	o:				Attr	п: д	ndi	ew Park	er		1		K					
hone #:	Fax #:							dress					N	3	2					
roject #:	Advance Project Own	er:					City	<b>/</b> :				2		3	1.					
roject Name:	Advanace Energy						Stat			Zip:		3	1	5	2					
	: BSU #2 or Tomahawk SV	JD T	Fre	nch 5					: Q'	70-570-9	535	2	3	X	a					
Sampler Name:	Erica Hart			IICII S			Fax		-	70-570-		1	6	3	13					
FOR LAB USE ONLY	Effica frant	1	T		MATR	IX		-	ERV	SAMPL	ING	2	)		3			1		
Lab I.D.	Sample I.D.	G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	SOIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:	DATE	TIME	Chloride	BIEX	TPHEXT	May ruy					
11	G5NW0-4	Ť	1			7 0			1	1/2/19			1	/		_			_	+
12	G5WWO-4		Ti		1		П			Horiti									_	+
13	G55W0-4		1		V		П	$\top$		5			/	1						
14	65 EW 0-4		1		V		П													1
15	G5B		11		V								/	V						
16	G6NW0-4		1		1															
17	G65W0-4		1		V									~						
18	GGB		1		V								V	/				1 (0)		
19	G75W0-4		1		V															
20	G7NW0-4		1		V								-	/						
alyses. All claims including rvice. In no event shall Car	Time: 40	ne deeme ing witho y Cardina Re	ed waive out limit el, rega ecei	red unless retailed	made in wr ness intern hether suc	iting and options,	receive	ed by C use, or l	ardinal v	within 30 days after rofits incurred by	r completion of to client, its subsidial asons or otherwing Phone Re Fax Resu REMARK	the applicable aries, iss.  Sult:	res □	No	Add'i Phoi Add'i Fax v@rthic	#:	sult.co	m		
Delivered By: Sampler - UPS	(Circle One)	7	49	Co	nple Cool Into	act				(ED BY: tials)										



Company Name:

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

Released to Imaging: 1/18/2022 2:19:06 PM

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

HICKS Consultants

Project Manager:	Andrew Parker						P.	0. #:						10							
Address:							Co	ompa	any:	1	RT Hoy	es		1							
City:	State:	Zip	):				At	tn:	A	hd	rew Pa	iker		3	Y		54				
Phone #:	Fax #:						Ad	dres	ss:				~	1	3		2				
Project #:	Project Owne	r:					Ci	ty:					4	3	2		1				
Project Name:	Advance Grergy BSU #2 Enca Hart						St	ate:		Z	Zip:		3	03	*		6				
Project Location:	B5U # 2						Pł	one	#: (	97	0-570	-9535	The second	3	10		2				
Sampler Name:	Enca Hart						Fa	x #:						9	1		. 2				
FOR LAB USE ONLY		1.	Г		MAT	RIX		PRE	SEF	٧٧.	SAMPLI	NG	Es	1	1		3				
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	STEWATER	OIL	HER:	ACID/BASE:	ICE / COOL	OTHER:			Chloride	STEX	PHEXT		may regu				
H906221	0 - 5	9	#	R.	WAST	SEU SEU	10	AC	SE	5	DATE	TIME		1							
21	67B 68NW 0-4 68SW 0-4 68 VW 0-4 68 B	┡	1		V						1122/10			V	1						
72	68NW0-4	-	1		V		-	H		-	1/2/19				/					2 - 5	
23	685W 0-9	$\vdash$	1		V		-	$\vdash$		+	-1				_	-		4			1
24	680000-9	$\vdash$	H		1	+	-	H		-	1			-	1				_		
45	(50D	1	-		V	+	F	$\vdash$		+	V			-							
		ł	F		-		H		-	+									-		
							T		-	1						-	-	+-			
							E														
PLEASE NOTE: Liability and D analyses. All claims including t	Damages. Cardinal's liability and client's exclusive remedy for hose for negligence and any other cause whatsoever shall be	any clai	m aris d waiv	ing whe	ther based in	n contrac	t or to	rt, shall	be limi	ited to	the amount paid	by the client for	r the					_			
service. In no event shall Cardi	inal be liable for incidental or consequental damages, including out of or related to the performance of services hereunder by	g withou	ut limit	ation, b	usiness inter	ruptions	loss o	of use, o	r loss	of profi	its incurred by c	lient, its subsidia	aries,								
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BILL TO



February 01, 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 01/30/19 8:10.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keene

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: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 01-Feb-19 14:07

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
G 6 N WALL 0-4'	H900312-01	Soil	29-Jan-19 14:00	30-Jan-19 08:10
G 7 S WALL 0-4'	H900312-02	Soil	29-Jan-19 14:15	30-Jan-19 08:10
G 8 S WALL 0-4'	H900312-03	Soil	29-Jan-19 14:30	30-Jan-19 08:10
G 4 W WALL 0-4'	H900312-04	Soil	29-Jan-19 15:15	30-Jan-19 08:10

BTEX and TPH analysis were added to the work order on 01/30/19 as per Andrew. This is the revised report that replaces the one sent on 01/30/19.

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene

Reported:

01-Feb-19 14:07



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

# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

G 6 N WALL 0-4' H900312-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	ories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	9013001	AC	30-Jan-19	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID	))		101 %	73.3	-129	9013103	ms	31-Jan-19	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctane			90.9 %	41	142	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctadecane			85.4 %	37.6	-147	9013102	MS	31-Jan-19	8015B	

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Celey D. Keine



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU #2H
Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 01-Feb-19 14:07

# G 7 S WALL 0-4' H900312-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	9013001	AC	30-Jan-19	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	73.3	-129	9013103	ms	31-Jan-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctane			86.8 %	41-	142	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctadecane			77.6 %	37.6	-147	9013102	MS	31-Jan-19	8015B	

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Celeg D. Keene



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 01-Feb-19 14:07

# G 8 S WALL 0-4' H900312-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	9013001	AC	30-Jan-19	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PII	D)		102 %	73.3	-129	9013103	ms	31-Jan-19	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctane			93.5 %	41-	142	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctadecane			84.6 %	37.6	-147	9013102	MS	31-Jan-19	8015B	

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Celeg D. Keene



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 01-Feb-19 14:07

# G 4 W WALL 0-4' H900312-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	9013001	AC	30-Jan-19	4500-Cl-B	
Volatile Organic Compounds by I	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9013103	ms	31-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9013103	ms	31-Jan-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctane			90.5 %	41-	142	9013102	MS	31-Jan-19	8015B	
Surrogate: 1-Chlorooctadecane			80.7 %	37.6	-147	9013102	MS	31-Jan-19	8015B	

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Celey D. Keene



# **Analytical Results For:**

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 01-Feb-19 14:07

# **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9013001 - General Prep - Wet Chem										
Blank (9013001-BLK1)				Prepared &	Analyzed:	30-Jan-19				
Chloride	ND	16.0	mg/kg							
LCS (9013001-BS1)				Prepared &	Analyzed:	30-Jan-19				
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (9013001-BSD1)				Prepared &	Analyzed:	30-Jan-19				
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY

Reported: 01-Feb-19 14:07

Project Number: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

# Volatile Organic Compounds by EPA Method 8021 - Quality Control

### **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9013103 - Volatiles										
Blank (9013103-BLK1)				Prepared &	Analyzed:	31-Jan-19				
Benzene	ND	0.050	mg/kg							
Coluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
urrogate: 4-Bromofluorobenzene (PID)	0.101		mg/kg	0.100		101	73.3-129			
LCS (9013103-BS1)				Prepared &	Analyzed:	31-Jan-19				
Benzene	2.36	0.050	mg/kg	2.00		118	72.2-131			
Coluene	2.24	0.050	mg/kg	2.00		112	71.7-126			
Ethylbenzene	2.20	0.050	mg/kg	2.00		110	68.9-126			
Total Xylenes	6.73	0.150	mg/kg	6.00		112	71.4-125			
urrogate: 4-Bromofluorobenzene (PID)	0.0991		mg/kg	0.100		99.1	73.3-129			
.CS Dup (9013103-BSD1)				Prepared &	Analyzed:	31-Jan-19				
Benzene	2.37	0.050	mg/kg	2.00		119	72.2-131	0.804	6.91	
Coluene	2.26	0.050	mg/kg	2.00		113	71.7-126	0.837	7.12	
Ethylbenzene	2.22	0.050	mg/kg	2.00		111	68.9-126	1.03	7.88	
Total Xylenes	6.80	0.150	mg/kg	6.00		113	71.4-125	1.10	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0999		mg/kg	0.100		99.9	73.3-129			

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Celey D. Keene



%REC

# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Spike

Source

Project Number: BSU #2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 01-Feb-19 14:07

RPD

### Petroleum Hydrocarbons by GC FID - Quality Control

### **Cardinal Laboratories**

Reporting

		reporting		opine	Source		, or the		Tu D	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9013102 - General Prep - Organics										
Blank (9013102-BLK1)				Prepared &	k Analyzed:	31-Jan-19				
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.3		mg/kg	50.0		90.6	41-142			
Surrogate: 1-Chlorooctadecane	39.1		mg/kg	50.0		78.1	37.6-147			
LCS (9013102-BS1)				Prepared &	k Analyzed:	31-Jan-19				
GRO C6-C10	171	10.0	mg/kg	200		85.3	76.5-133			
DRO >C10-C28	177	10.0	mg/kg	200		88.5	72.9-138			
Total TPH C6-C28	348	10.0	mg/kg	400		86.9	78-132			
Surrogate: 1-Chlorooctane	45.9		mg/kg	50.0		91.8	41-142			
Surrogate: 1-Chlorooctadecane	38.3		mg/kg	50.0		76.6	37.6-147			
LCS Dup (9013102-BSD1)				Prepared &	k Analyzed:	31-Jan-19				
GRO C6-C10	173	10.0	mg/kg	200		86.6	76.5-133	1.48	20.6	
DRO >C10-C28	180	10.0	mg/kg	200		89.8	72.9-138	1.49	20.6	
Total TPH C6-C28	353	10.0	mg/kg	400		88.2	78-132	1.48	18	
Surrogate: 1-Chlorooctane	44.9		mg/kg	50.0		89.8	41-142			
Surrogate: 1-Chlorooctadecane	39.7		mg/kg	50.0		79.5	37.6-147			

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Celey D. Keene



#### **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



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	RT Hicks consultants						11111			BIL	L TO						ANA	LYS	S RI	EQUE	EST		
Project Manage							1	2.0.	#:														
Address:	n-file						(	Com	pan	y:	27 H	cks	: :										
ity:		Zip	:				1	\ttn:	. A	ndr	ew Pa	rker			0	100							
hone #:	Fax #:						- 1		ress						1	=							
roject #:	Project Owner	:						City:	2						-	0		1					
							5	State	e:	3	Zip:				0	100							l
roiect Location	Advance Energy n: BSU #2H							hor	ne#							3-							
ampler Name:	Andrew Parker						ı	ax	#:						/	1							
FOR LAB USE ONLY					MA	TRIX		P	RES	ERV.	SAMPL	ING				1	3	1					1
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:	DATE	TIM	1E	Chloride	ATEX	シナタ							
1	66 N. WALL 0-4 8+	0			X					m	1:29-19	_	_	×	V	1							
Z	67 S. WALL 0-4 St	1										14:			L	/							
3	68 5 68 S.WALL 0-4 Pt	V			M							14:3	0	1	L	V							
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	nd Damages. Cardinal's liability and client's exclusive remedy for a				1	1																	

affiliates or successors arising out of or related to the performs Relinquished By:	Date: 1-30-19 Time: 0810	Received By:	dated	Phone Result:		Add'l Phone #: Add'l Fax #:	
Relinquished By:	Date:	Received By:		RFN	· C		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	2.4:	Sample Condition Cool Intact Yes Yes	CHECKED BY: (Initials)	Than!	e)	Rush!	



February 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 01/31/19 8:00.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keene

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: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
G5 S-E WALL 0-4'	H900350-01	Soil	30-Jan-19 14:00	31-Jan-19 08:00
G5 N-E WALL 0-4'	H900350-02	Soil	30-Jan-19 14:15	31-Jan-19 08:00
G2 W WALL 0-4'	H900350-03	Soil	30-Jan-19 15:00	31-Jan-19 08:00
G2 + 2' W WALL 0-4'	H900350-04	Soil	30-Jan-19 15:30	31-Jan-19 08:00
G3 SW WALL 0-4'	H900350-05	Soil	30-Jan-19 13:30	31-Jan-19 08:00

BTEX and TPH were added to samples -01, -02, -04 and -05 on 01/31/19 as per Andrew. This is the revised report that replaces the one sent on 01/31/19.

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keine



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

# G5 S-E WALL 0-4' H900350-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0 mg		4	9013114	AC	31-Jan-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020303	ms	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020303	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9020303	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020109	MS	01-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020109	MS	01-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020109	MS	01-Feb-19	8015B	
Surrogate: 1-Chlorooctane			80.5 %	41-	142	9020109	MS	01-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			82.5 % 37.6-1		-147	9020109	MS	01-Feb-19	8015B	

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Celey D. Keene



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

# G5 N-E WALL 0-4' H900350-02 (Soil)

Analyte	Result	MDL	Reporting L Limit Units Dilution		Batch	Analyst	Analyzed	Method	Notes	
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	464		16.0 mg/kg		4	9013114	AC	31-Jan-19	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Total Xylenes*	< 0.150	0.150	mg/kg	50	9020407	MS	05-Feb-19	8021B		
Total BTEX	< 0.300		0.300	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PI	D)		92.6 %	73.3	-129	9020407	MS	05-Feb-19	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020109	MS	02-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0 mg		1	9020109	MS	02-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020109	MS	02-Feb-19	8015B	
Surrogate: 1-Chlorooctane			95.0 % 41-142		142	9020109	MS	02-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			93.0 % 41-142 94.2 % 37.6-147		-147	9020109	MS	02-Feb-19	8015B	

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Celey D. Keene



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

# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

**G2 W WALL 0-4'** H900350-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes				
Cardinal Laboratories														
Inorganic Compounds														
Chloride	688		16.0	mg/kg	4	9013114	AC	31-Jan-19	4500-Cl-B					

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Celey D. Keene



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

# G2 + 2' W WALL 0-4' H900350-04 (Soil)

Analyte	Result	MDL	Reporting Limit Units Dilution B		Batch	Analyst	Analyzed	Method	Notes	
	Cardinal Laboratories									
Inorganic Compounds										
Chloride	32.0		16.0 mg/kg 4		9013114	AC	31-Jan-19	4500-Cl-B		
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050 mg/kg 50		9020407	MS	05-Feb-19	8021B		
Toluene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (Pl	D)		96.2 %	73.3	-129	9020407	MS	05-Feb-19	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020109	MS	02-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0 mg/kg		1	9020109	MS	02-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0 mg/kg 1		1	9020109	MS	02-Feb-19	8015B	
Surrogate: 1-Chlorooctane			89.7 % 41-142		9020109	MS	02-Feb-19	8015B		
Surrogate: 1-Chlorooctadecane			88.2 % 37.6-147		9020109	MS	02-Feb-19	8015B		

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Celey D. Keene



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

# G3 SW WALL 0-4' H900350-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0 mg/kg 4 90		9013114	AC	31-Jan-19	4500-Cl-B		
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020407	MS	05-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			91.4 %	73.3	-129	9020407	MS	05-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020109	MS	02-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020109	MS	02-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020109	MS	02-Feb-19	8015B	
Surrogate: 1-Chlorooctane			74.8 % 41-142		9020109	MS	02-Feb-19	8015B		
Surrogate: 1-Chlorooctadecane			73.2 %			9020109	MS	02-Feb-19	8015B	

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Celeg D. Keene



# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

# **Inorganic Compounds - Quality Control**

## **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9013114 - General Prep - Wet Chem										
Blank (9013114-BLK1)				Prepared &	Analyzed:	31-Jan-19				
Chloride	ND	16.0	mg/kg							
LCS (9013114-BS1)				Prepared &	Analyzed:	31-Jan-19				
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9013114-BSD1)				Prepared &	Analyzed:	31-Jan-19				
Chloride	400	16.0	mg/kg	400		100	80-120	7.69	20	

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Celey D. Keene



%REC

# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Project: ADVANCE ENERGY

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Spike

Source

Fax To: NONE

Reported: 06-Feb-19 10:31

RPD

# **Volatile Organic Compounds by EPA Method 8021 - Quality Control**

## **Cardinal Laboratories**

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9020303 - Volatiles										
Blank (9020303-BLK1)				Prepared &	: Analyzed:	03-Feb-19	)			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0995		mg/kg	0.100		99.5	73.3-129			
LCS (9020303-BS1)				Prepared &	: Analyzed:	03-Feb-19	)			
Benzene	2.17	0.050	mg/kg	2.00		108	72.2-131			
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	68.9-126			
Total Xylenes	6.19	0.150	mg/kg	6.00		103	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0988		mg/kg	0.100		98.8	73.3-129			
LCS Dup (9020303-BSD1)				Prepared &	Analyzed:	03-Feb-19	)			
Benzene	2.18	0.050	mg/kg	2.00		109	72.2-131	0.766	6.91	
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126	0.165	7.12	
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	68.9-126	1.83	7.88	
Total Xylenes	6.10	0.150	mg/kg	6.00		102	71.4-125	1.33	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0971		mg/kg	0.100		97.1	73.3-129			
Batch 9020407 - Volatiles										
Blank (9020407-BLK1)				Prepared: (	)4-Feb-19 A	Analyzed: (	5-Feb-19			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							

# Cardinal Laboratories

Surrogate: 4-Bromofluorobenzene (PID)

Total Xylenes

Total BTEX

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mg/kg

mg/kg

mg/kg

0.100

90.9

73.3-129

ND

ND

0.0909

0.150

0.300

Celey D. Keene

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: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

# Volatile Organic Compounds by EPA Method 8021 - Quality Control

## **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9020407 - Volatiles										
LCS (9020407-BS1)				Prepared: (	)4-Feb-19 A	nalyzed: 0	5-Feb-19			
Benzene	1.86	0.050	mg/kg	2.00		93.0	72.2-131			
Toluene	1.88	0.050	mg/kg	2.00		94.1	71.7-126			
Ethylbenzene	1.85	0.050	mg/kg	2.00		92.6	68.9-126			
Total Xylenes	5.40	0.150	mg/kg	6.00		89.9	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0978		mg/kg	0.100		97.8	73.3-129			
LCS Dup (9020407-BSD1)				Prepared: (	)4-Feb-19 A	nalyzed: 0	5-Feb-19			
Benzene	1.82	0.050	mg/kg	2.00		91.0	72.2-131	2.12	6.91	
Toluene	1.83	0.050	mg/kg	2.00		91.7	71.7-126	2.58	7.12	
Ethylbenzene	1.76	0.050	mg/kg	2.00		88.1	68.9-126	4.94	7.88	
Total Xylenes	5.15	0.150	mg/kg	6.00		85.9	71.4-125	4.62	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0929		mg/kg	0.100		92.9	73.3-129			

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Celey D. Keene



%REC

# Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Project: ADVANCE ENERGY

Spike

Source

Project Number: BSU 2H

Project Manager: ANDREW PARKER

Fax To: NONE

Reported: 06-Feb-19 10:31

RPD

# Petroleum Hydrocarbons by GC FID - Quality Control

## **Cardinal Laboratories**

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9020109 - General Prep - Organics										
Blank (9020109-BLK1)				Prepared &	k Analyzed:	01-Feb-19				
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.9		mg/kg	50.0		91.7	41-142			
Surrogate: 1-Chlorooctadecane	47.4		mg/kg	50.0		94.8	37.6-147			
LCS (9020109-BS1)				Prepared &	k Analyzed:	01-Feb-19				
GRO C6-C10	167	10.0	mg/kg	200		83.5	76.5-133			
DRO >C10-C28	179	10.0	mg/kg	200		89.3	72.9-138			
Total TPH C6-C28	346	10.0	mg/kg	400		86.4	78-132			
Surrogate: 1-Chlorooctane	47.7		mg/kg	50.0		95.4	41-142			
Surrogate: 1-Chlorooctadecane	48.6		mg/kg	50.0		97.1	37.6-147			
LCS Dup (9020109-BSD1)				Prepared &	k Analyzed:	01-Feb-19				
GRO C6-C10	168	10.0	mg/kg	200		83.8	76.5-133	0.387	20.6	
DRO >C10-C28	186	10.0	mg/kg	200		93.2	72.9-138	4.23	20.6	
Total TPH C6-C28	354	10.0	mg/kg	400		88.5	78-132	2.39	18	
Surrogate: 1-Chlorooctane	47.5		mg/kg	50.0		95.0	41-142			
Surrogate: 1-Chlorooctadecane	47.9		mg/kg	50.0		95.8	37.6-147			

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



#### **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

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (675) 393-2326 EAY (675) 393-2476

07 Hicks Consultants									BIL	LL	TO						ANA	LYS	SIS	REQI	JEST	Γ			
: Andrew Parter						_																			
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	Zip:					A	ttn:	. ,	And	re	w P	arkur	1	-	7										
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Project Owner	:					C	ity:						1												
Advance Energy							State	e:		Zip:			1	5	3										
BSU 2H						F	Phor	ne #:	:	_			1		3										
Andrew Parker		_	_		-	_	_		EDV.	-	AMOLI	NC.	4		4										
	Ъ.	П		MAI	RIX		-	KES	EKV.	3	AMPLI	NG	1		1	)									
Sample I.D.	G)RAB OR (C)OM	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:		DATE	TIME	7	5	BIEX	THEXT				3					
S-B WALL 0-4 ft				X						1.	30-19	14:00		1	V,	7		+	4	_	-	-	-	_	_
65 N-EWALL 0-4 A	1			1			1				1			$\coprod$	V	~		+	-	-	-	-	-	-	_
62 W. WALL 0-4 ft	Ц		4	1			1	-	-	L	-			H	.1	.1		+	+	-	+	-	-	-	_
62 +2 f W. WALL 0-4 ft	Ц		-	+			+	+	+				_	$\Box$		J		+	+	$\rightarrow$	+	$\rightarrow$		$\neg$	
63 SW WALL 0.4 #		Н	-	¥			+	+	+	$\vdash$	4	13:30	+	-	V	•		+							
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	RT Hicks Consultants: Andrew Parter  On-file  State: Fax #: Project Owner  Advance Energy  BSU 2 H  Andrew Parker  Sample I.D.  65 S-B WALL 0-4 ft 65 N-E WALL 0-4 ft 62 W. WALL 0-4 ft 62 t2 f W. WALL 0-4 ft 63 SW WALL 0-4 ft	RT Hicks Consultants:  Andrew Parker  State: Zip:  Fax #:  Project Owner:  Advance Energy  1: BSU 2 H  Andrew Parker  Sample I.D.  65  S-B WALL 0-4 ft  65 N-B WALL 0-4 ft  62 W. WALL 0-4 ft  62 Y. WALL 0-4 ft  63 SW WALL 0-4 ft	RT Hicks Consultants:  Andrew Parter  State: Zip:  Fax #:  Project Owner:  Advance Energy  BSU 2 H  Andrew Parter  Sample I.D.  Sample I.D.  So B WALL O-4 ft  G2 W. WALL O-4 ft  G2 t2 f W. WALL O-4 ft  G3 SW WALL O-4 ft  G3 SW WALL O-4 ft	RT Hicks Consultable: Andrew Parter  On-file  State: Zip: Fax #: Project Owner:  Advance Energy  1: BSU 2 H  Andrew Parker  Sample I.D.  65 S-B WALL O-4 ft 65 N-B WALL O-4 ft 62 W. WALL O-4 ft 62 W. WALL O-4 ft 63 SW WALL O-4 ft 63 SW WALL O-4 ft 63 SW WALL O-4 ft	Sample I.D.  Sampl	RT Hicks Consultable: Andrew Parts  On-file  State: Zip: Fax #: Project Owner:  Advance Energy  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Governments  Sample I.D.  Sample I.D.	RT Hicks Consultant  Andrew Partr  On-file  State: Zip:  Fax #:  Project Owner:  Advance Energy  SSO 2 H  Andrew Parker  Sample I.D.  Sample I.D.  Soll Soll Soll Soll Soll Soll Soll Sol	Sample I.D.  Sampl	RT Hicks Consultable:  Andrew Parter  On-file  State: Zip: Attn:  Fax #:  Project Owner:  Advance Entray  BSO 2 H  Andrew Parter  On-WOOD WASTEWATER  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  GS N-E WALL O-4 ft  G2 12 f W. WALL O-4 ft  G3 SW WALL O-4 ft	Sample I.D.  Sampl	BILL  RT Hicks Consultant  Andrew Parter  On file  State: Zip: Attn: Andre  Fax #: Address:  Project Owner:  Advance Energy  BSO 2 H  Andrew Parker  Sample I.D.  Sample I.D.	BILL TO  RT Hicks Consultant  Thorew Parter  State: Zip:  Fax #:  Project Owner:  Address:  City:  State: Zip:  Phone #:  Fax #:  Address:  City:  State: Zip:  Phone #:  Fax #:  Sample I.D.  Sample I.	BILL TO  RT Hicks (ensultant)  Andrew Parter  On-file  State: Zip:  Fax #:  Project Owner:  Advance Energy  State: Zip:  Phone #:  Fax #:  Address:  City:  State: Zip:  Phone #:  Fax #:  Andrew Parker  State: Zip:  Phone #:  Fax #:  Project Owner:  Advance Energy  State: Zip:  Phone #:  Fax #:  Address:  Date: Time  S-B WALL O-4 ft  G2 W. WALL O-4 ft  G2 W. WALL O-4 ft  G3 SW WALL O-4 ft	BILL TO  RT Hicks Consultats  Andrew Parter  On-file  State: Zip: Attn: Andrew Parker  Fax #: Address:  Project Owner:  Advance Energy  State: Zip:  Phone #:  Fax #:  Phone #:  Fax #:  Phone #:  Sample I.D.  Sampl	BILL TO  P.O. #:  Andrew Partr  Con-file  State: Zip:  Fax #:  Project Owner:  Advance Energy  State: Zip:  Phone #:  Fax #:  Andrew Parket  State: Zip:  Phone #:  Fax #:  Andrew Parket  Fax #:  Project Owner:  Advance Energy  State: Zip:  Phone #:  Fax #:  Andrew Parket  Date Time  S-B WALL O-4 ft  G5 N-B WALL O-4 ft  G2 W. WALL O-4 ft  G2 W. WALL O-4 ft  G3 15:30  G2 +2 f W. WALL O-4 ft  G3 +2 f W. WALL O-4 ft  G3 +2 f W. WALL O-4 ft  G4 15:30  G5 15:30	BILL TO  RT Hicks (ensultant)  Andrew Parter  On-file  State: Zip: Attn: Andrew Parker  Fax #: Address:  Project Owner: City:  Advance Energy  State: Zip: Phone #:  Fax #:  Andrew Parker  Fax #:  MATRIX PRESERV. SAMPLING  MATRIX PRESERV. SAMPLING  Sample I.D.  Sample I.D.  On-B WALL C-4 ft  Go N-B WALL C-4 ft  Go N-B WALL O-4 ft  Go N-B WALL O-	RT Hicks Consultant  : Andrew Parter  Con-file  State: Zip: Attn: Andrew Parker  Fax #: Address:  Project Owner: City:  Advence Energy  i: BSU 2 H  Andrew Parker  State: Zip: Phone #:  Fax #:  Phone #:  Fax #:  MATRIX PRESERV. SAMPLING  MATRIX PRESERV. SAMPLING  Sample I.D.  Sample I.D.  GS N-B WALL O-4 ft  G2 N-B WALL O-4 ft  G2 12 f W. WALL O-4 ft  G3 SW WALL O-4 ft	BILL TO  AND  That we farter  P.O. #:  Company: RT Hicks  State: Zip:  Attn: And rew Parky  Fax #:  Project Owner:  Advance Energy  Blue TO  AND  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Advance Energy  Phone #:  Fax #:  Project Owner:  State: Zip: Phone #:  Fax #:  Project Owner:  State: Zip: Phone #:  Fax #:  Project Owner:  Advance Energy  Phone #:  Fax #:  DATE TIME  S-E WALL O-4 ft  G2 W. Wagle O-4 ft  G2 +2 f W. Wagle O-4 ft  G3 SW WALL O-4 ft  G4 SW	State: Zip: Attn: Andrew Parks  Fax #: Address: Project Owner:  Advance Entray  Phone #: Fax #:  Andrew Parks  Fax #: Project Owner:  Advance Entray  BILL TO  ANALYS  P.O. #:  Company: RT Hicks  Address: City: State: Zip: Phone #: Fax #:  Andrew Parks  Address:  Project Owner:  Andrew Parks  State: Zip: Phone #: Fax #:  Andrew Parks  Address:  Date Time  S-B WALL O-4 ft  G5 N-B wall O-4 ft  G2 +1 f W wall O-4 ft  G3 5w Wall O-4 ft  G3 5w Wall O-4 ft  G3 5w Wall O-4 ft	Sample I.D.  Sampl	Andrew Parker  State: Zip: Attn: Andrew Parker  On. file  State: Zip: Attn: Andrew Parker  Fax #: Address:  Project Owner:  Address: Zip: State: Zip: Phone #:  Fax #: Address:  Project Owner:  Address: Dip: Phone #:  Fax #:  Andrew Parker  Sample I.D.  Sample I.D.	ANALYSIS REQUES  Thorw Parts  On. file  State: Zip: Attn: Andrew Parts  Fax #: Address:  Project Owner:  Advente Entray  State: Zip: Phone #:  Fax #:  Andrew Parts  On. file  State: Zip: Attn: Andrew Parts  State: Zip: Phone #:  Fax #:  Andrew Parts  On. file  State: Zip: Attn: Andrew Parts  State: Zip: Phone #:  Fax #:  Andrew Parts  On. file  State: Zip: Dhone #:  Fax #:  Andrew Parts  On. file  State: Zip: Dhone #:  Fax #:  Dhone #:  Fax #:  Sample I.D.  On. file  On. file  State: Zip: Dhone #:  Fax #:  Dhone #:  Fax #:  On. file  On. fi	State: Zip: Attn: Andrew Parker  State: Zip: Attn: Andrew Parker  Fax #: Address:  Project Owner:  Address: Zip: State: Zip: Phone #:  Fax #: Address:  Phone #:  Fax #: #	BILL TO  ANALYSIS REQUEST  Proper Control  State: Zip: Address:  Project Owner: City:  Address:  Project Owner: State: Zip:  Phone #:  Fax #:  Project Owner: State: Zip:  Phone #:  Fax #:  Project Owner: State: Zip:  Phone #:  Fax #:  DATE TIME  Sample I.D.  Sample	BILL TO  ANALYSIS REQUEST  P.O. #:  P.O. #:  Company: LT Hicks  State: Zip:  Address:  Project Owner:  City:  Address:  Project Owner:  Andrew Parket  Phone #:  Fax #:  Phone #:  Fax #:  Phone #:  Fax #:  Phone #:  Fax #:  Doon # Jill  Address:  Doon # Jill  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Andrew Parket  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Address:  Jill  Andrew Parket  Address:  Doon # Jill  Andrew Parket  Andre

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Relinquished By:  Relinquished By:  Relinquished By:	Date: Time: Time:	Received By:		Phone Result: Fax Result: REMARKS:	PYES NO NO RFN	Tf c1 < 600 will  TV1 BTEX, Benzene	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	410	Sample Condition Cool Intact Yes Yes	CHECKED BY: (Initials)			( Normal)	

District I
1625 N. French Dr., Hobbs, NM 88240
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1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 62807

## **CONDITIONS**

Operato	or:	OGRID:
	ADVANCE ENERGY PARTNERS HAT MESA, LLC	372417
	11490 Westheimer Rd., Ste 950	Action Number:
	Houston, TX 77077	62807
		Action Type:
		[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By		Condition Date
nvelez	None	1/18/2022