April 9, 2020

Dagger State Unit 3 (DSU 3 02062020)
Characterization, Remediation & Closure Report

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

Form C-141
Page 1

State of New Mexico
Oil Conservation Division

Incident ID	NRM2011358419
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.4624096 Longitude -103.6153213
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Dagger State Unit #003	Site Type: Produced water transfer line
Date Release Discovered: 02/06/2020	API# 30-025-36595

Unit Letter	Section	Township	Range	County
K	19	21S	33E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 2	Volume Recovered (bbls): 1
☒ Produced Water	Volume Released (bbls) 15	Volume Recovered (bbls): 10
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Wellhead stuffing box failure. Vacuum truck dispatched to location and recovered 11 barrels of produced water and oil.

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

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Andrew Parker (R.T. Hicks Consultants) Title: Sr. Env. Specialist

Signature: Andrew Parker Date: February 09, 2020

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

OCD Only

Received by: Ramona Marcus Date: 04/22/2020

Incident ID	~~NRM2000354631~~
District RP	
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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? **Plate 5 & 6**	179 (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 8**	☐ 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)? **Plate 8**	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? **Plate 9**	☐ 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? **Plate 7**	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? **Plate 8**	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? **Plate 7**	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland? **Plate 10**	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine? **Plate 11**	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology? **Plate 12**	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain? **Plate 13**	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	~~NRM2000354631~~ CE
District RP	
Facility ID	
Application ID	

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Printed Name: Andrew Parker Title: Sr. Env. Specialist

Signature: Andrew Parker Date: April 10, 2020

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

OCD Only

Received by: Ramona Marcus Date: 04/22/2020

Incident ID	~~NRM2000354631~~ CE
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Remediation Plan

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

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

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

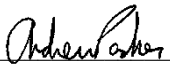
☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Andrew Parker Title: Sr. Env. Specialist

Signature:  Date: April 10, 2020

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

OCD Only

Received by: Ramona Marcus Date: 04/22/2020

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

Signature:  Date: 06/18/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2000354631
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Andrew Parker Title: Sr. Env. Specialist

Signature: Andrew Parker Date: April 10, 2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996
▲ Carlsbad ▲ Durango

April 10, 2020

NMOCD District 1
District 1 - HOBBS
1625 N. French Drive
Hobbs, New Mexico 88240
Electronic Submittal via portal

RE: Tracking # *Pending*
Characterization and Closure Report
Dagger State Unit 3 (DSU 3 02062020)
API: 30-025-36595
Advance Energy Partners Hat Mesa, LLC

NMOCD:

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

The release occurred on February 6, 2020 on an active production pad. State of New Mexico is the surface owner. The cause of the release was due to wellhead stuffing box failure. Seventeen barrels were released. Eleven barrels were recovered.

Excavation of impacted soil began on February 24, 2020 and was completed on February 28, 2020.

The C-141, including the Characterization, Remediation, and Closure Forms, is attached.

We respectfully ask NMOCD for:

- Deferment approval around the wellhead and pump jack, and
- Closure of the regulatory file for the non-deferred area.

Hick Consultants relied on 19.15.29 NMAC for characterization, remediation, and closure reporting for the above referenced release.

The location of the release is 32.4624096, - 103.6153213 (Latitude/Longitude; NAD 83); Unit Letter K, Sec 19, T21S., R33E; Lea County.

The report is divided into three sections:

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

Plates

- Plate 1 – Site Map
- Plate 2 – EMI Survey In-Phase Susceptibility (Horizontal Mode at 0.5m Separation)
- Plate 3 – EMI Survey ECa in the Horizontal Dipole Mode at 0.5 m coil separation.
- Plate 4 – EMI Survey ECa in the Vertical Dipole Mode at 1.0 m coil separation.
- Plate 5 – Depth to Water
- Plate 6 – Potentiometric Surface
- Plate 7 – Wellhead Protection
- Plate 8 – Water Courses
- Plate 9 – Nearby Structures
- Plate 10 – Wetlands
- Plate 11 – Mines and Minerals
- Plate 12 – Karst Potential
- Plate 13 – Flood Hazard Potential (FEMA)
- Plate 14 – Base Sample Grid Diagram
- Plate 15 – Wall Sample Grid Diagram

Tables

- Table 1 – Sample Results Summary
- Table 2 – Nearby OSE Well Summary

Appendices

- Appendix A – Laboratory Certificate of Analyses
- Appendix B - OSE Well Logs

1 Initial Response

The release occurred on February 06, 2020, resulting from failure of the wellhead stuffing box. The release included produced water and crude oil. The area of saturation and pooling areas remained on the active production pad (Plate 1 and Figure 1). The release consisted of 17 barrels; 11 barrels were recovered. The majority of the release was recovered from within the wellhead cellar.

The production pad was scraped within the release area on February 10th. Excavation of impacted soil caused by the release began on February 24, 2020. Excavated material was transported to an approved disposal facility.

Figure 1: Photograph viewing west from the east edge of the production pad. The release extent is visible as outlined by the melted snow (photo center). Date/Time: 02/06/2020. GPS: 32.4624139 N, 103.6146778 W.

2 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 5-13).

2.1 Site Map

Horizontal extent of the release was determined by visual observations. R.T. Hicks Consultants was on-location the day of the release and mapped the release extent using GPS technology.

Plate 1 shows the release extent relative to excavation extent, pipelines, and release source point at the wellhead.

2.2 Electromagnetic Induction Survey (EMI)

EMI Surveys are commonly used to measure apparent electrical conductivity (EC_a, "soil salinity") in soils. Employing a Geonics EM38-MKII, field personnel can effectively delineate the horizontal and vertical (up to a depth of 5-feet) extent of a produced water release by measuring EC_a and monitoring for EC changes between background and higher EC readings. At produced water releases, increasing EC measurements suggest a higher chloride.

On February 9, 2020 we performed an EMI Survey to measure the electrical conductivity of the release area. The EMI Survey was conducted in the horizontal and vertical dipole modes at 0.5 and 1.0 meter coil separations. Sensitivity to surface material is greatest at the 0.5 coil separation, zero feet in the horizontal mode and 0.66 feet in the vertical mode (below table and Figure 2a). At the 1.0 meter coil separation, greatest sensitivity is zero feet in the horizontal mode and 1.31 feet in the vertical mode (Figure 2b). Furthermore, at the 1.0 meter coil separation, sensitivity to subsurface material has a greater depth range. For example, at the 0.5 meter coil separation in the vertical mode the sensitivity ranges from 0.7 to 2.5 feet below ground surface; at the 1.0 meter coil separation in the vertical mode the sensitivity ranges from 1.3 to 4.9 feet below ground surface.

Coil Separation	Dipole Mode	Greatest Sensitivity	Relative Range	
meters		meters (feet)	Depth (meters)	Depth (feet)
0.5				
	Horizontal	0	0 - 0.4	0 - 1.3
	Vertical	0.2 (0.66)	0.2 - 0.8	0.7 - 2.5
1				
	Horizontal	0	0 - 0.8	0 - 2.5
	Vertical	0.4 (1.31)	0.4 - 1.5	1.3 - 4.9

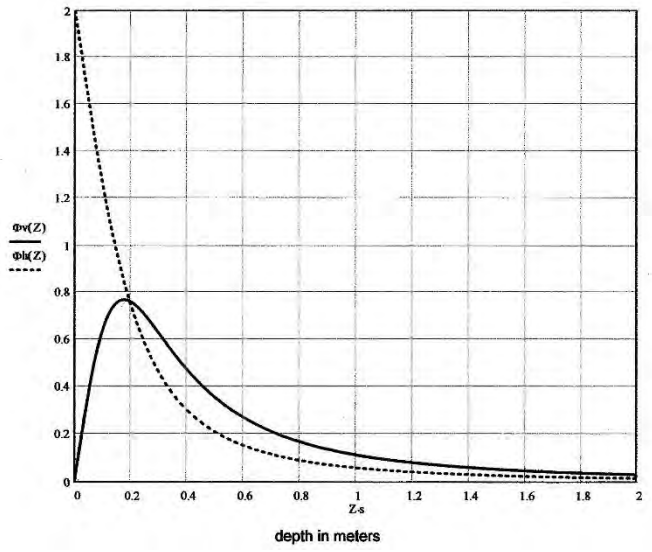


Figure 2a: 0.5-meter coil separation. Relative sensitivity with depth. Dashed line horizontal dipole mode. Solid line vertical dipole mode.

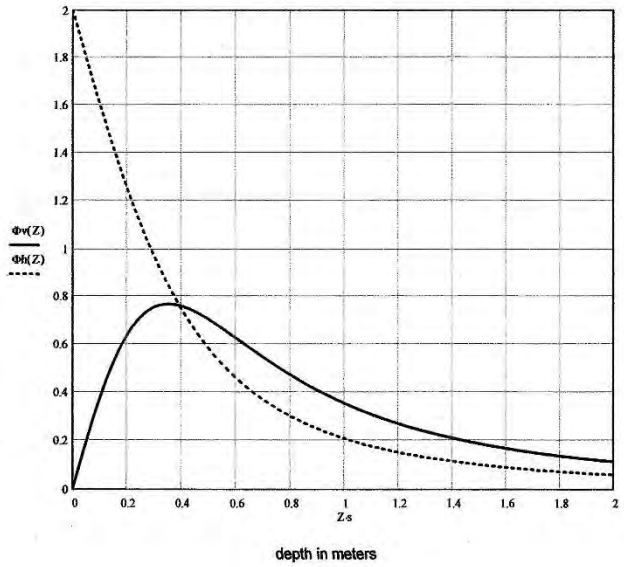


Figure 2b: 1.0-meter coil separation. Relative sensitivity with depth. Dashed line horizontal dipole mode. Solid line vertical dipole mode.

The difference in sensitivity ranges in the two coil configurations and dipole modes is important; the horizontal dipole mode will be relatively sensitive to variations near surface whereas the vertical dipole mode will be insensitive near the surface and sensitive at greater depths. This difference in sensitivity allows for a quick method for determining whether the near surface soil is more conductive (higher chloride concentration) than soils at depth, where

> *if a higher EC_a reading is obtained in the horizontal position than the vertical position, chloride has likely impacted the upper surface more than soils at lower depths. If a higher EC_a reading is obtained in the vertical position than the horizontal position, chloride has likely impacted soils at lower depths than the upper surface soils.*

It is important to note that the EM38 is very susceptible to metal and electrical interferences. A metal object small as a steel nail can cause the apparent electrical conductivity to read high or go negative. EMI surveys near pipelines, wellheads, tank batteries, and powerlines must account for these interferences.

2.3 Metal Interference

As discussed above, the EM38-MK2 is susceptible to metal and electrical interference. These interferences need to be identified and evaluated prior to evaluation of electrical conductivity of subsurface soils.

The In-phase (IP) susceptibility of metal and electrical interferences is measured in parts per thousand (PPT). It is common for susceptibility readings to have very high and very low (negative) value.

Plate 2 shows the IP readings in the vertical dipole mode at the 0.5 meter receiver coil separation relative to IP interferences within the survey area. The IP susceptibility in this mode/coil separation, is most sensitive from 0.7 to 2.5 ft below ground surface (bgs). Dark purple and bright yellow shading highlights areas with greatest IP susceptibility. The following areas shows high IP susceptibility:

- At the pump jack and wellhead (yellow).
- Along the metal pipelines (yellow and dark purple).
- An area along the northwestern edge of the survey area (yellow). This area is off the production pad.
- A valve that was identified shows metal interference but is obscured by the pipeline leading from the wellhead to the separator.

Interpretation notes:

- The pipeline connector and other metal objects will have an influence on the electrical conductivity readings during the Quad-phase (QP) EMI survey. The user of the EMI survey needs to be aware of QP false readings near these two objects.

2.4 Electrical Conductivity

Field soil testing of electrical conductivity at discreate depths were obtained from seven hand auger samples (HA-01 and HA-07). Discrete soil samples were field tested for electrical conductivity using a Hanna DiST 4 EC Tester. EC readings were measured using a saturated paste in a 1-part soil to 5-parts distilled water solution ($EC_{1:5}$).

The purpose of the soil sampling was to

1) correlate the EMI survey with site specific $EC_{(1:5)}$ and chloride concentrations to a depth of no greater than 4-feet bgs and
2) determine chloride impairment relative to depth.

As shown in Figure 3, $EC_{1:5}$ readings <0.20 dS/m correlates with a chloride concentration approximately <600 mg/kg.

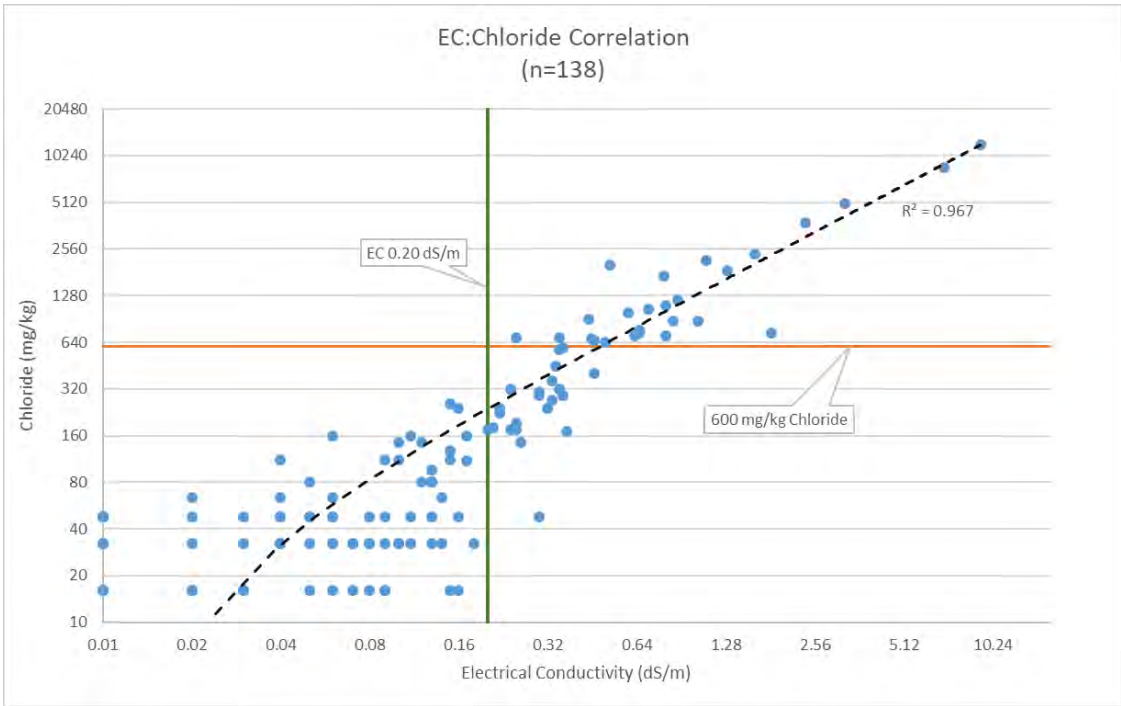


Figure 3: $EC_{1:5}$ vs Chloride. Soil samples with an $EC_{1:5}$ < 0.2 dS/m are likely to exhibit chloride concentrations below 600 mg/kg.

The Quad-phase (QP) readings of the EMI Survey measures apparent electrical conductivity (EC_a) in both the horizontal and vertical dipole modes.

Plates 3 and 4 compare EMI readings in the uppermost and lowermost soil profiles, respectively.

- Plate 3 shows the EC_a in the horizontal dipole mode at 0.5 m coil separation with a relative sensitivity range of 0 to 1.3 ft bgs with the greatest sensitivity at the surface.

  Within the release extent EC_a readings are affected by metal interference at the wellhead, valve, and pipelines. Along the southern extent of the release, the EMI survey shows higher EC_a (yellow-green shading) relative to background EC_a represented by dark green shading to the south of the release extent. The higher EC_a readings correlate with the southern release extent in areas not influenced by metal susceptibility.

  $EC_{(1:5)}$ readings at HA-03 and HA-04 confirm that the EMI survey defined the southern edge of the release. Hand Auger sample HA-03 at the surface exhibited an $EC_{(1:5)}$ reading of 1.43 dS/m. HA-04 at 0.5 feet bgs exhibited an $EC_{(1:5)}$ reading of 0.1 dS/m. As discussed above, $EC_{(1:5)}$ readings <0.2 dS/m correlated with a chloride concentration <600 mg/kg.

- Plate 4 shows EC_a in the vertical dipole mode at 1.0 m coil separation with a relative sensitivity range of 1.3 to 4.9 ft bgs with the greatest sensitivity at 1.31 ft bgs.

  Along the southern release extent, EC_a is near background concentrations (darker green color) and confirmed with HA-03 at 1-ft bgs where $EC_{(1:5)}$ readings exhibited 0.08 dS/m.

  At the northeastern extent, outside of the release extent, and within an area of background EC_a readings, HA-01 exhibited 0.16 dS/m, below the 0.2 dS/m threshold.

  HA-05 that is within the release extent exhibited $EC_{(1:5)}$ readings of 2.5 and 0.08 dS/m at the surface and 1-ft bgs, respectively.

  HA-06 at the edge of the pipeline metal interference/background and outside of the release extent exhibited an EC(1:5) reading of 0.09 dS/m at the surface.

  HA-02 and HA-07 exhibits $EC_{(1:5)}$ readings above 0.2 dS/m. HA-07 is outside of the release extent and is likely from a historic release.

The EMI survey and discrete sampling indicates that remediation of the eastern two-thirds of the release will most likely be at depths between 1 and 2 feet bgs. At the western one-third of the release extent remediation will exceed 4-feet bgs.

Table 1 is a summary of analytical results and $EC_{1:5}$ field readings. Appendix A contains the laboratory certificate of analysis.

2.5 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 5). Spatial analysis shows:

- The nearest wells are approximately 1.3 miles to the north.
- The depth to water in the nearest well (USGS-15845) is 141.19 feet.
- Another group of water wells is approximately 2.1 miles east-southeast. Depth to water in this well cluster averages 178.5 feet.

Ground water flow is to the south-southeast as demonstrated on the potentiometric surface map (Plate 6). We relied on the USGS water wells to generate the potentiometric surface. Regionally, USGS water wells show that ground water is within the alluvium and Chinle formation.

The potentiometric surface indicates that the depth to water is approximately 179 feet below ground surface, where 179 feet = 3784 ft surface elevation – 3605 ft potentiometric surface.

Table 2 lists nearby water wells from the Office of the State Engineer's (OSE) online database. Appendix B are the wells logs listed in Table 1.

2.6 Wellhead Protection Area

Plate 7 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

2.7 Distance to Nearest Significant Water Course

Plate 8 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).

2.8 Soil/Waste Characteristics

The release occurred in an area where depth to water is greater than 100 ft below ground surface (bgs) and an active production pad.

The release area was restored (discussed below, Section 3) according to Closure Criteria listed in Table 1 of 19.15.29 NMAC.

Table 1 shows the analytical results of confirmation sampling. The Laboratory Certificate of Analyses are located in Appendix A.

Release excavation showed the lithology as:

0 – 0.75 ft: caliche production pad
0.75 – 4.5 ft: silty sand
4.5 ft: hard caliche layer

3 Remediation and Closure

3.1 Excavation Protocol

All surfaces were restored in accordance with 19.15.29.13 NMAC. Per Table 1 of 19.15.29 NMAC, closure criteria concentrations where depth to water >100 feet are:

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

Excavation of the base and walls in the upper 4-feet continued until field screening of electrical conductivity ($EC_{1:5}$) was less than 0.2 to 0.3 dS/m (Figure 4). As shown previously in Figure 3, EC < 0.2 dS/m correlates with a chloride concentration <600 mg/kg.

Figure 4: Field screening for electrical conductivity (EC) during excavation. Date 02/24/2020. GPS: 32.4623308 N, 103.6152389 W

3.2 Remediation Activities

The excavation extent is irregular in shape and covers a surface area of 506 square yards with an excavated volume of 242 cu. yards.

Plate 14 shows the sampling diagram for base samples. A 5-point composite sample was collected from each grid for confirmation sampling. Five-point composite sample points were evenly spaced within each sample grid to obtain a representative sample of the area (Figure 5, below example).

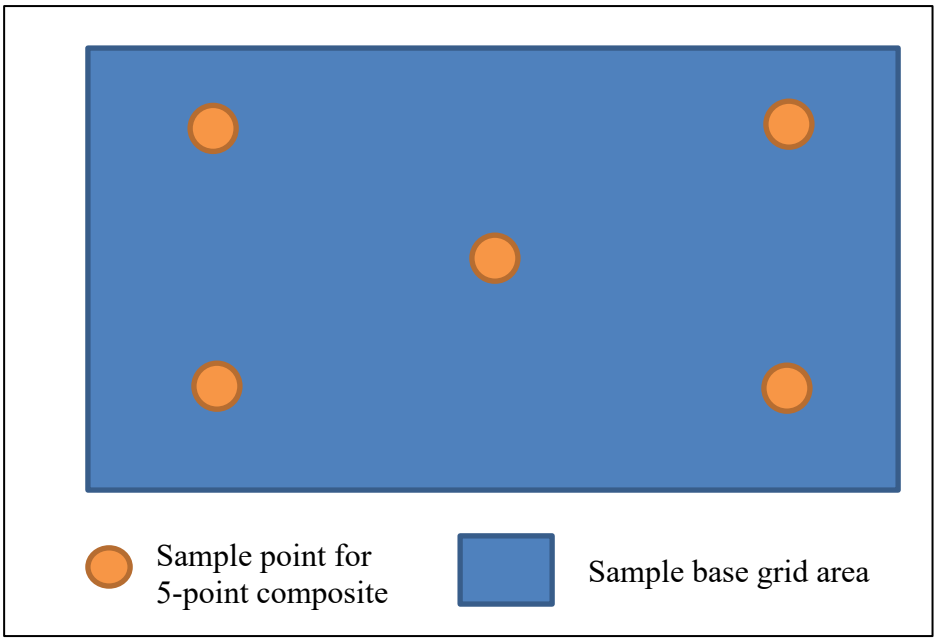


Figure 5: Example of 5-point sample grid for composite sampling.

Five-point composite soil samples were collected along the walls of the excavation as shown on Plate 15. Sample points for the composite wall samples were evenly distributed along the wall to obtain a representative 5-point composite sample. Samples were collected from the surface to 4-feet or excavation base depth, whichever is less.

If soil confirmation sampling exceeded 19.15.29 NMAC Table 1 Closure Criteria concentrations, excavation continued until soil confirmation results were below Closure Criteria with the exception around the wellhead and pump jack, discussed below.

Table 1 is a summary of analytical from confirmation sampling.

- Base confirmation samples (B-1 through B-07) exhibit concentrations below 19.15.29 NMAC Table 1 Closure Criteria.

- Wall confirmation samples (W-3 through W-11) exhibit concentrations below 19.15.29 NMAC Table 1 Closure Criteria.

The Cellar Base and Walls W-01 and W-02 exceed 19.15.29 NMAC Table 1 Closure Criteria.

Per 19.15.29.12.C(2),

> *If contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations…*

The wellhead cellar base and Wall W-02 (Figure 6) is located around production equipment (wellhead and pump jack). Therefore, we ask NMOCD for deferment of these areas.

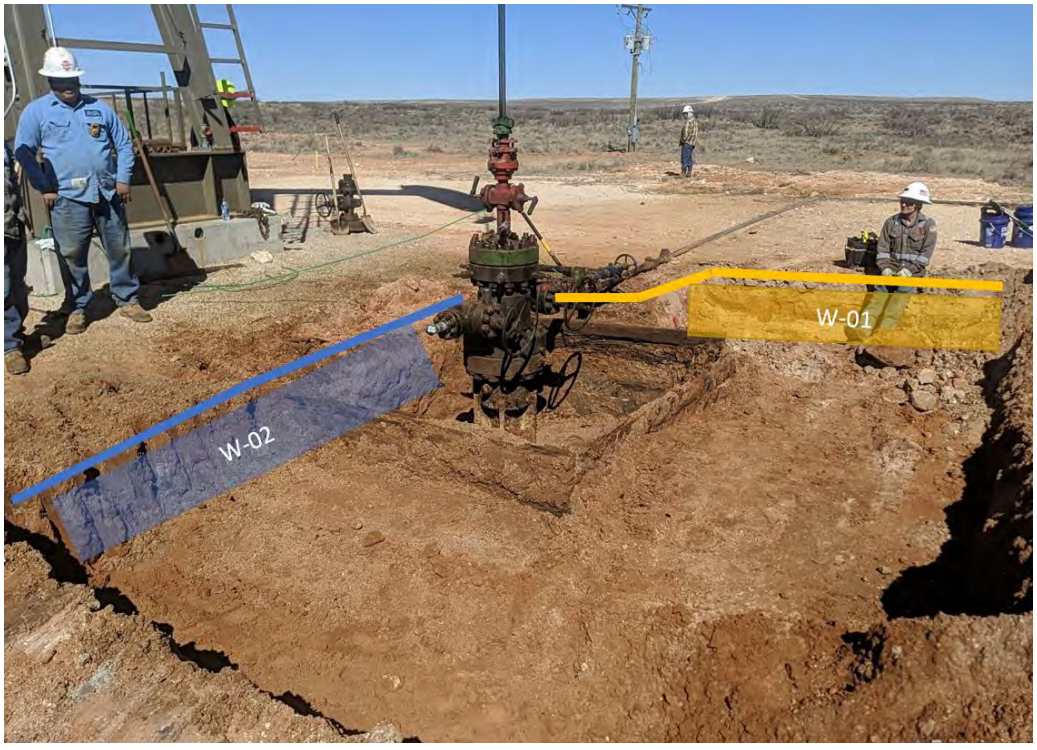


Figure 6: Photograph of wellhead and pump jack (production equipment), viewing northwest along base sample grid B-01. Wall grid extents are shown by the blue and yellow lines that are subject of deferment. Date/Time: 02/24/2020. GPS: 32.4623628 N,103.6152844 W.

Wall W-01 exhibits chloride concentrations above Table 1 of 19.15.29 NMAC Closure Criteria. The observed chloride concentrations at wall W-01 is likely from a historic release and/or consecutive releases from flowline connections. W-01 is 4-feet north of the current release extent. The area north of W-01 shall be the subject of a forthcoming release notification.

Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC after production equipment is decommissioned and is no longer used for oil and gas operations.

Excavated material was transported to an approved disposal facility. Clean backfill material was purchased from Merchant Livestock under a surface use agreement. Figure 7 shows the restored surface.

Figure 7: Restored production pad. Date: 02/28/2020 GPS: 32.4624347 N,103.6149031 W

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

Sincerely,
R.T. Hicks Consultants, Ltd.

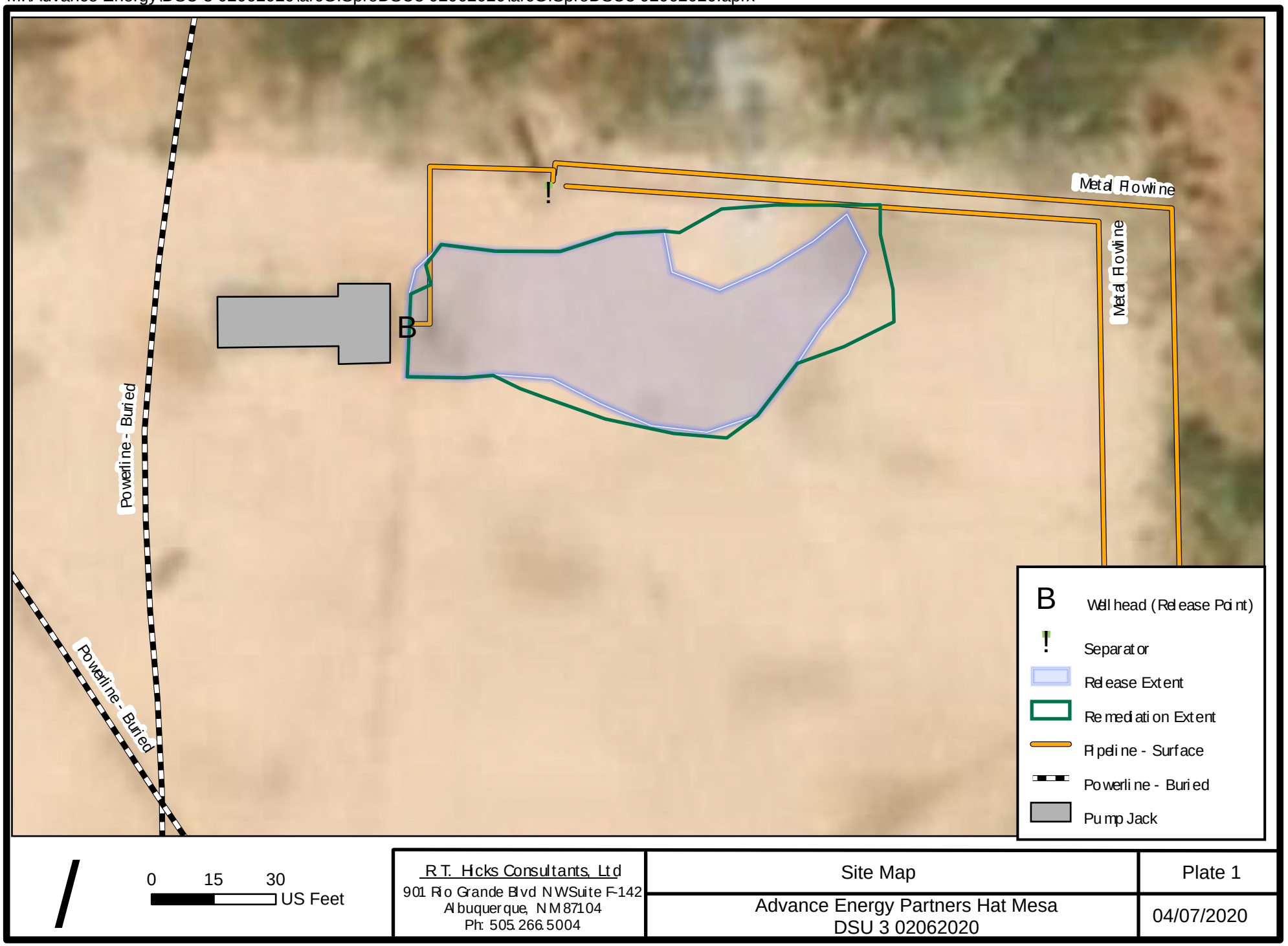
Andrew Parker
Sr. Env. Specialist

Copy: David Harwell (DHarwell@advanceenergypartners.com);
Advance Energy Partners Hat Mesa, LLC
Ryan Mann (rmann@slo.state.nm.us); State Land Office

Plates

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

M:\Advance Energy\DSU 3 02062020\arcGISproDSU3 02062020\arcGISproDSU3 02062020.aprx



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Site Map	Plate 1
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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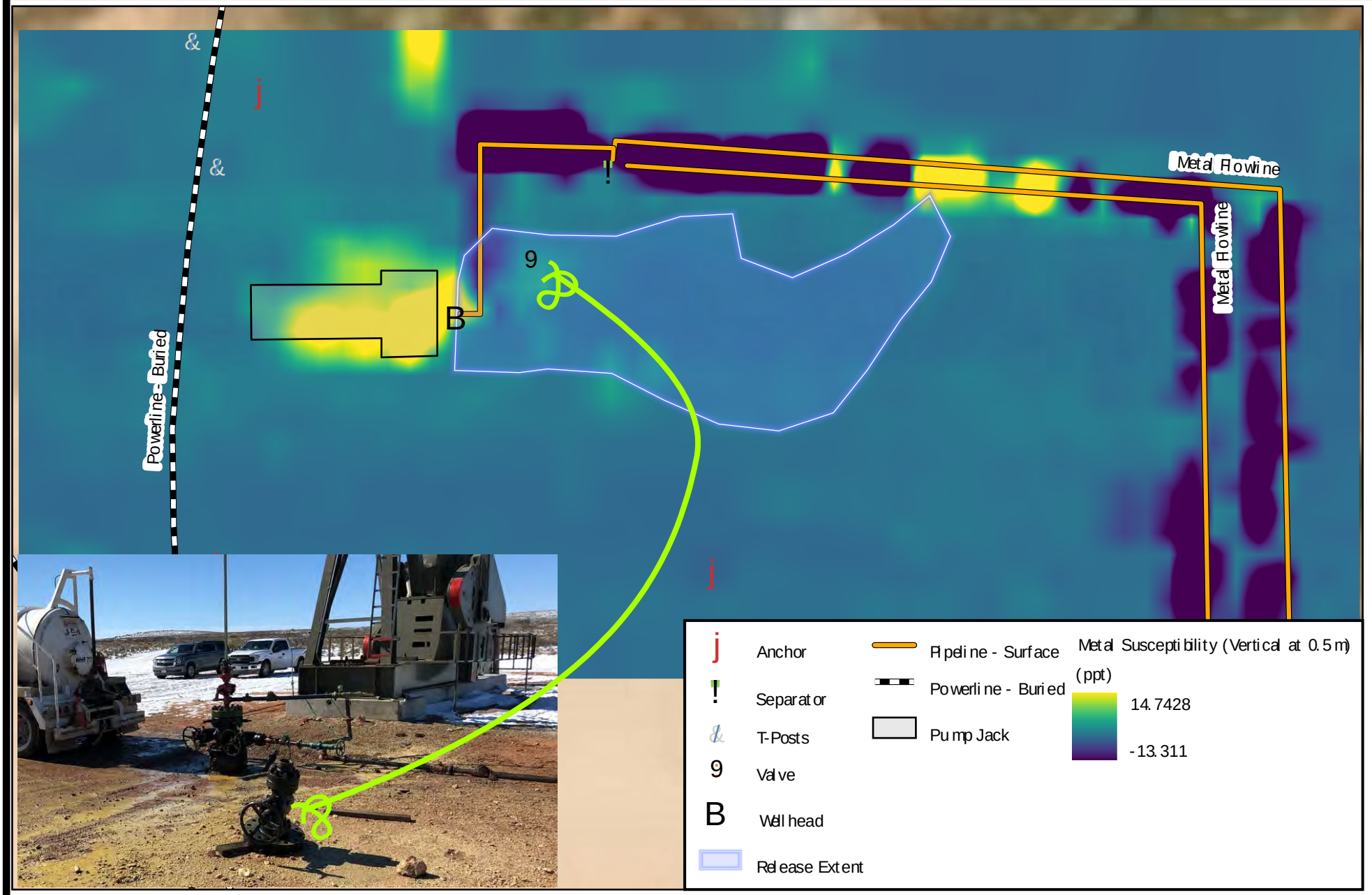

0 15 30 US Feet

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	EMI Survey Metal Susceptibility - 0.5m Separation Vertical Mode (0.7 - 2.5 feet relative sensitivity)	Plate 2
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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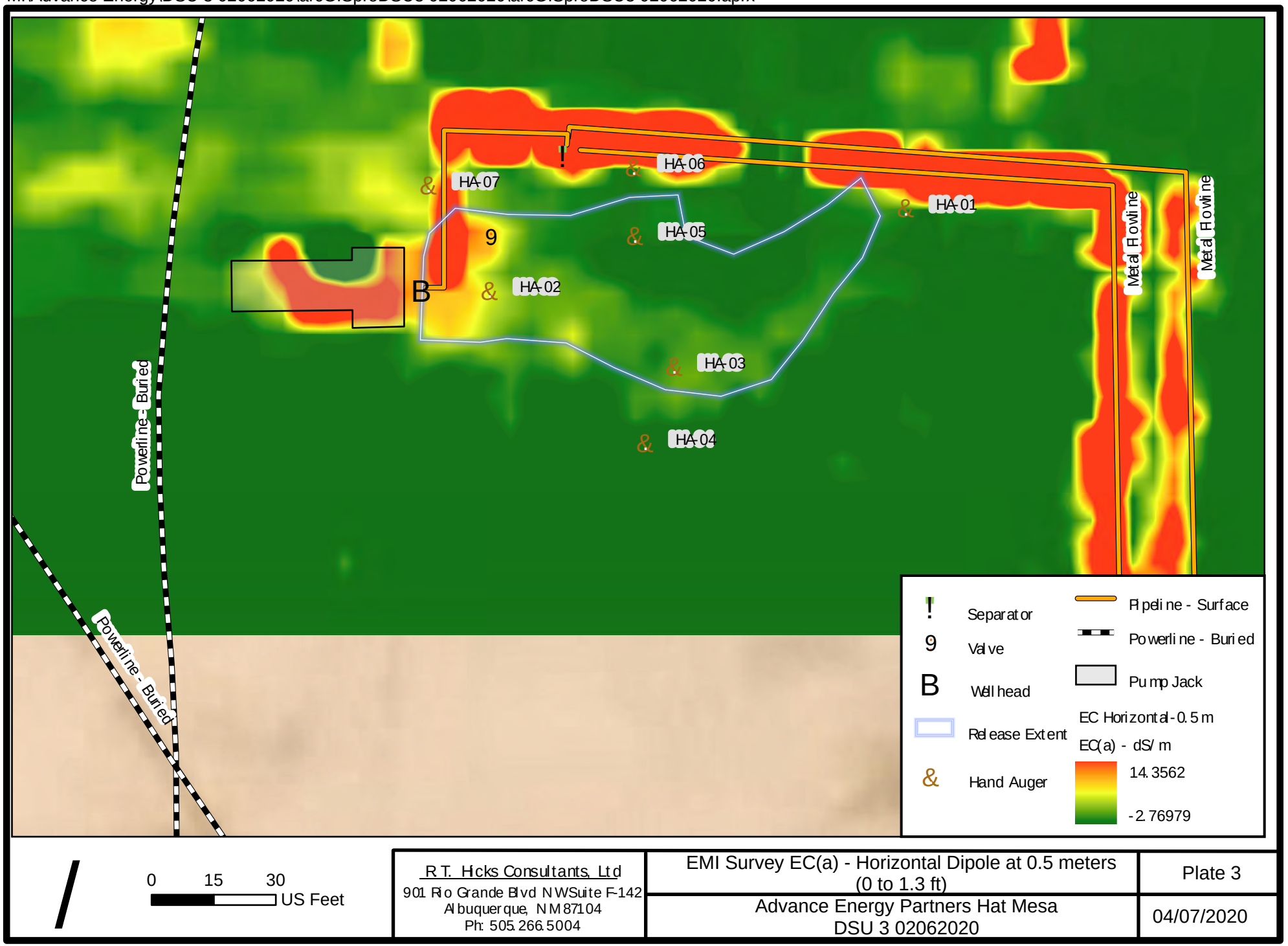

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	EMI Survey EC(a) - Horizontal Dipole at 0.5 meters (0 to 1.3 ft) Advance Energy Partners Hat Mesa DSU 3 02062020	Plate 3 04/07/2020

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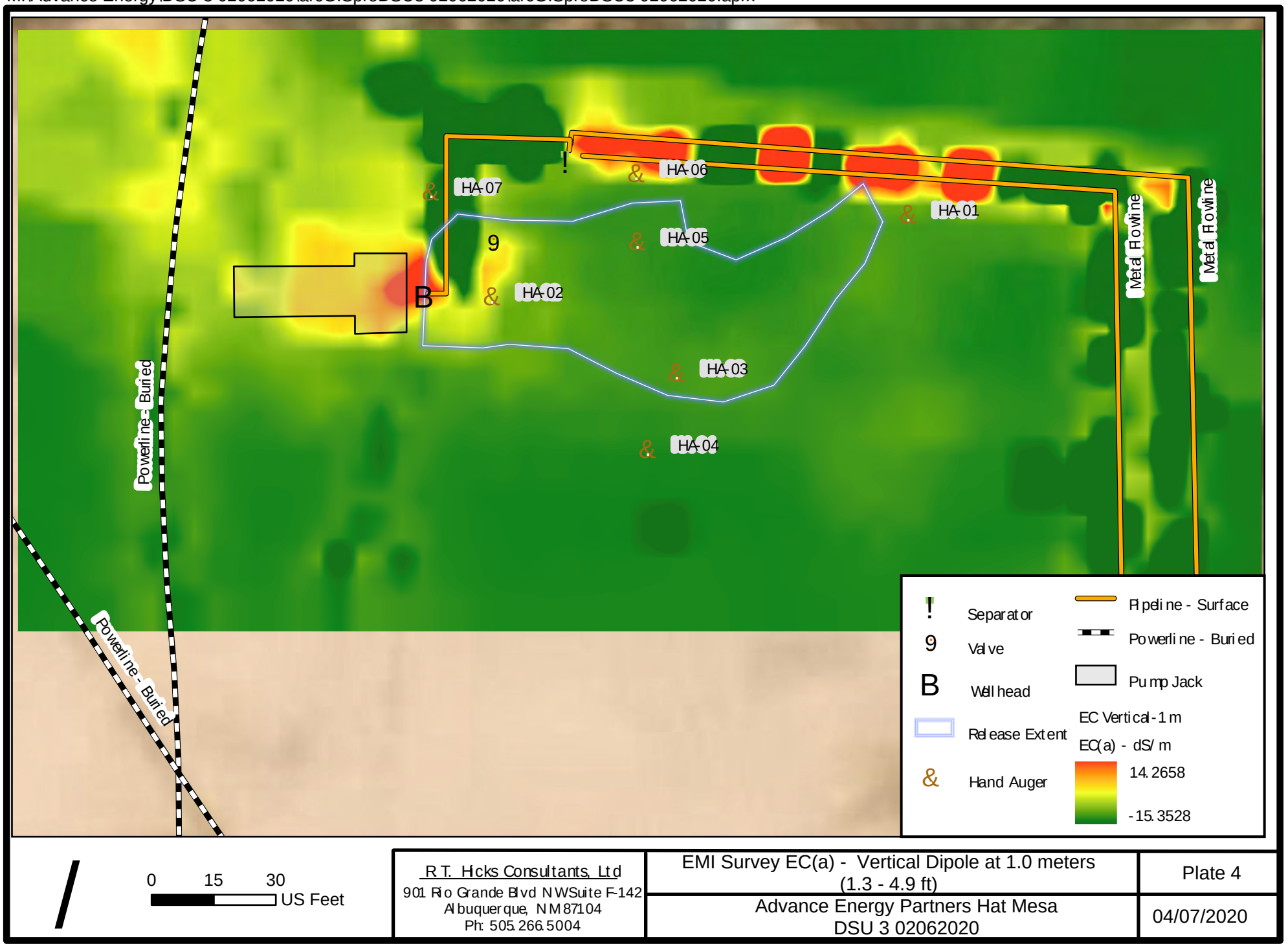

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	EMI Survey EC(a) - Vertical Dipole at 1.0 meters (1.3 - 4.9 ft) Advance Energy Partners Hat Mesa DSU 3 02062020	Plate 4 04/07/2020

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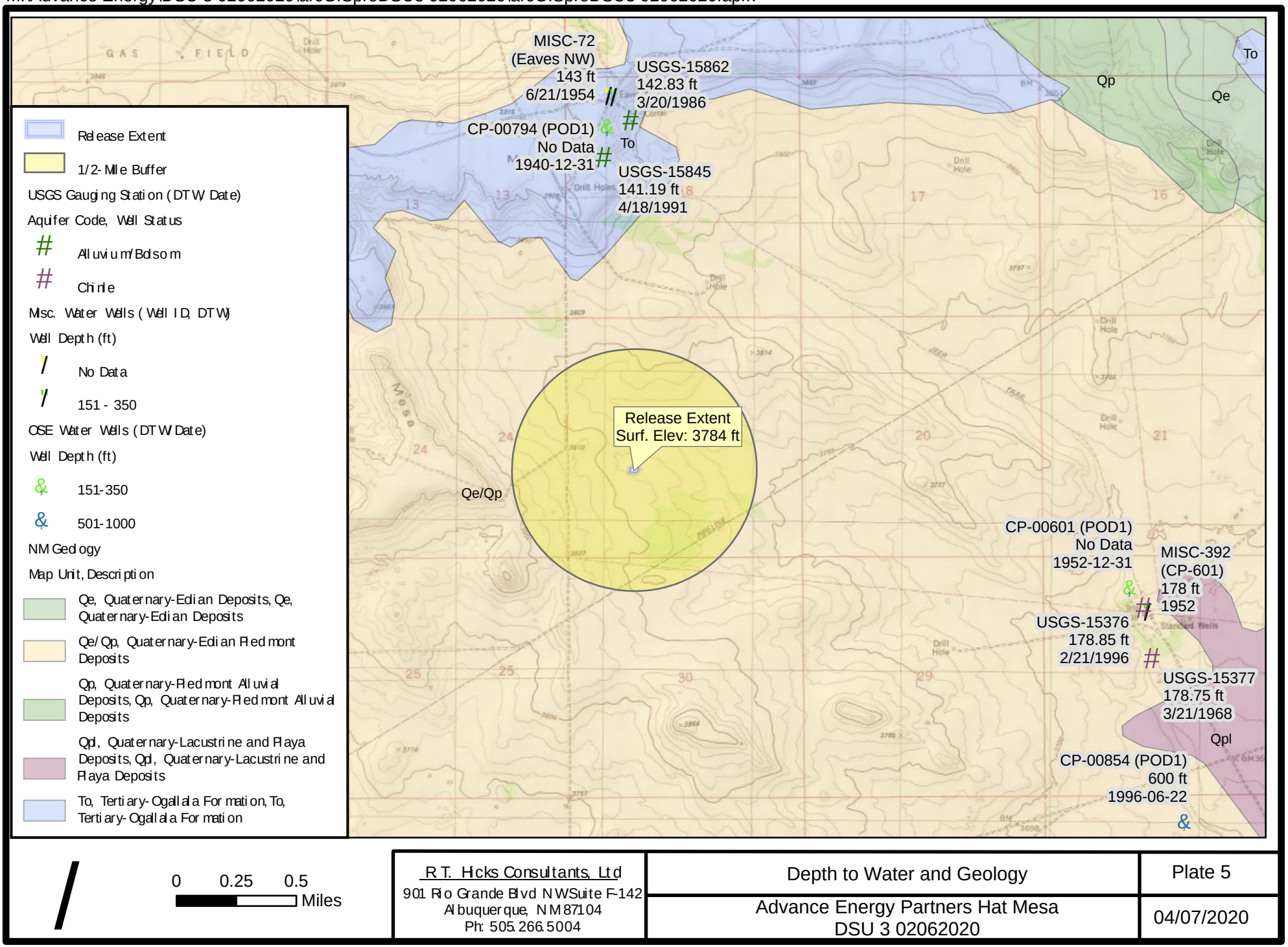

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Depth to Water and Geology Advance Energy Partners Hat Mesa DSU 3 02062020	Plate 5 04/07/2020

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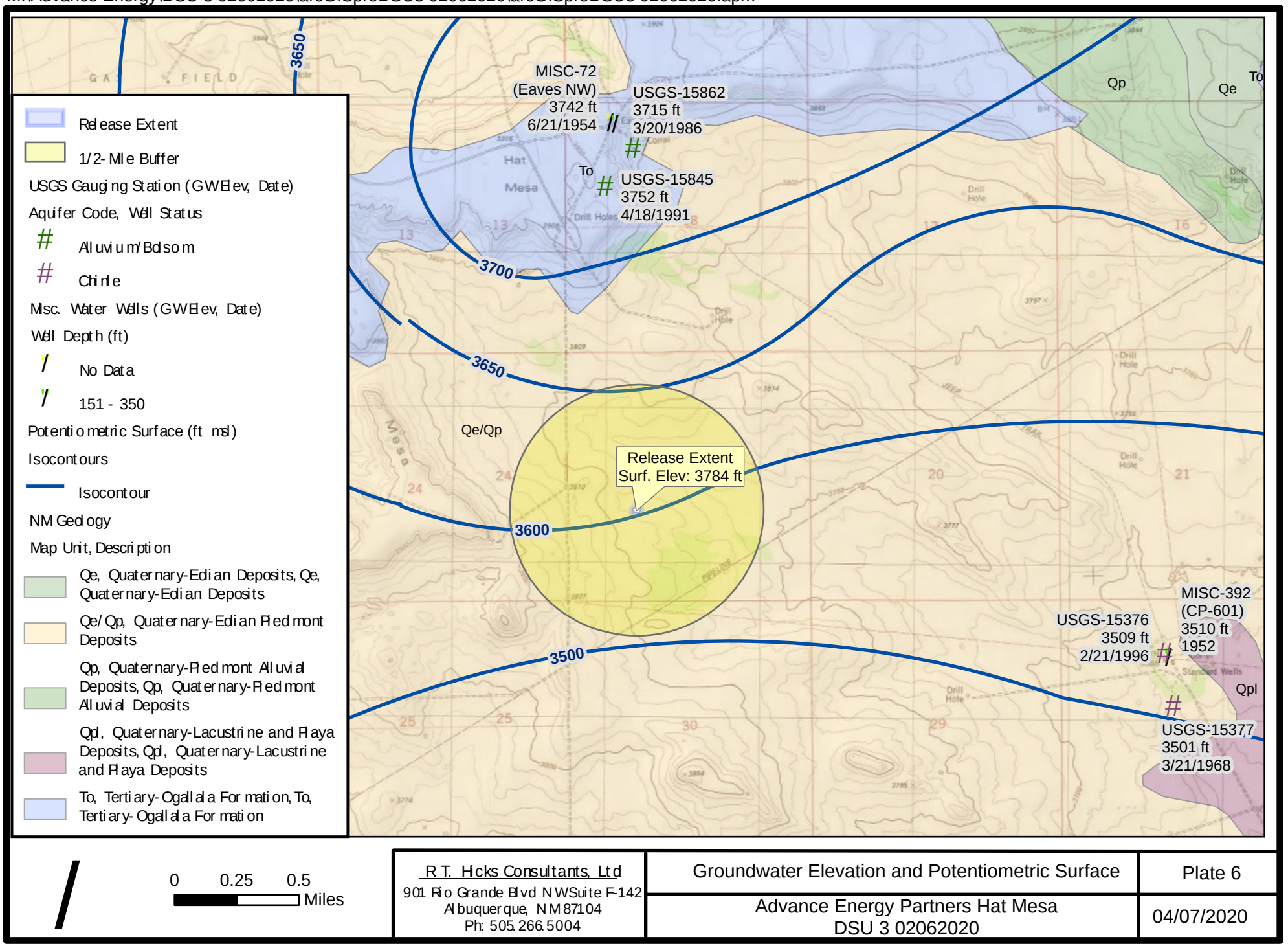

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Groundwater Elevation and Potentiometric Surface	Plate 6
Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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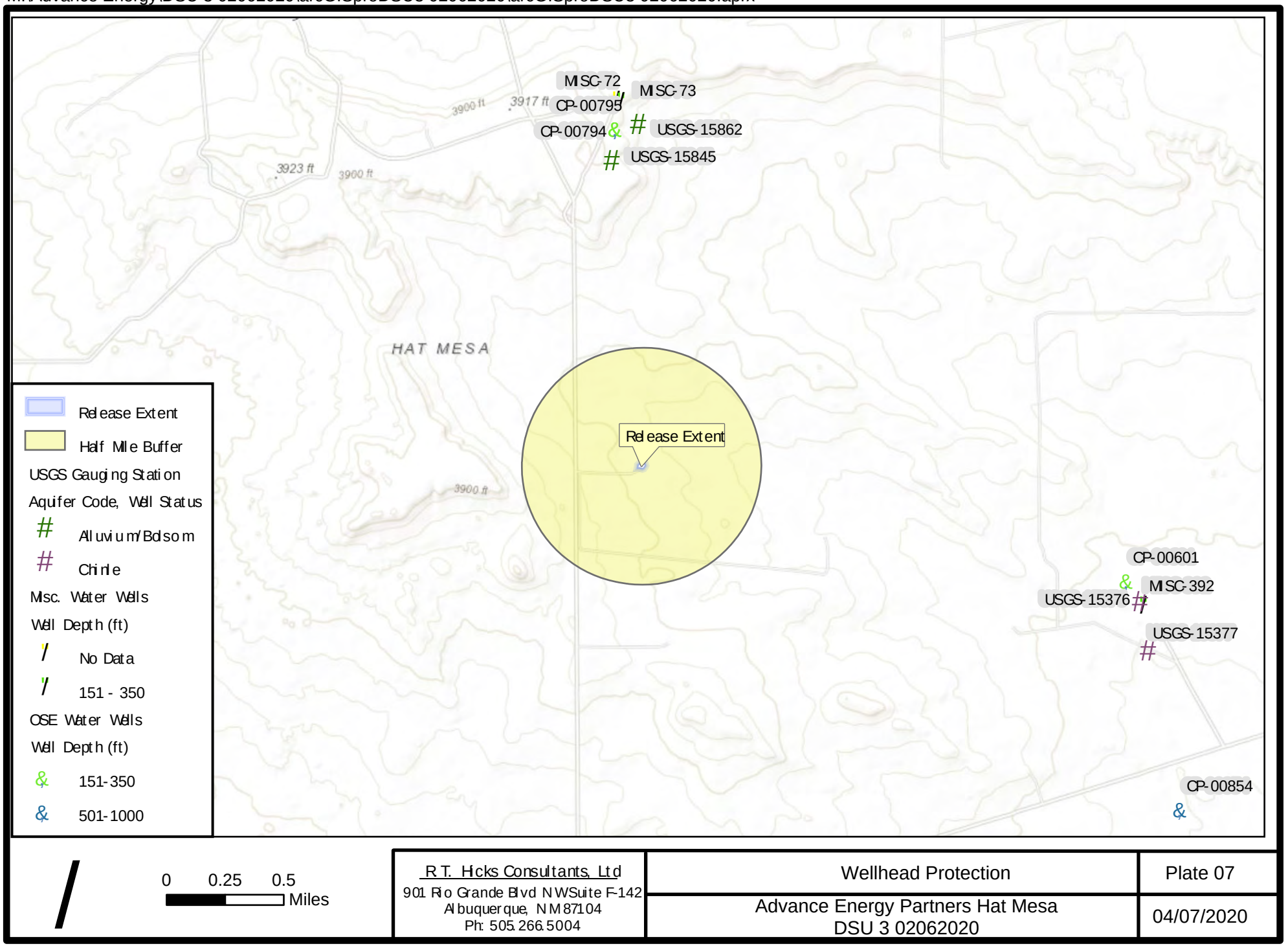

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Wellhead Protection	Plate 07
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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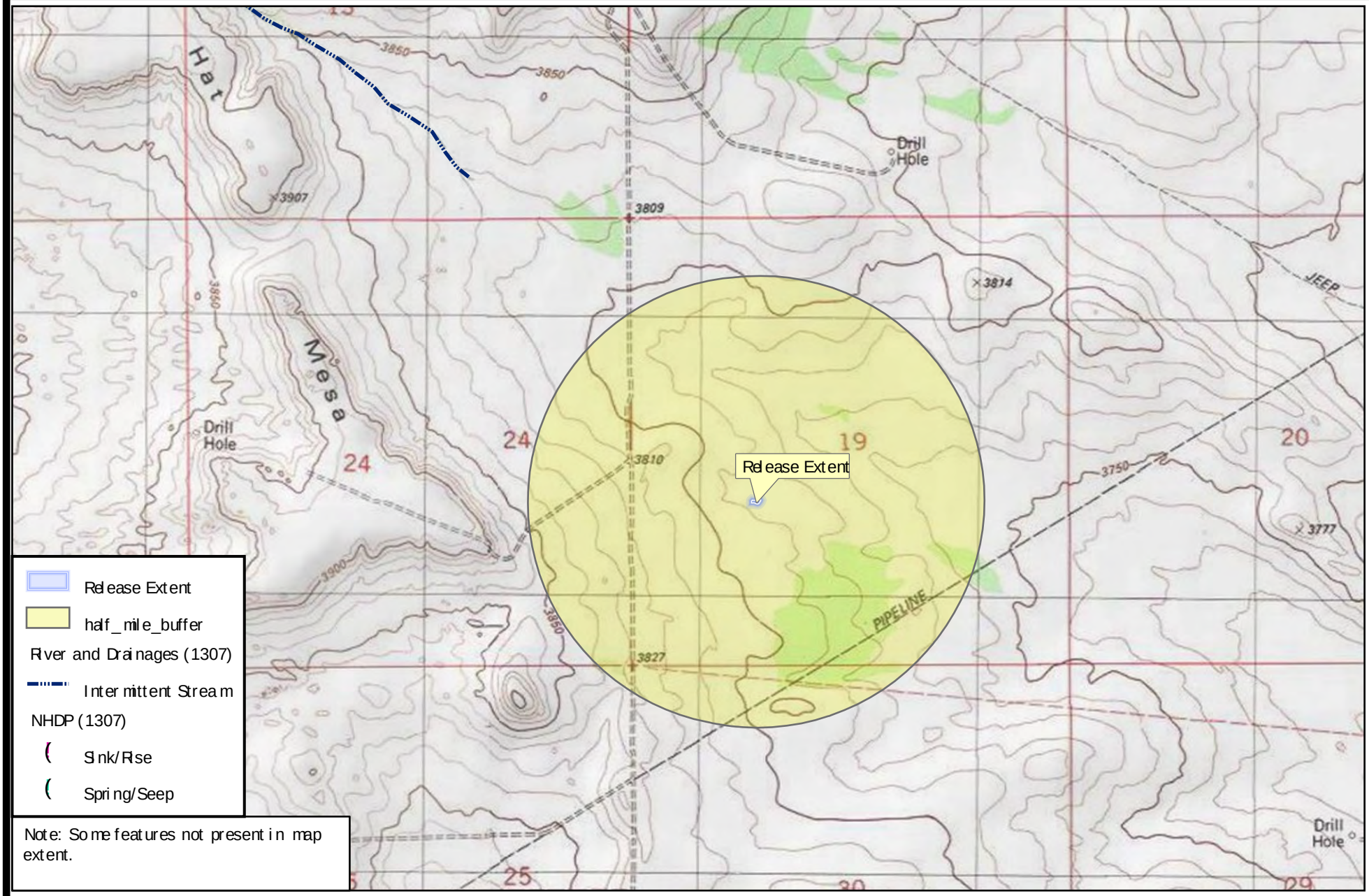

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Water Courses	Plate 8
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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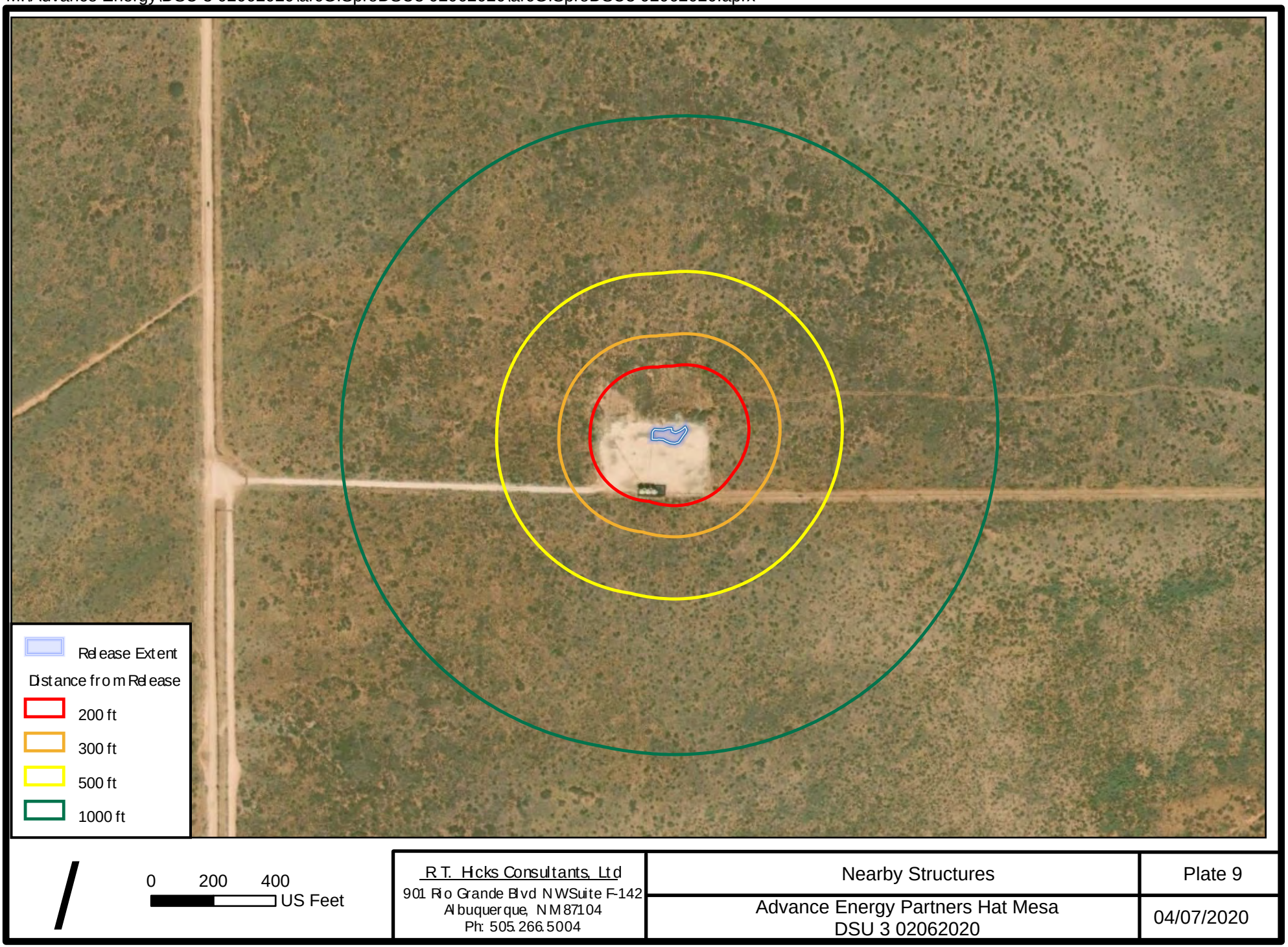

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Structures	Plate 9
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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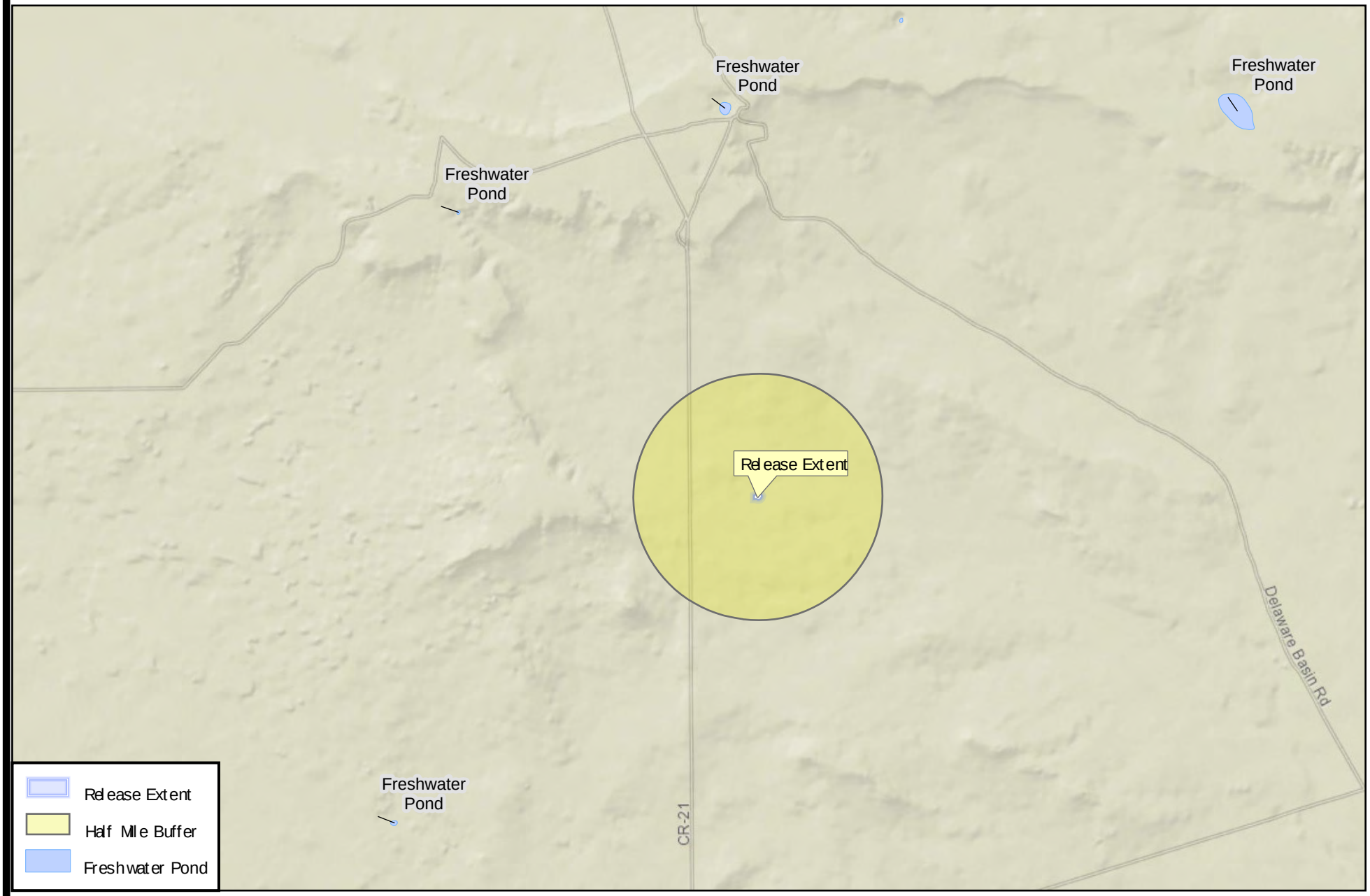

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Wetlands	Plate 10
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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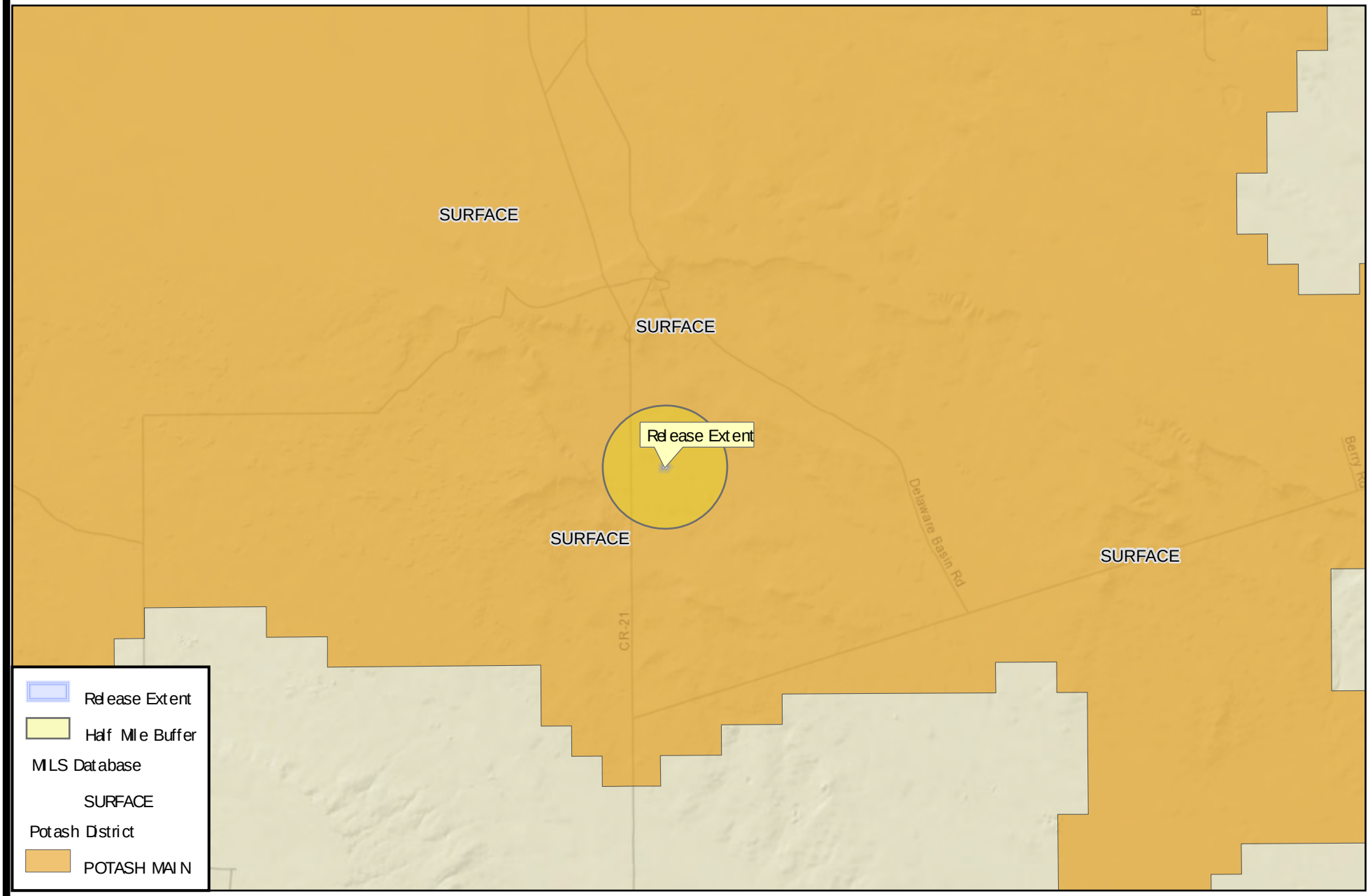

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Mines and Minerals	Plate 11
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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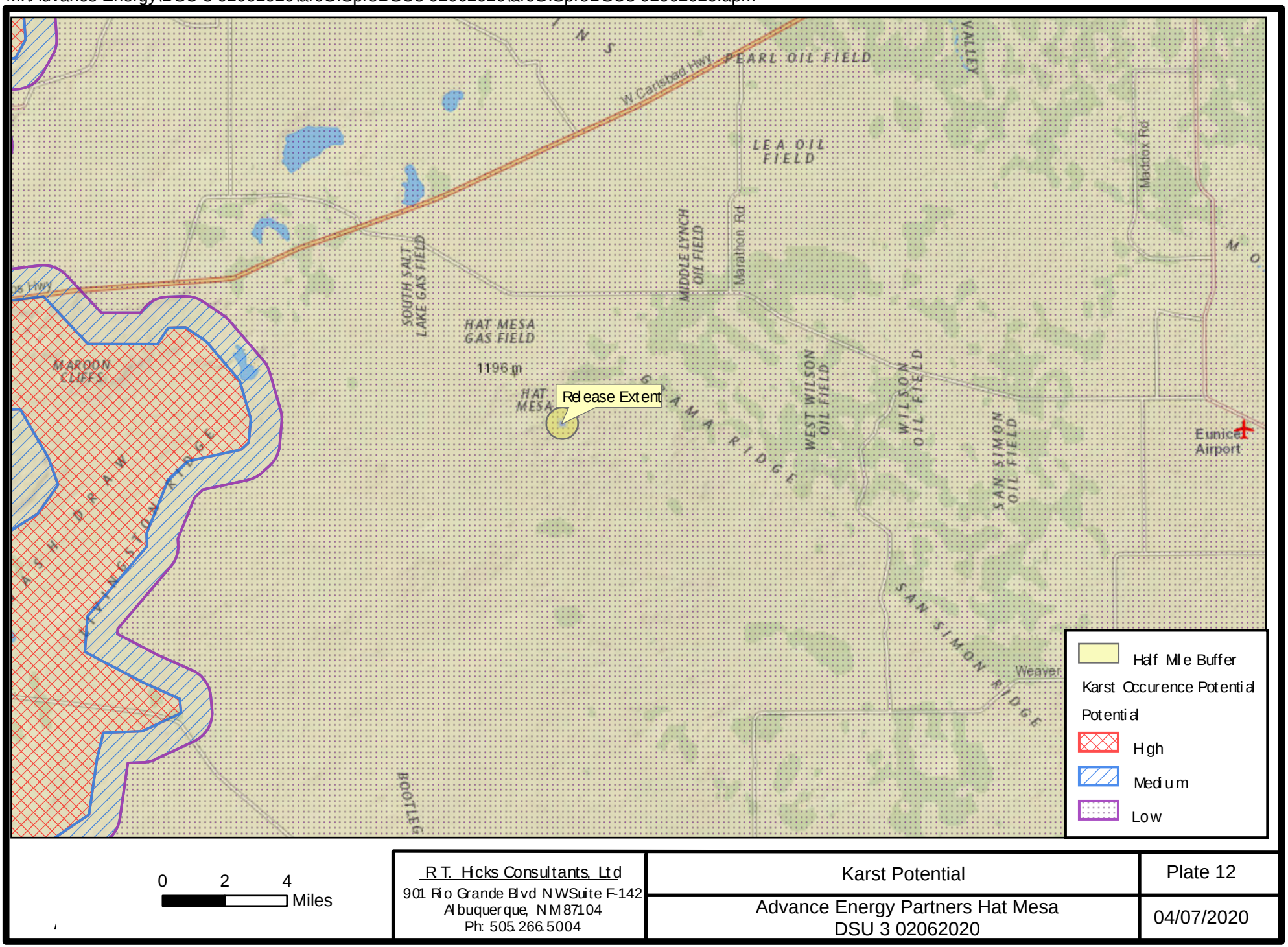

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Karst Potential	Plate 12
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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0 3 6 Miles

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Flood Hazards (FEMA)	Plate 13
Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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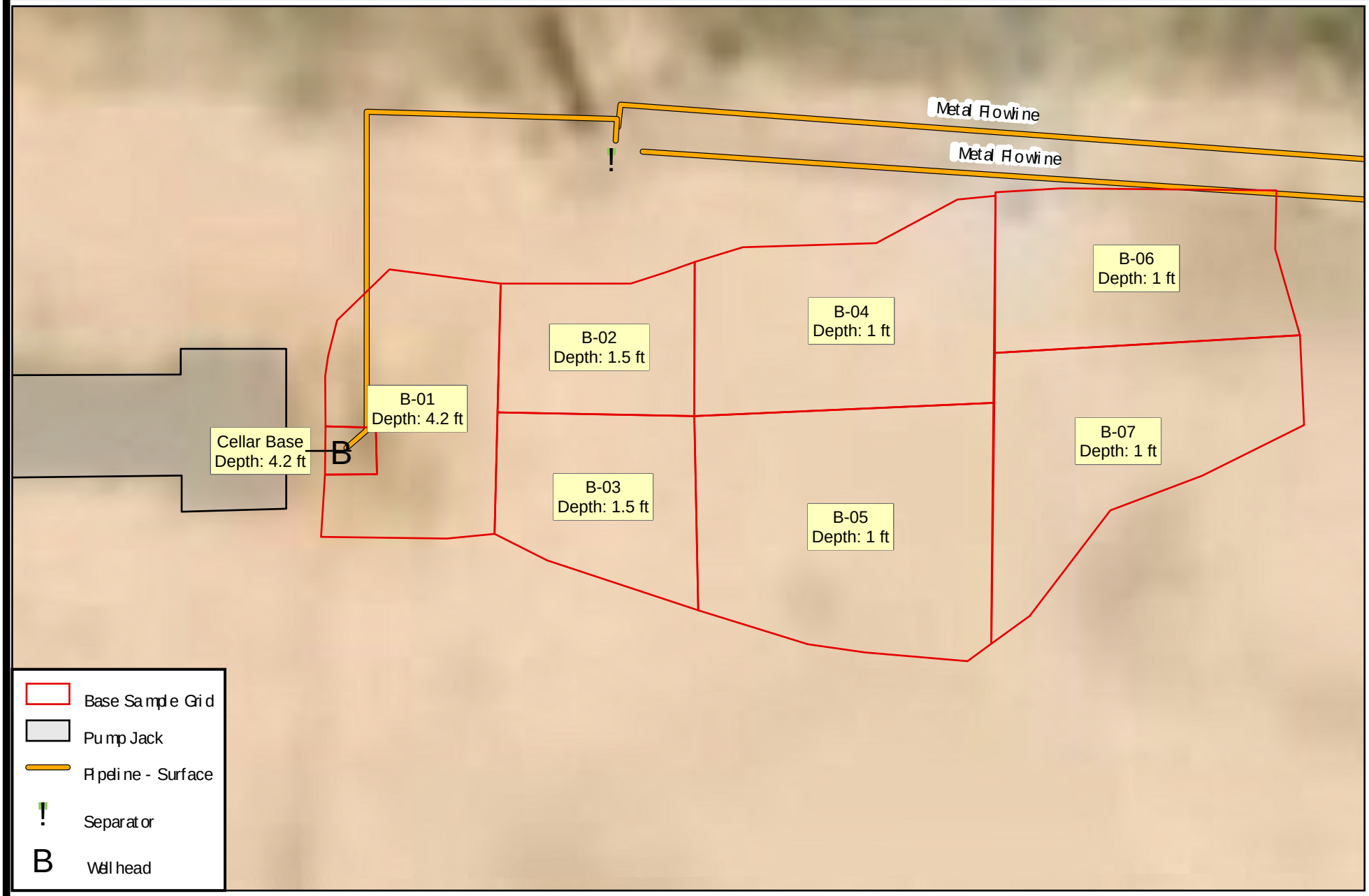

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Base Sampling Diagram	Plate 14
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

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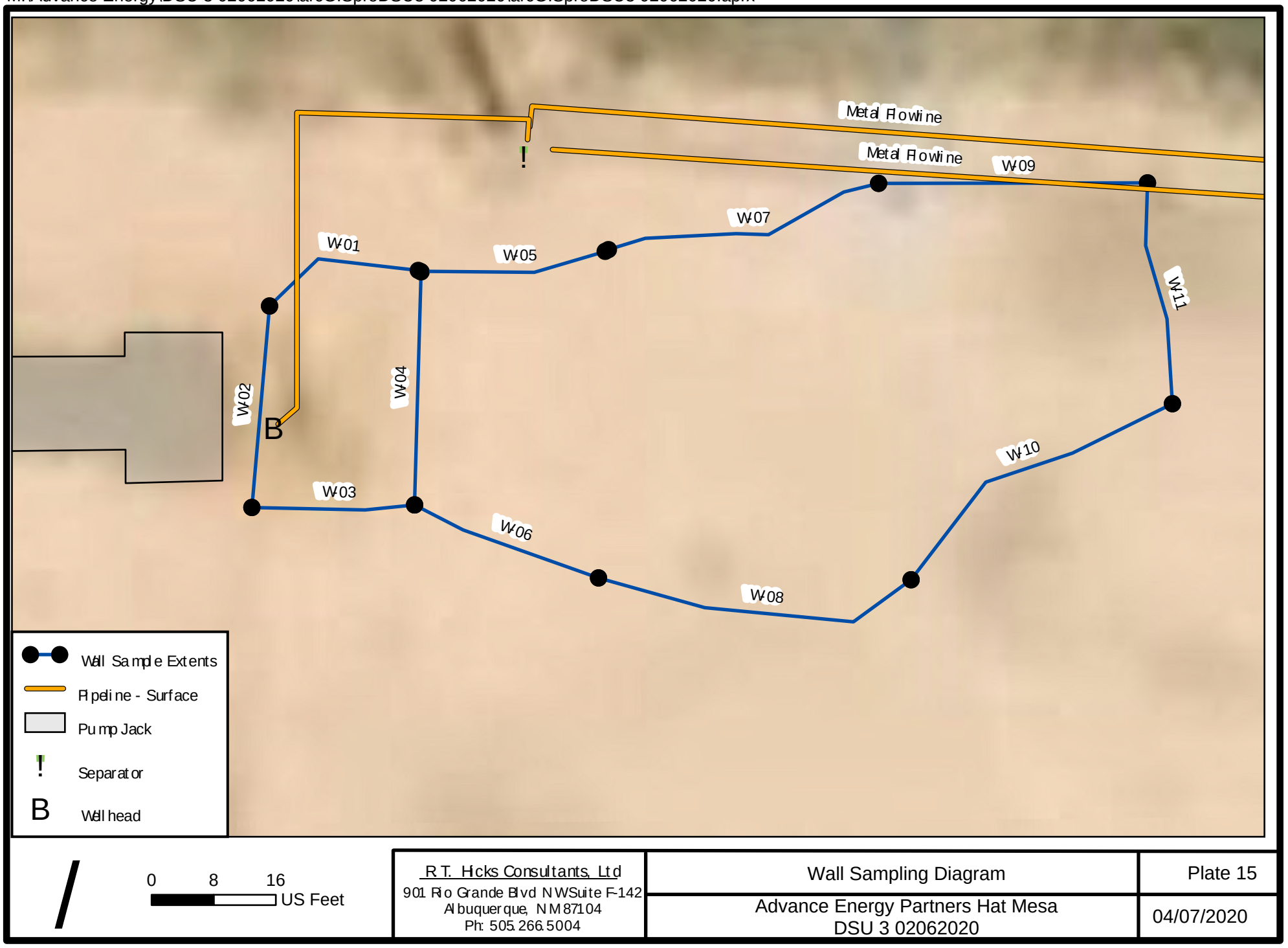

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Wall Sampling Diagram	Plate 15
	Advance Energy Partners Hat Mesa DSU 3 02062020	04/07/2020

Tables

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

April 7 2020

Table 1
Summary of Analytical

Dagger State Unit 3 (DSU 3)
Advance Energy Partners Hat Mesa

Sample ID	Date	Location	Discrete Depth (Feet)	Top Depth (Feet)	Bottom Depth (Feet)	EC (1:5) dS/m	Chloride (PPM)	GRO+DRO (PPM)	TPH Ext. (PPM)	Benzene (PPM)	BTEX (PPM)	Comments
NMOCD Closure Criteria												
0 - 4 feet & "not in-use"							600	--	2,500	10	50	
> 4 ft or "in-use"							20,000	1,000	2,500	10	50	
HA-01	2/21/2020	Grab	0.0			0.76						Characterization
HA-01	2/21/2020	Grab	0.5			0.16						Characterization
HA-02	2/21/2020	Grab	0.0			2.66						Characterization
HA-02	2/21/2020	Grab	0.5			1.56						Characterization
HA-02	2/21/2020	Grab	1.0			0.94						Characterization
HA-02	2/21/2020	Grab	2.0			0.6						Characterization
HA-02	2/21/2020	Grab	3.0			0.72						Characterization
HA-03	2/24/2020	Grab	0.0			1.43						Characterization
HA-03	2/24/2020	Grab	1.0			0.08						Characterization
HA-04	2/24/2020	Grab	0.5			0.1						Characterization
HA-05	2/24/2020	Grab	0.0			2.51						Characterization
HA-05	2/24/2020	Grab	1.0			0.08						Characterization
HA-06	2/24/2020	Grab	0.0			0.09						Characterization
HA-07	2/24/2020	Grab	0.0			2.54						Characterization
HA-07	2/24/2020	Grab	1.0			0.84						Characterization
HA-07	2/24/2020	Grab	2.0			1.11						Characterization
B-01	2/24/2020	Base	4.2			0.62	512	<27	<39.8	<0.05	<0.3	
B-02	2/25/2020	Base	1.5			0.17	112	<20	<30	<0.05	<0.3	
B-03	2/25/2020	Base	1.5			0.23	144	<20	<30	<0.05	<0.3	
B-04	2/25/2020	Base	1.0			0.1	80	<20	<30	<0.05	<0.3	
B-05	2/25/2020	Base	1.0			0.1	48	<20	<30	<0.05	<0.3	
B-06	2/25/2020	Base	1.0			0.1	64	<20	<30	<0.05	<0.3	
B-07	2/25/2020	Base	1.0			0.26	160	<20	<30	<0.05	<0.3	
Cellar (base)	2/24/2020	Base	4.2				2640	1134	1293	0.143	10.1	Defer
W-01	2/24/2020	Wall		0.0	4.0	1.08	816	<21.3	<31.3	<0.05	<0.3	Defer
W-02	2/24/2020	Wall		0.0	4.0	1.74	1460	296.9	334.7	<0.05	<0.3	Defer
W-03	2/24/2020	Wall		0.0	4.0	0.14	80	<20	<30	<0.05	<0.3	
W-04	2/24/2020	Wall		1.0	4.0	0.34	336	<20	<30	<0.05	<0.3	
W-05	2/25/2020	Wall		0.0	1.5	0.17	112	<20	<30	<0.05	<0.3	
W-06	2/25/2020	Wall		0.0	1.5	0.35	272	<20	<30	<0.05	<0.3	
W-07	2/25/2020	Wall		0.0	1.0	0.13	80	<20	<30	<0.05	<0.3	
W-08	2/25/2020	Wall		0.0	1.0	0.1	96	<20	<30	<0.05	<0.3	
W-09	2/25/2020	Wall		0.0	1.0	0.09	64	<20	<30	<0.05	<0.3	
W-10	2/25/2020	Wall		0.0	1.0	0.15	112	<20	<30	<0.05	<0.3	
W-11	2/25/2020	Wall		0.0	1.0	0.13	144	<20	<30	<0.05	<0.3	

Exceed Closure Criteria

POD Number	Date	Top of Water Bearing Strata	Bottom of Water Bearing Strata	Depth to Water	Source	Height Above Confining Layer
		Feet	Feet	Feet		Feet
CP-00601	1952		223	178		
CP 00854	6/22/1996	755	890	600	Artesian	155

Appendix A
Certificate of Analysis

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

CARDINAL Laboratories

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

March 30, 2020

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 02/25/20 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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)

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B - 01 4.2'	H000602-01	Soil	24-Feb-20 11:00	25-Feb-20 17:00
CELLAR BASE 4.2'	H000602-02	Soil	24-Feb-20 11:30	25-Feb-20 17:00
W - 01 0-4'	H000602-03	Soil	24-Feb-20 12:00	25-Feb-20 17:00
W - 02 0-4'	H000602-04	Soil	24-Feb-20 12:15	25-Feb-20 17:00
W - 03 0-4'	H000602-05	Soil	24-Feb-20 12:30	25-Feb-20 17:00
W - 04 1-4'	H000602-06	Soil	24-Feb-20 13:00	25-Feb-20 17:00

03/27/20 - Client revised sample ID on -06.
03/30/20 - Revised report issued to reflect change made on 03/27/20. This report will replace the one sent on 02/28/20.

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

B - 01 4.2'

H000602-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**512**		16.0	mg/kg	4	0022711	GM	28-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.8 %*	*73.3-129*		*0022706*	CK	*27-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
DRO >C10-C28*	**17.0**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
EXT DRO >C28-C36	**12.8**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*96.6 %*	*44.3-144*		*0022723*	CK	*28-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*102 %*	*42.2-156*		*0022723*	CK	*28-Feb-20*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

CELLAR BASE 4.2'

H000602-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**2640**		16.0	mg/kg	4	0022711	GM	28-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	**0.143**		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Toluene*	**0.989**		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total Xylenes*	**8.96**		0.150	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total BTEX	**10.1**		0.300	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*205 %*	*73.3-129*		*0022706*	CK	*27-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**153**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
DRO >C10-C28*	**981**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
EXT DRO >C28-C36	**159**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*125 %*	*44.3-144*		*0022723*	CK	*28-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*123 %*	*42.2-156*		*0022723*	CK	*28-Feb-20*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

W - 01 0-4'

H000602-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**816**		16.0	mg/kg	4	0022711	GM	28-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.4 %*	*73.3-129*		*0022706*	CK	*27-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**11.3**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*97.5 %*	*44.3-144*		*0022723*	CK	*28-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*103 %*	*42.2-156*		*0022723*	CK	*28-Feb-20*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

W - 02 0-4'

H000602-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**1460**		16.0	mg/kg	4	0022711	GM	28-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Ethylbenzene*	**0.106**		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*73.3-129*		*0022706*	CK	*27-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**11.9**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
DRO >C10-C28*	**285**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
EXT DRO >C28-C36	**37.8**		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*94.9 %*	*44.3-144*		*0022723*	CK	*28-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*111 %*	*42.2-156*		*0022723*	CK	*28-Feb-20*	*8015B*	

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CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

W - 03 0-4'

H000602-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	0022711	GM	28-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.6 %*	*73.3-129*		*0022706*	CK	*27-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*97.5 %*	*44.3-144*		*0022723*	CK	*28-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*103 %*	*42.2-156*		*0022723*	CK	*28-Feb-20*	*8015B*	

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CARDINAL Laboratories

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Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104	Project: ADVANCE ENERGY Project Number: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

W - 04 1-4'

H000602-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**336**		16.0	mg/kg	4	0022711	GM	28-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022706	CK	27-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.9 %*	*73.3-129*		*0022706*	CK	*27-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0022723	CK	28-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*93.0 %*	*44.3-144*		*0022723*	CK	*28-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*98.9 %*	*42.2-156*		*0022723*	CK	*28-Feb-20*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022711 - 1:4 DI Water										
Blank (0022711-BLK1)				Prepared & Analyzed: 27-Feb-20						
Chloride	ND	16.0	mg/kg							
LCS (0022711-BS1)				Prepared & Analyzed: 27-Feb-20						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (0022711-BSD1)				Prepared & Analyzed: 27-Feb-20						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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CARDINAL Laboratories

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Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104	Project: ADVANCE ENERGY Project Number: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022706 - Volatiles										
Blank (0022706-BLK1)				Prepared & Analyzed: 27-Feb-20						
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)	*ND*		mg/kg	*0.0500*		*98.3*	*73.3-129*			
LCS (0022706-BS1)				Prepared & Analyzed: 27-Feb-20						
Benzene	2.00	0.050	mg/kg	2.00		99.9	72.2-131			
Toluene	2.02	0.050	mg/kg	2.00		101	71.7-126			
Ethylbenzene	2.03	0.050	mg/kg	2.00		101	68.9-126			
Total Xylenes	5.89	0.150	mg/kg	6.00		98.1	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0501*		mg/kg	*0.0500*		*100*	*73.3-129*			
LCS Dup (0022706-BSD1)				Prepared & Analyzed: 27-Feb-20						
Benzene	2.08	0.050	mg/kg	2.00		104	72.2-131	4.28	14.6	
Toluene	2.10	0.050	mg/kg	2.00		105	71.7-126	4.10	17.4	
Ethylbenzene	2.11	0.050	mg/kg	2.00		106	68.9-126	4.11	18.9	
Total Xylenes	6.14	0.150	mg/kg	6.00		102	71.4-125	4.15	18.5	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0498*		mg/kg	*0.0500*		*99.5*	*73.3-129*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104	Project: ADVANCE ENERGY Project Number: DSU 3 Project Manager: ANDREW PARKER Fax To: NONE	Reported: 30-Mar-20 11:12

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022723 - General Prep - Organics										
Blank (0022723-BLK1)				Prepared: 27-Feb-20 Analyzed: 28-Feb-20						
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	*52.3*		mg/kg	*50.0*		*105*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*53.8*		mg/kg	*50.0*		*108*	*42.2-156*			
LCS (0022723-BS1)				Prepared: 27-Feb-20 Analyzed: 28-Feb-20						
GRO C6-C10	220	10.0	mg/kg	200		110	78.8-127			
DRO >C10-C28	209	10.0	mg/kg	200		105	80-132			
Total TPH C6-C28	429	10.0	mg/kg	400		107	81.3-128			
Surrogate: 1-Chlorooctane	*56.3*		mg/kg	*50.0*		*113*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*53.6*		mg/kg	*50.0*		*107*	*42.2-156*			
LCS Dup (0022723-BSD1)				Prepared: 27-Feb-20 Analyzed: 28-Feb-20						
GRO C6-C10	220	10.0	mg/kg	200		110	78.8-127	0.322	15.1	
DRO >C10-C28	206	10.0	mg/kg	200		103	80-132	1.90	17.1	
Total TPH C6-C28	426	10.0	mg/kg	400		106	81.3-128	0.758	15	
Surrogate: 1-Chlorooctane	*55.8*		mg/kg	*50.0*		*112*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*58.0*		mg/kg	*50.0*		*116*	*42.2-156*			

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CARDINAL Laboratories

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	RT Hicks
Project Manager:	Andrew Parker
Address:	On File
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	Advua Energy
Project Location:	DSU 3
Sampler Name:	JACOB SPENCE

BILL TO

P.O. #:	
Company:	RT Hicks
Attn:	Send To
Address:	andrew@RTHicks consultcom
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chloride	BTEX	TPH
H000602																		
1	B-01	4-2FT	C	1			X					X		2/24/20	Noon	X	X	X
2	Cellar BASE	4.2FT													11:30am			
3	W-01	0-4FT													12pm			
4	W-02	0-4FT													12:15pm			
5	W-03	0-4FT													12:30pm			
* 6	W-04	10-4FT													1pm			
		TD-3/27																

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 2-25-20	Received By:	Tamara Oldaker
Jacob Spence	Time: 1700		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 2.5° #113

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) TO

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

REMARKS:
* Sample Id changed per Andrew See email. TO.

CARDINAL Laboratories

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

March 02, 2020

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 02/25/20 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B - 02 1.5' (H000603-01)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2020	ND	2.00	99.9	2.00	4.28	
Toluene*	<0.050	0.050	02/27/2020	ND	2.02	101	2.00	4.10	
Ethylbenzene*	<0.050	0.050	02/27/2020	ND	2.03	101	2.00	4.11	
Total Xylenes*	<0.150	0.150	02/27/2020	ND	5.89	98.1	6.00	4.15	
Total BTEX	<0.300	0.300	02/27/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/28/2020	ND	416	104	400	3.77	

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	03/02/2020	ND	220	110	200	0.322	
DRO >C10-C28*	<10.0	10.0	03/02/2020	ND	209	105	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	03/02/2020	ND					

Surrogate: 1-Chlorooctane *94.1 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.3 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B - 03 1.5' (H000603-02)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2020	ND	2.00	99.9	2.00	4.28	
Toluene*	<0.050	0.050	02/27/2020	ND	2.02	101	2.00	4.10	
Ethylbenzene*	<0.050	0.050	02/27/2020	ND	2.03	101	2.00	4.11	
Total Xylenes*	<0.150	0.150	02/27/2020	ND	5.89	98.1	6.00	4.15	
Total BTEX	<0.300	0.300	02/27/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	02/28/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *100 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *106 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B - 04 1' (H000603-03)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2020	ND	2.00	99.9	2.00	4.28	
Toluene*	<0.050	0.050	02/27/2020	ND	2.02	101	2.00	4.10	
Ethylbenzene*	<0.050	0.050	02/27/2020	ND	2.03	101	2.00	4.11	
Total Xylenes*	<0.150	0.150	02/27/2020	ND	5.89	98.1	6.00	4.15	
Total BTEX	<0.300	0.300	02/27/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.0 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/28/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *95.7 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *102 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B - 05 1' (H000603-04)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2020	ND	2.00	99.9	2.00	4.28	
Toluene*	<0.050	0.050	02/27/2020	ND	2.02	101	2.00	4.10	
Ethylbenzene*	<0.050	0.050	02/27/2020	ND	2.03	101	2.00	4.11	
Total Xylenes*	<0.150	0.150	02/27/2020	ND	5.89	98.1	6.00	4.15	
Total BTEX	<0.300	0.300	02/27/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *102 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *106 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B - 06 1' (H000603-05)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2020	ND	2.00	99.9	2.00	4.28	
Toluene*	<0.050	0.050	02/27/2020	ND	2.02	101	2.00	4.10	
Ethylbenzene*	<0.050	0.050	02/27/2020	ND	2.03	101	2.00	4.11	
Total Xylenes*	<0.150	0.150	02/27/2020	ND	5.89	98.1	6.00	4.15	
Total BTEX	<0.300	0.300	02/27/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *105 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *110 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B - 07 1' (H000603-06)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *108 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 05 0-1.5' (H000603-07)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *98.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *100 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 06 0-1.5' (H000603-08)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *97.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *100 %* *42.2-156*

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Analytical Results For:

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

Received:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 07 0-1' (H000603-09)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *93.1 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *94.5 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 08 0-1' (H000603-10)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *97.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.4 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 09 0-1' (H000603-11)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *99.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *101 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 10 0-1' (H000603-12)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *99.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *102 %* *42.2-156*

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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:	02/25/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	ADVANCE ENERGY	Sampling Condition:	Cool & Intact
Project Number:	DSU 3	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W - 11 0-1' (H000603-13)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.78	88.8	2.00	8.33	
Toluene*	<0.050	0.050	02/28/2020	ND	1.79	89.4	2.00	8.44	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.79	89.6	2.00	8.66	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.26	87.7	6.00	8.94	
Total BTEX	<0.300	0.300	02/28/2020	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	02/28/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	216	108	200	5.42	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	229	115	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *99.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *102 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: RT Hicks	**BILL TO**
Project Manager: Andrew Parker	P.O. #:
Address: On File	Company: RT Hicks
City: State: Zip:	Attn: Send to
Phone #: Fax #:	Address: andrew@RThicks
Project #: Project Owner:	City: Consult.com
Project Name: Admire Energy	State: Zip:
Project Location: DSU 3	Phone #:
Sampler Name: JACOB SAENZ	Fax #:

FOR LAB USE ONLY					MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.		(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chloride	BTEX	TPH								
H000603																										
1	B-02	1.5FT	C	1			X					X		2/25/20	8am	X	X	X								
2	B-03	1.5FT													8:15am											
3	B-04	1FT													8:30am											
4	B-05	1FT													8:30am											
5	B-06	1FT													9am											
6	B-07	1FT													9:30am											
7	W-05	0-1.5FT													10am											
8	W-06	0-1.5FT													11am											
9	W-07	0-1FT													11:30am											
10	W-08	0-1FT													12pm											

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: JACOB SAENZ	Date: 2-25-20	Received By: Jamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1700		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 2.5°c #113	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) JG	

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	RT Hicks
Project Manager:	Andrew Parker
Address:	ON FILE
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	Advma Energy
Project Location:	PS43
Sampler Name:	JACOB SAENZ

BILL TO

P.O. #:	
Company:	RT Hicks
Attn:	Send to
Address:	andrew@rthicks
City:	consult.com
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	chloride	BTEX	TPH
H000603																	
11	W-9	0-1Ft	C	1			X				X		2/25/20	1pm	↓	↓	↓
12	W-10	0-1Ft	↓	↓			↓				↓		↓	1:30pm			
13	W-11	0-1Ft	↓	↓			↓				↓		↓	2pm			

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: 2-25-20	Received By:	
JACOB SAENZ	Time: 1700		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 2.5° #113

Sample Condition: Cool: Yes / Intact: Yes
CHECKED BY: (Initials) JD

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

Appendix B
OSE Well Logs

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

Revised December 1975

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

Declaration of Owner of Underground Water Right

80227

'79 APR 20 PM 3 01

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

CAPITAN BASIN
BASIN NAME

Declaration No. CP-601 Date received April 17, 1979

STATEMENT

1. Name of Declarant THE MERCHANT LIVESTOCK COMPANY
   Mailing Address P.O. Box 548 Carlsbad
   County of Eddy, State of New Mexico
2. Source of water supply shallow
   (artesian or shallow water aquifer)
3. Describe well location under one of the following subheadings:
   a. ____ ¼ NE ¼ NW ¼ of Sec. 28 Twp. 21S Rge. 33-E N.M.P.M., in Lea County.
   b. Tract No. ____ of Map No. ____ of the ____.
   c. X = ____ feet, Y = ____ feet, N. M. Coordinate System ____ Zone in the ____ Grant.
   On land owned by ____.
4. Description of well: date drilled 1952 driller ____ depth 223' feet.
   outside diameter of casing 6 5/8 inches; original capacity ____ gal. per min.; present capacity 3 gal. per min.; pumping lift ____ feet; static water level 178 feet (above) (below) land surface;
   make and type of pump ____
   make, type, horsepower, etc., of power plant ____
   Fractitional or percentage interest claimed in well 100%
5. Quantity of water appropriated and beneficially used ~~(acre feet per annum)~~ up to 3 (acre feet per annum)
   for stock water purposes.
6. Acreage actually irrigated ____ acres, located and described as follows (describe only lands actually irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner
			stock only		The Merchant Livestock Co.

'79 APR 17 AM 8 1
STATE ENGINEER OFFICE
ROSWELL, N. M.

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

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

8. Additional statements or explanations
   name of well - Standard

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

THE MERCHANT LIVESTOCK CO. declarant.
by: J. D. Merchant, Jr. President

Subscribed and sworn to before me this 12th day of April, A.D. 1979

My commission expires March 2, 1980 Notary Public

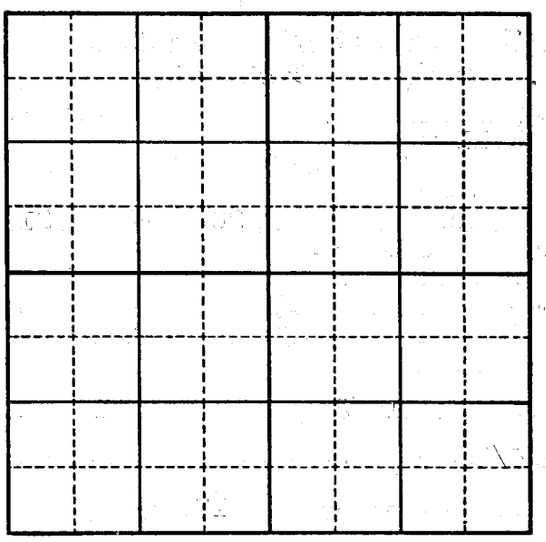
563298

FILED

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

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

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



INSTRUCTIONS

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

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

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

Secs. 1-3. Complete all blanks.

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

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

Sec. 6. Describe only the acreage actually irrigated. When necessary to clearly define irrigated acreages, describe to nearest 2½ acre subdivision. If located on unsurveyed lands. describe by legal supdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily-located natural object.

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

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

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

SF EC

'79 APR 20 PM 3 00

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

April 17, 1979

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

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

Gentlemen:

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

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

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

Yours very truly,

J. C. Groseclose
Basin Supervisor

JCG/fh
Encls.
cc: Santa Fe

563298

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) 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:	07/11/1996	**PCW Rcv Date:**	10/17/2013	**Source:**	Shallow
Pump Type:	SUBMER	**Pipe Discharge Size:**	2.875	**Estimated Yield:**	100 GPM
Casing Size:	6.63	**Depth Well:**	950 feet	**Depth Water:**	600 feet

Water Bearing Stratifications:

Top	Bottom	Description
755	805	Sandstone/Gravel/Conglomerate
860	890	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
760	950

Meter Number:	8514	**Meter Make:**	BLANCETT
Meter Serial Number:	040711711	**Meter Multiplier:**	1.0000
Number of Dials:	7	**Meter 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	A	jw		0
03/29/2004	2004	69871	A	jw		0
05/17/2004	2004	8758	A	jw		2.651
06/11/2004	2004	79641	A	jw		2.998
01/27/2012	2012	18062553	A	RPT	Initial reading	0
03/01/2012	2012	19039807	A	RPT		2.999
05/29/2013	2013	179696	A	RPT	initial reading	0
10/07/2013	2013	460774	A	RPT	Qtr IV 2013	36.229
11/11/2013	2013	540326	A	RPT		10.254
01/01/2014	2013	614283	A	RPT		9.533
10/01/2014	2014	1122654	A	RPT		65.526
01/01/2015	2014	1212343	A	RPT		11.560
03/31/2015	2015	1307063	A	RPT		12.209
06/27/2015	2015	1369556	A	RPT		8.055

Meter Readings (in Acre-Feet)

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

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

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	CP 01349 POD1	2	3	1	27	21S	33E	635304	3591576

Driller License:	421	**Driller Company:**	GLENN'S WATER WELL SERVICE		
Driller Name:	GLENN, CLARK A."CORKY"				
Drill Start Date:	07/12/2014	**Drill Finish Date:**	07/18/2014	**Plug Date:**	
Log File Date:	08/04/2014	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	1188 feet	**Depth Water:**	572 feet

Water Bearing Stratifications:	Top	Bottom	Description
	990	1188	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	721	1188

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2014 SEP 10 PM 2:15

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): CP-1355 (East Standard South) *** Revised 09/09/14 ***	OSE FILE NUMBER(S):
WELL OWNER NAME(S): Merchants/Glenn's Water Well Service, Inc.	PHONE (OPTIONAL): 575-398-2424
WELL OWNER MAILING ADDRESS: P. O. Box 692	CITY: Tatum STATE: NM ZIP: 88267

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	26	54.8	N
LONGITUDE	103	33	58.3	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE1/4NW1/4SW1/4 Section 27, Township 21 South, Range 33 East on Merchants Livestock Land

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 421	Corky Glenn	Glenn's Water Well Service, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
07/22/14	07/29/14	1,192'	1,192'	925'

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 582'

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0'	40'	20"	16"	None	15 1/2"	.250	
0'	757'	14 3/4"	9 5/8"	Thread & Collar	8.921"	36 lbs.	none
690'	1,192'	8 3/4"	7" (502.14' Total)	Thread & Collar	6.366"	23 lbs.	1/8"
			317.96 perforated				
			on bottom of liner				

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	40'	20"	Cemented	2 yds.	Top Pour
0	757'	14 3/4"	Float and shoe cemented to surface	962	Circulated

FOR OSE INTERNAL USE

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

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

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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	○ Y ◉ N	
4'	28'	24'	Caliche	○ Y ◉ N	
28'	120'	92'	Sand & Clay	○ Y ◉ N	
120'	260'	140'	Red Clay	○ Y ◉ N	
260'	757'	497'	Red & Brown Shale, and Clay (some blue)	○ Y ◉ N	
757'	815'	58'	Red & Brown Shale	○ Y ◉ N	
815'	840'	25'	Blue Clay & Shale	○ Y ◉ N	
840'	925'	85'	Red and Brown Shale (some sandrock)	○ Y ◉ N	
925'	975'	50'	Watersand and Gravel	◉ Y ○ N	
975'	1,185'	210'	Watersand (brown sandrock)	◉ Y ○ N	
1,185'	1,192'	7'	Red Shale	○ Y ◉ N	
				○ Y ◉ N	
				○ Y ◉ N	
				○ Y ◉ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ◉ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

0' to 757' drilled with mud.
757' to 1192' drilled with air and foam.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

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

Corky Glenn — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

9/9/14 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

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

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE RECEIVED NEW MEXICO 2014 AUG 18 A 8:53

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): CP - 1355 East Standard (South)	OSE FILE NUMBER(S):
WELL OWNER NAME(S): Merchants Livestock/Glenn's Water Well Service, Inc.	PHONE (OPTIONAL): (575)398-2424
WELL OWNER MAILING ADDRESS: P.O. Box 692	CITY: Tatum STATE: NM ZIP: 88267

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	26	54.8	N
LONGITUDE	103	33	58.3	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE/NW/SW Sec. 27, T21S, R33E on Merchants Livestock Land

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 421	Corky Glenn	Glenn's Water Well Service, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
7/29/14	8/2/14	1192'	1192'	925'

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 582'

DRILLING FLUID: ( ) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0'	40'	20"	16"	None	15 1/2"	.250	
0'	757'	14 3/4"	9 5/8"	Thread and Collar	.352	36 lbs.	none
757'	1192'	8 3/4'	7"	Thread and Collar	6.5"	23 lbs.	1/8"

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0'	40'	20"	Cemented	2 yds	Top Pour
0'	757'	14 3/4"	Float and Shoe Cemented to Surface	1034	Circulated

FOR OSE INTERNAL USE

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

FILE NUMBER	CP-1355	POD NUMBER	1	TRN NUMBER	549450
LOCATION	Exp1	21S.33E.27.312			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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'	Soil	○ Y ◉ N	
4'	28'	24'	Caleche	○ Y ◉ N	
28'	120'	92'	Sand and Clay	○ Y ◉ N	
120'	260'	140'	Red Clay	○ Y ◉ N	
260'	757'	497'	Red and Brown Shale and Clay(some blue)	○ Y ◉ N	
757'	815'	58'	Red and Brown Shale	○ Y ◉ N	
815'	840'	25'	Blue Clay and Shale	○ Y ◉ N	
840'	925'	85'	Red and Brown Shale(some sandrock)	○ Y ◉ N	
925'	975'	50'	Watersand and Gravel	◉ Y ○ N	
975'	1185'	210'	Watersand(brown sandrock)	◉ Y ○ N	
1185'	1192'	7'	Red Shale	○ Y ◉ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ◉ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 50

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

0' to 757' drilled with mud. 757' to 1192' drilled with air and foam.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

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

Corky Glenn — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

8/7/14 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1355	POD NUMBER	1	TRN NUMBER	549450
LOCATION	Exp1	21S.33E.27.312			PAGE 2 OF 2

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) 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"				
Drill Start Date:	08/01/2014	**Drill Finish Date:**	08/09/2014	**Plug Date:**	
Log File Date:	08/25/2014	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.37	**Depth Well:**	1098 feet	**Depth Water:**	555 feet

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

Casing Perforations:	Top	Bottom
	735	1098

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

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

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

Driller Name: GLENN, CLARK A."CORKY"

Drill Start Date:	08/16/2014	**Drill Finish Date:**	08/26/2014	**Plug Date:**	
Log File Date:	09/10/2014	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.37	**Depth Well:**	1286 feet	**Depth Water:**	578 feet

Water Bearing Stratifications:	Top	Bottom	Description
	945	960	Sandstone/Gravel/Conglomerate
	960	1077	Shale/Mudstone/Siltstone
	1077	1215	Sandstone/Gravel/Conglomerate
	1215	1286	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	846	1286

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
CP-1701-POD1		

WELL OWNER NAME(S)	PHONE (OPTIONAL)
The Jimmy Mills GST and 2005 GST Trusts	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
c/o Stacey Mills PO Box 1359	Loving	NM	88256-1358

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	26	0.5	N
	LONGITUDE	103	39	10.1	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1706	Bryce Wallace	Elite Drillers Corporation

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/15/18	11/29/18	840	880	560

COMPLETED WELL IS: [x] ARTESIAN [ ] DRY HOLE [ ] SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 457

DRILLING FLUID: [x] AIR [ ] MUD ADDITIVES – SPECIFY:

DRILLING METHOD: [x] ROTARY [ ] HAMMER [ ] CABLE TOOL [ ] OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	20	12.75	ASTM53 Grade B Steel	N/A	12.57	.188	
+2	460	12.25	ASTM53 Grade B steel	Welded	6.065	.28	
460	840	12.25	SDR17 PVC	Spline	6	SDR17	.032

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	20	12.75	Portland I/II Cement	17	Pour
0	453	12.25	Baroid Benseal Grout	247	Trimmie
453	860	12.25	8/16 Silica Sand	285	Pour

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	CP-1701	POD NO.	1	TRN NO.	619305
LOCATION	Exp1	21S.32E.35.31		WELL TAG ID NO.	—

PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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	5	5	Topsoil	Y N	
5	8	3	Caliche	Y N	
8	80	72	Tan/Red sandy caliche	Y N	
80	190	110	Red clay	Y N	
190	400	210	Tan/Red sandstone	Y N	
400	560	160	Red siltstone	Y N	
560	575	15	Red siltstone/Gyp	✓ Y N	5.00
575	750	175	Red siltstone	Y N	
750	770	20	Red siltstone/Gyp	✓ Y N	25.00
770	840	70	Red siltstone	Y N	
840	880	40	Red Shale	Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☑ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 30.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

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

Bryce Wallace — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

12/10/2018 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1701	POD NO. 1	TRN NO. 619305
LOCATION Exp1 215.32E.35.31	WELL TAG ID NO. —	PAGE 2 OF 2