Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nRM2003745665
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: November 5, 2021

email: aparker@advanceenergypartners.com Telephone: 970-570-9535

OCD Only

Received by: Robert Hamlet Date: 3/18/2022

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: Robert Hamlet Date: 3/18/2022

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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

Transmittal Letter

November 5, 2021

RE: Closure report not recorded in OCD Imaging
Incident ID: nRM2003745665
AEP #: 01312020-1730-water
Location: Crockett to Dagger Release

NMOCD:

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

The remediation and closure report for Incident nRM2003745665 was completed on March 30, 2020. Since the completion of the remediation and closure report, AEP conducted a depth-to-water determination program discussed below.

Depth to Water Determination

In September/October 2021, Advance Energy initiated a depth-to-water boring program to determine whether depth-to-water is present in the upper 100-feet of the surface soil profile. Nine (9) boreholes were advanced between 103 to 106-feet below ground surface, rested for at least 72-hours, and gauged for the presence of groundwater. The nearest boring is located 330-feet northwest of the release. The boring is identified as MISC-403 (CP-1882). No groundwater was detected within the upper 100-feet. Plate 4 (revised) is an updated depth-to-water map. The driller log is attached.

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

Incident ID: nRM2003745665
AEP #: 01312020-1730-water

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

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

Sincerely,

Andrew Parker
Environmental Scientist

11/05/2021

Incident ID	nRM2003745665
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release? **Plate 4 & 5**	307 (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 7**	☐ 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 7**	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? **Plate 8**	☐ 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 6**	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? **Plate 6**	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? **Plate 6**	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland? **Plate 9**	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine? **Plate 10**	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology? **Plate 11**	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain? **Plate 12**	☐ 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	nRM2003745665
District RP	
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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: Andrew Parker Date: November 5, 2021

email: aparker@advanceenergypartners.com Telephone: 970-570-9535

OCD Only

Received by: Date:

Incident ID	nRM2003745665
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Signature: Andrew Parker Date: November 5, 2021

email: aparker@advanceenergypartners.com Telephone: 970-570-9535

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Incident ID	nRM2003745665
District RP	
Facility ID	
Application ID	

Closure

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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

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

☒ Description of remediation activities

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

Signature: Andrew Parker Date: November 5, 2021

email: aparker@advanceenergypartners.com Telephone: 970-570-9535

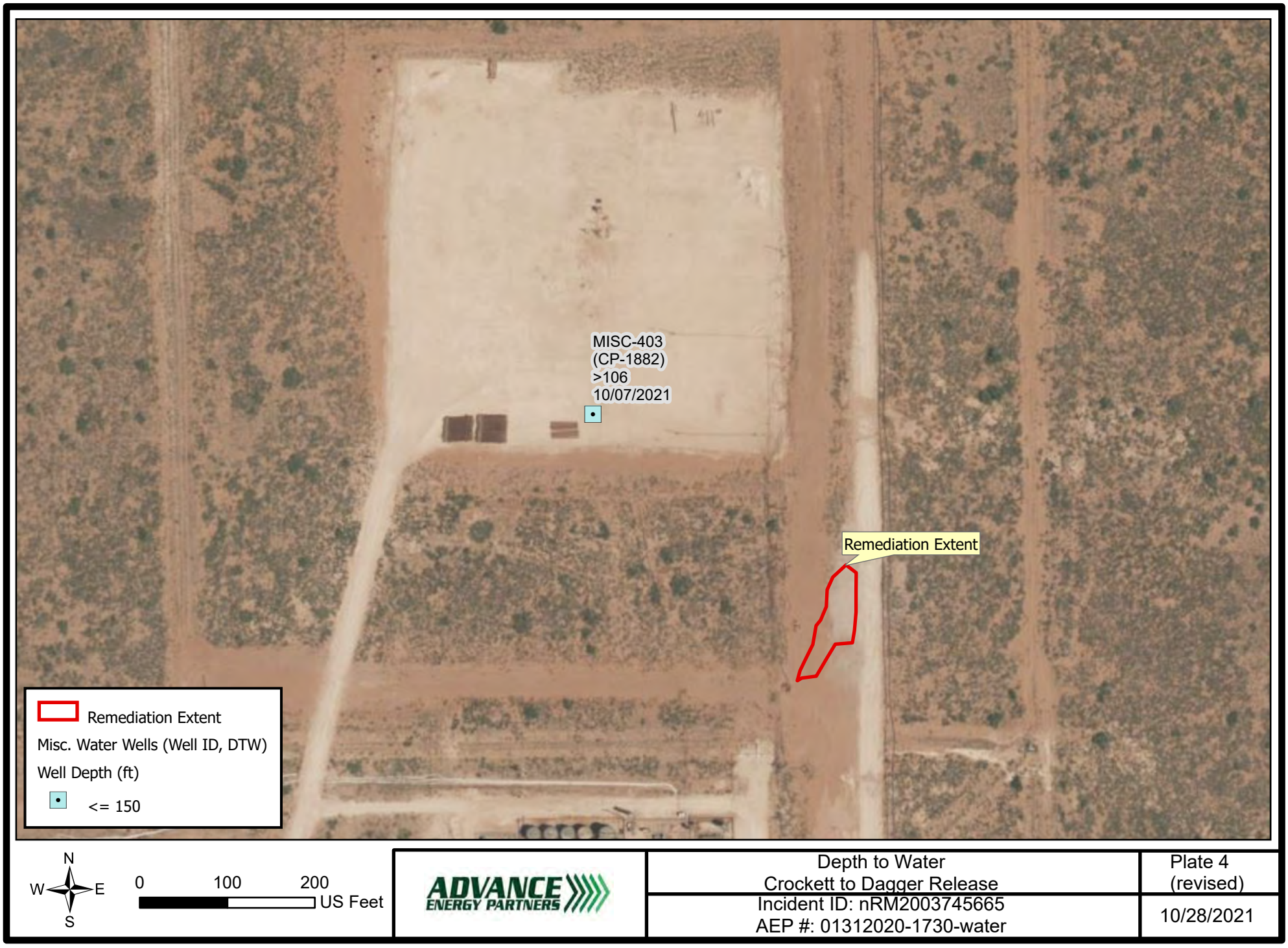
OCD Only

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: _____


MISC-403
(CP-1882)
>106
10/07/2021
Remediation Extent
Remediation Extent
Misc. Water Wells (Well ID, DTW)
Well Depth (ft)
<= 150
N
W
E
S
0
100
200
US Feet
ADVANCE ENERGY PARTNERS
Depth to Water
Crockett to Dagger Release
Plate 4
(revised)
Incident ID: nRM2003745665
AEP #: 01312020-1730-water
10/28/2021

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

10/29/2021

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record CP-1882 Pod1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, CP-1882 Pod1.

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

Sincerely,

Lucas Middleton

Enclosures: as noted above

OSE DII NOV 1 2021 PM4:42

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).
POD1 (TW-1)	n/a	CP-1882

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Advanced Energy Partners	832.672.4700

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
11490 Westheimer Rd. Stuit 950	Houston	TX	77077

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	27	7.70	N
	LONGITUDE	103	36	17.7	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

SE SE NE Sec. 30 T21S R33E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/06/2021	10/07/2021	temporary well material	106	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

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	106	±6.5	Boring- HSA	--	--	--	--

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

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

FILE NO.	POD NO.	TRN NO.	
LOCATION		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	9	9	Sand, Fine-grained, poorly graded, Red	Y ✓ N	
9	19	10	Caliche, with fine-grained sand, White/Tan	Y ✓ N	
19	69	50	Sand, Fine-grained, poorly graded, Tan/ Brown	Y ✓ N	
69	79	10	Sand, Fine-grained, poorly graded with clay, Reddish Brown	Y ✓ N	
79	106	27	Clay, Stiff, consolidated, with fine-grained sand, Reddish Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				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): 0.00

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: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.

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

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

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 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 10/28/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

2021-10-28_CP-1882_OSE_Well Record and Log-forsigned

Final Audit Report 2021-10-29

Created:	2021-10-29
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAnssS7mjb_msszUkFnzTQWpA1oI8YdAXL

"2021-10-28_CP-1882_OSE_Well Record and Log-forsigned" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-10-29 - 3:54:49 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-10-29 - 3:55:18 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-10-29 - 4:17:34 PM GMT- IP address: 64.90.153.232

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-10-29 - 4:18:13 PM GMT - Time Source: server- IP address: 64.90.153.232

Agreement completed.
2021-10-29 - 4:18:13 PM GMT

Adobe Sign

PLUGGING RECORD

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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: CP-1882-POD1

Well owner: Advanced Energy Partners Phone No.: 832.672.4700

Mailing address: 11490 Westheimer Rd. Stuit 950

City: Houston State: Texas Zip code: 77077

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)

2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge, Carmelo Trevino, Cameron Pruitt

4) Date well plugging began: 10/14/2021 Date well plugging concluded: 10/14/2021

5) GPS Well Location: Latitude: 32 deg, 27 min, 7.70 sec
Longitude: 103 deg, 36 min, 17.7 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 106 ft below ground level (bgl), by the following manner: weighted tape

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 07/08/2021

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

RECEIVED NOV 1 2021 PM 4:45

Version: September 8, 2009
Page 1 of 2

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

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0-10' Hydrated Bentonite	15.6 gallons	15 gallons	Augers	
	10'-106' Drill Cuttings	Approx. 152 gallons	152 gallons	Boring	

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins

Signature of Well Driller

10/29/2021

Date

Version: September 8, 2009
Page 2 of 2

2021-10-28_CP-1882__WD-11 Plugging Record-forsign

Final Audit Report 2021-10-29

Created:	2021-10-29
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAJ56zL5gGf8mtJumZGiLTdDB7pgJ8zerB

"2021-10-28_CP-1882__WD-11 Plugging Record-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-10-29 - 3:55:07 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-10-29 - 3:55:26 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-10-29 - 4:16:44 PM GMT- IP address: 64.90.153.232

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-10-29 - 4:17:17 PM GMT - Time Source: server- IP address: 64.90.153.232

Agreement completed.
2021-10-29 - 4:17:17 PM GMT

March 30, 2020

Tracking # NRM2003745665 Closure Report
Crockett to Dagger Release

Prepared for
Advance Energy Partners Hat Mesa LLC
Houston, Texas

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

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

Form C-141
Page 1

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003745665
District RP	
Facility ID	
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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 32.4512992 Longitude -103.6041677
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Crockett to Dagger Release	Site Type: Produced water transfer line
Date Release Discovered: 01/31/2020 @ 17:30	API#

Unit Letter	Section	Township	Range	County
H	30	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)	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls) 22.4	Volume Recovered (bbls) 0
	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: 4-inch polyline coupling failed during air flushing of produced water transfer line. Residual fluid in polyline was released onto the pipeline right-of-way.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003745665
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

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

Signature: Andrew Parker Date: February 02, 2020

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

OCD Only

Received by: Ramona Marcus Date: 02/06/2020

Spill Dimensions to Volume of Release			
Input	**volume of affected soil**	**[feet^3]**	2398.00
Input	Porosity: typically is .35 to .40 for most soils	[-]	0.35
Input	Proportion of porosity filled with release fluid [0,1]	[-]	0.15
Output	volume of fluid	[feet^3]	**125.9**
		[gal]	**941.8**
		Barrels	22.4

State of New Mexico
Oil Conservation Division

Incident ID	NRM2000354631
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release? **Plate 4 & 5**	307 (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 7**	☐ 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 7**	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? **Plate 8**	☐ 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 6**	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? **Plate 6**	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? **Plate 6**	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland? **Plate 9**	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine? **Plate 10**	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology? **Plate 11**	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain? **Plate 12**	☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM2000354631
District RP	
Facility ID	
Application ID	

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

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

Signature: Andrew Parker Date: March 30, 2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NRM2000354631
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

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

Signature: Andrew Parker Date: March 30, 2020

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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: March 30, 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 ▲ Midland

March 30, 2020

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

RE: Tracking # NRM2003745665 - Characterization and Closure Report
Crocket to Dagger Release
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 01/31/2020 at 17:30 hours on surface owned by State of New Mexico. The cause of the release was due to failure of a 4-inch poly line during air flushing of a produced water transfer line. Residual fluid in the polyline was released onto the pipeline right of way.

Excavation of impacted soil began on February 03, 2020 and was completed on February 13, 2020.

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

We respectfully ask NMOCD for closure of the regulatory file.

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

The location of the release is 32.4512992, - 103.6041677 (Latitude/Longitude; NAD 83); Unit Letter H, Sec 30, T21S., R33E; Lea County.

The release occurred within silty sands with a hard caliche layer at 4.5 to 5 feet below ground surface.

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 – ECa in the QP vertical mode at 0.5 m coil separation (0.7 to 2.5 ft bgs)
- Plate 4 – Depth to Water
- Plate 5 – Potentiometric Surface
- Plates 6 through 12 – As labeled on the C-141 Characterization Checklist
- Plate 13 – Base Sample Grid Diagram
- Plate 14 – Wall Sample Grid Diagram

Tables

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

Appendices

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

1 Initial Response

The release occurred on January 31, 2020, resulting from failure of a 4-inch poly line during air flushing of a produced water transfer line. Residual fluid in the polyline was released onto the pipeline right of way. The release consisted of 22.4 barrels of produced water; none was recovered. Excavation of the release began on February 03, 2020. Excavated material was transported to an approved disposal facility.

Figure 1: Photograph viewing south of the release path. The source of the release is near the stockpiled dirt from the pipeline excavation (photo background center). Date/Time: 01/31/2020. GPS: 32.4514328 N, -103.6039950 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 (Plate 4-11).

2.1 Site Map

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

Plate 1 shows the release extent relative to a pipeline excavation and release source point.

2.2 Electromagnetic Induction Survey (EMI)

On February 3, 2020 we performed an EMI Survey to measure the electrical conductivity of the release area. The EMI Survey was conducted using an EM38-MK2 manufactured by Geonics Limited.

Conducting an EMI survey allows for assessment of apparent electrical conductivity (EC_a) without intrusive sampling and allows assessment of EC_a with depth.

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 1a). 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 1b). 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

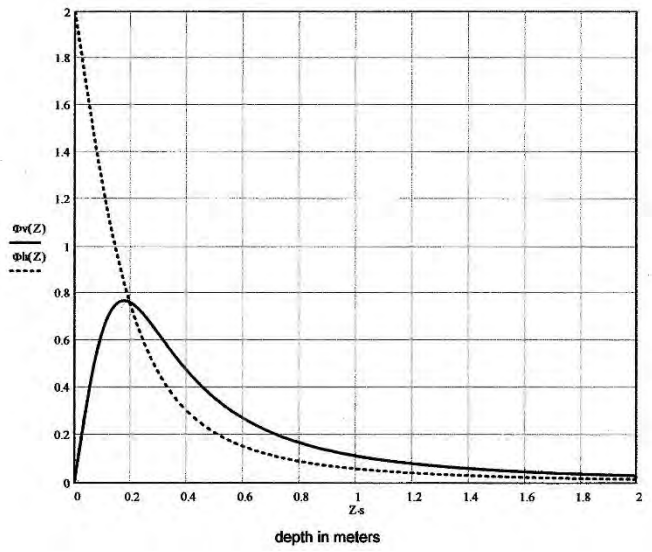

Figure 2a: 0.5-meter coil separation. Relative sensitivity with depth. Dashed line horizontal dipole mode. Solid line vertical dipole mode.

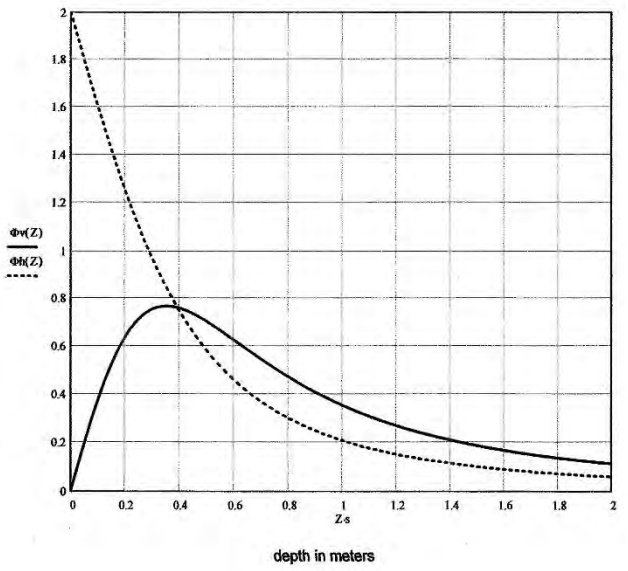

Figure 2b: 1.0-meter coil separation. Relative sensitivity with depth. Dashed line horizontal dipole mode. Solid line vertical dipole mode.

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 horizontal 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 to 1.3 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 source (bright yellow). A metal pipeline connector caused the interference as shown in the image on Plate 2.
- An area northwest of the metal riser (dark purple). This was likely field equipment such as shovels, wrenches, and extra pipeline connectors.

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

The Quad-phase (QP) readings of the EM38-MK2 measures apparent electrical conductivity (EC_a) in both the horizontal and vertical dipole modes. The EMI survey readings shown on Plate 3 represent the vertical dipole mode at 0.5 m coil separation with a relative sensitivity range of 0.7 to 2.5 ft bgs.

The yellow to red shading of the EMI survey on Plate 3 indicates areas of concern within with three areas showing “hot spots” with red shading having the highest EC_a concentrations.

Field soil testing of electrical conductivity at discreate depths were obtained from two hand auger samples (HA-01 and HA-02). 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 ($EC_{1:5}$). We also obtained a soil sample at HA-01 for laboratory analysis of chloride.

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.

At HA-01, the upper 4-feet shows chloride concentrations greater than 600 mg/kg chloride; specifically at 4-feet bgs where $EC_{(1:5)}$ readings showed 5.8 dS/m with a chloride concentration of 7,460 mg/kg. At HA-02, chloride impact is limited to the upper 2 to 3 feet as $EC_{(1:5)}$ readings were below 0.2 dS/m at 4-feet bgs. As shown in Figure 3, $EC_{1:5}$ readings <0.20 dS/m correlates with a chloride concentration approximately <600 mg/kg.

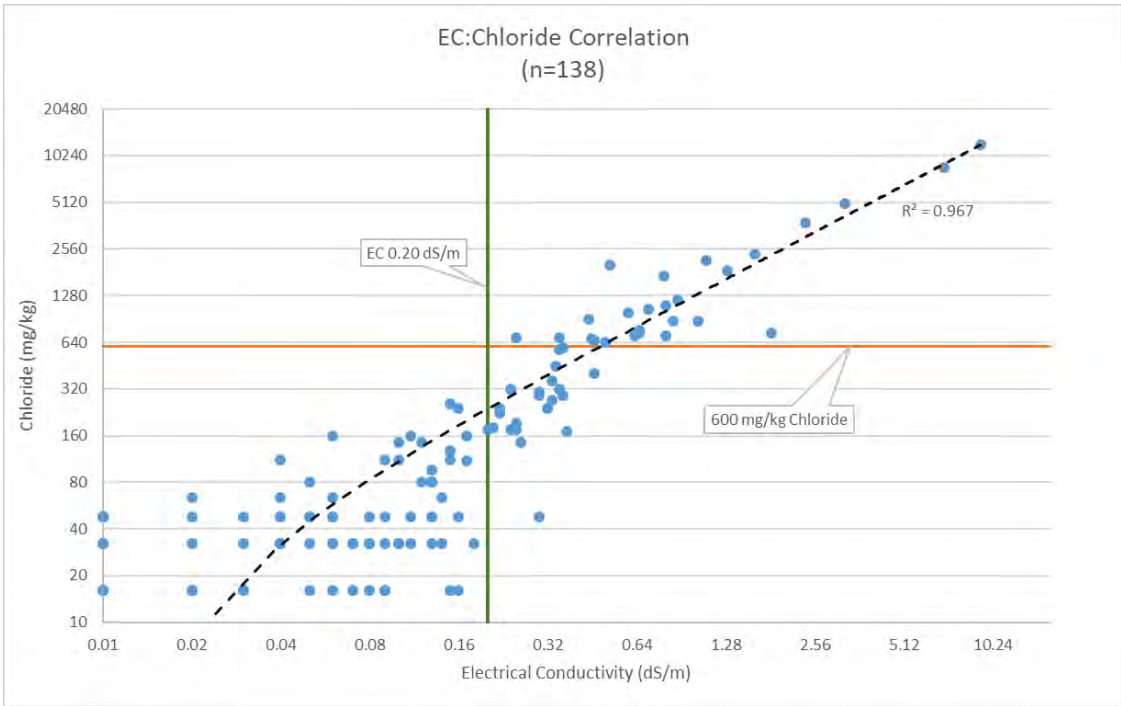

Figure 3: $EC_{1:5}$ vs Chloride. Soil samples with an $EC_{1:5}$ < 0.2 dS/m are likely to exhibit chloride concentrations below 600 mg/kg.

The EMI survey and discrete sampling indicates that remediation of chloride within the release extent will most likely be at depths between 2 and 4.5 feet bgs.

Table 2 is a summary of analytical results and $EC_{1:5}$ field readings. Appendix B 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 4). Spatial analysis shows:

- The closest wells are approximately 1.5 miles to the east.
- The average depth to water in the well cluster is 178.4 feet.

Ground water flow is to the south-southeast as demonstrated on the potentiometric surface map (Plate 5). We relied on the USGS water wells to generate the potentiometric surface. Regionally, USGS water wells show that ground water is within the Santa Rosa and Chinle Formation.

The potentiometric surface indicates that the depth to water is approximately 307 feet below ground surface, where 307 feet = 3777 ft surface elevation – 3470 ft potentiometric surface.

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

2.6 Wellhead Protection Area

Plate 6 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 7 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 within a pipeline right-of-way currently being constructed.

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

Table 2 shows the analytical results of confirmation sampling. The Laboratory Certificate of Analyses are located in Appendix B.

Release excavation showed the lithology as:

0 – 4.5 ft: silty sand
4.0 – 4.5 ft: hard Caliche layer

3 Remediation and Closure

3.1 Excavation Protocol

All surfaces were remediated 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) was less than 0.2 to 0.3 dS/m (Figure 4). EC readings were measured using a saturated paste in a 1-part soil to 5-parts distilled water solution ($EC_{1:5}$). A Hanna DiST 4 EC Tester was used to record measurements.

As shown previously in Figure 3, EC < 0.2 dS/m correlates with a chloride concentration <600 mg/kg.

Figure 4: Field screen for electrical conductivity (EC) during excavation. Photo is viewing south from base B-08. Date 02/07/2020. GPS: 32.4517028 N , 103.6039972 W

3.2 Remediation Activities

The excavation extent is irregular in shape and covers a surface area of 328 square yards with an excavated volume of 426 cu. yards

Plate 13 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).

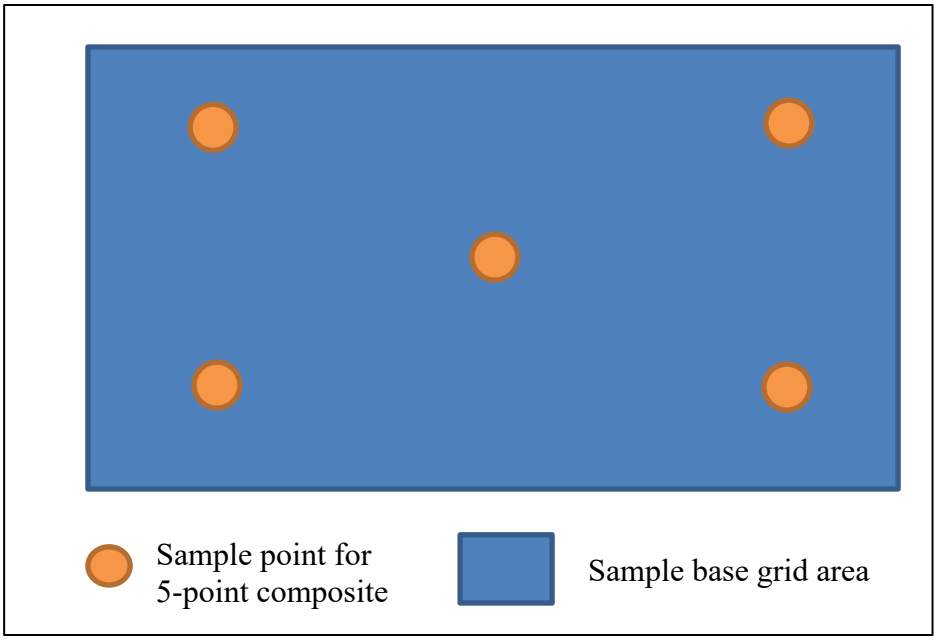

Figure 5: Example of 5-point sample grid for composite sampling.

Five-point composite soil samples were collected along the walls of the excavation as shown on Plate 14. 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 excavation depth was greater than 4-feet, an additional confirmation sample was obtained below 4-feet.

If soil confirmation sampling exceeded 19.15.29 NMAC Table 1 Closure Criteria concentrations, excavation continued in areas of concern until soil confirmation results were below Closure Criteria.

All confirmation samples show chloride, BTEX, and TPH concentrations below Table 1 of 19.15.29 NMAC Closure Criteria. Table 2 is a summary of final confirmation sampling results. Appendix B contains the Laboratory Certificates of Analyses.

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

The surface within the release extent is currently being used for the construction of a pipeline. The pipeline excavation is visible in Figure 6, below, background left. Final contouring and reseeding will occur at completion of the pipeline installation.

Figure 6: Backfill of release extent. Final contouring will occur during the completion of pipeline installation. The pipeline excavation is visible in photo background left. Photo is viewing north. Date: 02/14/2020. GPS: 32.4515417 N, 103.6040278 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
Brad Blevins (bblevins5252@gmail.com); Merchant Livestock

Plates

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

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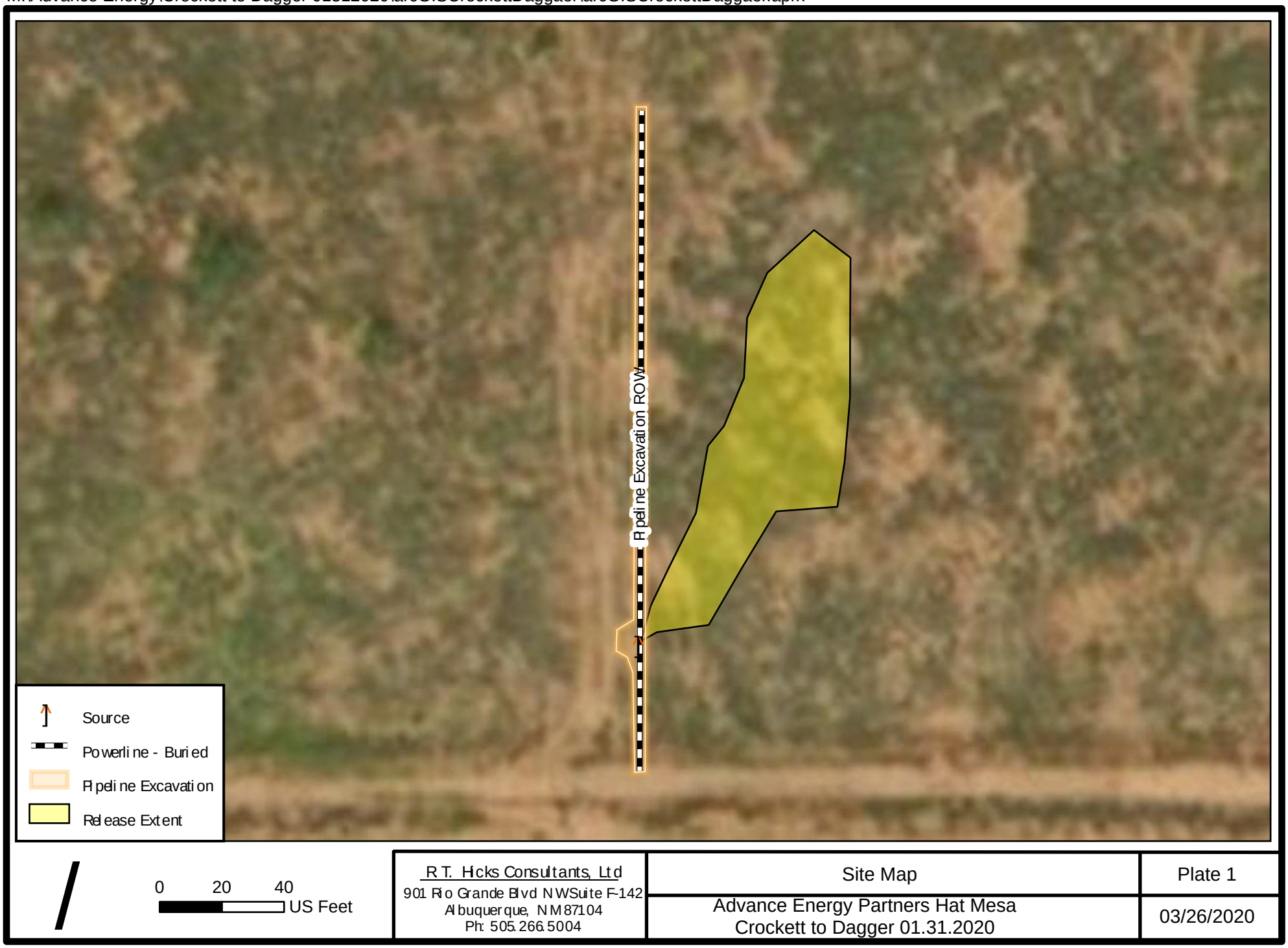

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Site Map	Plate 1
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

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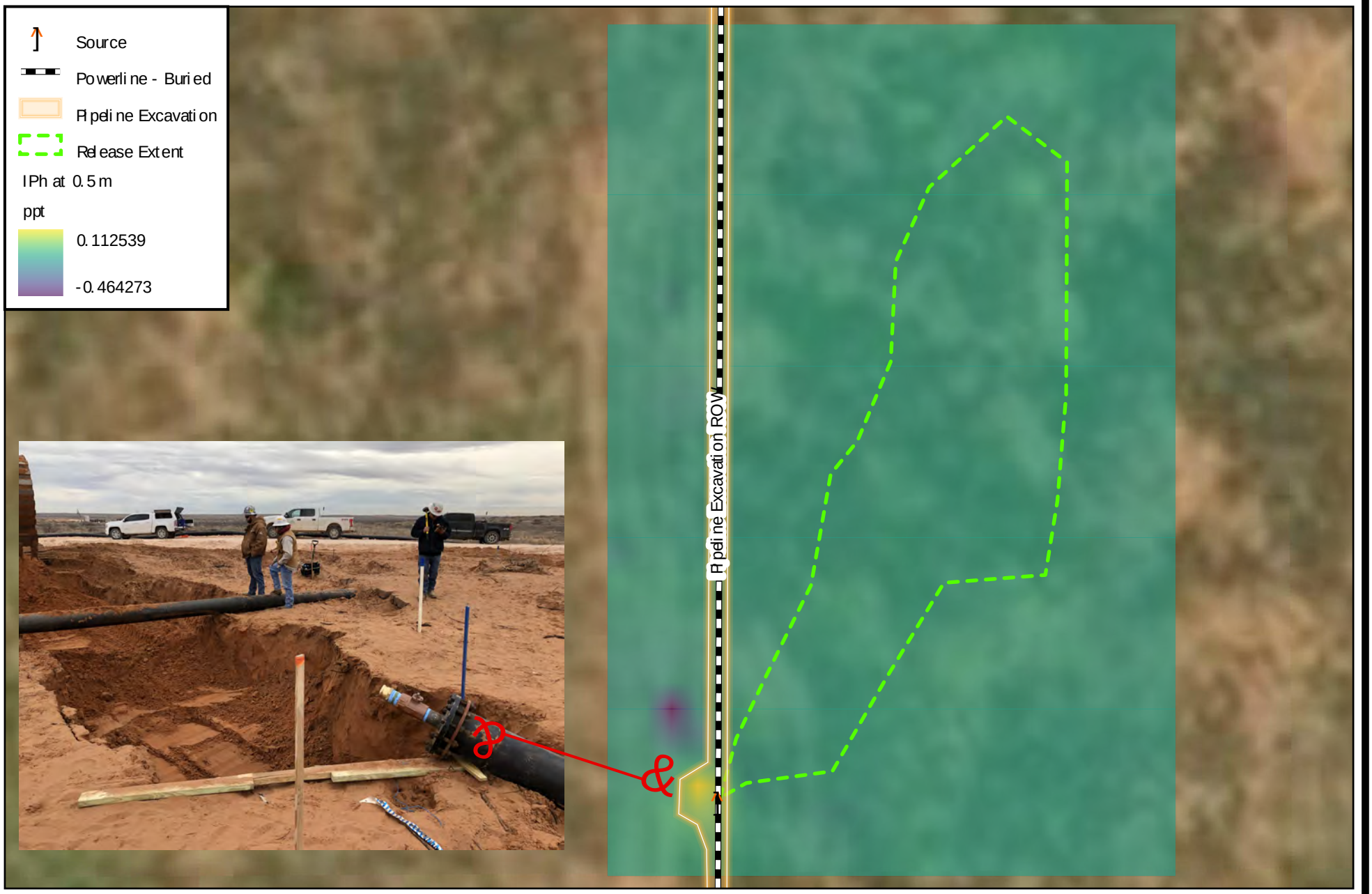

0 15 30 US Feet

R T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	EMI Survey Showing Metal Interference Susceptibility IP Horizontal Mode at 0.5m Coil Separation (0-1.3 ft) Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	Plate 02 03/26/2020

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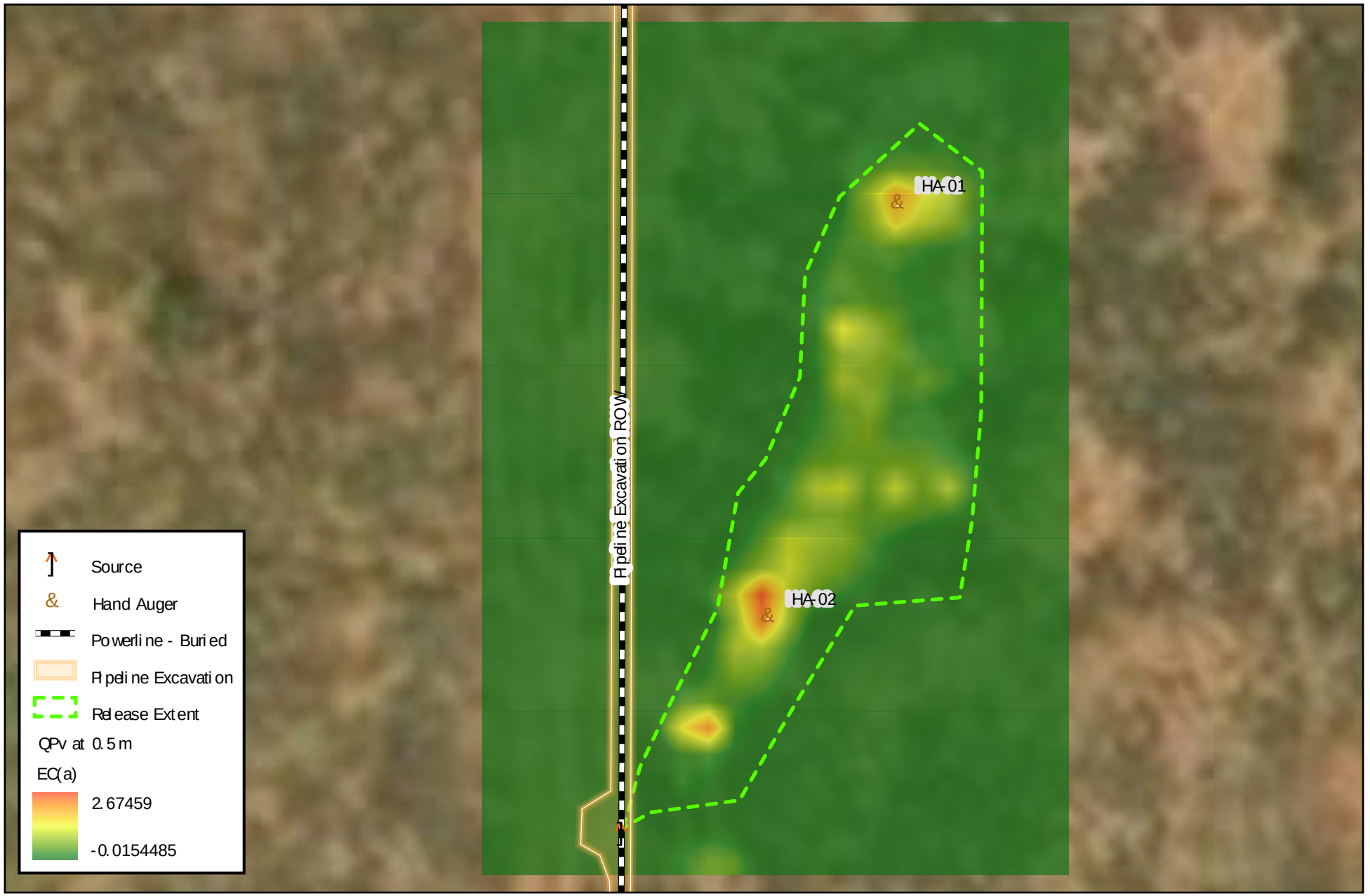

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

EMI Survey Quad Phase Apparent Electrical Conductivity
Vertical Dipole Mode at 0.5 m Coil Separation (0.7-2.5 ft)

Advance Energy Partners Hat Mesa
Crockett to Dagger 01.31.2020

Plate 3

03/26/2020

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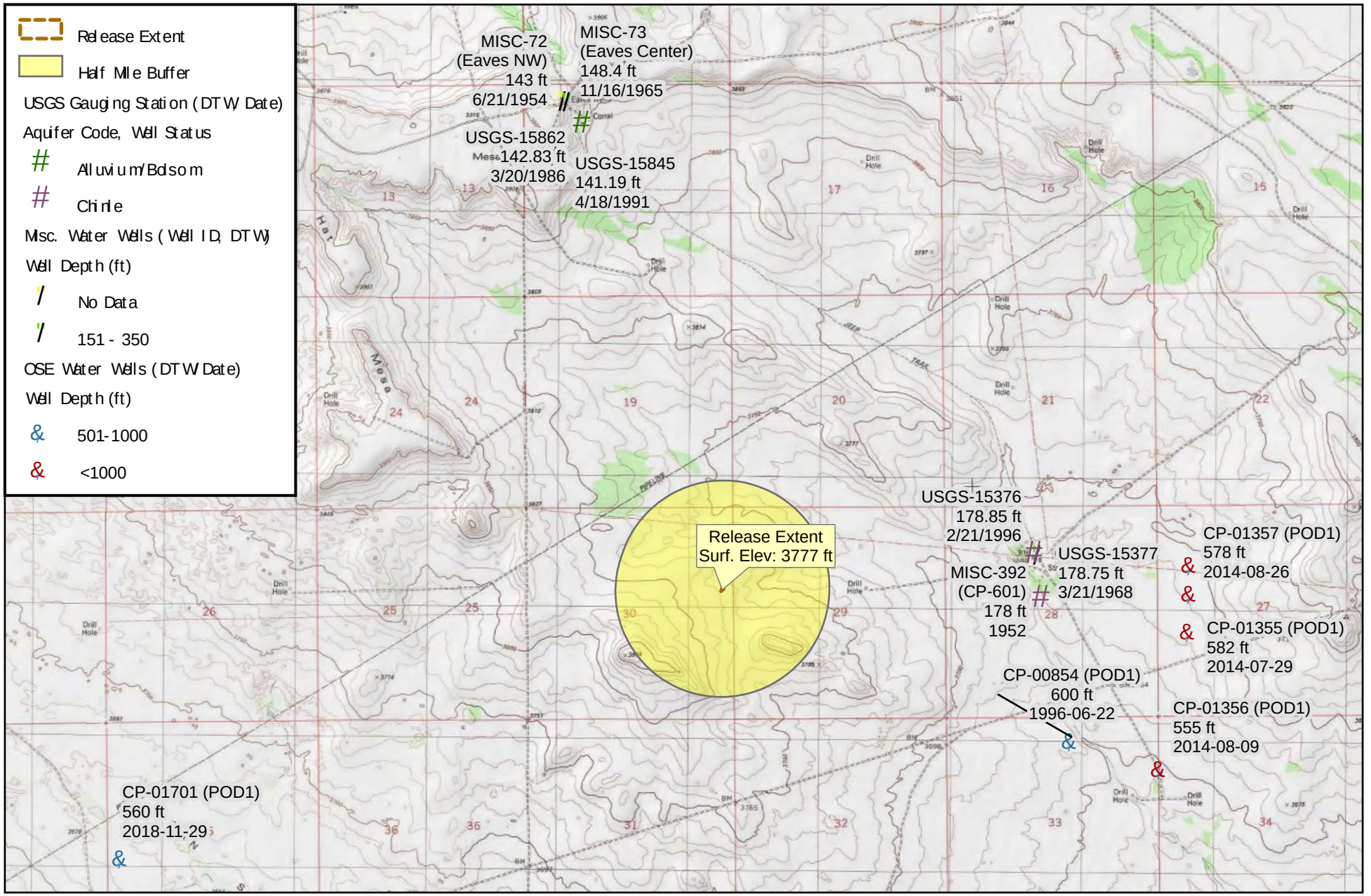

0 0.5 1 Miles

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

Depth to Water	Plate 4
Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

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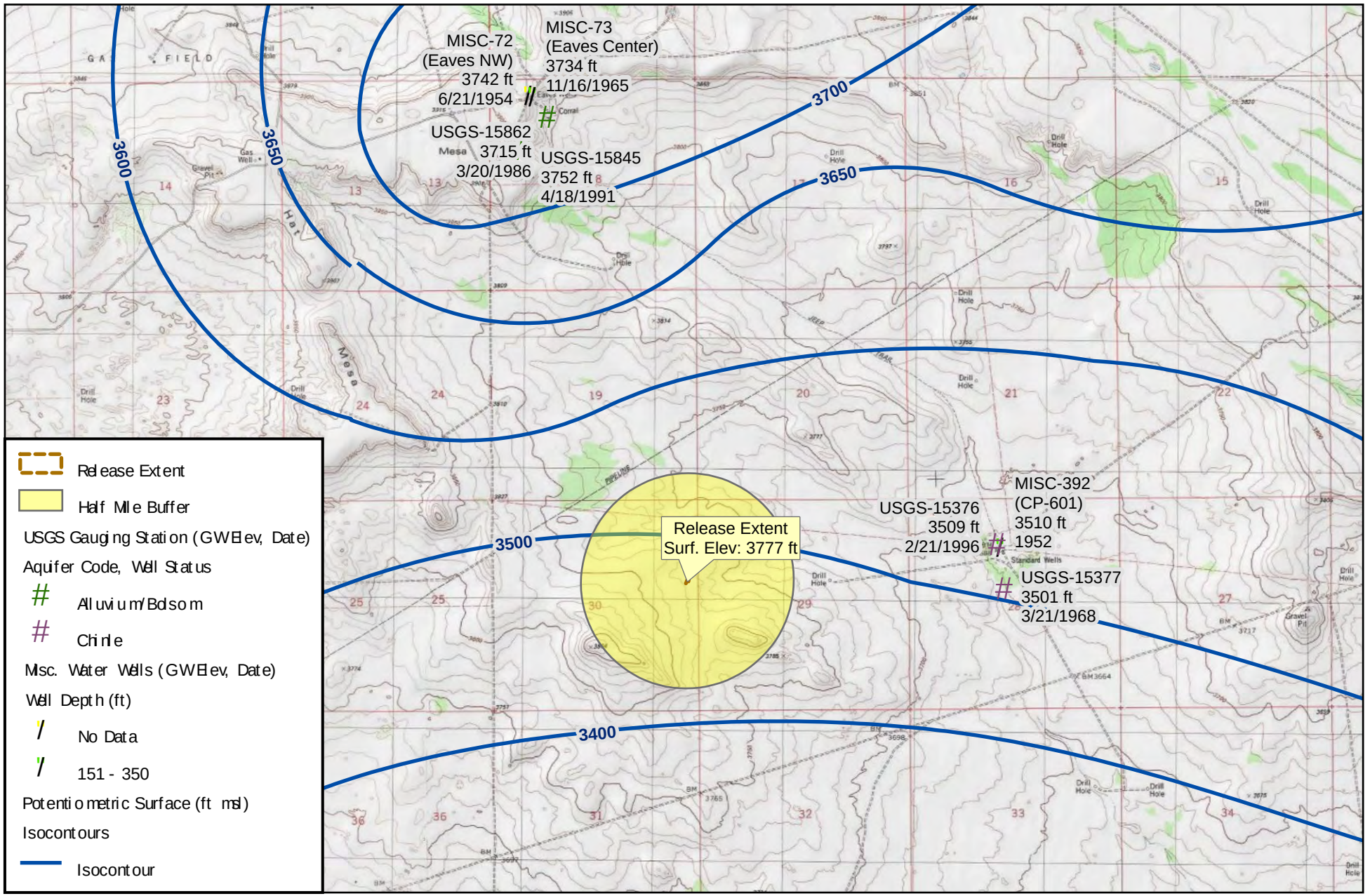
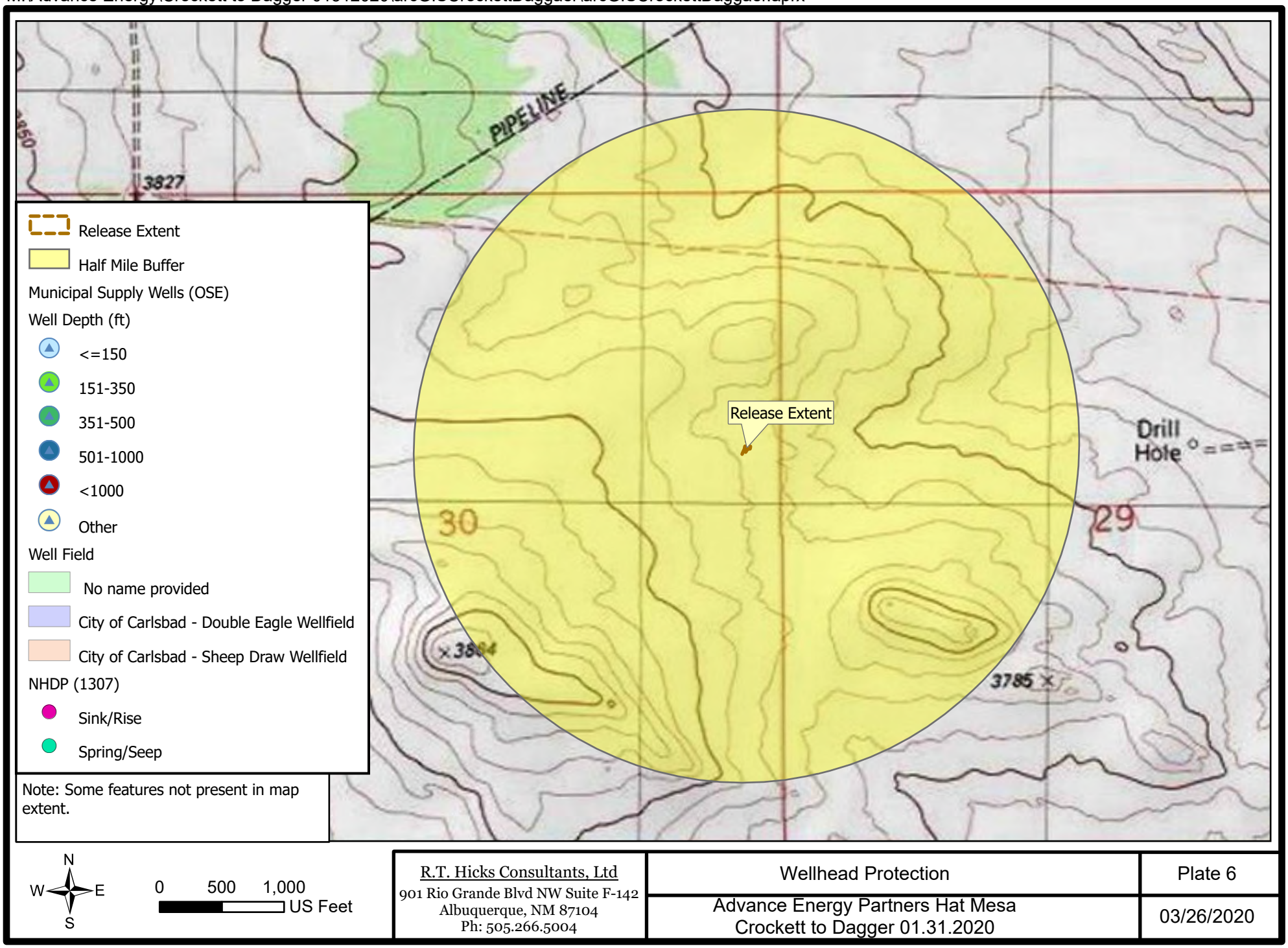


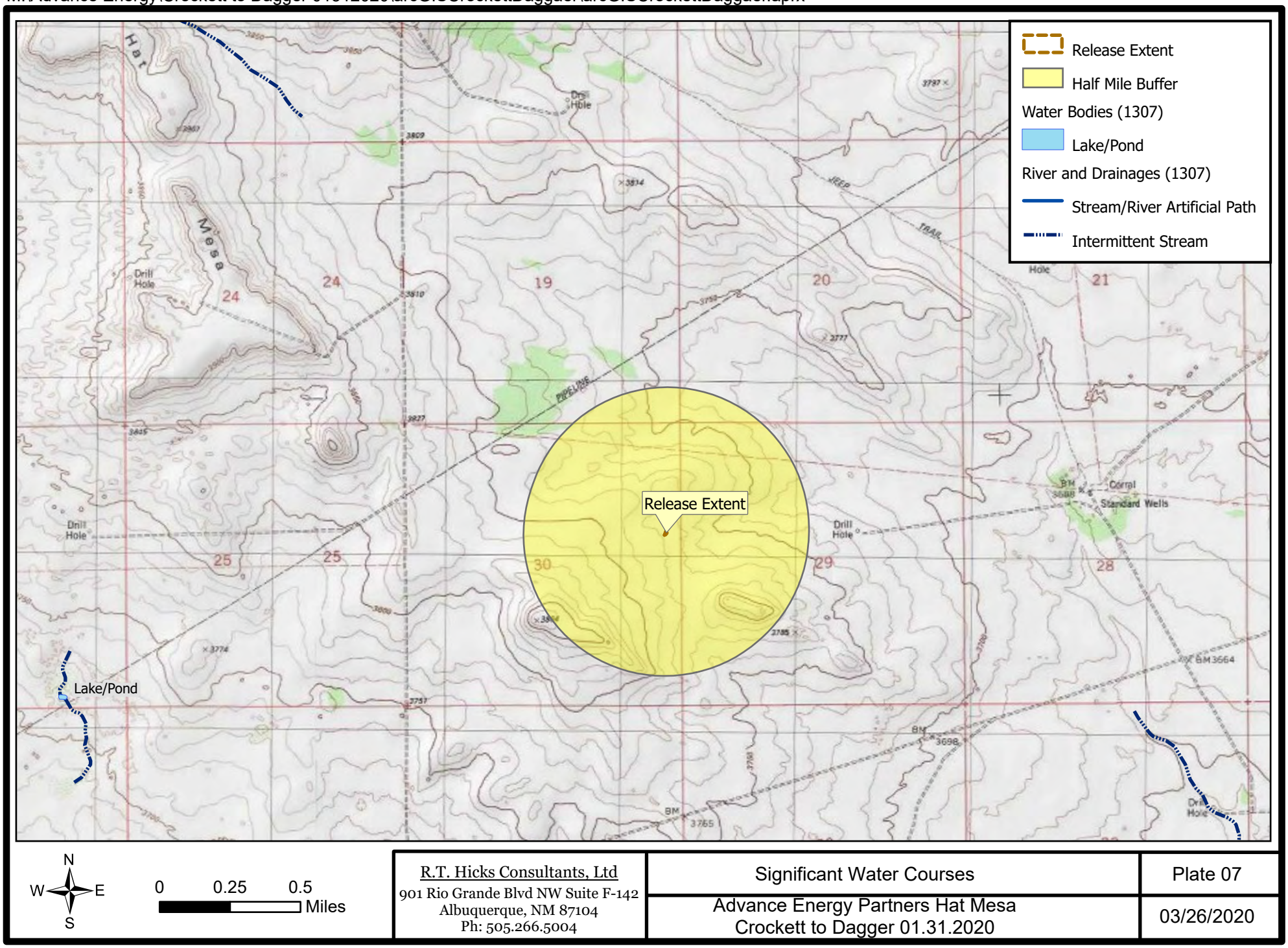
R T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Groundwater Elevation and Potentiometric Surface	Plate 5
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



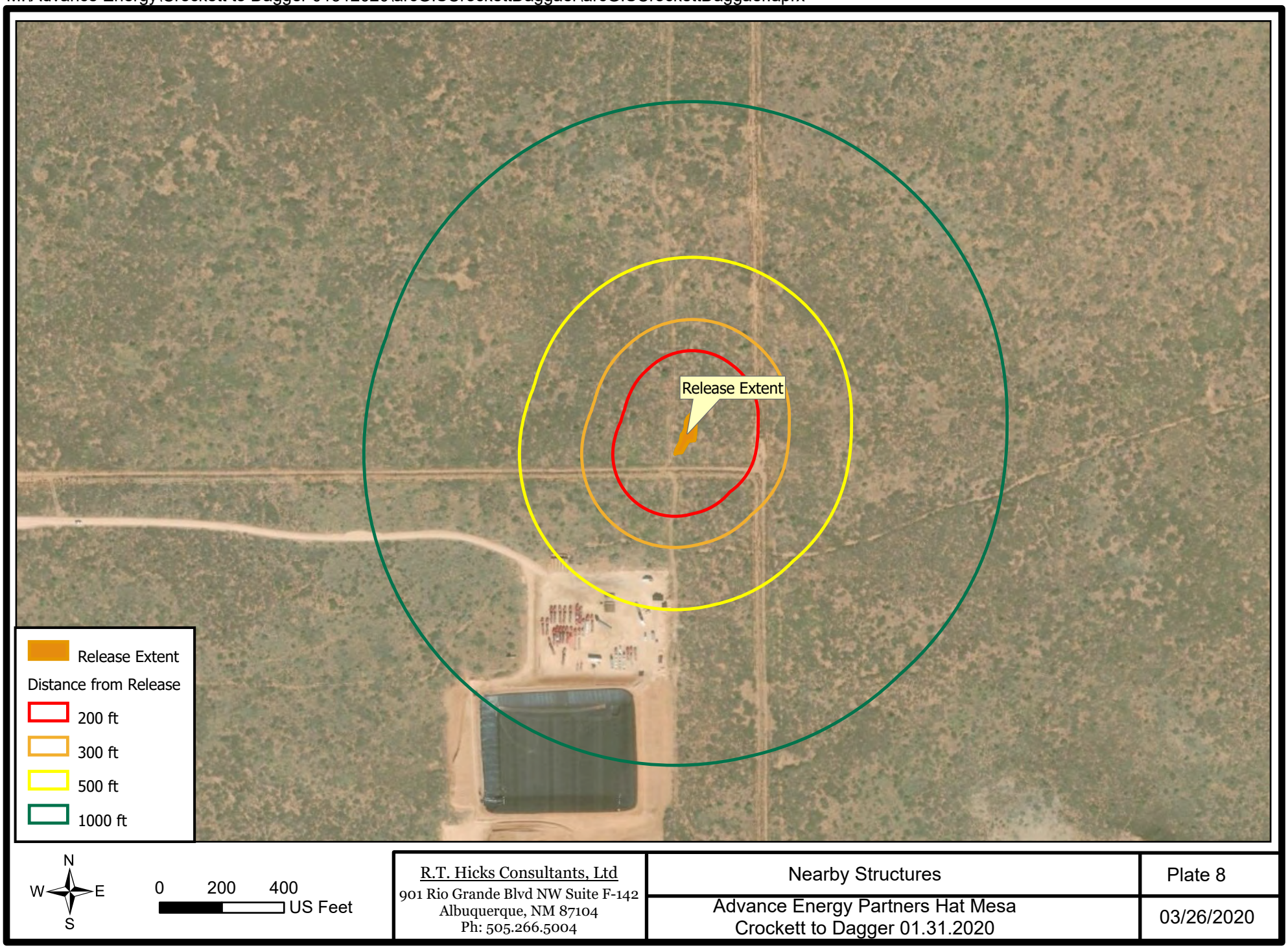
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Wellhead Protection	Plate 6
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



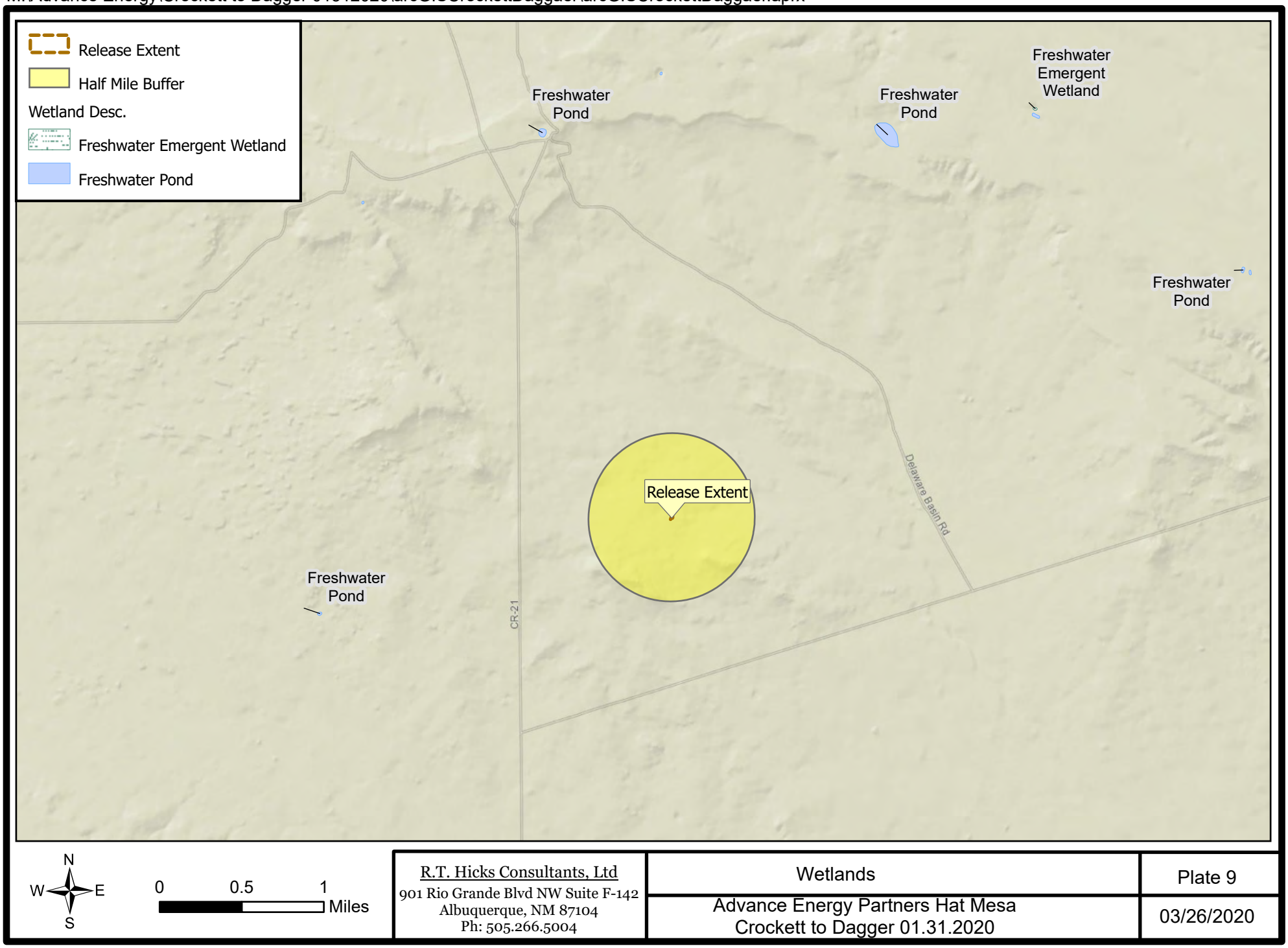
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Significant Water Courses	Plate 07
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



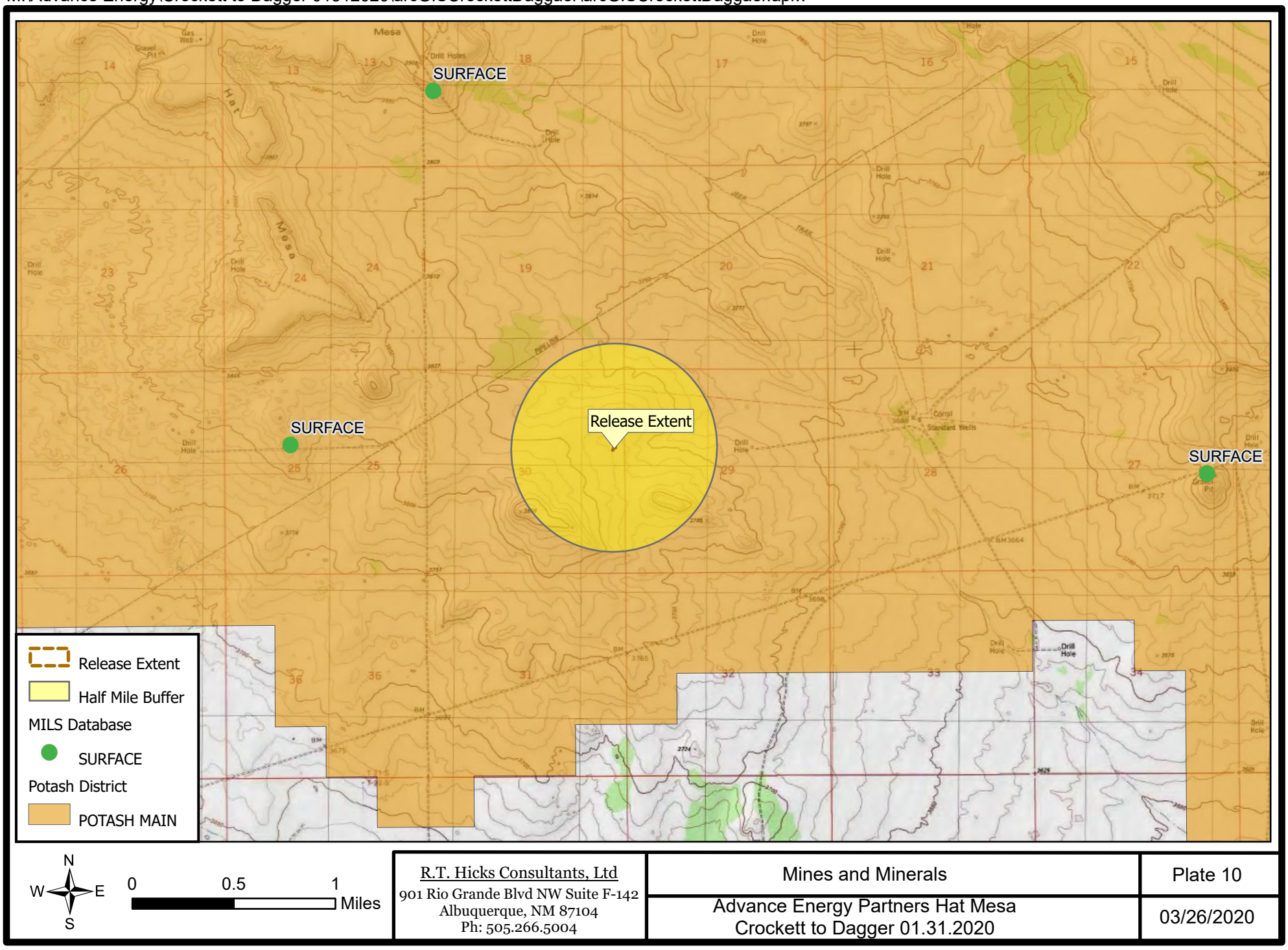
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Structures	Plate 8
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Wetlands	Plate 9
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Mines and Minerals	Plate 10
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

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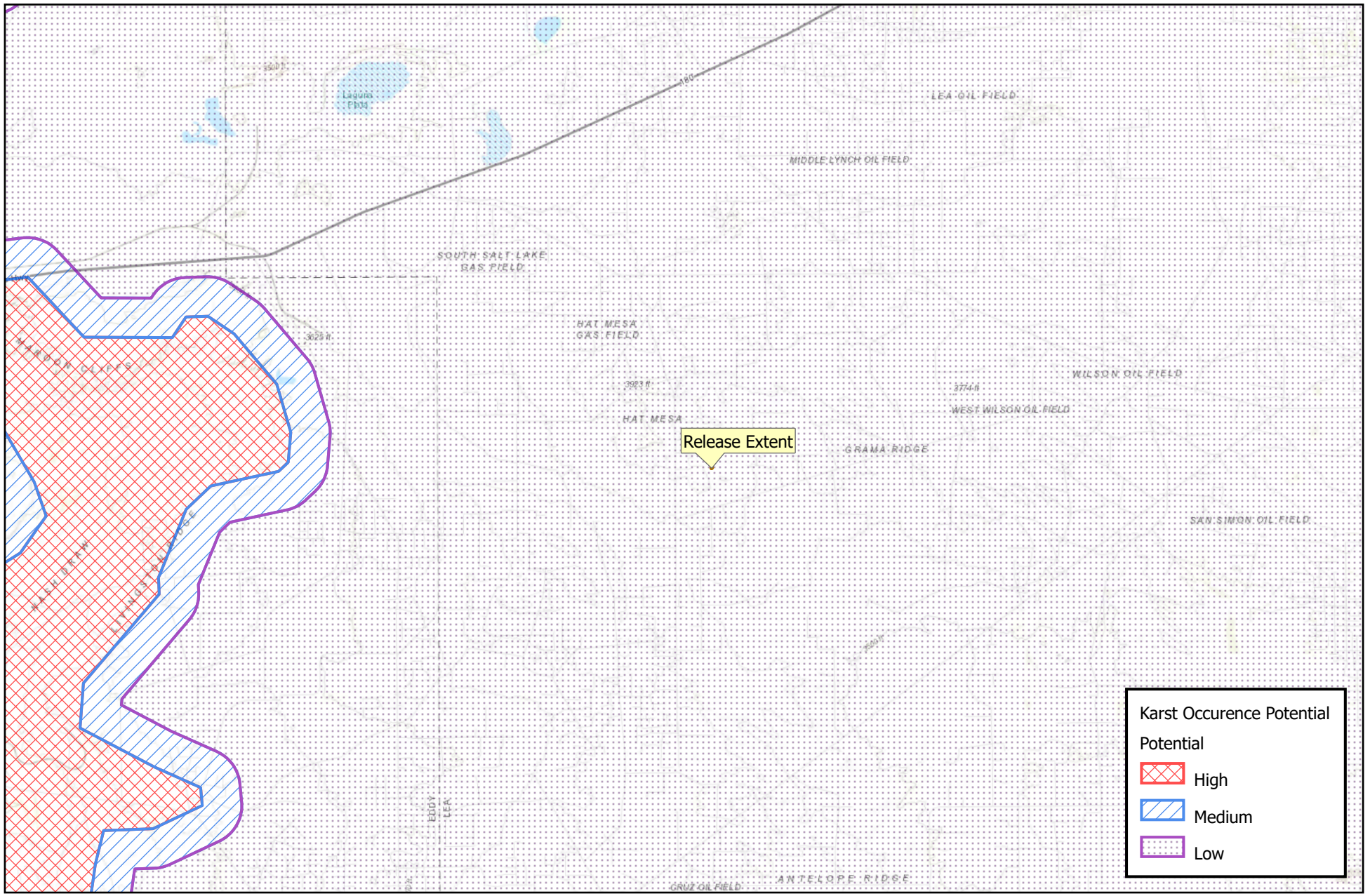


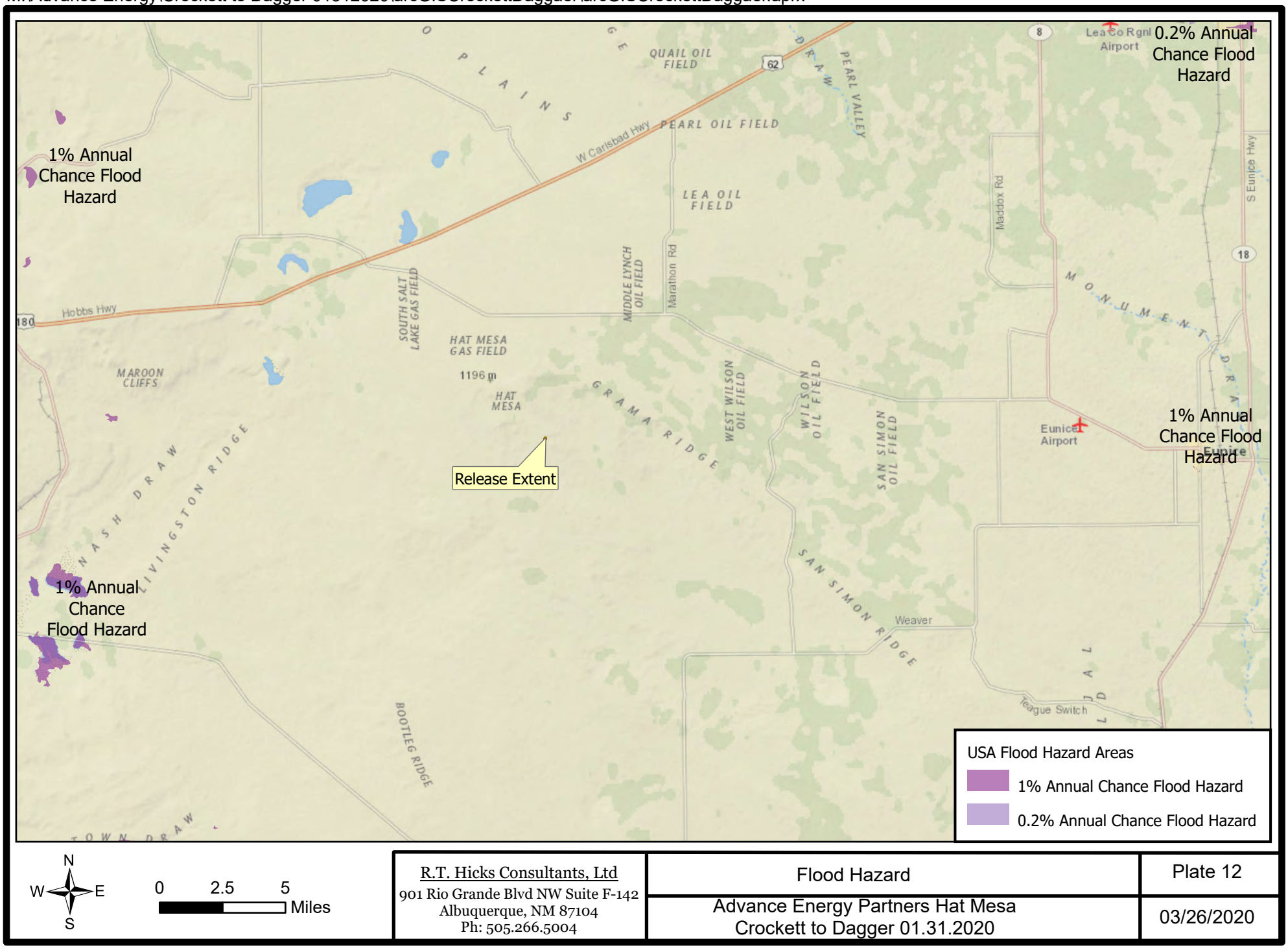
N
W E
S

0 2 4 Miles

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

Karst Potential	Plate 11
Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



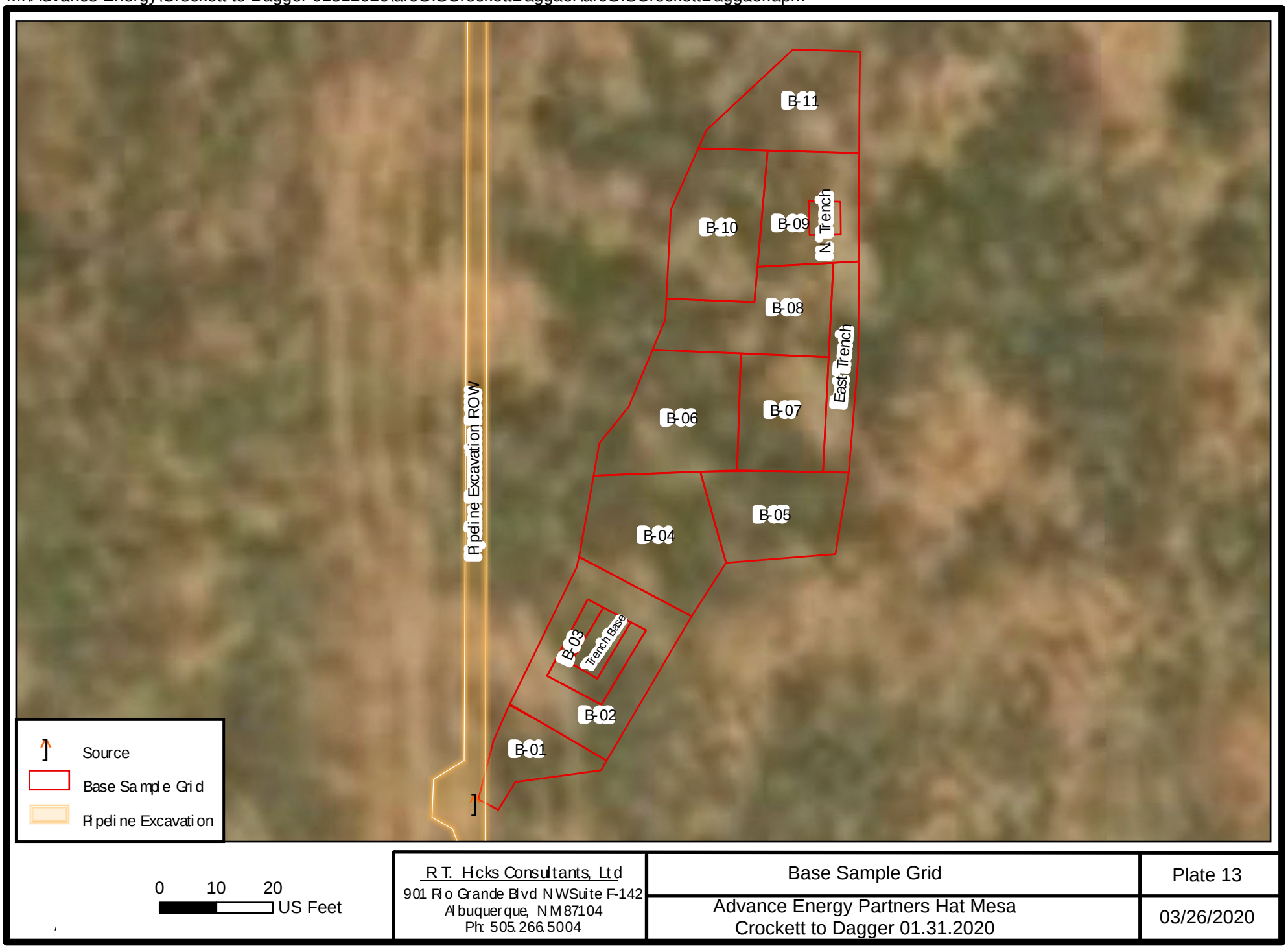
N W E S

0 2.5 5 Miles

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

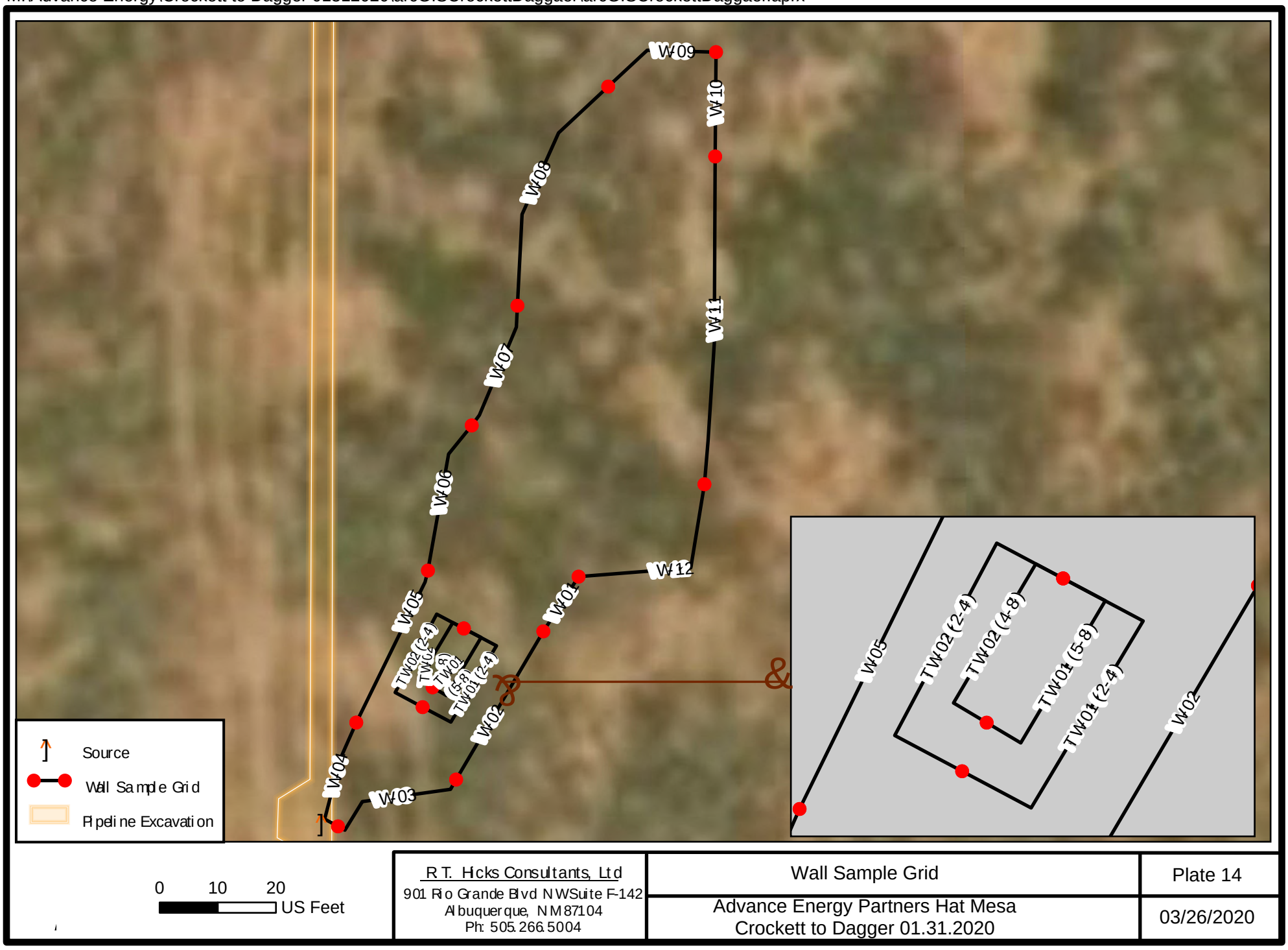
Flood Hazard	Plate 12
Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



R T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Base Sample Grid	Plate 13
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

M:\Advance Energy\Crockett to Dagger 01312020\arcGISCrockettDaggaer\arcGISCrockettDaggaer.aprx



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Wall Sample Grid	Plate 14
	Advance Energy Partners Hat Mesa Crockett to Dagger 01.31.2020	03/26/2020

Tables

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

March 2020

Table 1
OSE Water Well Log Data Summary

Crockett to Dagger
Advance Energy Partners Hat Mesa, LLC

POD Number	Date	Top of Water Bearing Strata	Bottom of Water Bearing Strata	Depth to Water	Source	Height Above Confining Layer
		Feet	Feet	Feet		Feet
CP-00601	1952		223	178		
CP 00854	6/22/1996	755	890	600	Artesian	155
CP 01349 POD 1	7/18/2014	990	1188	572	Artesian	418
CP 01355 POD 1	7/29/2014	925	1185	582	Artesian	343
CP 01356 POD 1	8/9/2014	765	1092	555	Artesian	210
CP 01357 POD 1	8/26/2014	945	1286	578	Artesian	367
CP 01701 POD 1	11/29/2018	560	840	457	Artesian	103

March 2020

Summary of Analytical

Advance Energy Partners
Crockett to Dagger

Sample ID	Date	Location (Base/Wall)	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	2/1/2020	Grab	2.0			2.97						Characterization
HA-01	2/4/2020	Grab	4.0			5.8	7460					Characterization
HA-02	2/1/2020	Grab	2.0			5.12						Characterization
HA-02	2/1/2020	Grab	4.0			0.07						Characterization
B-01	2/3/2020	Base	4.0				208					Base
B-02	2/3/2020	Base	4.0				32	<20	<30	<0.05	<0.3	Base
Trench Base	2/4/2020	Base	8.0				960	<20	<30	<0.05	<0.3	Within B-02
B-03	2/3/2020	Base	5.0				32					Base
B-04	2/3/2020	Base	2.0				16					Base
B-05	2/7/2020	Base	3.0			0.12	96					Base
B-06	2/7/2020	Base	2.5			0.1	96	<20	<30	<0.05	<0.3	Base
B-07	2/7/2020	Base	2.5			0.09	64	<20	<30	<0.05	<0.3	Base
B-08	2/7/2020	Base	2.5			0.01	<16					Base
B-09	2/7/2020	Base	4.5			4.43	3480					Base
N. Trench	2/7/2020	Base	7.5			2.89	1630					Delineation trench base
N. Trench	2/7/2020	Base	8.5			0.68	160					Delineation trench base
B-10	2/7/2020	Base	4.5			0.34	352					Base
B-11	2/7/2020	Base	4.5			0.02	16					Base
East Trench	2/7/2020	Base	3.5			0.26	224					At base of W-11
W-01	2/3/2020	Wall		0.0	2.0		32	<20	<30	<0.05	<0.3	Wall
W-02	2/3/2020	Wall		0.0	2.0		64					Wall
W-03	2/3/2020	Wall		0.0	4.0		48					Wall
W-04	2/3/2020	Wall		0.0	4.0		32					Wall
W-05	2/3/2020	Wall		0.0	2.0		48	<20	<30	<0.05	<0.3	Wall
W-06	2/3/2020	Wall		0.0	2.0		32					Wall
W-07	2/7/2020	Wall		0.0	2.5	0.01	<16	<20	<30	<0.05	<0.3	Wall
W-08	2/7/2020	Wall		0.0	4.0	0.04	48					Wall
W-09	2/7/2020	Wall		0.0	4.0	0.05	64					Wall
W-10	2/7/2020	Wall		0.0	4.0	0.08	16					Wall
W-11	2/7/2020	Wall		0.0	2.5	0.02	32					Wall
W-12		Wall		0.0	2.0							Excavated
W-12	2/7/2020	Wall		2.0	4.0	0.04	32	<20	<30	<0.05	<0.3	Wall
TW -01	2/4/2020	Wall		2.0	4.0		112					Trench Wall
TW -01	2/4/2020	Wall		5.0	8.0		2240					Trench Wall
TW -02	2/4/2020	Wall		2.0	4.0		512	<20	<30	<0.05	<0.3	Trench Wall
TW -02	2/4/2020	Wall		4.0	8.0		16					Trench Wall

Appendix A
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

CAPITAN BASIN
BASIN NAME

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

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

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

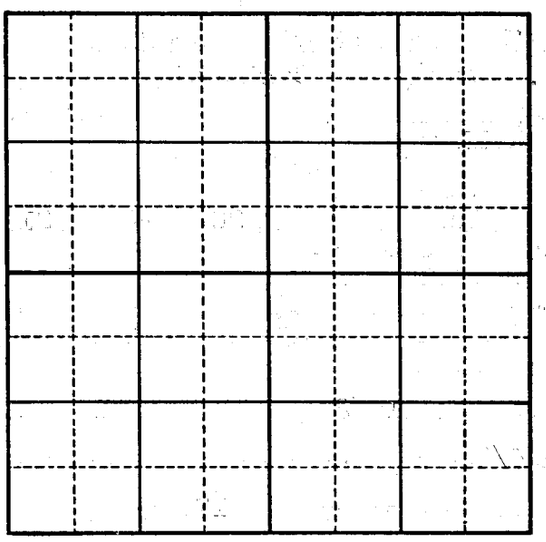
FILED

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

563298

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

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



INSTRUCTIONS

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

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

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

Secs. 1-3. Complete all blanks.

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

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

Sec. 6. Describe only the acreage actually irrigated. When necessary to clearly define irrigated acreages, describe to nearest 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

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

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

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE
Driller Name: GLENN, CLARK A."CORKY" (LD)

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

(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 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	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'	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 — 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 PM 3:53

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	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

8/9/14 — 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	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

Appendix B
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

February 10, 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 02/05/20 11:35.

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B - 01 4'	H000346-01	Soil	03-Feb-20 09:00	05-Feb-20 11:35
B - 02 4'	H000346-02	Soil	03-Feb-20 09:30	05-Feb-20 11:35
B - 03 5'	H000346-03	Soil	03-Feb-20 10:00	05-Feb-20 11:35
B - 04 2'	H000346-04	Soil	03-Feb-20 10:30	05-Feb-20 11:35
W - 01 0-2'	H000346-05	Soil	03-Feb-20 11:00	05-Feb-20 11:35
W - 02 0-2'	H000346-06	Soil	03-Feb-20 11:30	05-Feb-20 11:35
W - 03 0-4'	H000346-07	Soil	03-Feb-20 12:00	05-Feb-20 11:35
W - 04 0-4'	H000346-08	Soil	03-Feb-20 12:30	05-Feb-20 11:35
W - 05 0-2'	H000346-09	Soil	03-Feb-20 13:00	05-Feb-20 11:35
W - 06 0-2'	H000346-10	Soil	03-Feb-20 13:30	05-Feb-20 11:35
TRENCH BASE 8'	H000346-11	Soil	04-Feb-20 09:00	05-Feb-20 11:35
TRENCH WALL - 01 2-4'	H000346-12	Soil	04-Feb-20 09:30	05-Feb-20 11:35
TW - 01 5-8'	H000346-13	Soil	04-Feb-20 10:00	05-Feb-20 11:35
TW - 02 2-4'	H000346-14	Soil	04-Feb-20 11:00	05-Feb-20 11:35
TW - 02 4-8'	H000346-15	Soil	04-Feb-20 12:00	05-Feb-20 11:35
HA - 01 4'	H000346-16	Soil	04-Feb-20 12:30	05-Feb-20 11:35

02/09/20 - Client revised the sample ID for -06.
02/10/20 - This is the revised report and will replace the one sent on 02/06/20.

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

B - 01 4'

H000346-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**208**		16.0	mg/kg	4	0020409	AC	05-Feb-20	4500-Cl-B	

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

B - 02 4'

H000346-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	0020409	AC	05-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.9 %*	*73.3-129*		*0020507*	MS	*05-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*90.2 %*	*41-142*		*0020503*	MS	*05-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.8 %*	*37.6-147*		*0020503*	MS	*05-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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

B - 03 5'

H000346-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

B - 04 2'

H000346-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

W - 01 0-2'

H000346-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*0020507*	MS	*05-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*90.9 %*	*41-142*		*0020503*	MS	*05-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.9 %*	*37.6-147*		*0020503*	MS	*05-Feb-20*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

W - 02 0-2'

H000346-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

W - 03 0-4'

H000346-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

W - 04 0-4'

H000346-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

W - 05 0-2'

H000346-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*0020507*	MS	*05-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*90.9 %*	*41-142*		*0020503*	MS	*05-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.4 %*	*37.6-147*		*0020503*	MS	*05-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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

W - 06 0-2'

H000346-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

TRENCH BASE 8'

H000346-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**960**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.8 %*	*73.3-129*		*0020507*	MS	*05-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*88.8 %*	*41-142*		*0020503*	MS	*05-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*92.0 %*	*37.6-147*		*0020503*	MS	*05-Feb-20*	*8015B*	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

TRENCH WALL - 01 2-4'

H000346-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

TW - 01 5-8'

H000346-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**2240**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

TW - 02 2-4'

H000346-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**512**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0020507	MS	05-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.9 %*	*73.3-129*		*0020507*	MS	*05-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0020503	MS	05-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*88.2 %*	*41-142*		*0020503*	MS	*05-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.1 %*	*37.6-147*		*0020503*	MS	*05-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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

TW - 02 4-8'

H000346-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

HA - 01 4'

H000346-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**7460**		16.0	mg/kg	4	0020513	AC	05-Feb-20	4500-Cl-B	

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0020409 - 1:4 DI Water										
Blank (0020409-BLK1)				Prepared & Analyzed: 04-Feb-20						
Chloride	ND	16.0	mg/kg							
LCS (0020409-BS1)				Prepared & Analyzed: 04-Feb-20						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (0020409-BSD1)				Prepared & Analyzed: 04-Feb-20						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	
Batch 0020513 - 1:4 DI Water										
Blank (0020513-BLK1)				Prepared & Analyzed: 05-Feb-20						
Chloride	ND	16.0	mg/kg							
LCS (0020513-BS1)				Prepared & Analyzed: 05-Feb-20						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (0020513-BSD1)				Prepared & Analyzed: 05-Feb-20						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

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Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104	Project: ADVANCE ENERGY Project Number: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

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 0020507 - Volatiles										
Blank (0020507-BLK1)				Prepared & Analyzed: 05-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)	*0.0503*		mg/kg	*0.0500*		*101*	*73.3-129*			
LCS (0020507-BS1)				Prepared & Analyzed: 05-Feb-20						
Benzene	1.72	0.050	mg/kg	2.00		86.1	72.2-131			
Toluene	1.78	0.050	mg/kg	2.00		88.8	71.7-126			
Ethylbenzene	1.73	0.050	mg/kg	2.00		86.7	68.9-126			
Total Xylenes	5.20	0.150	mg/kg	6.00		86.6	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0513*		mg/kg	*0.0500*		*103*	*73.3-129*			
LCS Dup (0020507-BSD1)				Prepared & Analyzed: 05-Feb-20						
Benzene	1.90	0.050	mg/kg	2.00		94.8	72.2-131	9.61	14.6	
Toluene	1.96	0.050	mg/kg	2.00		98.0	71.7-126	9.81	17.4	
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.5	68.9-126	9.71	18.9	
Total Xylenes	5.74	0.150	mg/kg	6.00		95.7	71.4-125	9.93	18.5	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0505*		mg/kg	*0.0500*		*101*	*73.3-129*			

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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: CROCKET TO DAGGER Project Manager: ANDREW PARKER Fax To: NONE	Reported: 10-Feb-20 10:07

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 0020503 - General Prep - Organics										
Blank (0020503-BLK1)				Prepared & Analyzed: 05-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	*45.9*		mg/kg	*50.0*		*91.7*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*93.9*	*37.6-147*			
LCS (0020503-BS1)				Prepared & Analyzed: 05-Feb-20						
GRO C6-C10	210	10.0	mg/kg	200		105	76.5-133			
DRO >C10-C28	201	10.0	mg/kg	200		101	72.9-138			
Total TPH C6-C28	411	10.0	mg/kg	400		103	78-132			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*37.6-147*			
LCS Dup (0020503-BSD1)				Prepared & Analyzed: 05-Feb-20						
GRO C6-C10	208	10.0	mg/kg	200		104	76.5-133	1.09	20.6	
DRO >C10-C28	200	10.0	mg/kg	200		100	72.9-138	0.537	20.6	
Total TPH C6-C28	408	10.0	mg/kg	400		102	78-132	0.821	18	
Surrogate: 1-Chlorooctane	*50.6*		mg/kg	*50.0*		*101*	*41-142*			
Surrogate: 1-Chlorooctadecane	*49.1*		mg/kg	*50.0*		*98.2*	*37.6-147*			

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Notes and Definitions

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	R.T. Hicks Consultants	**BILL TO** P.O. #:	DL Line Test
Project Manager:	Andrew Parker	Company:	R.T. Hicks
Address:	On-File	Attn:	Send to
City:	State: Zip:	Address:	andrew@rthicks
Phone #:	Fax #:	City:	consult.com
Project #:	Project Owner:	State:	Zip:
Project Name:	Advance Energy	Phone #:	
Project Location:	Crochet to Dagger	Fax #:	
Sampler Name:	Jacob Saenz		

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	ANALYSIS REQUEST: CHLORIDE	TPH (GRO+DRO+MRO)	BENZENE, BTEX
H000346																		
1	B-01	4FT	C	1			X					X		2-3-20	9am	X		
2	B-02	4FT													9:30am		X	X
3	B-03	5FT													10am			
4	B-04	2FT													10:30am			
5	W-01	0-2FT													11am		X	X
* 6	W-02	0-2 ~~0-4FT~~													11:30am			
7	W-03	0-4FT													12pm			
8	W-04	0-4FT													12:30pm			
9	W-05	0-2FT													1pm		X	X
10	W-06	0-2FT													1:30pm			

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: 2.5	Received By:	
	Time: 11:35		
Relinquished By:	Date:	Received By:	
	Time:		

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: * Sample ID revised as per Andrew. 2/9 ck
RFN

Page 1/2

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: #113 2.7°C	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	T.O.

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	R.T. Hicks Consultants
Project Manager:	Andrew Parker
Address:	On-File
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	Advance Energy
Project Location:	Crochet to Dagger
Sampler Name:	Jacob Saenz

BILL TO

P.O. #:	DL Line Test
Company:	R.T. 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	TPH (GRO+DRO+MRO)	BENZENE, BTEX
H000346																	
11	Trench Base 8FT	C	1			X					X		2/4/20	9 am	X	X	X
12	Trench Wall-01 2-4FT													9:30 am			
13	TW-01 5-8FT													10 am			
14	TW-02 2-4FT													11 am		X	X
15	TW-02 4-8FT													12 pm			
16	HA-01 4FT	G												12:30 pm			

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: Andrew Parker	Date: 2.5	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1135		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: RNF Page 2/2
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: #113 2.7°C

Sample Condition	CHECKED BY: (Initials)
Cool: ☐ Yes ☐ No — Intact: ☐ Yes ☐ No	T.O.

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

February 10, 2020

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: CROCKETT TO DAGGER 01312020

Enclosed are the results of analyses for samples received by the laboratory on 02/07/20 16:30.

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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: B-05 3' (H000380-01)

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	02/10/2020	ND	432	108	400	0.00	

Sample ID: B-06 2.5' (H000380-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2020	ND	1.86	93.2	2.00	6.05	
Toluene*	<0.050	0.050	02/10/2020	ND	1.91	95.7	2.00	6.03	
Ethylbenzene*	<0.050	0.050	02/10/2020	ND	1.95	97.4	2.00	6.10	
Total Xylenes*	<0.150	0.150	02/10/2020	ND	5.75	95.9	6.00	6.19	
Total BTEX	<0.300	0.300	02/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *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	02/10/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2020	ND	216	108	200	2.95	
DRO >C10-C28*	<10.0	10.0	02/10/2020	ND	212	106	200	4.98	
EXT DRO >C28-C36	<10.0	10.0	02/10/2020	ND					

Surrogate: 1-Chlorooctane *100 %* *41-142*

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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: B-06 2.5' (H000380-02)

TPH 8015M **mg/kg** **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Surrogate: 1-Chlorooctadecane	*103 %*	*37.6-147*							

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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: B-07 2.5' (H000380-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2020	ND	1.86	93.2	2.00	6.05	
Toluene*	<0.050	0.050	02/10/2020	ND	1.91	95.7	2.00	6.03	
Ethylbenzene*	<0.050	0.050	02/10/2020	ND	1.95	97.4	2.00	6.10	
Total Xylenes*	<0.150	0.150	02/10/2020	ND	5.75	95.9	6.00	6.19	
Total BTEX	<0.300	0.300	02/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *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	02/10/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2020	ND	216	108	200	2.95	
DRO >C10-C28*	<10.0	10.0	02/10/2020	ND	212	106	200	4.98	
EXT DRO >C28-C36	<10.0	10.0	02/10/2020	ND					

Surrogate: 1-Chlorooctane *103 %* *41-142*

Surrogate: 1-Chlorooctadecane *106 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: B-08 2.5' (H000380-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2020	ND	432	108	400	0.00	

Sample ID: B-09 4.5' (H000380-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3480**	16.0	02/10/2020	ND	432	108	400	0.00	

Sample ID: B-10 4.5' (H000380-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	02/10/2020	ND	432	108	400	0.00	

Sample ID: B-11 4.5' (H000380-07)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	02/10/2020	ND	432	108	400	0.00	

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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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: W-07 0-2.5' (H000380-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2020	ND	1.86	93.2	2.00	6.05	
Toluene*	<0.050	0.050	02/10/2020	ND	1.91	95.7	2.00	6.03	
Ethylbenzene*	<0.050	0.050	02/10/2020	ND	1.95	97.4	2.00	6.10	
Total Xylenes*	<0.150	0.150	02/10/2020	ND	5.75	95.9	6.00	6.19	
Total BTEX	<0.300	0.300	02/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *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	<16.0	16.0	02/10/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2020	ND	216	108	200	2.95	
DRO >C10-C28*	<10.0	10.0	02/10/2020	ND	212	106	200	4.98	
EXT DRO >C28-C36	<10.0	10.0	02/10/2020	ND					

Surrogate: 1-Chlorooctane *103 %* *41-142*

Surrogate: 1-Chlorooctadecane *105 %* *37.6-147*

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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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: W-08 0-4' (H000380-09)

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	02/10/2020	ND	432	108	400	0.00	

Sample ID: W-09 0-4' (H000380-10)

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	02/10/2020	ND	432	108	400	0.00	

Sample ID: W-10 0-4' (H000380-11)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	02/10/2020	ND	432	108	400	0.00	

Sample ID: W-11 0-2.5' (H000380-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/10/2020	ND	432	108	400	0.00	

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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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: W-12 2-4' (H000380-13)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2020	ND	1.86	93.2	2.00	6.05	
Toluene*	<0.050	0.050	02/10/2020	ND	1.91	95.7	2.00	6.03	
Ethylbenzene*	<0.050	0.050	02/10/2020	ND	1.95	97.4	2.00	6.10	
Total Xylenes*	<0.150	0.150	02/10/2020	ND	5.75	95.9	6.00	6.19	
Total BTEX	<0.300	0.300	02/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *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	**32.0**	16.0	02/10/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2020	ND	216	108	200	2.95	
DRO >C10-C28*	<10.0	10.0	02/10/2020	ND	212	106	200	4.98	
EXT DRO >C28-C36	<10.0	10.0	02/10/2020	ND					

Surrogate: 1-Chlorooctane *105 %* *41-142*

Surrogate: 1-Chlorooctadecane *107 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKETT TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: B. N TRENCH 7.5' (H000380-14)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1630**	16.0	02/10/2020	ND	432	108	400	0.00	

Sample ID: B. N TRENCH 8.5' (H000380-15)

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	02/10/2020	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

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: R.T. Hick Consultants	**BILL TO**
Project Manager: Andrew Parker	P.O. #: C to D
Address: on file	Company:
City: State: Zip:	Attn: email Andrew
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Crockett to Dagger 01312020	State: Zip:
Project Location: Advance Energy	Phone #: 970-570-9535
Sampler Name: Andrew Parker	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 EXT												
H000380																												
1	B-05 @ 3ft	G	1			✓							2/7/20	08:15	✓													
2	B-06 @ 2.5ft													08:30	✓	X	X											
3	B-07 @ 2.5ft													09:00	✓	X	X											
4	B-08 @ 2.5ft													09:30	✓													
5	B-09 4.5ft													09:45	✓													
6	B-10 4.5ft													10:00	✓													
7	B-11 4.5ft													10:15	✓													
8	W-07 0-2.5ft													10:30	✓	X	X											
9	W-08 0-4ft													10:45	✓													
10	W-09 0-4ft													11:00	✓													

Relinquished By:	Date: 2/7	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 10:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		RFN

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: #113 / 4.3°c

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

CHECKED BY: (Initials)

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: R.T. Hicks Consultants	**BILL TO**
Project Manager: Andrew Parker	P.O. #: C to D
Address: On file	Company:
City: State: Zip:	Attn: email Andrew
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Crockett to Dagger 01312020	State: Zip:
Project Location: Advance Energy	Phone #: 970-570-9535
Sampler Name: Andrew Parker	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 EXT									
H000380																										
11	W-10 0-4ft	G	1			✓							2/7/20	11:15	✓											
12	W-11 0-2.5ft	↓	↓			↓					↓			11:30	✓											
13	W-12 2-4ft	↓	↓			↓					↓		↓	11:45	✓	X	X									
14	B.N Trench 7.5ft	↓	↓			↓					↓			2:00	✓											
15	B.N Trench 8.5ft	↓	↓			↓					↓		↓	2:15	✓											

Relinquished By: Andrew	Date: 2/7	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 10:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: RFN
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other: #113 / 4.3°C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	

CARDINAL Laboratories

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

February 10, 2020

ANDREW PARKER

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: CROCKET TO DAGGER 01312020

Enclosed are the results of analyses for samples received by the laboratory on 02/07/20 16:35.

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:	02/07/2020	Sampling Date:	02/07/2020
Reported:	02/10/2020	Sampling Type:	Soil
Project Name:	CROCKET TO DAGGER 01312020	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ADVANCE ENERGY		

Sample ID: EAST TRENCH 3' (H000381-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	02/10/2020	ND	432	108	400	0.00	

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

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: R.T. Hicks Consultants	**BILL TO**
Project Manager: Andrew Parker	P.O. #: C to D
Address: on file	Company:
City: State: Zip:	Attn: email Andrew
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Crockett to Dagger 01312020	State: Zip:
Project Location: Advance Energy	Phone #: 970-5709535
Sampler Name: Andrew Parker	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	Cl (Orsat)
H000356 1	East Trench 3ft	G	1			✓							2/7/20	2:30	✓

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: Andrew	Date: 2-7	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 16:35		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: RFN
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other: #113 / 4.3°C		Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 60641

CONDITIONS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 11490 Westheimer Rd., Ste 950 Houston, TX 77077	OGRID: 372417
	Action Number: 60641
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NRM2003745665 CROCKETT TO DAGGER RELEASE, thank you. This closure is approved.	3/18/2022