

Incident ID	NRM2016453805
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.4578013

Longitude -103.5916387

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Wool Head B Battery	Site Type: Tank Battery
Date Release Discovered: 06/07/2020 @ 23:00	API#

Unit Letter	Section	Township	Range	County
O	20	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls):
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 10	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Actuator valve failed to open causing pump to over pressure Poly Transition on Pump causing a rupture in pipe resulting in a release of approximately 10 bbls. Outside containment on Location. Release contained on production pad. 35' x 75' approximately produced water residue.

State of New Mexico
Oil Conservation Division

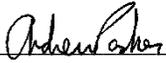
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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Andrew Parker (R.T. Hicks Consultants)</u> Title: <u>Sr. Env. Specialist</u> Signature: <u></u> Date: <u>June, 10th 2020</u> email: <u>andrew@rthicksconsult.com</u> Telephone: <u>970-570-9535</u>
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>6/12/2020</u>

Spill Dimensions to Volume of Release			
Input	volume of affected soil	[feet^3]	5937.00
Input	Porosity: typically is .35 to .40 for most soils	[-]	0.09
Input	Proportion of porosity filled with release fluid [0,1]	[-]	0.10
Output	volume of fluid	[feet^3]	53.4
		[gal]	399.7
		Barrels	9.5

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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? <u>Plate 2</u>	___203___ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? <u>Plate 4</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? <u>Plate 4</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? <u>Plate 5</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? <u>Plate 3</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? <u>Plate 3</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? <u>Plate 3</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland? <u>Plate 6</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine? <u>Plate 7</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology? <u>Plate 8</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain? <u>Plate 9</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

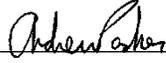
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform 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: Env. Scientist

Signature: 

Date: October 13, 2020

email: aparker@advanceenergypartners.com

Telephone: 970-570-9535

OCD Only

Received by: Cristina Eads

Date: 10/22/2020

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Remediation Plan

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

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

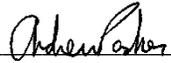
Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

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

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Printed Name: Andrew Parker

Title: Env. Scientist

Signature: 

Date: October 13, 2020

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: _____

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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.

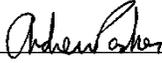
Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- 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: Env. Scientist

Signature: 

Date: October 13, 2020

email: aparker@advanceenergypartners.com

Telephone: 970-570-9535

OCD Only

Received by: Cristina Eads

Date: 10/22/2020

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

Closure Approved by: 

Date: 12/16/2020

Printed Name: Cristina Eads

Title: Environmental Specialist



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

October 13, 2020

RE:

Characterization, Workplan, & Closure
Incident ID: NRM2016453805
AEP #: 06072020-2300-prodops
Location: Wool Head "B" Pad Battery

NM Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr.
Santa Fe, NM 87505

NMOCD:

Advance Energy Partners Hat Mesa LLC (Advance Energy) submits this characterization report and proposed workplan/closure for the above referenced incident.

The produced water release occurred on June 07, 2020 caused by an actuator valve failing to open causing pump to over pressure the poly-transition fitting on the pump, thus causing a rupture in pipe resulting in a release of approximately 10 bbls. The release was outside of the tank battery containment and remained on an active production pad. The release covered an area of approximately 11,874 sq. ft. The source of the release is at coordinates 32.4578074, -103.5915909 (Latitude/Longitude; NAD 83). The release occurred of State surface.

Drilling, completion, and flowback operations were ongoing at the time of the release and access to the location was limited. Operations were completed on August 27th, 2020 and characterization was initiated thereafter.

Incident ID: NRM2016453805
AEP #: 06072020-2300-prodops

1. Characterization

The following sections address items as described in 19.15.29.11.A, paragraphs 1- 4. Please refer to the C-141 characterization checklist for additional setback criteria and verification (Plates 5-9).

1.1. Site Map

Horizontal extent of the release was determined by visual observations the day that the release and mapped using GPS technology with sub-meter accuracy.

Plate 1 shows the release extent relative to the active production pad, tank batteries, flowlines, soil sample points, and the point of release.

1.2. Depth to Ground Water

Plate 2 shows the depth to ground water reproduced from Open File Report -95¹ published by Geohydrology Associates, Inc for the Bureau of Land Management (BLM). As shown on Plate 2, depth to water is between 150 to 200 feet below ground surface.

Most recent depth to water data was queried from the USGS and New Mexico Office of the State Engineer (OSE) online databases. Spatial analysis shows the nearest water well (USGS-15376) is approximately 0.8 miles southeast with a depth to water of 178.85 ft (dated 02/21/1996).

The potentiometric surface indicates that the depth to water is approximately 203 feet below ground surface, where 203 feet = 3723 ft surface elevation – 3520 ft potentiometric surface.

Appendix A are the wells logs for nearby wells.

1.3. Wellhead Protection Area

Plate 3 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

¹ Collection of hydrologic data Eastside Roswell Range EIS area, New Mexico.
<https://geoinfo.nmt.edu/publications/openfile/details.cfm?Volume=95>

Incident ID: NRM2016453805
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1.4. Distance to Nearest Significant Water Course

Plate 4 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).

1.5. Soil/Waste Characteristics

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

Past remediations in the area commonly show the lithology as:

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

The lateral and vertical extent of the release was determined by collecting soil samples in the four cardinal directions relative to the release extent and two samples within the release extent (Plate 1).

Table 1 summarizes the analytical results. All samples exhibit chloride and hydrocarbon concentrations, within the upper 2-feet, below the most stringent closure criteria listed in Table 1 of 19.15.29 NMAC. Laboratory Certificate of Analysis is located in Appendix B.

Incident ID: NRM2016453805
AEP #: 06072020-2300-prodops

2. Remediation Workplan/Closure

As discussed above, soil samples obtained during characterization exhibit chloride and hydrocarbon concentrations, within the upper 2-feet, below the most stringent closure criteria listed in Table 1 of 19.15.29 NMAC. Furthermore, soil sample results from 1 to 2-feet below ground surface (bgs) show a decrease in chloride concentrations with the exception of 'HA East' that exhibited a chloride concentration of 128 mg/kg at 0 to 1-foot and 1 to 2-feet. TPH, benzene, and BTEX were below laboratory detection limits in all samples.

Therefore, we propose "No Further Action" and ask for closure of the regulatory file. The release extent remains on an active production pad for oil and gas operations (Figure 1).



Figure 1: Photo of release area on June 9, 2020. Photo is viewing south from northeast release extent. GPS: 32.4581456 N, -103.5917231 W. Date: 2020-06-09 09:58:37

Please contact me with any questions at 970-570-9535.

Sincerely,
Advance Energy Partners Hat Mesa, LLC

Andrew Parker
Env. Scientist

Copy: Randy Black, Braden Harris; Advance Energy Partners Hat Mesa, LLC
Ryan Mann; New Mexico State Land Office

13 October 2020

Plates



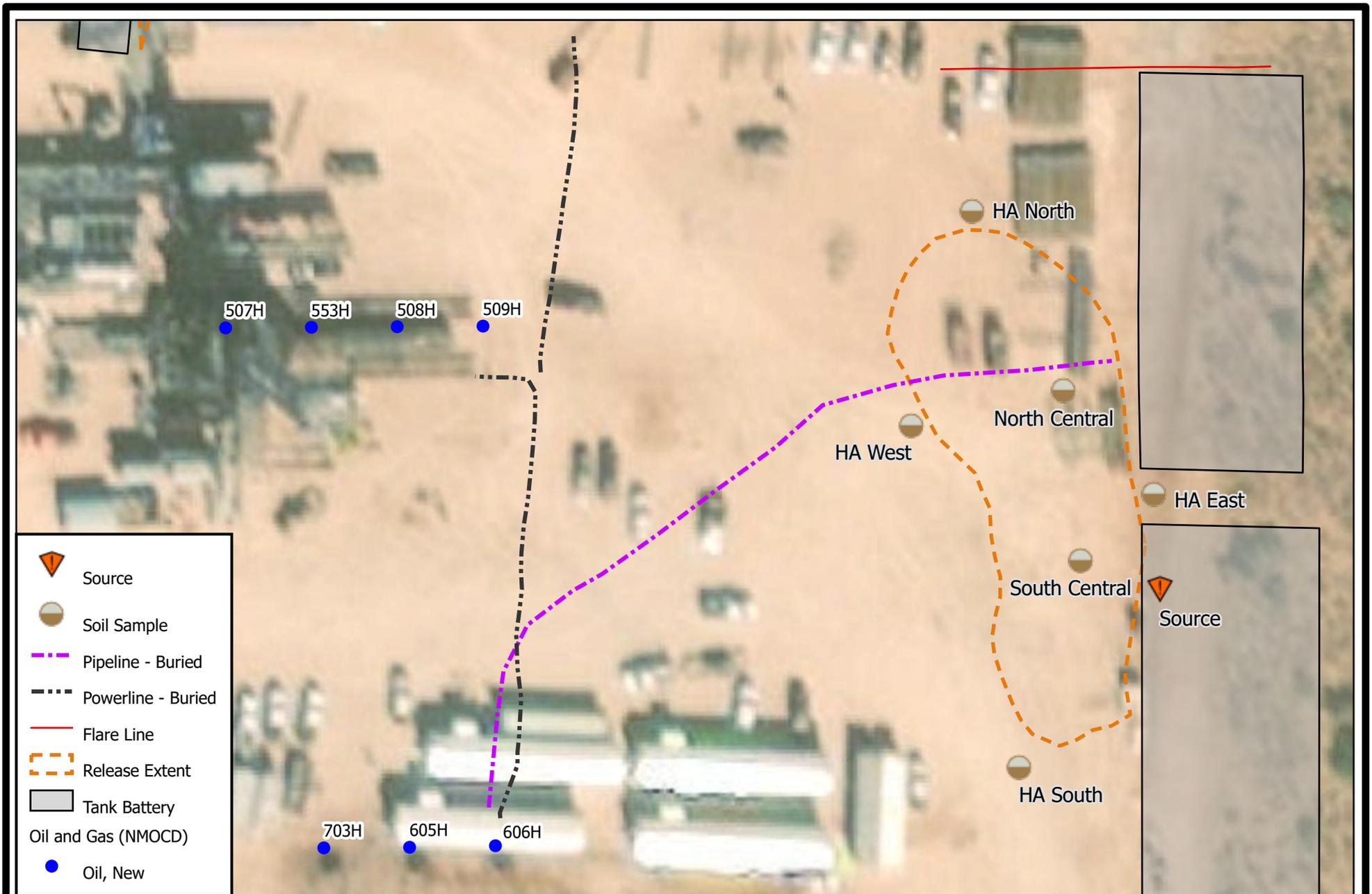
Tables

10/13/2020

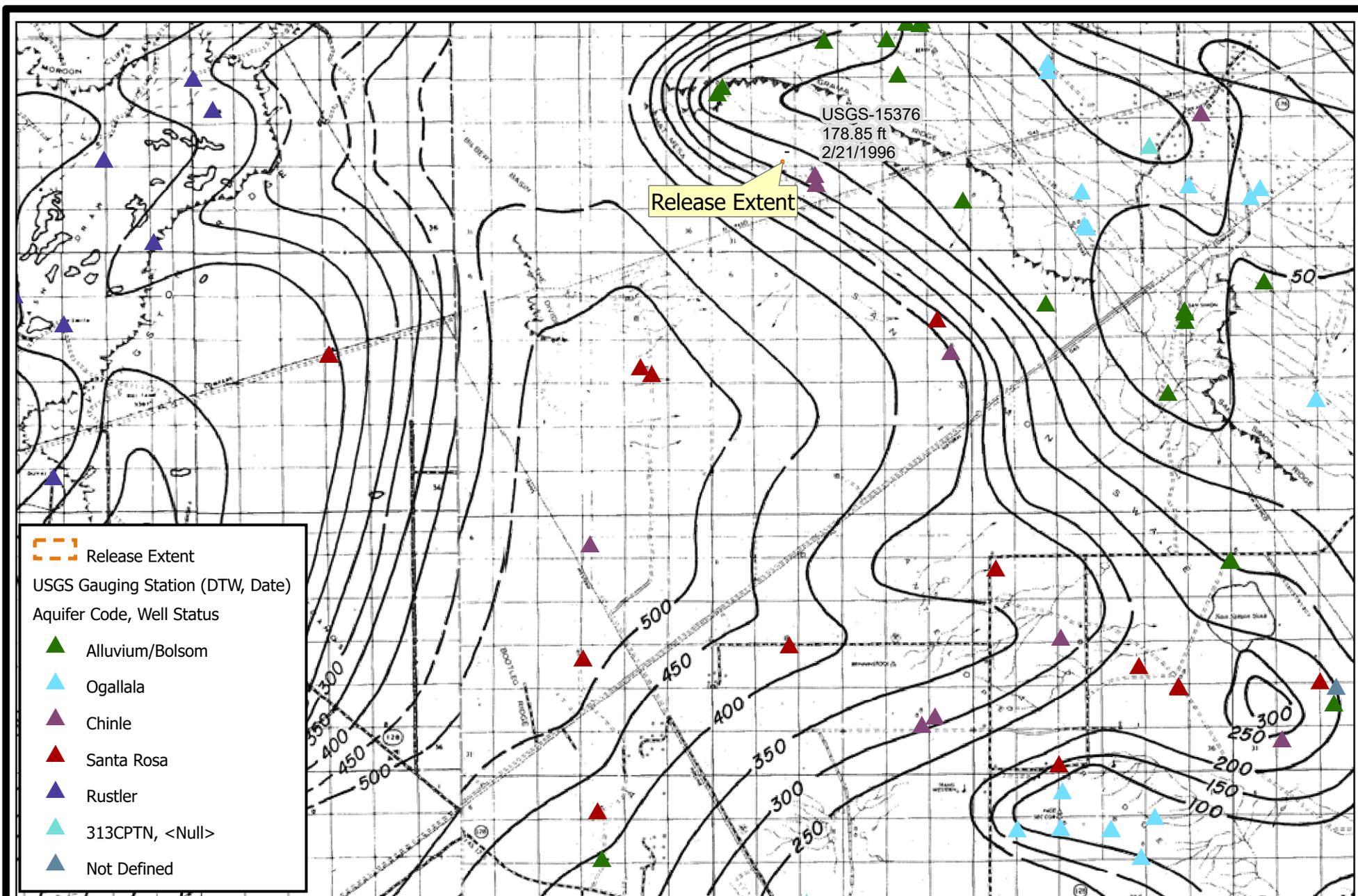
Table 1
Summary of Analytical

Incident ID: NRM2016453805
AEP #: 06072020-2300-prodops

Sample ID	Date	Top Depth (Feet)	Bottom Depth (Feet)	Chloride (PPM)	GRO+DRO (PPM)	TPH Ext. (PPM)	Benzene (PPM)	BTEX (PPM)
NMOCD Closure Criteria								
0 - 4 feet				600	--	2,500	10	50
> 4 ft				20,000	1,000	2,500	10	50
HA North	9/24/2020	0	1	160	<20	<30	<0.05	<0.30
HA North	9/24/2020	1	2	32	<20	<30	<0.05	<0.30
HA South	10/2/2020	0	1	240	<20	<30	<0.05	<0.30
HA South	10/2/2020	1	2	<16	<20	<30	<0.05	<0.30
HA East	9/24/2020	0	1	128	<20	<30	<0.05	<0.30
HA East	9/24/2020	1	2	128	<20	<30	<0.05	<0.30
HA West	10/2/2020	0.0	1.0	96	<20	<30	<0.05	<0.30
HA West	10/2/2020	1.0	2.0	32	<20	<30	<0.05	<0.30
North Central	10/2/2020	0.0	1.0	560	<20	<30	<0.05	<0.30
North Central	10/2/2020	1.0	2.0	96	<20	<30	<0.05	<0.30
South Central	10/2/2020	0.0	1.0	304	<20	<30	<0.05	<0.30
South Central	10/2/2020	1.0	2.0	112	<20	<30	<0.05	<0.30



Site Map	Plate 01
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops	09/21/2020

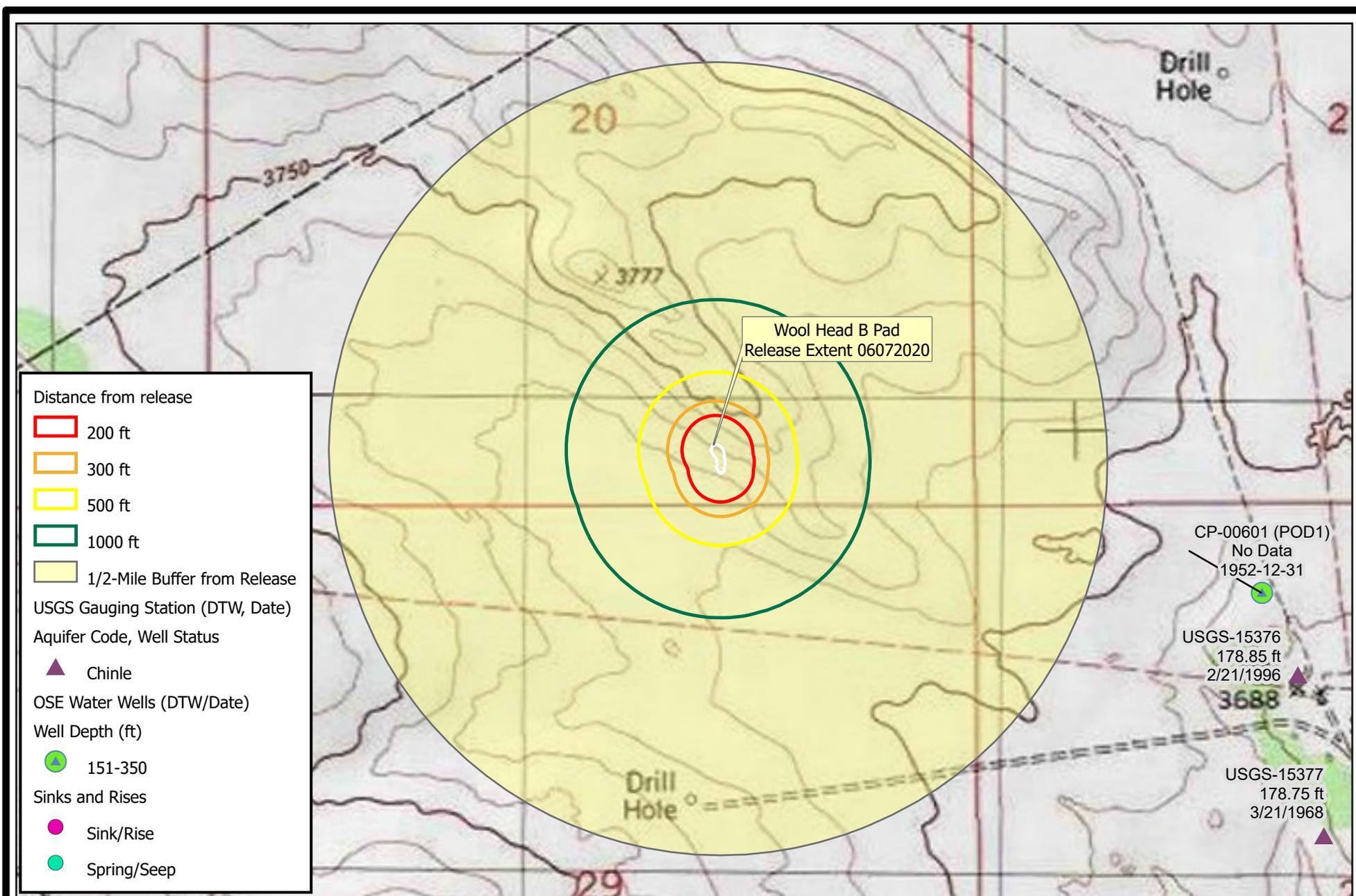


-  Release Extent
- USGS Gauging Station (DTW, Date)
- Aquifer Code, Well Status
-  Alluvium/Bolsom
-  Ogallala
-  Chinle
-  Santa Rosa
-  Rustler
-  313CPTN, <Null>
-  Not Defined



Depth to Water
 Base Map: OFR-95
 Wool Head B Pad 06072020
 AEP #: 06072020-2300-prodops

Plate 02
 09/21/2020



Distance from release

- 200 ft
- 300 ft
- 500 ft
- 1000 ft
- 1/2-Mile Buffer from Release

USGS Gauging Station (DTW, Date)

Aquifer Code, Well Status

- ▲ Chinle

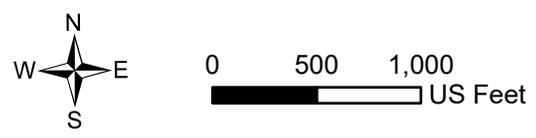
OSE Water Wells (DTW/Date)

Well Depth (ft)

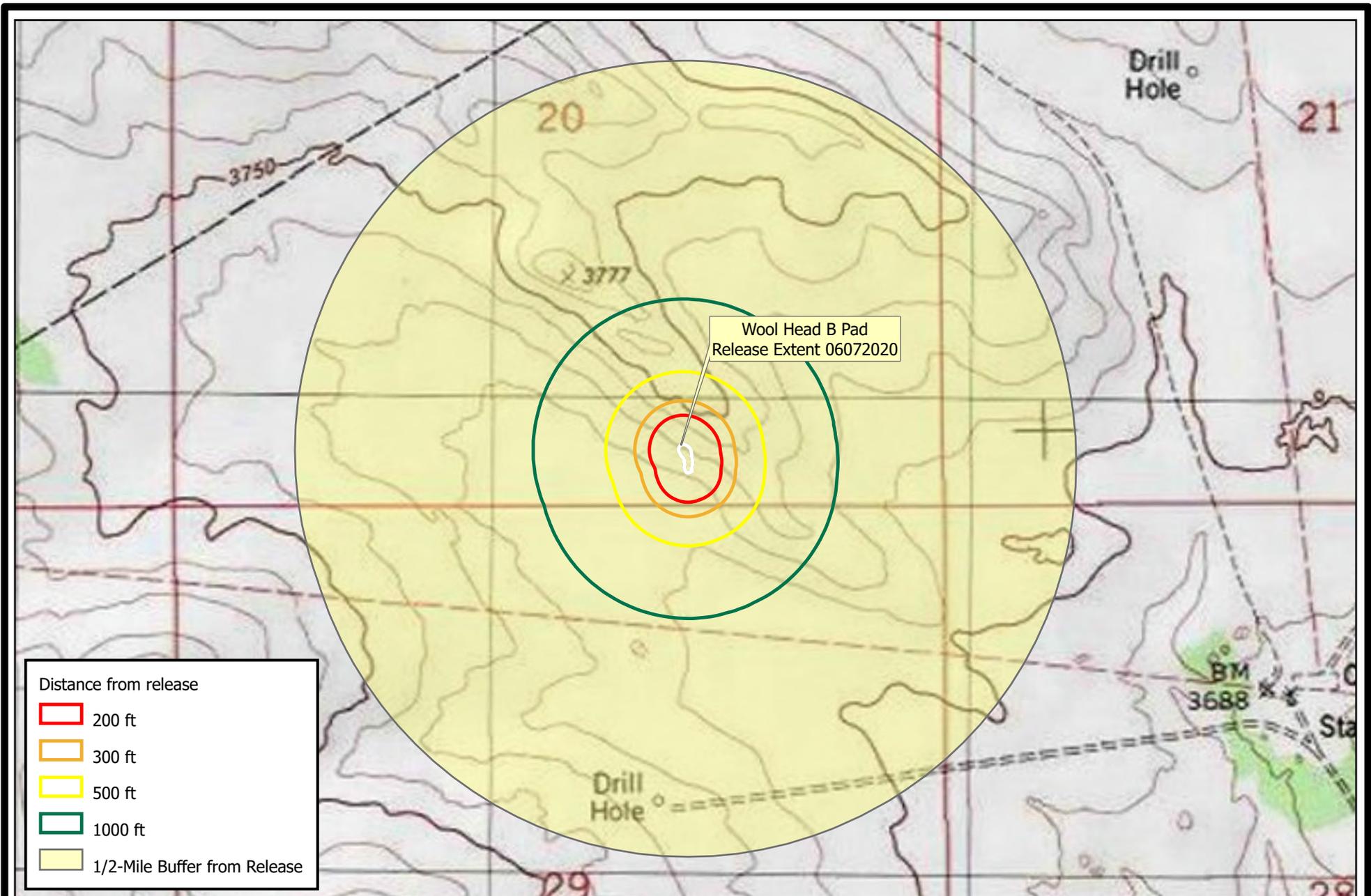
- 151-350

Sinks and Rises

- Sink/Rise
- Spring/Seep

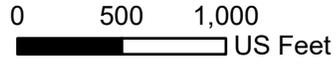


Wellhead Protection	Plate 03
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops	09/21/2020

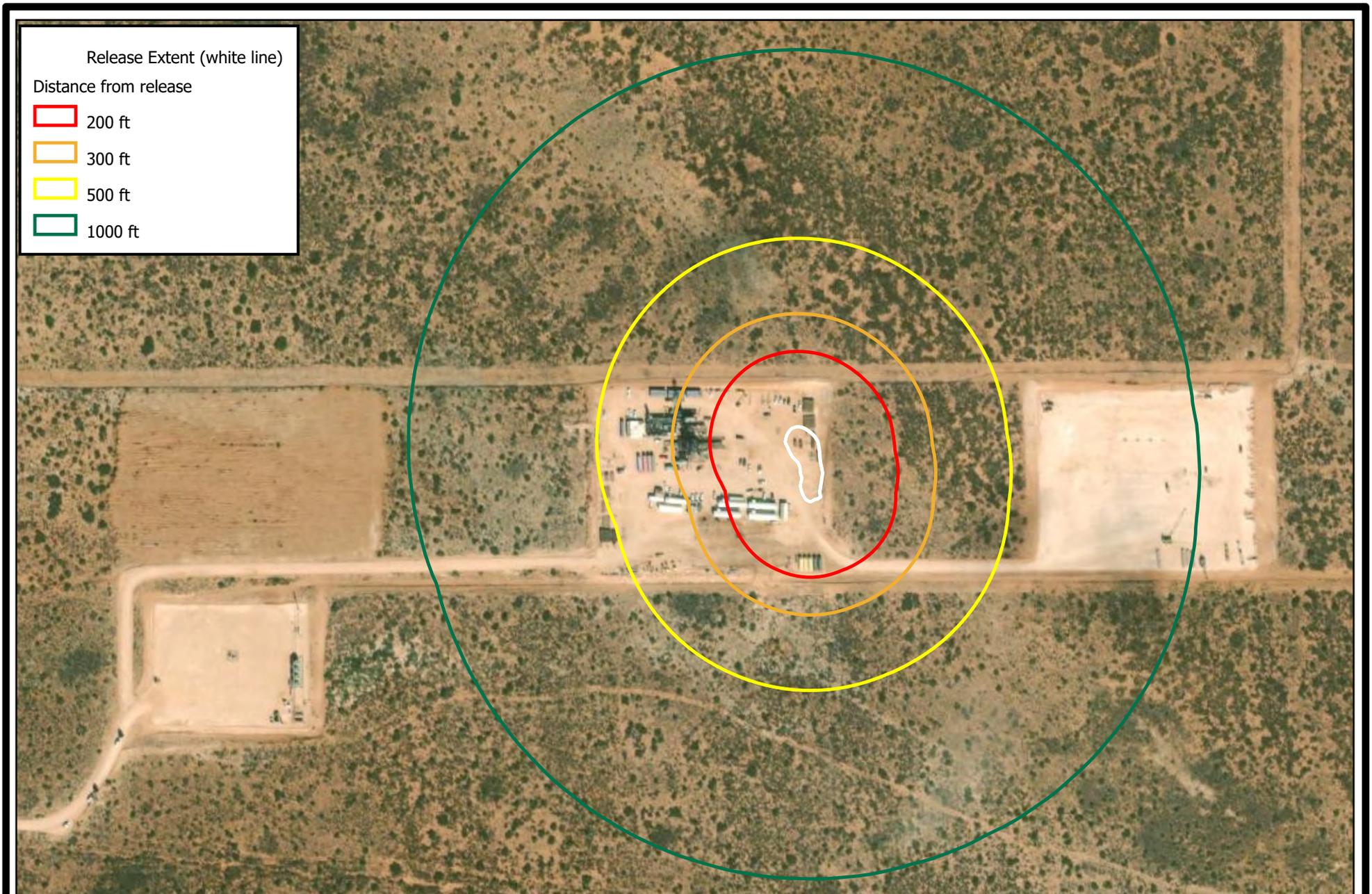


Distance from release

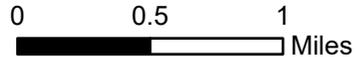
- 200 ft
- 300 ft
- 500 ft
- 1000 ft
- 1/2-Mile Buffer from Release



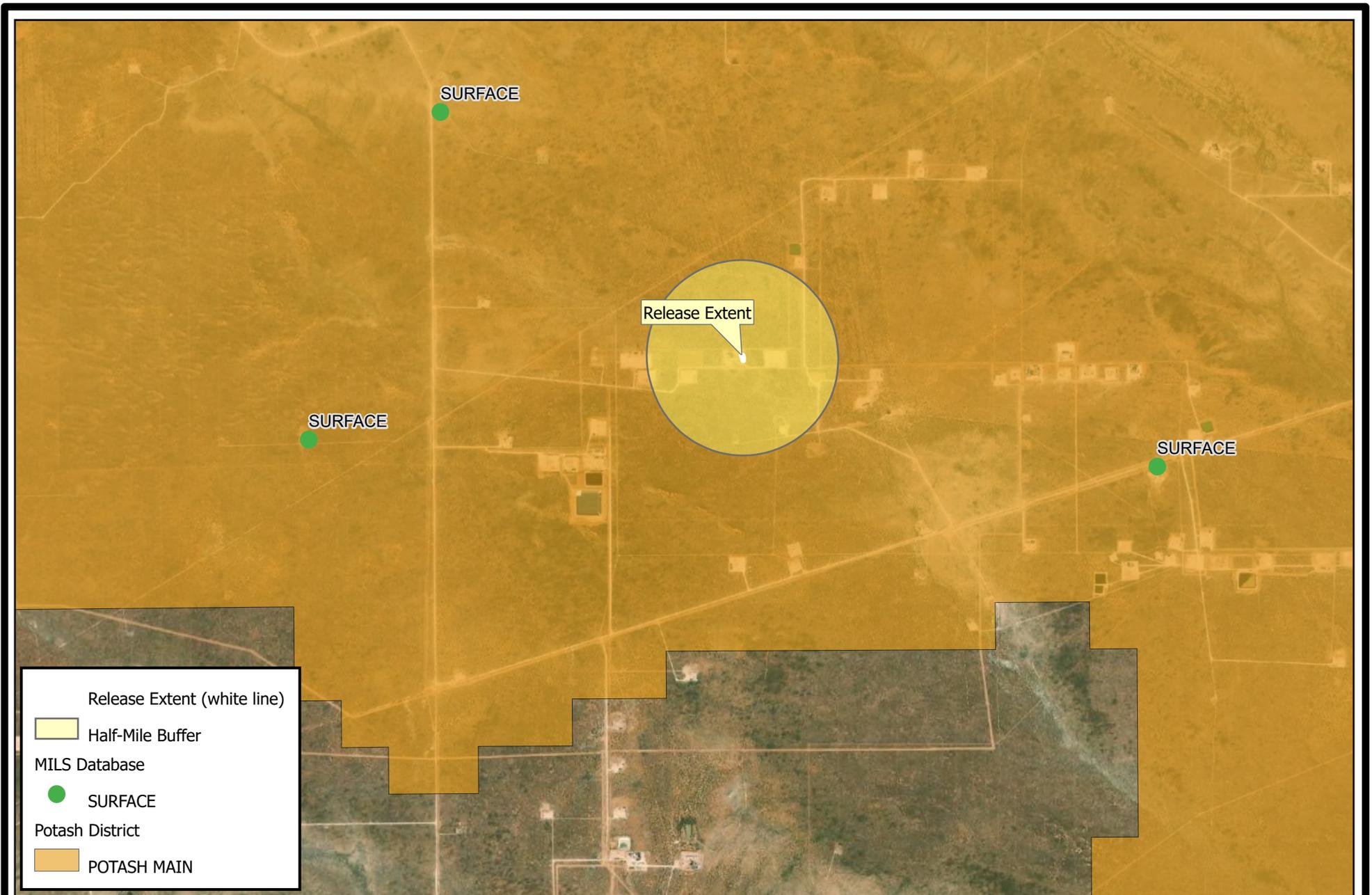
Nearby Water Courses	Plate 04
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops	09/21/2020



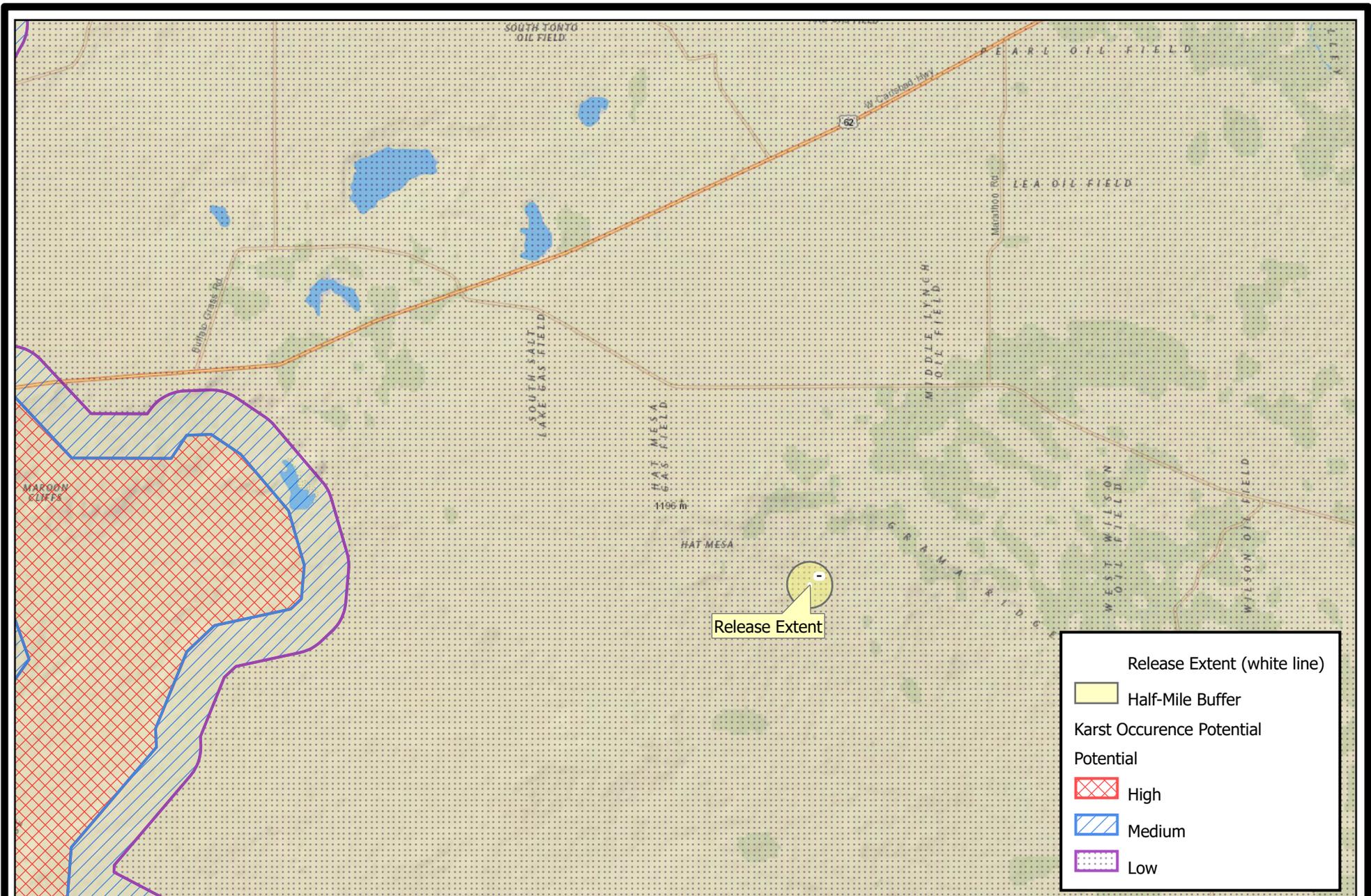
Nearby Structures	Plate 05
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops	10/12/2020



Nearby Wetlands	Plate 06
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops	10/12/2020



Mines and Minerals	Plate 07
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops	10/12/2020

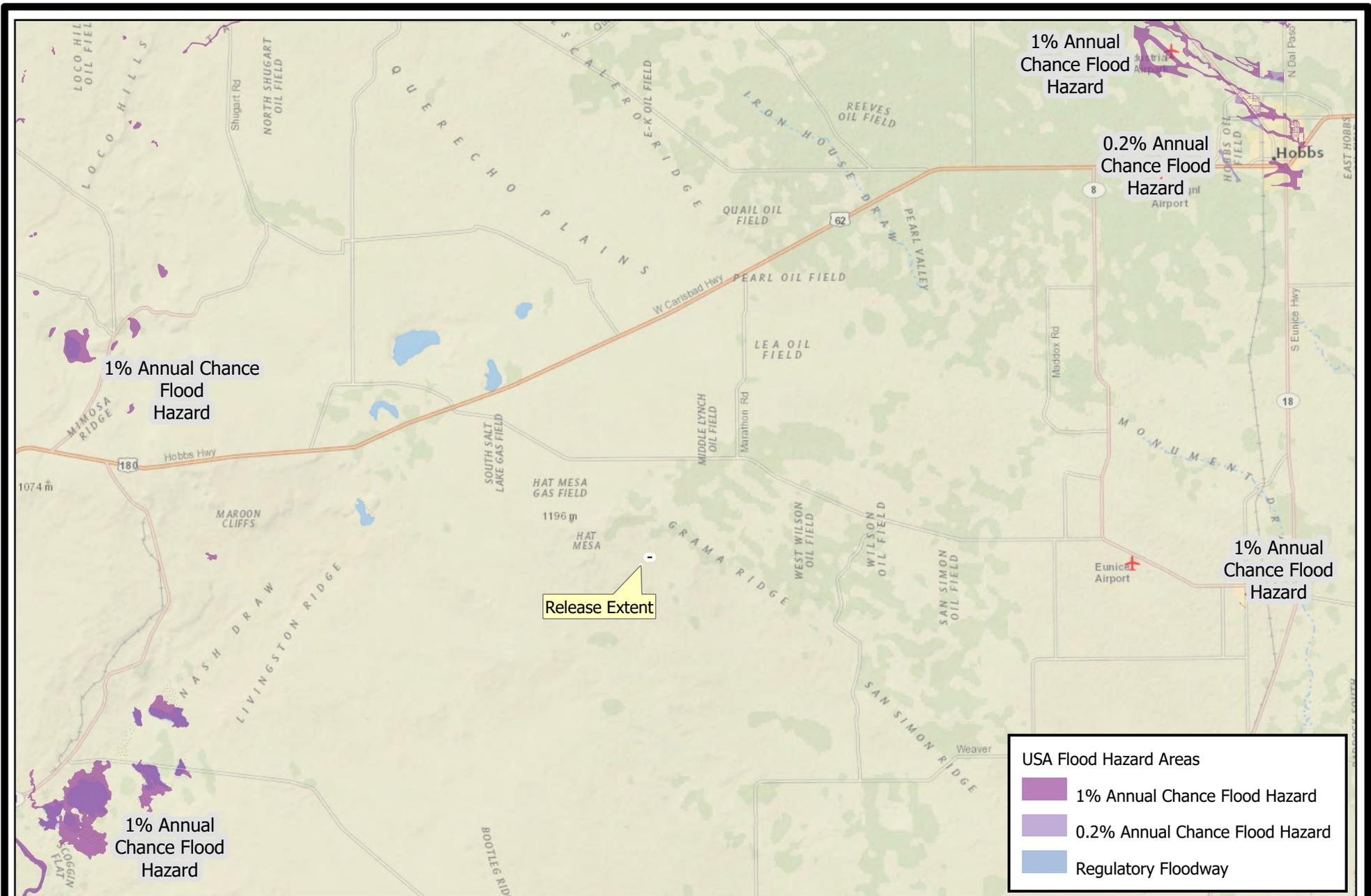


	Release Extent (white line)
	Half-Mile Buffer
Karst Occurrence Potential	
Potential	
	High
	Medium
	Low



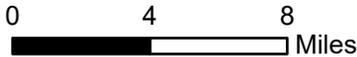
Karst
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops

Plate 08
10/13/2020



USA Flood Hazard Areas

- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway



Flood Hazard
Wool Head B Pad 06072020 AEP #: 06072020-2300-prodops

Plate 09
10/12/2020

Appendix A

Well Logs





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)					(NAD83 UTM in meters)		
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 02096	2	3	14	22S	32E		627204	3584464* 

x

Driller License:	Driller Company:		
Driller Name: JOHN H. TRIGG CO.			
Drill Start Date:	Drill Finish Date: 12/31/1963	Plug Date:	
Log File Date:	PCW Rcv Date:	Source:	
Pump Type:	Pipe Discharge Size:	Estimated Yield: 25 GPM	
Casing Size: 7.00	Depth Well: 435 feet	Depth Water: 360 feet	

x

*UTM location was derived from PLSS - see Help

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

4/17/20 3:04 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)
Well Tag	POD Number	Q64 Q16 Q4 Sec Tws Rng	X	Y		
	C 02821	2 2 3 14 22S 32E	627303	3584563*		

x		Driller License: 1348	Driller Company: TAYLOR WATER WELL SERVICE
Driller Name:			
Drill Start Date: 06/12/2001	Drill Finish Date: 06/23/2001	Plug Date:	
Log File Date: 10/04/2001	PCW Rcv Date:	Source: Shallow	
Pump Type:	Pipe Discharge Size:	Estimated Yield: 2 GPM	
Casing Size: 5.00	Depth Well: 540 feet	Depth Water: 340 feet	

x		Water Bearing Stratifications:	Top	Bottom	Description
			410	540	Sandstone/Gravel/Conglomerate

x		Casing Perforations:	Top	Bottom
			410	430
			440	540

x
*UTM location was derived from PLSS - see Help

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

4/17/20 3:09 PM

POINT OF DIVERSION SUMMARY

Revised December 1975

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

Declaration of Owner of Underground Water Right

CAPITAN BASIN
BASIN NAME

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

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501
80227
19
79 APR 20 PM 3 01

STATEMENT

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

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

7. Water was first applied to beneficial use _____ month _____ day _____ 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

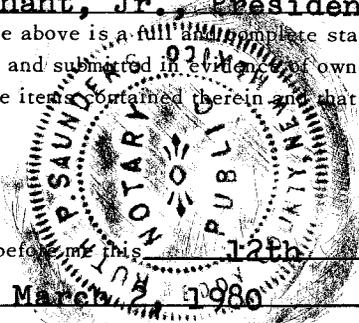
I, J. D. Merchant, Jr., President being first duly sworn upon my oath, depose and say that the above is a full and complete statement prepared in accordance with the instructions on the reverse side of this form and submitted in _____ ownership of a valid underground water right, that I have carefully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

THE MERCHANT LIVESTOCK CO. declarant.

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

Subscribed and sworn to before me this 12th

My commission expires March 2, 1980



P. Saunders Notary Public

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

563298

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

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

INSTRUCTIONS

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

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

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

Secs. 1-3. Complete all blanks.

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

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

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

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

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

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



SF

EL

APR 20 PM 3 00

April 17, 1979

STATE ENGINEER OFFICE
CARLSBAD, N.M. 81501

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

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

Gentlemen:

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

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

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

Yours very truly,

J. C. Groseclose
Basin Supervisor

JCG/fh
Encls.
cc: Santa Fe

563298



New Mexico Office of the State Engineer

Point of Diversion Summary

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

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

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

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



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
205 WELLS, NEW MEXICO

2014 SEP 10 PM 2:15

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP-1355 (East Standard South) *** Revised 09/09/14 ***				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS P. O. Box 692				CITY Tatum	STATE NM	ZIP 88267	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 26	SECONDS 54.8	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 103	33	58.3	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE1/4NW1/4SW1/4 Section 27, Township 21 South, Range 33 East on Merchants Livestock Land								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421	NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.			
	DRILLING STARTED 07/22/14	DRILLING ENDED 07/29/14	DEPTH OF COMPLETED WELL (FT) 1,192'	BORE HOLE DEPTH (FT) 1,192'	DEPTH WATER FIRST ENCOUNTERED (FT) 925'			
	COMPLETED WELL IS: <input checked="" type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 582'			
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0'	40'	20"	16"	None	15 1/2"	.250	
	0'	757'	14 3/4"	9 5/8"	Thread & Collar	8.921"	36 lbs.	none
	690'	1,192'	8 3/4"	7" (502.14' Total) 317.96 perforated on bottom of liner	Thread & Collar	6.366"	23 lbs.	1/8"
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0'	40'	20"	Cemented	2 yds.	Top Pour		
0	757'	14 3/4"	Float and shoe cemented to surface	962	Circulated			

FOR OSE INTERNAL USE

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

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

DEPTH (feet bgl)	THICKNESS (feet)		COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
	FROM	TO			
0	4'	4'	Sand	<input type="radio"/> Y <input checked="" type="radio"/> N	
4'	28'	24'	Caliche	<input type="radio"/> Y <input checked="" type="radio"/> N	
28'	120'	92'	Sand & Clay	<input type="radio"/> Y <input checked="" type="radio"/> N	
120'	260'	140'	Red Clay	<input type="radio"/> Y <input checked="" type="radio"/> N	
260'	757'	497'	Red & Brown Shale, and Clay (some blue)	<input type="radio"/> Y <input checked="" type="radio"/> N	
757'	815'	58'	Red & Brown Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
815'	840'	25'	Blue Clay & Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
840'	925'	85'	Red and Brown Shale (some sandrock)	<input type="radio"/> Y <input checked="" type="radio"/> N	
925'	975'	50'	Watersand and Gravel	<input checked="" type="radio"/> Y <input type="radio"/> N	
975'	1,185'	210'	Watersand (brown sandrock)	<input checked="" type="radio"/> Y <input type="radio"/> N	
1,185'	1,192'	7'	Red Shale	<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
				<input type="radio"/> Y <input checked="" type="radio"/> N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input checked="" type="radio"/> PUMP				TOTAL ESTIMATED WELL YIELD (gpm):	
<input type="radio"/> AIR LIFT <input type="radio"/> BAILER <input type="radio"/> OTHER - SPECIFY:					

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

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



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP - 1355 East Standard (South)				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants Livestock/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) (575)398-2424			
	WELL OWNER MAILING ADDRESS P.O. Box 692				CITY Tatum		STATE NM	ZIP 88267
	WELL LOCATION (FROM GPS)	DEGREES		MINUTES	SECONDS	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84		
		LATITUDE	32	26	54.8			
	LONGITUDE	103	33	58.3	W			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE/NW/SW Sec. 27, T21S, R33E on Merchants Livestock Land								

2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 7/29/14	DRILLING ENDED 8/2/14	DEPTH OF COMPLETED WELL (FT) 1192'	BORE HOLE DEPTH (FT) 1192'	DEPTH WATER FIRST ENCOUNTERED (FT) 925'			
	COMPLETED WELL IS: <input checked="" type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 582'		
	DRILLING FLUID: <input type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
0'	40'	20"	16"	None	15 1/2"	.250		
0'	757'	14 3/4"	9 5/8"	Thread and Collar	.352	36 lbs.	none	
757'	1192'	8 3/4"	7"	Thread and Collar	6.5"	23 lbs.	1/8"	

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

STATE ENGINEER OFFICE
 2014 AUG - 8 AM 9:53
 NEW MEXICO

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

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

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

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER / PRINT SIGNEE NAME	8/7/14 DATE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	CP-1355	POD NUMBER	1
LOCATION	Exp1	TRN NUMBER	549450
			PAGE 2 OF 2



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

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

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

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



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

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



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) CP-1701-POD1		WELL TAG ID NO.		OSE FILE NO(S)		
	WELL OWNER NAME(S) The Jimmy Mills GST and 2005 GST Trusts				PHONE (OPTIONAL)		
	WELL OWNER MAILING ADDRESS c/o Stacey Mills PO Box 1359				CITY Loving	STATE NM	ZIP 88256-1358
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 26	SECONDS 0.5	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND	
	LONGITUDE 103	39	10.1	W	* 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. WD1706	NAME OF LICENSED DRILLER Bryce Wallace			NAME OF WELL DRILLING COMPANY Elite Drillers Corporation			
	DRILLING STARTED 10/15/18	DRILLING ENDED 11/29/18	DEPTH OF COMPLETED WELL (FT) 840	BORE HOLE DEPTH (FT) 880	DEPTH WATER FIRST ENCOUNTERED (FT) 560			
	COMPLETED WELL IS: <input checked="" type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 457			
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	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)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
	FROM	TO				
	0	20	12.75	Portland I/II Cement	17	Pour
	0	453	12.25	Baroid Benseal Grout	247	Trinnie
	453	860	12.25	8/16 Silica Sand	285	Pour

FOR OSE INTERNAL USE

FILE NO. CP-1701	POD NO. 1	TRN NO. 019305
LOCATION Expi	215.32E.35.31	WELL TAG ID NO. —

WR-20 WELL RECORD & LOG (Version 06/30/17) PAGE 1 OF 2

Appendix B

Certificate of Analysis





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

September 30, 2020

ANDREW PARKER

ADVANCE ENERGY PARTNERS

11490 WESTHEIMER ROAD, STE. 950

HOUSTON, TX 77077

RE: WOOLHEAD B PAD

Enclosed are the results of analyses for samples received by the laboratory on 09/25/20 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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 accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	09/25/2020	Sampling Date:	09/24/2020
Reported:	09/30/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: HA NORTH 0-1' (H002553-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/28/2020	ND	2.08	104	2.00	5.02	
Toluene*	<0.050	0.050	09/28/2020	ND	2.03	102	2.00	5.28	
Ethylbenzene*	<0.050	0.050	09/28/2020	ND	2.09	104	2.00	5.24	
Total Xylenes*	<0.150	0.150	09/28/2020	ND	6.11	102	6.00	5.07	
Total BTEX	<0.300	0.300	09/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/28/2020	ND	416	104	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	09/29/2020	ND	186	93.1	200	5.08	
DRO >C10-C28*	<10.0	10.0	09/29/2020	ND	190	95.1	200	7.43	
EXT DRO >C28-C36	<10.0	10.0	09/29/2020	ND					

Surrogate: 1-Chlorooctane 113 % 44.3-144

Surrogate: 1-Chlorooctadecane 123 % 42.2-156

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	09/25/2020	Sampling Date:	09/24/2020
Reported:	09/30/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: HA NORTH 1-2' (H002553-02)

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	09/28/2020	ND	2.08	104	2.00	5.02	
Toluene*	<0.050	0.050	09/28/2020	ND	2.03	102	2.00	5.28	
Ethylbenzene*	<0.050	0.050	09/28/2020	ND	2.09	104	2.00	5.24	
Total Xylenes*	<0.150	0.150	09/28/2020	ND	6.11	102	6.00	5.07	
Total BTEX	<0.300	0.300	09/28/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/28/2020	ND	416	104	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	09/29/2020	ND	186	93.1	200	5.08	
DRO >C10-C28*	<10.0	10.0	09/29/2020	ND	190	95.1	200	7.43	
EXT DRO >C28-C36	<10.0	10.0	09/29/2020	ND					

Surrogate: 1-Chlorooctane 114 % 44.3-144

Surrogate: 1-Chlorooctadecane 124 % 42.2-156

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	09/25/2020	Sampling Date:	09/24/2020
Reported:	09/30/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: HA EAST 0-1' (H002553-03)

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	09/28/2020	ND	2.08	104	2.00	5.02	
Toluene*	<0.050	0.050	09/28/2020	ND	2.03	102	2.00	5.28	
Ethylbenzene*	<0.050	0.050	09/28/2020	ND	2.09	104	2.00	5.24	
Total Xylenes*	<0.150	0.150	09/28/2020	ND	6.11	102	6.00	5.07	
Total BTEX	<0.300	0.300	09/28/2020	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/28/2020	ND	416	104	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	09/29/2020	ND	186	93.1	200	5.08	
DRO >C10-C28*	<10.0	10.0	09/29/2020	ND	190	95.1	200	7.43	
EXT DRO >C28-C36	<10.0	10.0	09/29/2020	ND					

Surrogate: 1-Chlorooctane 114 % 44.3-144

Surrogate: 1-Chlorooctadecane 123 % 42.2-156

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	09/25/2020	Sampling Date:	09/24/2020
Reported:	09/30/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: HA EAST 1-2' (H002553-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/28/2020	ND	2.08	104	2.00	5.02		
Toluene*	<0.050	0.050	09/28/2020	ND	2.03	102	2.00	5.28		
Ethylbenzene*	<0.050	0.050	09/28/2020	ND	2.09	104	2.00	5.24		
Total Xylenes*	<0.150	0.150	09/28/2020	ND	6.11	102	6.00	5.07		
Total BTEX	<0.300	0.300	09/28/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/28/2020	ND	416	104	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	09/29/2020	ND	186	93.1	200	5.08		
DRO >C10-C28*	<10.0	10.0	09/29/2020	ND	190	95.1	200	7.43		
EXT DRO >C28-C36	<10.0	10.0	09/29/2020	ND						

Surrogate: 1-Chlorooctane 116 % 44.3-144

Surrogate: 1-Chlorooctadecane 127 % 42.2-156

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Advance Energy Partners
 Project Manager: Andrew Parker
 Address: On-File
 City: State: Zip:
 Phone #: Fax #:
 Project #: Project Owner:
 Project Name: 06072000-2300-prodops
 Project Location: Washhead Blvd
 Sampler Name: Jacob Sacnz
 P.O. #: 06072000-2300-prodops
 Company: AEP
 Attn: Send to
 Address: Aparker@advance
 City: energypartners.com
 State: Zip:
 Phone #: Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	CHLORIDE	TPH (GRO+DRO+MRO)	BENZENE, BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H00253	1 HA North	C	1							9/24/90	8:30am			
	2 HA North										8:55am			
	3 HA East										9am			
	4 HA East										9am			

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Relinquished By: SA Lab SA# N2
 Date: 7-25-20
 Time: 1645
 Received By: Jennifer Stebbins
 Date: 7-25-20
 Time: 1645

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: L.O.C. #113
 Sample Condition: Cool Intact Yes No
 CHECKED BY: (Initials) JS
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:

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



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

October 07, 2020

ANDREW PARKER

ADVANCE ENERGY PARTNERS

11490 WESTHEIMER ROAD, STE. 950

HOUSTON, TX 77077

RE: WOOLHEAD B PAD

Enclosed are the results of analyses for samples received by the laboratory on 10/02/20 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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 accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, flowing "C" at the beginning.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HA-SOUTH 0-1' (H002621-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2020	ND	2.32	116	2.00	1.02	
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06	
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999	
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00	
Total BTEX	<0.300	0.300	10/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	240	16.0	10/06/2020	ND	448	112	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	10/02/2020	ND	218	109	200	5.87	
DRO >C10-C28*	<10.0	10.0	10/02/2020	ND	223	112	200	10.1	
EXT DRO >C28-C36	<10.0	10.0	10/02/2020	ND					

Surrogate: 1-Chlorooctane 112 % 44.3-144

Surrogate: 1-Chlorooctadecane 122 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HA-SOUTH 1-2' (H002621-02)

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	10/05/2020	ND	2.32	116	2.00	1.02		
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06		
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999		
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00		
Total BTEX	<0.300	0.300	10/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	10/06/2020	ND	448	112	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	10/02/2020	ND	218	109	200	5.87		
DRO >C10-C28*	<10.0	10.0	10/02/2020	ND	223	112	200	10.1		
EXT DRO >C28-C36	<10.0	10.0	10/02/2020	ND						

Surrogate: 1-Chlorooctane 115 % 44.3-144

Surrogate: 1-Chlorooctadecane 125 % 42.2-156

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HA-WEST 0-1' (H002621-03)

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	10/05/2020	ND	2.32	116	2.00	1.02		
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06		
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999		
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00		
Total BTEX	<0.300	0.300	10/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500CI-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	10/06/2020	ND	448	112	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	10/02/2020	ND	218	109	200	5.87		
DRO >C10-C28*	<10.0	10.0	10/02/2020	ND	223	112	200	10.1		
EXT DRO >C28-C36	<10.0	10.0	10/02/2020	ND						

Surrogate: 1-Chlorooctane 105 % 44.3-144

Surrogate: 1-Chlorooctadecane 114 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HA-WEST 1-2' (H002621-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/05/2020	ND	2.32	116	2.00	1.02		
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06		
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999		
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00		
Total BTEX	<0.300	0.300	10/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	10/06/2020	ND	448	112	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	10/02/2020	ND	218	109	200	5.87		
DRO >C10-C28*	<10.0	10.0	10/02/2020	ND	223	112	200	10.1		
EXT DRO >C28-C36	<10.0	10.0	10/02/2020	ND						

Surrogate: 1-Chlorooctane 99.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 108 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: NORTH CENTRAL 0-1' (H002621-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2020	ND	2.32	116	2.00	1.02	
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06	
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999	
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00	
Total BTEX	<0.300	0.300	10/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	560	16.0	10/06/2020	ND	448	112	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	10/02/2020	ND	218	109	200	5.87	
DRO >C10-C28*	<10.0	10.0	10/02/2020	ND	223	112	200	10.1	
EXT DRO >C28-C36	<10.0	10.0	10/02/2020	ND					

Surrogate: 1-Chlorooctane 106 % 44.3-144

Surrogate: 1-Chlorooctadecane 120 % 42.2-156

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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: NORTH CENTRAL 1-2' (H002621-06)

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	10/05/2020	ND	2.32	116	2.00	1.02	
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06	
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999	
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00	
Total BTEX	<0.300	0.300	10/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500CI-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	10/06/2020	ND	448	112	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	10/02/2020	ND	218	109	200	5.87	
DRO >C10-C28*	<10.0	10.0	10/02/2020	ND	223	112	200	10.1	
EXT DRO >C28-C36	<10.0	10.0	10/02/2020	ND					

Surrogate: 1-Chlorooctane 107 % 44.3-144

Surrogate: 1-Chlorooctadecane 111 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SOUTH CENTRAL 0-1' (H002621-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/05/2020	ND	2.32	116	2.00	1.02		
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06		
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999		
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00		
Total BTEX	<0.300	0.300	10/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	304	16.0	10/06/2020	ND	448	112	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	10/05/2020	ND	229	114	200	5.73		
DRO >C10-C28*	<10.0	10.0	10/05/2020	ND	226	113	200	7.69		
EXT DRO >C28-C36	<10.0	10.0	10/05/2020	ND						

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.6 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ADVANCE ENERGY PARTNERS
 ANDREW PARKER
 11490 WESTHEIMER ROAD, STE. 950
 HOUSTON TX, 77077
 Fax To: (832) 672-4609

Received:	10/02/2020	Sampling Date:	10/02/2020
Reported:	10/07/2020	Sampling Type:	Soil
Project Name:	WOOLHEAD B PAD	Sampling Condition:	Cool & Intact
Project Number:	06072020-2300-PRODOPS	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SOUTH CENTRAL 1-2' (H002621-08)

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	10/05/2020	ND	2.32	116	2.00	1.02	
Toluene*	<0.050	0.050	10/05/2020	ND	2.27	113	2.00	1.06	
Ethylbenzene*	<0.050	0.050	10/05/2020	ND	2.34	117	2.00	0.999	
Total Xylenes*	<0.150	0.150	10/05/2020	ND	6.83	114	6.00	1.00	
Total BTEX	<0.300	0.300	10/05/2020	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/06/2020	ND	448	112	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	10/05/2020	ND	229	114	200	5.73	
DRO >C10-C28*	<10.0	10.0	10/05/2020	ND	226	113	200	7.69	
EXT DRO >C28-C36	<10.0	10.0	10/05/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Advance Energy Partners
 Project Manager: Andrew Parker
 Address: On-File
 City: State: Zip:
 Phone #: Fax #:
 Project #: Project Owner:
 Project Name: 06072020-2300-prodops
 Project Location: woolhead Bind
 Sampler Name: Jacob Saenz
 P.O. #: 06072020-2300-prodops
 Company: AEP
 Attn: Send to
 Address: Aparker@advance
 City: energypartners.com
 State: Zip:
 Phone #: Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					DATE	TIME	CHLORIDE	TPH (GRO+DRO+MRO)	BENZENE, BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE					
06072021	1 HA-South	C	1			X			10/29/20	8:00m	X	X	X
	2 HA-South									8:15m	X	X	X
	3 HA-West									8:30m	X	X	X
	4 HA-West									9:00m	X	X	X
	5 North Central									9:15m	X	X	X
	6 North Central									9:30m	X	X	X
	7 South Central									Norm	X	X	X
	8 South Central									11m	X	X	X

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Relinquished By: JACOB SAENZ
 Date: 12/16/20
 Time: 15:50
 Received By: JACOB SAENZ
 Date: 12/16/20
 Time: 15:50

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: #1175 5.602
 Sample Condition: Cool Intact
 Yes No

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

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 10799

CONDITIONS OF APPROVAL

Operator:	ADVANCE ENERGY PARTNERS HAT ME	11490 Westheimer Rd., Ste 950	Houston, TX77077	OGRID:	372417	Action Number:	10799	Action Type:	C-141
OCD Reviewer	ceads								
	Condition								
	None								