

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

QUESTIONS

Action 136243

QUESTIONS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 136243
	Action Type: [NOTIFY] Notification Of Release (NOR)

QUESTIONS

Location of Release Source	
<i>Please answer all of the questions in this group.</i>	
Site Name	20220813-1610-completions Redbud 8N
Date Release Discovered	08/13/2022
Surface Owner	State

Incident Details	
<i>Please answer all of the questions in this group.</i>	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Human Error Valve Produced Water Released: 12 BBL Recovered: 0 BBL Lost: 12 BBL]
Is the concentration of dissolved chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS (continued)

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 136243
	Action Type: [NOTIFY] Notification Of Release (NOR)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by 19.15.29.7(A) NMAC	No, minor release.
Reasons why this would be considered a submission for a notification of a major release	
If YES, was immediate notice given to the OCD, by whom	<i>Not answered.</i>
If YES, was immediate notice given to the OCD, to whom	<i>Not answered.</i>
If YES, was immediate notice given to the OCD, when	<i>Not answered.</i>
If YES, was immediate notice given to the OCD, by what means (phone, email, etc.)	<i>Not answered.</i>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

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 prepare and attach a narrative of actions to date in the follow-up C-141 submission. 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 prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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ACKNOWLEDGMENTS

Action 136243

ACKNOWLEDGMENTS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 136243
	Action Type: [NOTIFY] Notification Of Release (NOR)

ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	I acknowledge that I am authorized to submit notification of a releases on behalf of my operator.
<input checked="" type="checkbox"/>	I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to my operator) to track the notification(s) and corrective action(s) for a release, pursuant to NMAC 19.15.29.
<input checked="" type="checkbox"/>	I acknowledge that creating a new incident file will require my operator to file subsequent submission(s) of form "C-141, Application for administrative approval of a release notification and corrective action", pursuant to NMAC 19.15.29.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	I acknowledge the fact that 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.
<input checked="" type="checkbox"/>	I acknowledge the fact that, 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.

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CONDITIONS

Action 136243

CONDITIONS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 136243
	Action Type: [NOTIFY] Notification Of Release (NOR)

CONDITIONS

Created By	Condition	Condition Date
aparker1969	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.	8/22/2022

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State of New Mexico
Energy Minerals and Natural
Resources Department

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

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

Incident ID	nAPP2223437408
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Ameredev Operating, LLC	OGRID: 372224
Contact Name: Shane M ^c Neely	Contact Telephone: (737) 300-4700
Contact email: smcneely@ameredev.com	Incident # (assigned by OCD) nAPP2223437408
Contact mailing address: 2901 Via Fortuna, Suite 600 Austin, Texas 78746	

Location of Release Source

Latitude 32.0806346 _____ Longitude -103.282563 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name 20220813-1610-completions Redbud 8N	Site Type Production Site
Date Release Discovered 08/13/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
P	32	T25S	R36E	Lea

Surface Owner: State Federal Tribal Private (Name: _____)

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) 11.7 bbls	Volume Recovered (bbls) none
	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: Pipe flange left open.

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</u> Title: <u>Env. Scientist</u> Signature: <u></u> Date: <u>08/22/2022</u> email: <u>aparker@amerev.com</u> Telephone: <u>970-570-9535</u>
<u>OCD Only</u> Received by: <u>Jocelyn Harimon</u> Date: <u>10/19/2022</u>

Spill Dimensions to Volume of Release			
Input	volume of affected soil	[feet^3]	1884.40
Input	Porosity: typically is .35 to .40 for most soils	[-]	0.35
Input	Proportion of porosity filled with release fluid [0,1]	[-]	0.10
Output			
	volume of fluid	[feet^3]	66.0
		[gal]	493.4
		Barrels	11.7

From GIS

Sq. Ft 2692

Depth (ft) 0.7

Cu. Ft 1884.4

Incident ID	nAPP2223437408
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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>	>100 (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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-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

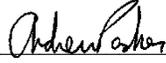
Page 4

Incident ID	nAPP2223437408
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: Env. Scientist

Signature: 

Date: October 19, 2022

email: aparker@amerede.com

Telephone: 970-570-9535

OCD Only

Received by: Jocelyn Harimon

Date: 10/19/2022

Incident ID	nAPP2223437408
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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)

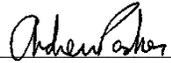
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.

- 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: Env. Scientist

Signature: 

Date: October 19, 2022

email: aparker@ameredev.com

Telephone: 970-570-9535

OCD Only

Received by: Jocelyn Harimon Date: 10/19/2022

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____

Date: _____

Incident ID	nAPP2223437408
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Facility ID	
Application ID	

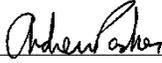
Closure

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: Env. Scientist
 Signature:  Date: October 19, 2022
 email: aparker@ameredev.com Telephone: 970-570-9535

OCD Only

Received by: Jocelyn Harimon Date: 10/19/2022

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:  Date: 11/17/2022
 Printed Name: Jennifer Nobui Title: Environmental Specialist A



Ameredev II, LLC

2901 Via Fortuna Suite 600 • Austin, Texas 78746 • Phone (737) 300-4700

October 19, 2022

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

RE: Closure Report
Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions

NMOCD:

Ameredev Operating submits this closure report for the above referenced incident. We ask for closure of the regulatory file.

Ameredev Operating submits this report containing characterization data and remediation/restoration activities for incident number nAPP2223437408. The release occurred on August 13, 2022 from a pipe flange. The calculated volume of released produced water was 11.7 barrels.

The release occurred on an active production site and flowed onto a pipeline and utility right-of-way (ROW) for oil and gas operations and pastureland. The release is located on State surface. The coordinates of the release point are 32.0806346, -103.282563 (Lat, Long; NAD83). The release did not impact surface or groundwater. Figure 1 shows the source of the release; Figures 2 and 3 show the extent of the release. Communications are in Appendix A.

Figure 1: Photo of source facing northeast from the southwestern extent.

*Date Taken: 2022-08-14 11:18:27
GPS: 32.0801889, -103.2824408*



Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions



*Figure 2: Photo of western extent of the release facing southeast.
Date Taken: 2022-08-14 11:19:14. GPS: 32.0807172, -103.2825719*



*Figure 3: Photo of the eastern extent of the release facing west.
Date Taken: 2022-08-14 11:20:31. GPS: 32.0806497, -103.2820744*

10/19/2022

Released to Imaging: 11/17/2022 9:36:17 AM

Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions

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 2-9).

1.1. Site Map

Horizontal extent of the release was determined by visual observations. The release extent mapping utilized GPS technology with sub-meter accuracy.

Plate 1 shows the release extent relative to the Redbud 8N production facilities, ROW and nearby utilities. The source of the release is located at 32.0806346, -103.282563 (Lat, Long; NAD83). The release extent covered an area of approximately 2692 sq. ft.

1.2. Depth to Ground Water

To determine depth-to-water within ½-mile of the release extent, Ameredev Operating began a depth-to-water borehole program mid-September 2022. The depth-to-water program:

- Boreholes will be located throughout Ameredev Operating leases in New Mexico.
- Located within ½-mile of identified areas, and
- Drilled to a depth of approximately 101-feet below ground surface, left open for 72-hours, then gauged for the presence of groundwater within the upper 100-feet of ground surface.

The water well and depth to water borehole nearest to the release area are mapped on Plate 2. The Well Logs are presented in Appendix B:

1. MISC-405 (CP-0057 POD 1) is located 0.26-miles to the southeast. The top of the water bearing strata is noted as 300-feet.
2. MISC-410 (CP-1922 POD 1) is located 0.35-miles to the southwest. Depth to water is >101 ft.

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). The water source is a well used for stock water purposes. A windmill noted on topographic map is 0.37 miles east of release was visually inspected and is no longer in use or operational.
- Not 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
- Not within 1000 feet of any other fresh water well or spring.

10/19/2022

Released to Imaging: 11/17/2022 9:36:17 AM



Ameredev, LLC

Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions

1.4. Distance to Nearest Significant Water Course

Plate 4 shows that the release extent is:

- Within ½ mile of a significant water course.
- Not within 300 feet of a continuously flowing watercourse or any other significant watercourse.
- Not within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

The closest significant water course is an intermittent stream 0.42 miles to the east of the release extent.

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 site and ROW used for oil and gas operations with flow onto pastureland.

The release occurred in the Pyote soils and Dune land complex with a slope of 0 – 3%¹. The USDA Natural Resources Conservation Service (NRCS) soil survey describes the upper 5-feet of the Pyote soils and Dune land lithology as

- *A - 0 to 30 inches: fine sand*
- *Bt - 30 to 60 inches: fine sandy loam*

The lithology as described by the NRCS is consistent with professional observations during excavation activities within the area of interest.

2. Remediation & Restoration

Release extent was divided into sample grids of not more than 200 sq ft. A soil sample was collected from each grid base and along excavation walls for laboratory analysis of chloride, TPH, Benzene, and BTEX.

- Plate 10 shows the confirmation sample grid layout.
- Plate 11 shows the confirmation sample locations.
- Table A shows the coordinates of the confirmation sample points.

¹ <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions

Ameredev excavated within the off-site (ROW) and on site (well pad and production equipment) release extent until the walls and bases met Closure Criteria per Table 1 of 19.15.29 NMAC as defined below. Further vertical delineation was performed in grids G-05, G-09 and G-12 to confirm constituents of concern remained within closure criteria at further depth.

- For the release areas off site along a right-of-way and pastureland and where depth to water is > 100 ft:
 - 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

- For the release area on an active production site that is in use for oil and gas operations and where depth to water is > 100 ft:
 - 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

An estimated 552 cu. yds. of material was excavated and hauled off-site to an approved disposal facility. Figures 4 & 5 show the excavation extent. Summary of analytical is presented in Table B. Laboratory Certificates of Analysis are presented in Appendix C.

10/19/2022

Released to Imaging: 11/17/2022 9:36:17 AM



Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions



*Figure 4: Eastern extent facing east from central release area.
Date Taken: 2022-10-05 16:03:23
GPS: 32.0807625, -103.2823583*



*Figure 5: Western extent facing west from central release area
Date Taken: 2022-10-05 16:02:11
GPS: 32.0807419, -103.2823572*

The portion of the release extent that is off-site and within the ROW was remediated, restored, and reclaimed per 19.15.29.13.D NMAC. The release extent on the active production site was remediated and restored per 19.15.29.C.12.C.(2) and 19.15.29.13.A-C NMAC. Figures 6 & 7.

10/19/2022

Released to Imaging: 11/17/2022 9:36:17 AM

Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions



Figure 6: Facing west
Date Taken: 2022-10-13 09:16:11
GPS: 32.0807028, -103.2819328



Figure 7: Facing east
Date Taken: 2022-10-13 12:11:15
GPS: 32.0807536, -103.2826183

Final remediation and reclamation of the production site shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC when the production site is no longer in-use for oil and gas operations.

Please contact me with any questions.

Sincerely,
Ameredev II, LLC

Andrew Parker
Env. Scientist

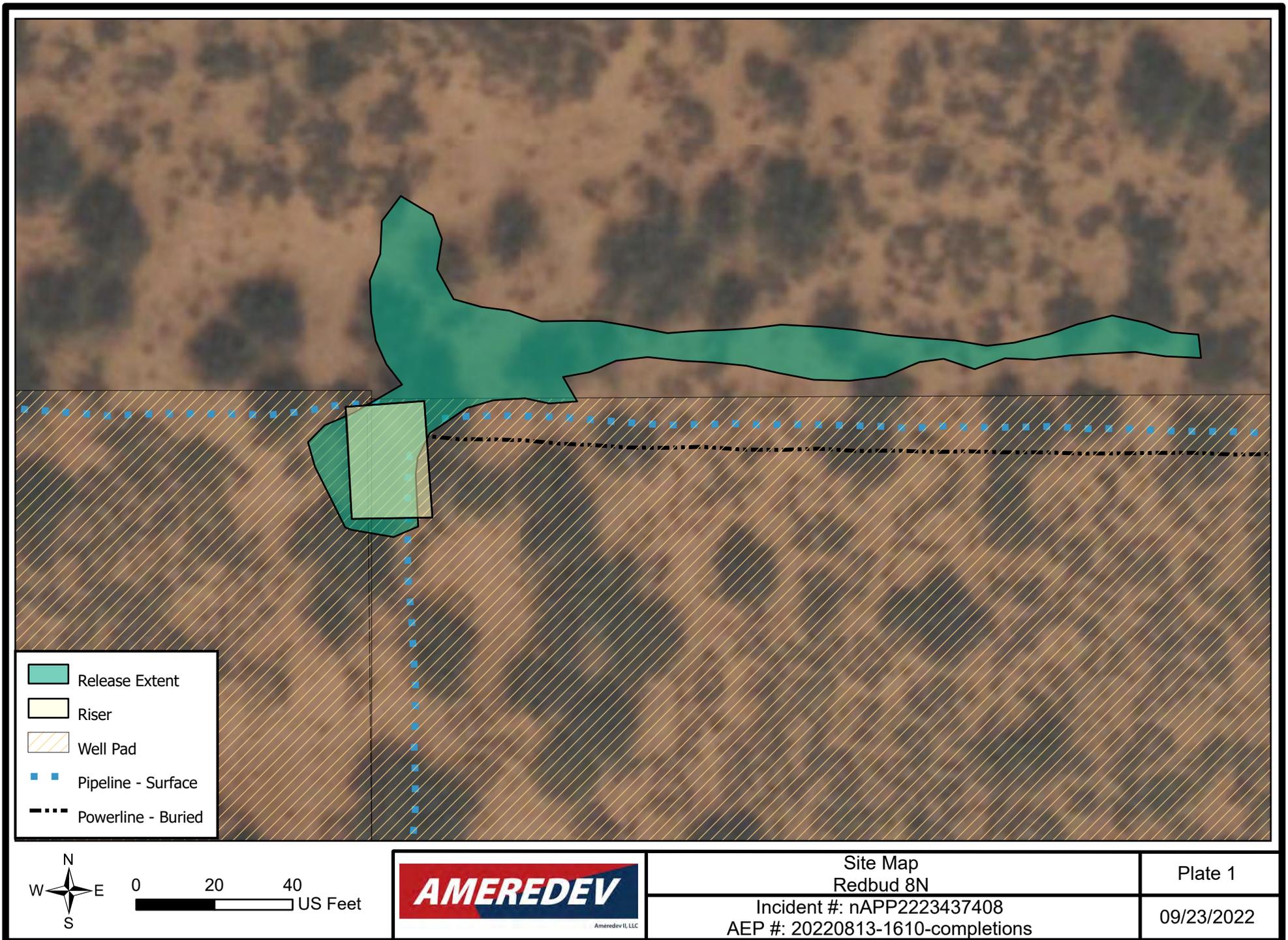
Cc: Dayeed Kahn, Ameredev II, LLC

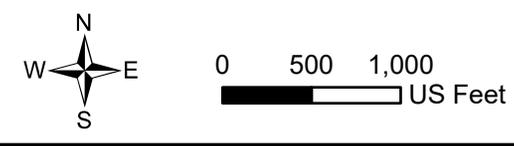
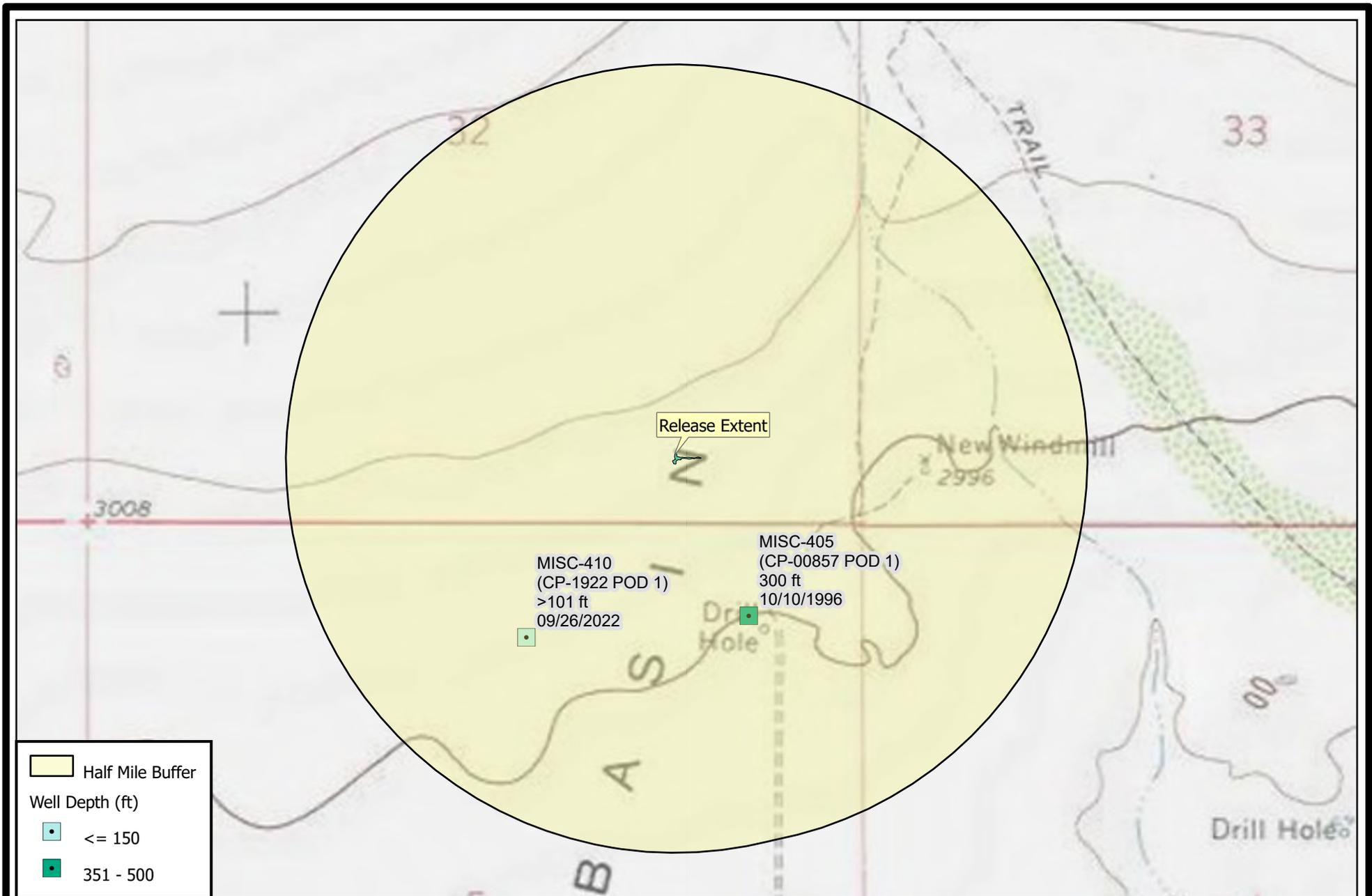
10/19/2022

Plates

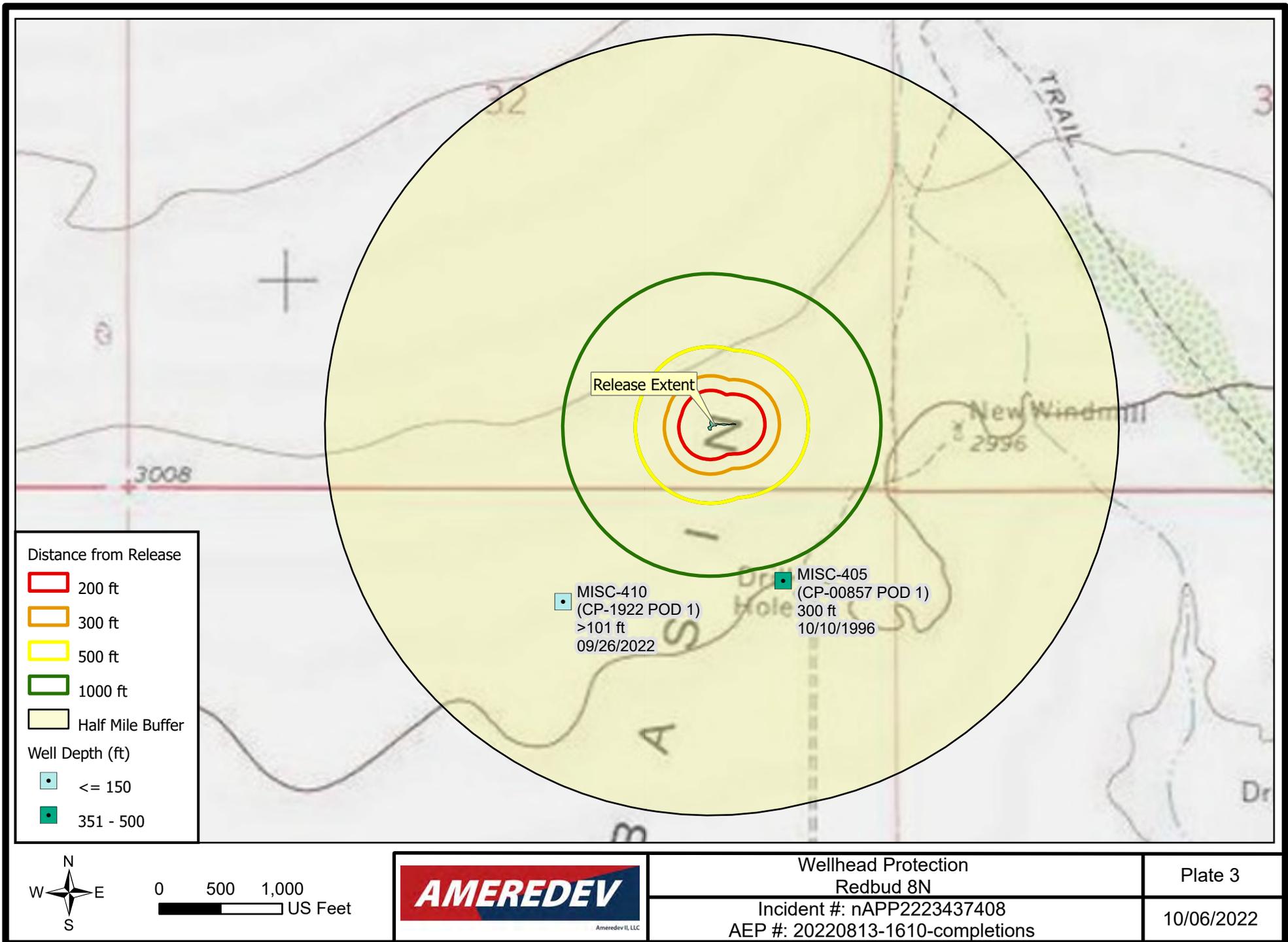


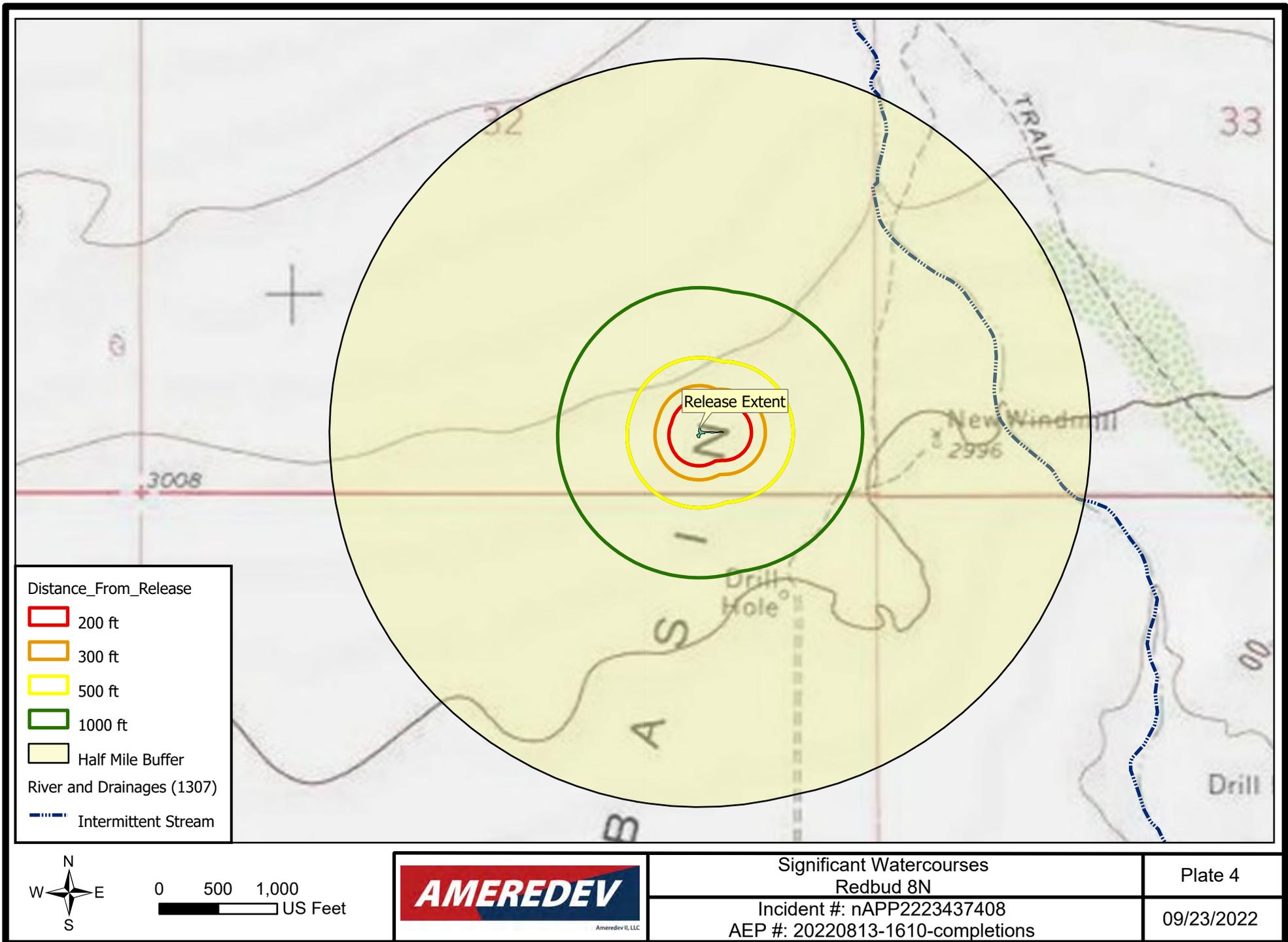
Ameredev II, LLC

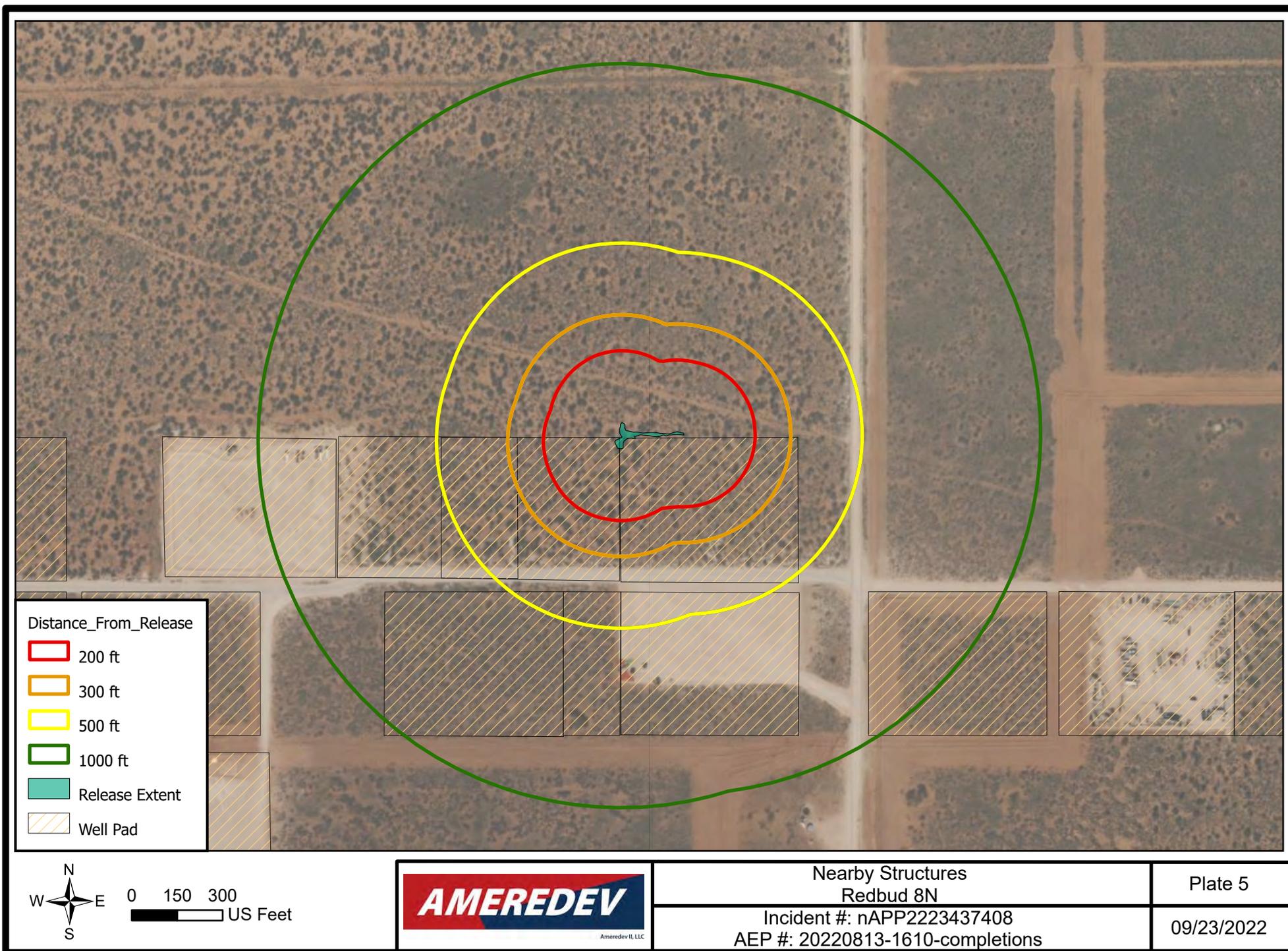


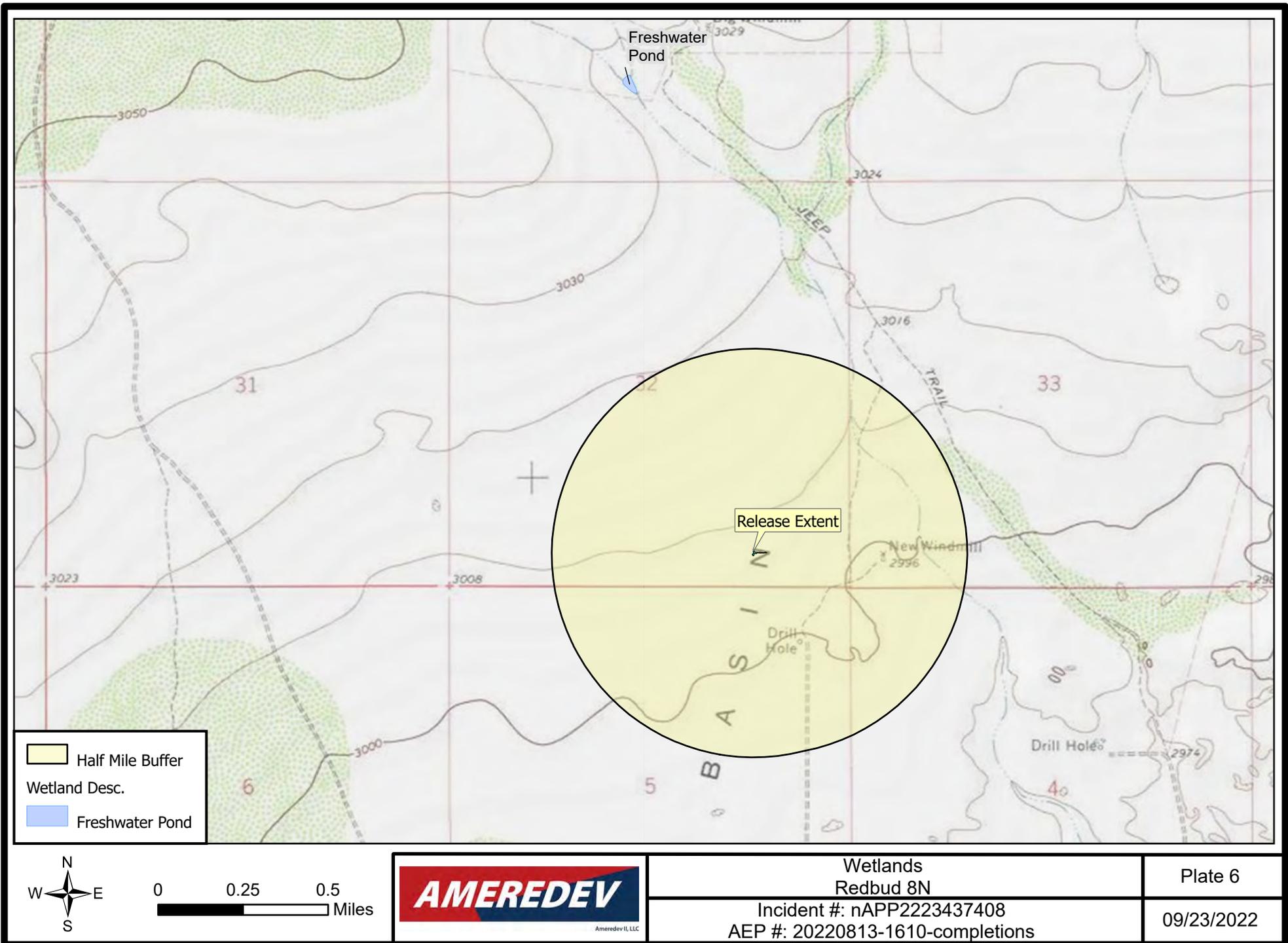


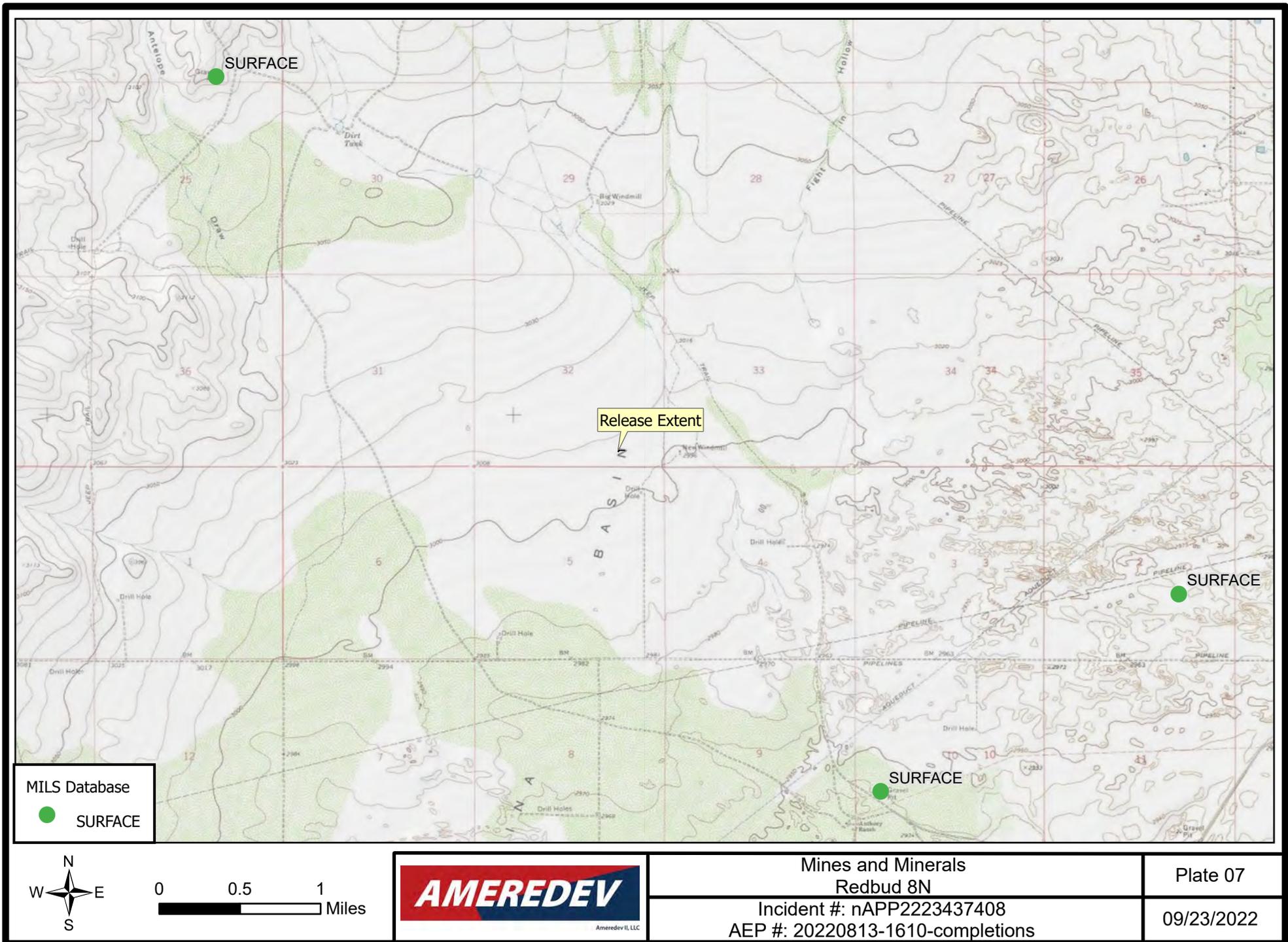
Depth to Water Redbud 8N	Plate 2
Incident #: nAPP2223437408	10/06/2022
AEP #: 20220813-1610-completions	











MILS Database
 ● SURFACE

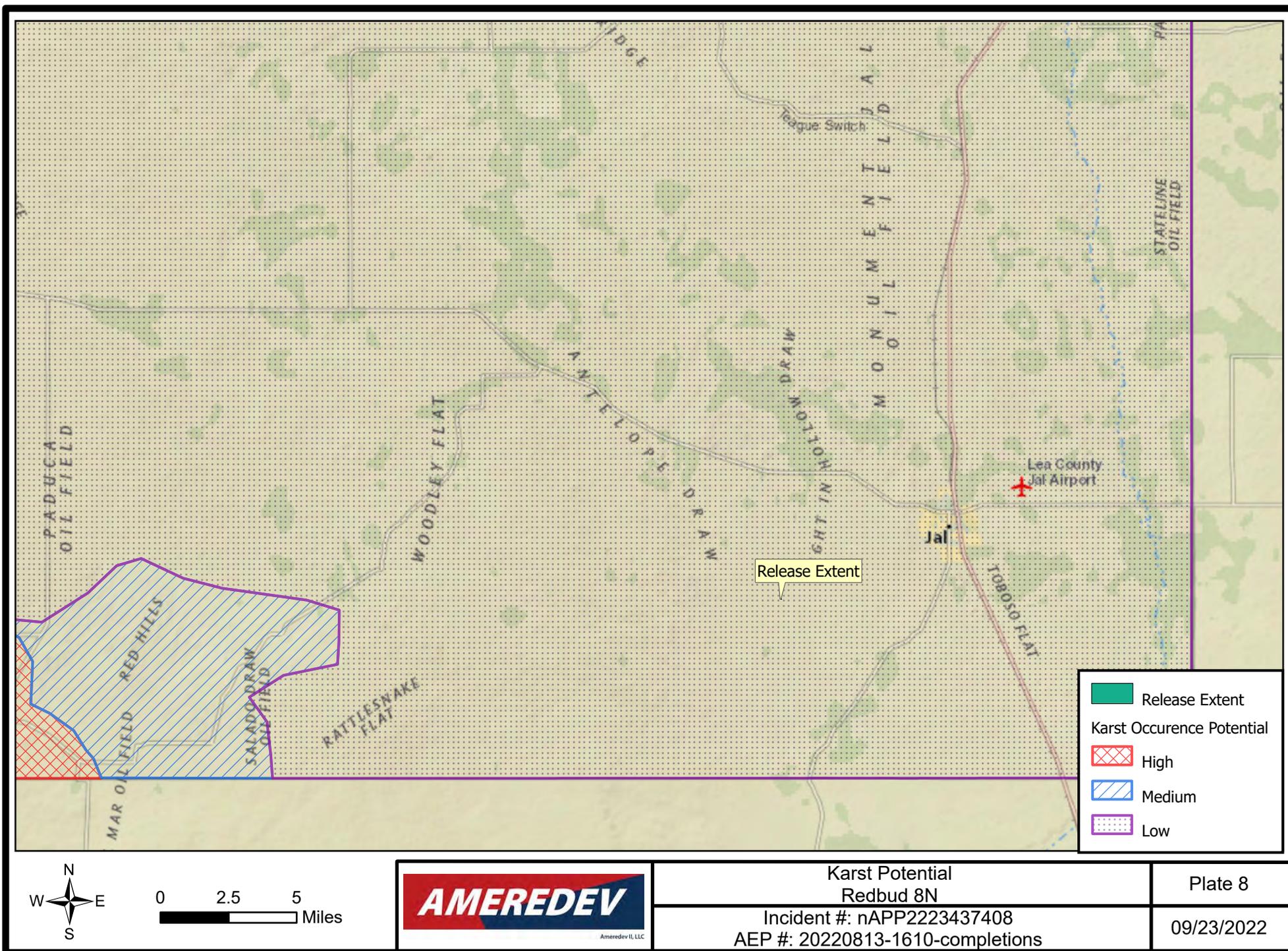


0 0.5 1 Miles



Mines and Minerals
 Redbud 8N
 Incident #: nAPP2223437408
 AEP #: 20220813-1610-completions

Plate 07
 09/23/2022

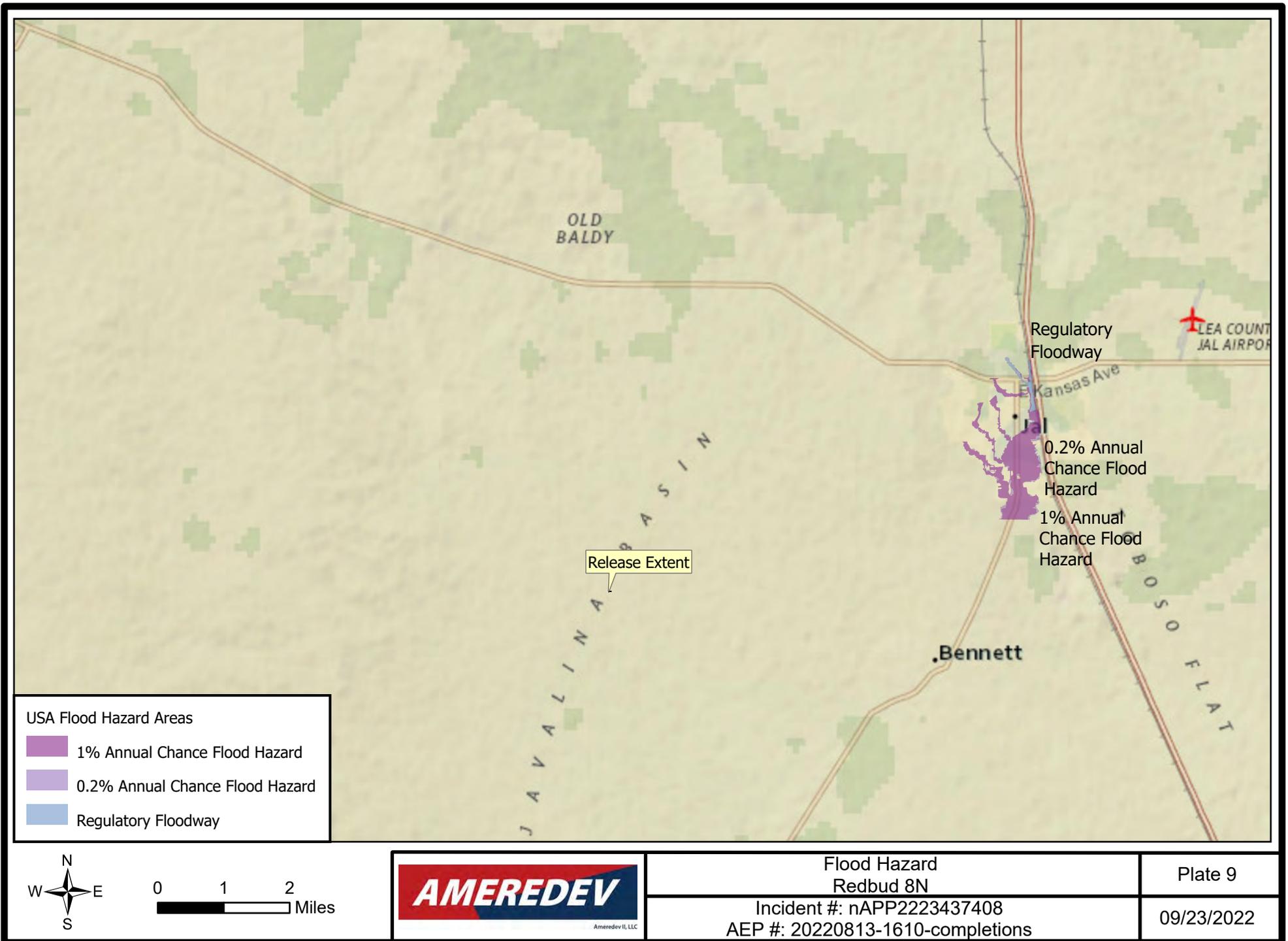


0 2.5 5 Miles



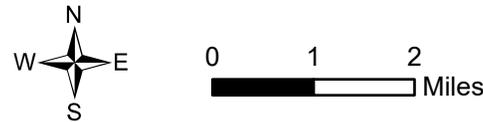
Karst Potential
 Redbud 8N
 Incident #: nAPP2223437408
 AEP #: 20220813-1610-completions

Plate 8
 09/23/2022



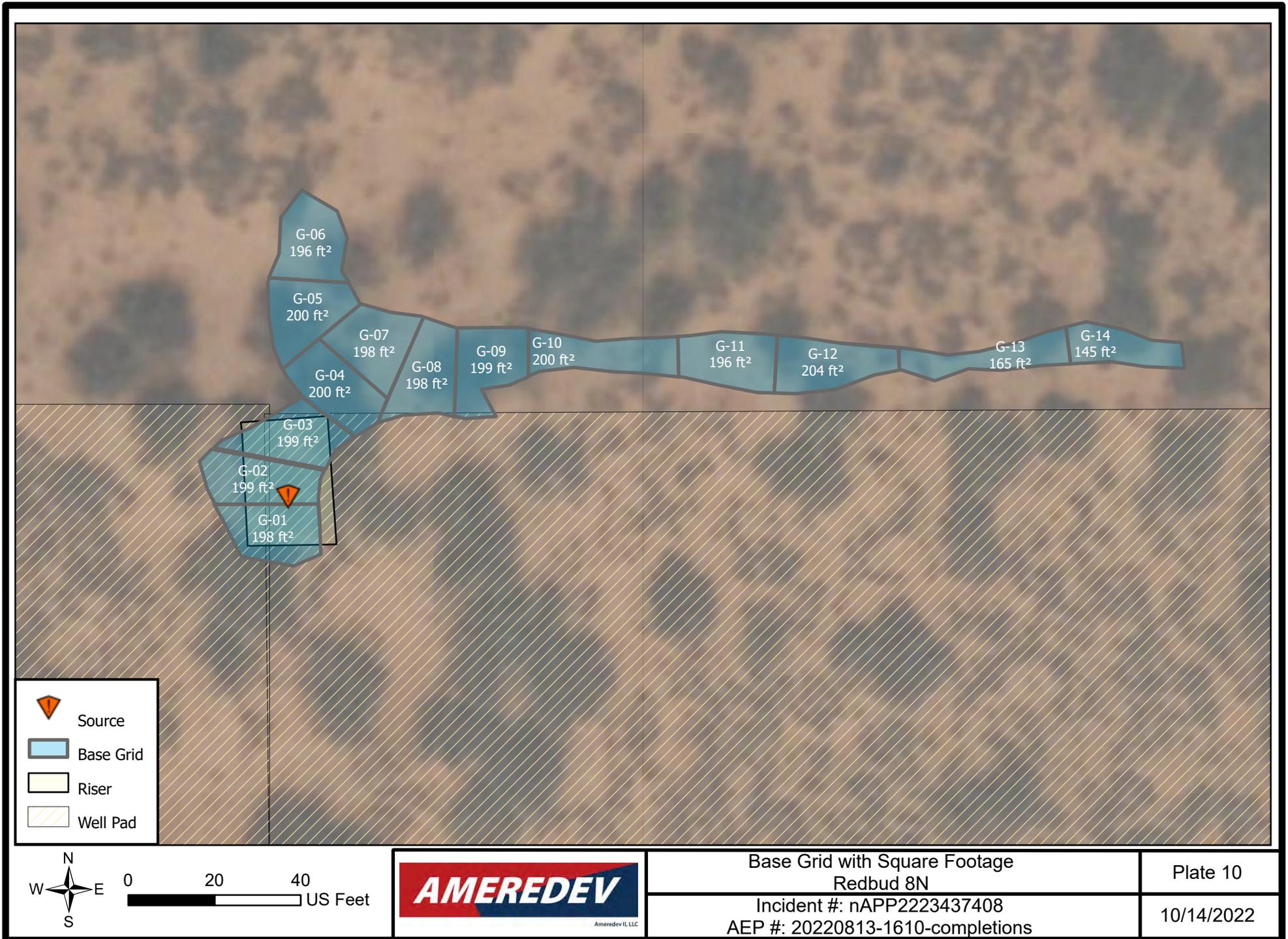
USA Flood Hazard Areas

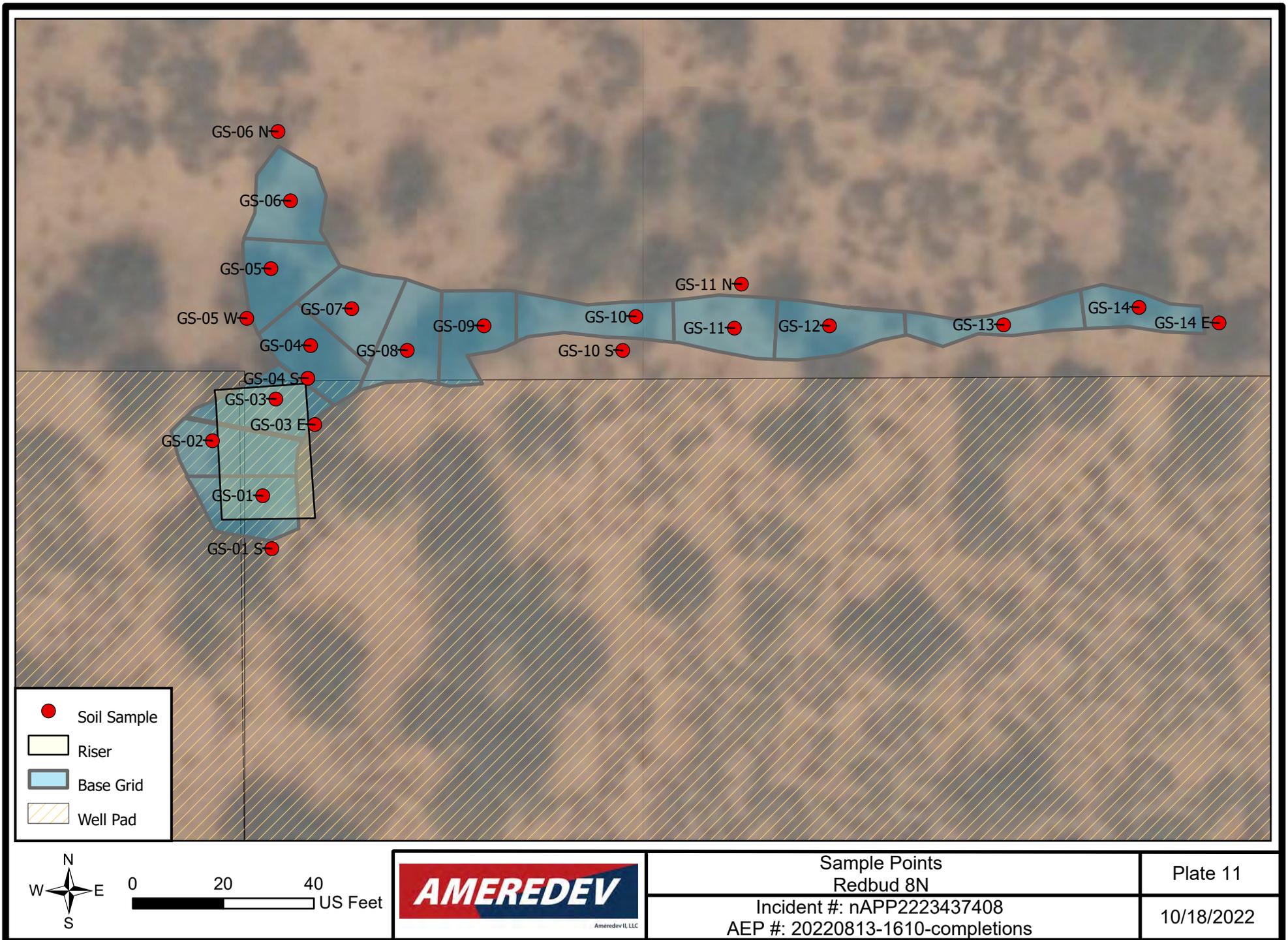
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway



Flood Hazard Redbud 8N
Incident #: nAPP2223437408 AEP #: 20220813-1610-completions

Plate 9
09/23/2022





Tables



Ameredev II, LLC

Sample Points	Latitude	Longitude
GS-01	32.08061977	-103.28256383
GS-01 S	32.08059268	-103.28255833
GS-02	32.08064789	-103.28259422
GS-03	32.08066924	-103.28255591
GS-03 E	32.08065621	-103.28253231
GS-04	32.08069661	-103.28253485
GS-04 S	32.08067988	-103.28253653
GS-05	32.08073600	-103.28255885
GS-05 W	32.08071055	-103.28257344
GS-06	32.08077071	-103.28254700
GS-06 N	32.08080976	-103.28255457
GS-07	32.08071550	-103.28250997
GS-08	32.08069417	-103.28247641
GS-09	32.08070672	-103.28243000
GS-10	32.08071147	-103.28233813
GS-10 S	32.08069412	-103.28234607
GS-11	32.08070553	-103.28227852
GS-11 N	32.08072807	-103.28227427
GS-12	32.08070672	-103.28222102
GS-13	32.08070722	-103.28211571
GS-14	32.08071614	-103.28203381
GS-14 E	32.08070823	-103.28198541

October 18, 2022

Table B
Summary of Analytical

Incident ID: nAPP2223437408
Redbud 8N
AEP #: 20220813-1610-completions

Sample ID	Date	Discrete Depth (Feet)	Top Depth (Feet)	Bottom Depth (Feet)	In Use (Yes/No)	Chloride (mg/kg)	GRO+DRO (mg/kg)	TPH Ext. (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Comments	Lab	Lab #
												(Hall/Cardinal)	
NMOCD Closure Criteria													
0 - 4 feet & "not in-use"						600	--	100	10	50			
> 4 ft or "in-use"						20,000	1,000	2,500	10	50			
GS-01	10/6/2022	2			Pad	64	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-01 S	10/6/2022	0			Pad	32	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-02	10/6/2022	0			Pad	352	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-03	10/6/2022	2			Pad	320	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-03 E	10/6/2022	0			Pad	80	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-04	10/5/2022	4.5			ROW	5920	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS- 04 S	10/5/2022		0	2	Pad	1520	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS- 04 S	10/5/2022		2	4	Pad	2480	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS- 04 S	10/5/2022	4.5			Pad	2280	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-05	10/5/2022	4.5			ROW	5780	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-05	10/5/2022	5.5			ROW	5360	<20	<30	<0.05	<0.30	Vertical Delineation	Cardinal	H224694
GS-05	10/5/2022	6.5			ROW	6400	<20	<30	<0.05	<0.30	Vertical Delineation	Cardinal	H224694
GS-05 W	10/5/2022		0	2	ROW	240	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-05 W	10/5/2022		2	4	ROW	16	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-06	10/5/2022	4.5			ROW	1800	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-06N	10/5/2022		0	2	ROW	32	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-06N	10/5/2022		2	4	ROW	224	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-07	10/5/2022	4.5			ROW	5920	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-08	10/5/2022	4.5			ROW	2520	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-09	10/5/2022	4.5			ROW	6400	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-09	10/5/2022	5.5			ROW	5440	<20	<30	<0.05	<0.30	Vertical Delineation	Cardinal	H224694
GS-09	10/5/2022	6.5			ROW	6160	<20	<30	<0.05	<0.30	Vertical Delineation	Cardinal	H224694
GS-10	10/5/2022	4.5			ROW	3120	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224711
GS-10 S	10/5/2022		0	2	ROW	32	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-10 S	10/5/2022		2	4	ROW	32	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-11	10/5/2022	4.5			ROW	6400	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-11 N	10/5/2022		0	2	ROW	16	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-11 N	10/5/2022		2	4	ROW	32	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-12	10/5/2022	4.5			ROW	6720	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-12	10/5/2022	5.5			ROW	4720	<20	<30	<0.05	<0.30	Vertical Delineation	Cardinal	H224694
GS-12	10/5/2022	6.5			ROW	2320	<20	<30	<0.05	<0.30	Vertical Delineation	Cardinal	H224694
GS-13	10/5/2022	4.5			ROW	6000	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-14	10/5/2022	4.5			ROW	64	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-14 E	10/5/2022		0	2	ROW	80	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
GS-14 E	10/5/2022		2	4	ROW	64	<20	<30	<0.05	<0.30	Confirmation	Cardinal	H224694
Backfill	10/5/2022					16	<20	<30	<0.05	<0.30	Backfill	Cardinal	H224694
Topsoil 01	10/10/2022					16	<20	<30	<0.05	<0.30	Topsoil	Cardinal	H224754

Appendix A

Communications



Ameredev II, LLC

From: [Andrew Parker](#)
To: [Enviro, OCD, EMNRD](#)
Cc: [Laura Parker](#); [Jesus Palomares](#); [Christopher Turner](#)
Subject: nAPP2223437408 48 hr sampling notice Redbud 8N
Date: Wednesday, September 28, 2022 6:44:13 PM

NMOCD,

Please accept this email as the 48 hour confirmation sampling notice for incident nAPP2223437408. Remediation commences tomorrow (9/29/2022).

Location: Redbud 8N riser
AEP #: 20220813-1610-completions

Thank you,

Andrew Parker
Environmental Scientist
970-570-9535



From: Andrew Parker
Sent: Monday, August 22, 2022 10:36 AM
To: spills@slo.state.nm.us; Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Laura Parker <lparker@ameredev.com>; Dayeed Khan <dkhan@ameredev.com>
Subject: C-141 NOR nAPP2223437408

NMOCD/SLO:

Attached is the C-141 NOR for incident nAPP2223437408 with volume calculation. Please retain for your files.

Location: Redbud 8N Production Site
AEP #: 20220813-1610-completions

Regards,

Andrew Parker
Environmental Scientist
970-570-9535



From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Monday, August 22, 2022 11:23 AM
To: Andrew Parker <aparker@amerede.com>
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has accepted the application, Application ID: 136243

To whom it may concern (c/o Andrew Parker for AMEREDEV OPERATING, LLC),

The OCD has accepted the submitted *Notification of a release* (NOR), for incident ID (n#) nAPP2223437408, with the following conditions:

- **When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.**

Please reference nAPP2223437408, on all subsequent C-141 submissions and communications regarding the remediation of this release.

NOTE: As of December 2019, NMOCD has discontinued the use of the “RP” number.

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

ocd.enviro@state.nm.us

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Andrew Parker

From: OCDOnline@state.nm.us
Sent: Monday, August 22, 2022 11:23 AM
To: Andrew Parker
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has accepted the application, Application ID: 136243

Caution: External (ocdonline@state.nm.us)

Spam Content [Details](#)

[Report This Email](#) [FAQ](#) [Protection by INKY](#)

To whom it may concern (c/o Andrew Parker for AMEREDEV OPERATING, LLC),

The OCD has accepted the submitted *Notification of a release* (NOR), for incident ID (n#) nAPP2223437408, with the following conditions:

- **When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.**

Please reference nAPP2223437408, on all subsequent C-141 submissions and communications regarding the remediation of this release.

NOTE: As of December 2019, NMOCD has discontinued the use of the "RP" number.

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

ocd.enviro@state.nm.us

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Appendix B

Well Logs



Ameredev II, LLC



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

July 8, 2022

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

Hand Delivered to the DII Office of the State Engineer

Re: Well Record CP-1922 Pod-1

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-1922 Pod-1.

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

Sincerely,

A handwritten signature in black ink that reads "Lucas Middleton". The signature is written in a cursive style.

Lucas Middleton

Enclosures: as noted above

OSE DII SEP 30 2022 AM 10:57



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD-1		WELL TAG ID NO. n/a		OSE FILE NO(S). CP-1922		
	WELL OWNER NAME(S) Ameredev Operating, LLC				PHONE (OPTIONAL) 737-300-4700		
	WELL OWNER MAILING ADDRESS 2901 Via Fortuna Suite 600				CITY Austin	STATE TX	ZIP 78746
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32	SECONDS 4	38.51	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND
		LONGITUDE	103	17	9.02	W	* DATUM REQUIRED: WGS 84
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SW NW NE Sec.5 T26S R36S NMPM							

2. DRILLING & CASING INFORMATION	LICENSE NO. 1249	NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.			
	DRILLING STARTED 9/21/2022	DRILLING ENDED 9/21/2022	DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) ±101	DEPTH WATER FIRST ENCOUNTERED (FT) n/a			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a	DATE STATIC MEASURED 7/26/2022		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	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	101	±6.25"	Boring-HSA	--	--	--	--

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				

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2



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-1922

Well owner: Ameredev Operating, LLC Phone No.: 737-300-4700

Mailing address: 2901 Via Fortuna Suite 600

City: Austin State: Texas Zip code: 78746

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, Cameron Pruitt
- 4) Date well plugging began: 7/26/2022 Date well plugging concluded: 7/26/2022
- 5) GPS Well Location: Latitude: 32 deg, 4 min, 38.51 sec
Longitude: 103 deg, 17 min, 9.02 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 101 ft below ground level (bgl),
by the following manner: water level probe
- 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: 9/12/2022
- 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):

OSE DJJ SEP 30 2022 AM 10:58

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:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 15 gallons	15 gallons	Augers	
10'-101'	Drill Cuttings	Approx. 145 gallons	145 gallons	Boring	

DSE OIT SEP 30 2022 AM 10:58

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.

Jackie Atkins

Signature of Well Driller

9/29/2022

Date

6_CP-1922_WellLog-packet-forsign-DTW-16

Final Audit Report

2022-09-29

Created:	2022-09-29
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAPQJeAO8oO_PInuci8MR060bacCzdSRFN

"6_CP-1922_WellLog-packet-forsign-DTW-16" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2022-09-29 - 9:20:49 PM GMT- IP address: 64.17.71.25
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2022-09-29 - 9:21:48 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2022-09-29 - 9:24:30 PM GMT- IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2022-09-29 - 9:24:54 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.
2022-09-29 - 9:24:54 PM GMT

05E 011 SEP 30 2022 AM 10:58



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
NA	CP 00857 POD1	1 2 2	05	26S	36E	662244	3550380

Driller License: 1184 **Driller Company:** WEST TEXAS WATER WELL SERVICE

Driller Name: COLLIS, ROBERT E. (LD)

Drill Start Date: 10/09/1996	Drill Finish Date: 10/10/1996	Plug Date:
Log File Date: 01/15/1997	PCW Rcv Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 100 GPM
Casing Size:	Depth Well: 365 feet	Depth Water:

Water Bearing Stratifications:	Top	Bottom	Description
	300	365	Sandstone/Gravel/Conglomerate

Meter Number: 18966	Meter Make:	
Meter Serial Number:	Meter Multiplier: 1.0000	
Number of Dials: 1	Meter Type: Diversion	
Unit of Measure: Gallons	Return Flow Percent:	
Usage Multiplier:	Reading Frequency: Quarterly (No Reading Expected)	

**YTD Meter Amounts:	Year	Amount
	2017	0

Meter Number: 19007	Meter Make: OCTAVE	
Meter Serial Number: 19235055	Meter Multiplier: 1.0000	
Number of Dials: 9	Meter Type: Diversion	
Unit of Measure: Gallons	Return Flow Percent:	
Usage Multiplier:	Reading Frequency: Monthly	

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
02/01/2017	2017	2599614	A	RPT		0
04/01/2017	2017	2627531	A	RPT		3.598
05/01/2017	2017	2631319	A	RPT		0.488
06/01/2017	2017	2652251	A	RPT		2.698
07/01/2017	2017	2720508	A	RPT		8.798
08/01/2017	2017	2782114	A	RPT		7.941
09/01/2017	2017	2858989	A	RPT		9.909
10/01/2017	2017	2906622	A	RPT		6.140

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
11/01/2017	2017	2912696	A	RPT		0.783
12/01/2017	2017	2998304	A	RPT		11.034
02/01/2018	2018	3146658	A	RPT		19.122
03/01/2018	2018	3212353	A	RPT		8.468
04/01/2018	2018	3286487	A	RPT		9.555
05/01/2018	2018	3381113	A	RPT		12.197
06/01/2018	2018	3470486	A	RPT		11.520
07/01/2018	2018	3547614	A	RPT		9.941
09/01/2018	2018	3569776	A	RPT		2.857
12/01/2018	2018	4076874	A	RPT		65.362
01/01/2019	2018	4181523	A	RPT		13.489
02/01/2019	2019	4296954	A	RPT		14.878
03/01/2019	2019	4346796	A	RPT		6.424
04/01/2019	2019	4365803	A	RPT		2.450
05/01/2019	2019	4418132	A	RPT		6.745
07/31/2019	2019	0	A	RPT		0
09/30/2019	2019	325518	A	RPT		41.957
10/31/2019	2019	388564	A	RPT		8.126
12/31/2019	2019	622880	A	RPT		30.202
01/19/2020	2020	672026	A	RPT		6.335
01/19/2020	2020	0	A	RPT		0
01/31/2020	2020	336667	A	RPT		1.033
03/31/2020	2020	9198198	A	RPT		27.195
08/31/2020	2020	25497766	A	RPT		50.022
09/30/2020	2020	29234202	A	RPT		11.467
11/30/2020	2020	36579854	A	RPT		22.543
12/31/2020	2020	40821185	A	RPT		13.016
01/31/2021	2021	45738623	A	RPT		15.091

**YTD Meter Amounts:	Year	Amount
	2017	51.389
	2018	152.511
	2019	110.782
	2020	131.611
	2021	15.091

Meter Number:	19056	Meter Make:	MASTER METER
Meter Serial Number:	19814845	Meter Multiplier:	10.0000
Number of Dials:	6	Meter Type:	Diversion
Unit of Measure:	Gallons	Return Flow Percent:	
Usage Multiplier:		Reading Frequency:	Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount Online
11/30/2020	2020	38460	A	RPT	0
12/31/2020	2020	42150	A	RPT	0.113
01/31/2021	2021	49850	A	RPT	0.236

**YTD Meter Amounts:	Year	Amount
	2020	0.113
	2021	0.236

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.

File CP-857



NEW MEXICO OFFICE OF THE STATE ENGINEER



Update Well Location

Date: 03/27/2020 POD No.: CP-00857-POD1 OSE Staff: Chris Angel

Instructions:

Use this form to correct or update POD location(s) based on In-Office Geospatial Applications. Update WATERS by creating a UWL transaction in the pertinent file number(s). Create and image a map, if necessary.

Current Location:

NM State Plane (NAD83) - In feet	NM West Zone	<input type="checkbox"/>	X (in feet): Y (in feet):		
	NM Central Zone	<input type="checkbox"/>			
	NM East Zone	<input type="checkbox"/>			
UTM (NAD83) - In meters	UTM Zone 13N	<input type="checkbox"/>	Easting (in meters): Northing (in meters):		
	UTM Zone 12N	<input type="checkbox"/>			
Lat/Long (WGS84) - To 1/10 th of second <input type="checkbox"/> Check if seconds are decimal format	Lat:	deg	min	sec	
	Long:	deg	min	sec	
Other Location Information (complete the below, if applicable):					
PLSS Quarters or Halves: SW1/4NE1/4NE1/4		Section: 05		Township: 26 South Range: 36 East	
County: Lea			Subasin: Capitan		

Updated Location:

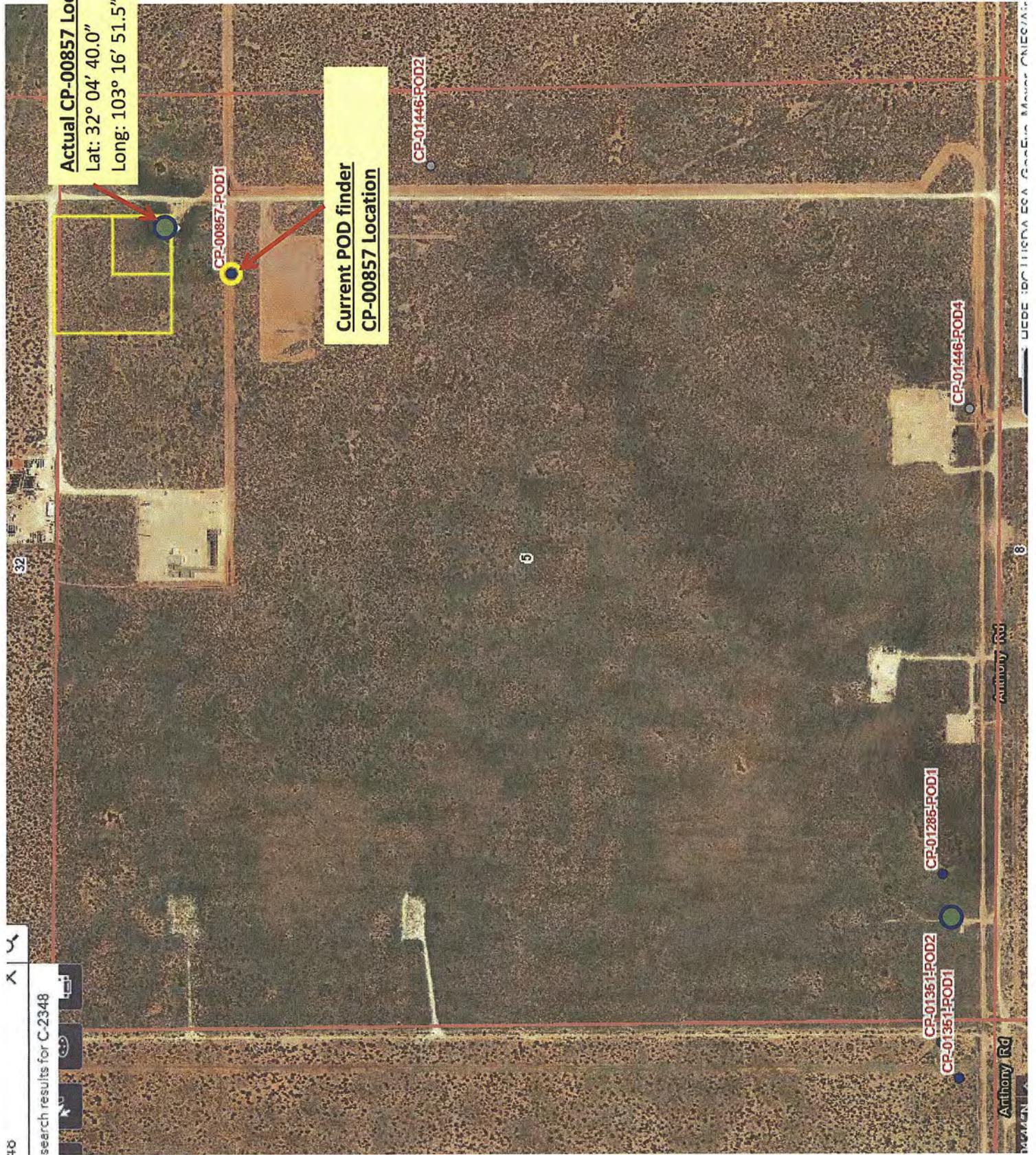
NM State Plane (NAD83) - In feet	NM West Zone	<input type="checkbox"/>	X (in feet): Y (in feet):			
	NM Central Zone	<input type="checkbox"/>				
	NM East Zone	<input type="checkbox"/>				
UTM (NAD83) - In meters	UTM Zone 13N	<input type="checkbox"/>	Easting (in meters): Northing (in meters):			
	UTM Zone 12N	<input type="checkbox"/>				
Lat/Long (WGS84) - To 1/10 th of second <input type="checkbox"/> Check if seconds are decimal format	Lat: 32	deg	04	min	40.0	sec
	Long: 103	deg	16	min	51.5	sec
Other Location Information (complete the below, if applicable):						
PLSS Quarters or Halves: SE1/4NW1/4NE1/4NE1/4		Section: 05		Township: 26 South Range: 36 East		
County: Lea			Subasin: Capitan			

Comments:

A GPS was used to locate the well on the attached map.

Update Well Location Form, Rev. 12/11/18

File No.: CP-857 Trn. No.: 670905



Actual CP-00857 Location
 Lat: 32° 04' 40.0"
 Long: 103° 16' 51.5"

**Current POD finder
 CP-00857 Location**

search results for C-2348

CP-01446-POD2

CP-00857-POD1

CP-01286-POD1

CP-01351-POD2

CP-01351-POD1

CP-01446-POD4

Anthony Rd

Anthony Rd

8

5

32

UCBE :DC I110VA ECA /GSE/EA MAGEP /NIEC/VAI

Appendix C

Certificates of Analysis



Ameredev II, LLC



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

October 13, 2022

ANDREW PARKER

AMEREDEV

2901 VIA FORTUNA , SUITE 600

AUSTIN, TX 78746

RE: REDBUD 8N

Enclosed are the results of analyses for samples received by the laboratory on 10/06/22 14:08.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GS - 04 4.5FT	H224694-01	Soil	05-Oct-22 09:01	06-Oct-22 14:08
GS - 04S 0-2FT	H224694-02	Soil	05-Oct-22 09:06	06-Oct-22 14:08
GS - 04S 2-4FT	H224694-03	Soil	05-Oct-22 09:10	06-Oct-22 14:08
GS - 04S 4.5FT	H224694-04	Soil	05-Oct-22 09:15	06-Oct-22 14:08
GS - 05 4.5FT	H224694-05	Soil	05-Oct-22 09:18	06-Oct-22 14:08
GS - 05 5.5FT	H224694-06	Soil	05-Oct-22 09:21	06-Oct-22 14:08
GS - 05 6.5FT	H224694-07	Soil	05-Oct-22 09:25	06-Oct-22 14:08
GS - 05W 0-2FT	H224694-08	Soil	05-Oct-22 09:28	06-Oct-22 14:08
GS - 05W 2-4FT	H224694-09	Soil	05-Oct-22 09:32	06-Oct-22 14:08
GS - 06 4.5FT	H224694-10	Soil	05-Oct-22 09:35	06-Oct-22 14:08
GS - 06N 0-2FT	H224694-11	Soil	05-Oct-22 09:37	06-Oct-22 14:08
GS - 06N 2-4FT	H224694-12	Soil	05-Oct-22 09:41	06-Oct-22 14:08
GS - 07 4.5FT	H224694-13	Soil	05-Oct-22 09:43	06-Oct-22 14:08
GS - 08 4.5FT	H224694-14	Soil	05-Oct-22 09:50	06-Oct-22 14:08
GS - 09 4.5FT	H224694-15	Soil	05-Oct-22 09:55	06-Oct-22 14:08
GS - 09 5.5FT	H224694-16	Soil	05-Oct-22 09:59	06-Oct-22 14:08
GS - 09 6.5FT	H224694-17	Soil	05-Oct-22 10:03	06-Oct-22 14:08
GS - 10S 0-2FT	H224694-19	Soil	05-Oct-22 10:15	06-Oct-22 14:08
GS - 10S 2-4FT	H224694-20	Soil	05-Oct-22 10:19	06-Oct-22 14:08
GS - 11 4.5FT	H224694-21	Soil	05-Oct-22 10:23	06-Oct-22 14:08
GS - 11N 0-2FT	H224694-22	Soil	05-Oct-22 10:27	06-Oct-22 14:08
GS - 11N 2-4FT	H224694-23	Soil	05-Oct-22 10:31	06-Oct-22 14:08
GS - 12 4.5FT	H224694-24	Soil	05-Oct-22 10:35	06-Oct-22 14:08
GS - 12 5.5FT	H224694-25	Soil	05-Oct-22 10:40	06-Oct-22 14:08
GS - 12 6.5FT	H224694-26	Soil	05-Oct-22 10:43	06-Oct-22 14:08
GS - 13 4.5FT	H224694-27	Soil	05-Oct-22 10:48	06-Oct-22 14:08
GS - 14 4.5FT	H224694-28	Soil	05-Oct-22 10:52	06-Oct-22 14:08

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* = 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:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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GS - 14E 0-2FT	H224694-29	Soil	05-Oct-22 10:56	06-Oct-22 14:08
GS - 14E 2-4FT	H224694-30	Soil	05-Oct-22 10:59	06-Oct-22 14:08
GS - 01 2FT	H224694-31	Soil	06-Oct-22 08:25	06-Oct-22 14:08
GS - 01S 0FT	H224694-32	Soil	06-Oct-22 08:29	06-Oct-22 14:08
GS - 02 0FT	H224694-33	Soil	06-Oct-22 08:34	06-Oct-22 14:08
GS - 03 2FT	H224694-34	Soil	06-Oct-22 08:40	06-Oct-22 14:08
GS - 03E 0FT	H224694-35	Soil	06-Oct-22 08:43	06-Oct-22 14:08
REDBUD BACKFILL	H224694-36	Soil	06-Oct-22 12:28	06-Oct-22 14:08

10/13/22 - Client changed the sample ID of -01 (See COC). This is the revised report and will replace the one sent on 10/11/22.

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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

GS - 04 4.5FT
H224694-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5920		16.0	mg/kg	4	2101020	GM	10-Oct-22	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100707	JH	10-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			91.6 %		69.9-140	2100707	JH	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	

Surrogate: 1-Chlorooctane			104 %		45.3-161	2100715	MS	08-Oct-22	8015B	
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Surrogate: 1-Chlorooctadecane			110 %		46.3-178	2100715	MS	08-Oct-22	8015B	
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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 04S 0-2FT
H224694-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	1520		16.0	mg/kg	4	2101020	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100707	JH	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			91.3 %		69.9-140	2100707	JH	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			102 %		45.3-161	2100715	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			108 %		46.3-178	2100715	MS	08-Oct-22	8015B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 04S 2-4FT
H224694-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	2480		16.0	mg/kg	4	2101020	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100707	JH	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100707	JH	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			91.3 %	69.9-140		2100707	JH	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			102 %	45.3-161		2100715	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			107 %	46.3-178		2100715	MS	08-Oct-22	8015B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 04S 4.5FT
H224694-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	2280		16.0	mg/kg	4	2101020	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100715	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			102 %	45.3-161		2100715	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			107 %	46.3-178		2100715	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 05 4.5FT
H224694-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	5760		16.0	mg/kg	4	2101020	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			103 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			107 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

GS - 05 5.5FT**H224694-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5360		16.0	mg/kg	4	2101020	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

Surrogate: 1-Chlorooctane			102 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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Surrogate: 1-Chlorooctadecane			106 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 05 6.5FT
H224694-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	6400		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	QM-07
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140 2100738 JH/ 09-Oct-22 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

Surrogate: 1-Chlorooctane 102 % 45.3-161 2100716 MS 08-Oct-22 8015B

Surrogate: 1-Chlorooctadecane 106 % 46.3-178 2100716 MS 08-Oct-22 8015B

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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 05W 0-2FT
H224694-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	240		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			98.1 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			102 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 05W 2-4FT
H224694-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			101 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			106 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 06 4.5FT
H224694-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	1800		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			99.7 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			102 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 06N 0-2FT
H224694-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

Surrogate: 1-Chlorooctane			96.8 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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Surrogate: 1-Chlorooctadecane			99.1 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 06N 2-4FT
H224694-12 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	224		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			97.4 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			101 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 07 4.5FT
H224694-13 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	5920		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			99.4 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			103 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 08 4.5FT
H224694-14 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	2520		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

Surrogate: 1-Chlorooctane			99.3 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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Surrogate: 1-Chlorooctadecane			103 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 09 4.5FT
H224694-15 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	6400		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			100 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			104 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 09 5.5FT
H224694-16 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	5440		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			101 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			104 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 09 6.5FT
H224694-17 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	6160		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			103 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			107 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 10S 0-2FT
H224694-19 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			102 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			106 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 10S 2-4FT
H224694-20 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			105 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			110 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 11 4.5FT
H224694-21 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	6400		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			106 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			107 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			111 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

GS - 11N 0-2FT**H224694-22 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	16.0		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140 2100738 JH/ 09-Oct-22 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

Surrogate: 1-Chlorooctane 101 % 45.3-161 2100716 MS 08-Oct-22 8015B

Surrogate: 1-Chlorooctadecane 105 % 46.3-178 2100716 MS 08-Oct-22 8015B

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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 11N 2-4FT
H224694-23 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			103 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			108 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 12 4.5FT
H224694-24 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	6720		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100738	JH/	09-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100738	JH/	09-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	69.9-140		2100738	JH/	09-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			105 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			109 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 12 5.5FT
H224694-25 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	4720		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100716	MS	08-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			101 %	45.3-161		2100716	MS	08-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			105 %	46.3-178		2100716	MS	08-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 12 6.5FT
H224694-26 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	2320		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			75.8 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			89.3 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 13 4.5FT
H224694-27 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	6000		16.0	mg/kg	4	2101028	GM	10-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			75.6 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			87.4 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 14 4.5FT
H224694-28 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			102 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			77.5 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			89.9 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 14E 0-2FT
H224694-29 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			102 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			82.4 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			96.3 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Cardinal Laboratories

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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 14E 2-4FT
H224694-30 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			102 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			79.6 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			94.0 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 01 2FT
H224694-31 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			94.7 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			119 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 01S 0FT
H224694-32 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100739	JH/	10-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100739	JH/	10-Oct-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %	69.9-140		2100739	JH/	10-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

Surrogate: 1-Chlorooctane			77.1 %	45.3-161		2100717	MS	10-Oct-22	8015B	
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Surrogate: 1-Chlorooctadecane			90.9 %	46.3-178		2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 02 0FT
H224694-33 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	352		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100737	JH	08-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			95.4 %		69.9-140	2100737	JH	08-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			79.0 %		45.3-161	2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			79.3 %		46.3-178	2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 03 2FT
H224694-34 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	320		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100737	JH	08-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			95.9 %		69.9-140	2100737	JH	08-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			74.2 %		45.3-161	2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			88.8 %		46.3-178	2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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**GS - 03E 0FT
H224694-35 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100737	JH	08-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			95.5 %		69.9-140	2100737	JH	08-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			78.0 %		45.3-161	2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			91.9 %		46.3-178	2100717	MS	10-Oct-22	8015B	
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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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REDBUD BACKFILL

H224694-36 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	2101011	GM	11-Oct-22	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2100737	JH	08-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2100737	JH	08-Oct-22	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			94.8 %		69.9-140	2100737	JH	08-Oct-22	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2100717	MS	10-Oct-22	8015B	

<i>Surrogate: 1-Chlorooctane</i>			78.5 %		45.3-161	2100717	MS	10-Oct-22	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			91.9 %		46.3-178	2100717	MS	10-Oct-22	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2101011 - 1:4 DI Water

Blank (2101011-BLK1)		Prepared & Analyzed: 10-Oct-22								
Chloride	ND	16.0	mg/kg							
LCS (2101011-BS1)		Prepared & Analyzed: 10-Oct-22								
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2101011-BSD1)		Prepared & Analyzed: 10-Oct-22								
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

Batch 2101020 - 1:4 DI Water

Blank (2101020-BLK1)		Prepared & Analyzed: 10-Oct-22								
Chloride	ND	16.0	mg/kg							
LCS (2101020-BS1)		Prepared & Analyzed: 10-Oct-22								
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (2101020-BSD1)		Prepared & Analyzed: 10-Oct-22								
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	

Batch 2101028 - 1:4 DI Water

Blank (2101028-BLK1)		Prepared & Analyzed: 10-Oct-22								
Chloride	ND	16.0	mg/kg							
LCS (2101028-BS1)		Prepared & Analyzed: 10-Oct-22								
Chloride	416	16.0	mg/kg	400		104	80-120			

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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2101028 - 1:4 DI Water

LCS Dup (2101028-BSD1)

Prepared & Analyzed: 10-Oct-22

Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

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
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Batch 2100707 - Volatiles**Blank (2100707-BLK1)**

Prepared: 07-Oct-22 Analyzed: 09-Oct-22

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		91.9	69.9-140			

LCS (2100707-BS1)

Prepared: 07-Oct-22 Analyzed: 09-Oct-22

Benzene	2.29	0.050	mg/kg	2.00		115	83.4-122			
Toluene	2.16	0.050	mg/kg	2.00		108	84.2-126			
Ethylbenzene	2.09	0.050	mg/kg	2.00		104	84.2-121			
m,p-Xylene	4.32	0.100	mg/kg	4.00		108	89.9-126			
o-Xylene	2.03	0.050	mg/kg	2.00		101	84.3-123			
Total Xylenes	6.34	0.150	mg/kg	6.00		106	89.1-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0451		mg/kg	0.0500		90.2	69.9-140			

LCS Dup (2100707-BSD1)

Prepared: 07-Oct-22 Analyzed: 09-Oct-22

Benzene	2.26	0.050	mg/kg	2.00		113	83.4-122	1.42	12.6	
Toluene	2.13	0.050	mg/kg	2.00		107	84.2-126	1.43	13.3	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	84.2-121	1.34	13.9	
m,p-Xylene	4.24	0.100	mg/kg	4.00		106	89.9-126	1.70	13.6	
o-Xylene	2.00	0.050	mg/kg	2.00		99.9	84.3-123	1.44	14.1	
Total Xylenes	6.24	0.150	mg/kg	6.00		104	89.1-124	1.62	13.4	
Surrogate: 4-Bromofluorobenzene (PID)	0.0450		mg/kg	0.0500		90.0	69.9-140			

Batch 2100737 - Volatiles**Blank (2100737-BLK1)**

Prepared: 07-Oct-22 Analyzed: 08-Oct-22

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							

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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

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
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Batch 2100737 - Volatiles**Blank (2100737-BLK1)**

Prepared: 07-Oct-22 Analyzed: 08-Oct-22

Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		95.2	69.9-140			

LCS (2100737-BS1)

Prepared: 07-Oct-22 Analyzed: 08-Oct-22

Benzene	2.20	0.050	mg/kg	2.00		110	83.4-122			
Toluene	2.10	0.050	mg/kg	2.00		105	84.2-126			
Ethylbenzene	2.03	0.050	mg/kg	2.00		101	84.2-121			
m,p-Xylene	4.18	0.100	mg/kg	4.00		104	89.9-126			
o-Xylene	1.98	0.050	mg/kg	2.00		99.1	84.3-123			
Total Xylenes	6.16	0.150	mg/kg	6.00		103	89.1-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0456		mg/kg	0.0500		91.3	69.9-140			

LCS Dup (2100737-BSD1)

Prepared: 07-Oct-22 Analyzed: 08-Oct-22

Benzene	2.13	0.050	mg/kg	2.00		106	83.4-122	3.32	12.6	
Toluene	2.03	0.050	mg/kg	2.00		102	84.2-126	3.06	13.3	
Ethylbenzene	1.96	0.050	mg/kg	2.00		97.8	84.2-121	3.46	13.9	
m,p-Xylene	4.02	0.100	mg/kg	4.00		101	89.9-126	3.75	13.6	
o-Xylene	1.91	0.050	mg/kg	2.00		95.7	84.3-123	3.53	14.1	
Total Xylenes	5.94	0.150	mg/kg	6.00		99.0	89.1-124	3.68	13.4	
Surrogate: 4-Bromofluorobenzene (PID)	0.0461		mg/kg	0.0500		92.1	69.9-140			

Batch 2100738 - Volatiles**Blank (2100738-BLK1)**

Prepared: 07-Oct-22 Analyzed: 09-Oct-22

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)	0.0518		mg/kg	0.0500		104	69.9-140			

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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

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
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Batch 2100738 - Volatiles**LCS (2100738-BS1)**

Prepared: 07-Oct-22 Analyzed: 09-Oct-22

Benzene	2.11	0.050	mg/kg	2.00		105	83.4-122			
Toluene	2.09	0.050	mg/kg	2.00		104	84.2-126			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	84.2-121			
m,p-Xylene	4.20	0.100	mg/kg	4.00		105	89.9-126			
o-Xylene	2.04	0.050	mg/kg	2.00		102	84.3-123			
Total Xylenes	6.24	0.150	mg/kg	6.00		104	89.1-124			

Surrogate: 4-Bromofluorobenzene (PID) 0.0506 mg/kg 0.0500 101 69.9-140

LCS Dup (2100738-BSD1)

Prepared: 07-Oct-22 Analyzed: 09-Oct-22

Benzene	2.04	0.050	mg/kg	2.00		102	83.4-122	3.35	12.6	
Toluene	2.03	0.050	mg/kg	2.00		102	84.2-126	2.61	13.3	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.5	84.2-121	3.66	13.9	
m,p-Xylene	4.04	0.100	mg/kg	4.00		101	89.9-126	3.78	13.6	
o-Xylene	1.94	0.050	mg/kg	2.00		96.9	84.3-123	4.91	14.1	
Total Xylenes	5.98	0.150	mg/kg	6.00		99.7	89.1-124	4.15	13.4	

Surrogate: 4-Bromofluorobenzene (PID) 0.0504 mg/kg 0.0500 101 69.9-140

Batch 2100739 - Volatiles**Blank (2100739-BLK1)**

Prepared: 07-Oct-22 Analyzed: 10-Oct-22

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) 0.0500 mg/kg 0.0500 100 69.9-140

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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

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
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Batch 2100739 - Volatiles**LCS (2100739-BS1)**

Prepared: 07-Oct-22 Analyzed: 10-Oct-22

Benzene	2.05	0.050	mg/kg	2.00		102	83.4-122			
Toluene	1.87	0.050	mg/kg	2.00		93.4	84.2-126			
Ethylbenzene	1.82	0.050	mg/kg	2.00		91.0	84.2-121			
m,p-Xylene	3.73	0.100	mg/kg	4.00		93.3	89.9-126			
o-Xylene	1.87	0.050	mg/kg	2.00		93.5	84.3-123			
Total Xylenes	5.99	0.150	mg/kg	6.00		99.9	89.1-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0502		mg/kg	0.0500		100	69.9-140			

LCS Dup (2100739-BSD1)

Prepared: 07-Oct-22 Analyzed: 10-Oct-22

Benzene	2.01	0.050	mg/kg	2.00		101	83.4-122	1.53	12.6	
Toluene	1.99	0.050	mg/kg	2.00		99.6	84.2-126	6.44	13.3	
Ethylbenzene	1.96	0.050	mg/kg	2.00		98.1	84.2-121	7.51	13.9	
m,p-Xylene	4.02	0.100	mg/kg	4.00		101	89.9-126	7.42	13.6	
o-Xylene	1.95	0.050	mg/kg	2.00		97.6	84.3-123	4.27	14.1	
Total Xylenes	5.97	0.150	mg/kg	6.00		99.5	89.1-124	0.320	13.4	
Surrogate: 4-Bromofluorobenzene (PID)	0.0505		mg/kg	0.0500		101	69.9-140			

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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
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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
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Batch 2100715 - General Prep - Organics

Blank (2100715-BLK1)		Prepared & Analyzed: 07-Oct-22								
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	55.1		mg/kg	50.0		110	45.3-161			
Surrogate: 1-Chlorooctadecane	57.5		mg/kg	50.0		115	46.3-178			

LCS (2100715-BS1)		Prepared & Analyzed: 07-Oct-22								
GRO C6-C10	213	10.0	mg/kg	200		106	76.8-124			
DRO >C10-C28	220	10.0	mg/kg	200		110	74.9-127			
Total TPH C6-C28	433	10.0	mg/kg	400		108	77.5-124			
Surrogate: 1-Chlorooctane	59.4		mg/kg	50.0		119	45.3-161			
Surrogate: 1-Chlorooctadecane	63.9		mg/kg	50.0		128	46.3-178			

LCS Dup (2100715-BSD1)		Prepared & Analyzed: 07-Oct-22								
GRO C6-C10	217	10.0	mg/kg	200		109	76.8-124	2.20	17.2	
DRO >C10-C28	229	10.0	mg/kg	200		114	74.9-127	3.73	18.6	
Total TPH C6-C28	446	10.0	mg/kg	400		111	77.5-124	2.98	17.6	
Surrogate: 1-Chlorooctane	63.5		mg/kg	50.0		127	45.3-161			
Surrogate: 1-Chlorooctadecane	68.2		mg/kg	50.0		136	46.3-178			

Batch 2100716 - General Prep - Organics

Blank (2100716-BLK1)		Prepared: 07-Oct-22 Analyzed: 08-Oct-22								
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	56.4		mg/kg	50.0		113	45.3-161			
Surrogate: 1-Chlorooctadecane	57.8		mg/kg	50.0		116	46.3-178			

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Analytical Results For:

AMEREDEV
2901 VIA FORTUNA , SUITE 600
AUSTIN TX, 78746

Project: REDBUD 8N
Project Number: 20220813-1610-COMPLETIONS
Project Manager: ANDREW PARKER
Fax To:

Reported:
13-Oct-22 08:52

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
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Batch 2100716 - General Prep - Organics**LCS (2100716-BS1)**

Prepared: 07-Oct-22 Analyzed: 08-Oct-22

GRO C6-C10	219	10.0	mg/kg	200	110	76.8-124				
DRO >C10-C28	224	10.0	mg/kg	200	112	74.9-127				
Total TPH C6-C28	443	10.0	mg/kg	400	111	77.5-124				
Surrogate: 1-Chlorooctane	63.8		mg/kg	50.0	128	45.3-161				
Surrogate: 1-Chlorooctadecane	64.8		mg/kg	50.0	130	46.3-178				

LCS Dup (2100716-BSD1)

Prepared: 07-Oct-22 Analyzed: 08-Oct-22

GRO C6-C10	216	10.0	mg/kg	200	108	76.8-124	1.30	17.2		
DRO >C10-C28	225	10.0	mg/kg	200	113	74.9-127	0.530	18.6		
Total TPH C6-C28	441	10.0	mg/kg	400	110	77.5-124	0.369	17.6		
Surrogate: 1-Chlorooctane	67.7		mg/kg	50.0	135	45.3-161				
Surrogate: 1-Chlorooctadecane	68.0		mg/kg	50.0	136	46.3-178				

Batch 2100717 - General Prep - Organics**Blank (2100717-BLK1)**

Prepared: 07-Oct-22 Analyzed: 10-Oct-22

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	40.0		mg/kg	50.0	80.0	45.3-161				
Surrogate: 1-Chlorooctadecane	47.1		mg/kg	50.0	94.2	46.3-178				

LCS (2100717-BS1)

Prepared: 07-Oct-22 Analyzed: 10-Oct-22

GRO C6-C10	211	10.0	mg/kg	200	106	76.8-124				
DRO >C10-C28	203	10.0	mg/kg	200	101	74.9-127				
Total TPH C6-C28	414	10.0	mg/kg	400	103	77.5-124				
Surrogate: 1-Chlorooctane	44.9		mg/kg	50.0	89.9	45.3-161				
Surrogate: 1-Chlorooctadecane	56.3		mg/kg	50.0	113	46.3-178				

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

AMEREDEV 2901 VIA FORTUNA , SUITE 600 AUSTIN TX, 78746	Project: REDBUD 8N Project Number: 20220813-1610-COMPLETIONS Project Manager: ANDREW PARKER Fax To:	Reported: 13-Oct-22 08:52
--	--	------------------------------

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
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Batch 2100717 - General Prep - Organics

LCS Dup (2100717-BSD1)

Prepared: 07-Oct-22 Analyzed: 10-Oct-22

GRO C6-C10	215	10.0	mg/kg	200	108	76.8-124	1.88	17.2		
DRO >C10-C28	203	10.0	mg/kg	200	101	74.9-127	0.0316	18.6		
Total TPH C6-C28	418	10.0	mg/kg	400	104	77.5-124	0.981	17.6		
Surrogate: 1-Chlorooctane	50.4		mg/kg	50.0	101	45.3-161				
Surrogate: 1-Chlorooctadecane	62.2		mg/kg	50.0	124	46.3-178				

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Amerdev</u> Project Manager: <u>Andrew Parker</u> Address: <u>On File</u> City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: <u>20220813-1610-completions</u> Project Location: <u>Redbud 8N</u> Sampler Name: <u>Christopher Turner</u>		BILL TO P.O. #: <u>20220813-1610-completions</u> Company: <u>Amerdev</u> Attn: <u>a.parker@amerdev.com</u> Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____		ANALYSIS REQUEST	
Lab I.D.		Sample I.D.		MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : _____ ACID/BASE: _____ ICE / COOL _____ OTHER : _____	
H224694 1 GS-04 2 GS-04S 3 GS-04S 4 GS-04S 5 GS-05 6 GS-05 7 GS-05 8 GS-05W 9 GS-05W 10 GS-06		* 4.5 FT 0-2 FT 2-4 FT 4.5 FT 4.5 FT 5.5 FT 6.5 FT 0-2 FT 2-4 FT 4.5 FT		(G)RAB OR (C)OMP. # CONTAINERS MATRIX PRESERV SAMPLING	
DATE: <u>10-05</u> TIME: <u>9:01</u>		DATE: _____ TIME: _____		DATE: _____ TIME: _____	
Relinquished By: <u>CK</u> Date: <u>10-6-22</u> Time: <u>1408</u>		Received By: <u>[Signature]</u> Date: _____ Time: _____		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____ All Results are emailed. Please provide Email address: _____	
Delivered By: (Circle One) UPS - Bus - Other: _____		Observed Temp. °C <u>36</u> Corrected Temp. °C <u>30</u>		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked BY: <u>[Signature]</u> (Initials)	
Turndown Time: _____ Thermometer ID #113 Correction Factor -0.6°C		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Corrected Temp. °C		REMARKS: <u>*ID changed per customer 10-10/12/22</u>	



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: Amerex
 Project Manager: Andrew Parker
 Address: On File State: _____ Zip: _____
 City: _____
 Phone #: _____ Fax #: _____
 Project #: _____ Project Owner: _____
 Project Name: 20220813-1610-completions
 Project Location: Redbud 8N
 Sampler Name: Christopher Turner

P.O. #: 20220813-1610-completions
 Company: Amerex
 Attn: aparker@amerex.com
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
<u>H224694</u>												
31	GS-01	ZF+	G 1						10-06	8:25	✓	Chloride
32	GS-01S	OFF								8:29	✓	TPH (GRO+DRO+MRO)
33	GS-02	OFF								8:34	✓	BTEX (Benzene)
34	GS-03	ZF+								8:40	✓	
35	GS-03E	OFF								8:43	✓	
36	Redbud Backfill		G 4						10-06	12:28	✓	

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Relinquished By: AT Date: 10-6-22 Received By: [Signature]
 Time: 1408 Date: _____
 Relinquished By: _____ Date: _____
 Time: _____ Received By: _____

Delivered By: (Circle One) Observed Temp. °C 36 Sample Condition Cool Intact Yes No
 Corrected Temp. °C 3.0 Yes No

Turnaround Time: _____ Standard Rush
 Thermometer ID #113 Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
 Correction Factor -0.5°C Yes No No No Corrected Temp. °C



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

October 12, 2022

ANDREW PARKER

AMEREDEV

2901 VIA FORTUNA , SUITE 600

AUSTIN, TX 78746

RE: REDBUD 8N

Enclosed are the results of analyses for samples received by the laboratory on 10/06/22 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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, prominent 'C' at the beginning.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

AMEREDEV
 ANDREW PARKER
 2901 VIA FORTUNA , SUITE 600
 AUSTIN TX, 78746
 Fax To:

Received:	10/06/2022	Sampling Date:	10/06/2022
Reported:	10/12/2022	Sampling Type:	Soil
Project Name:	REDBUD 8N	Sampling Condition:	Cool & Intact
Project Number:	20220813-1610-COMPLETIONS	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: GS - 10 4.5 FT (H224711-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/11/2022	ND	2.22	111	2.00	0.232	
Toluene*	<0.050	0.050	10/11/2022	ND	2.10	105	2.00	0.153	
Ethylbenzene*	<0.050	0.050	10/11/2022	ND	2.03	101	2.00	0.491	
Total Xylenes*	<0.150	0.150	10/11/2022	ND	6.18	103	6.00	0.756	
Total BTEX	<0.300	0.300	10/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	10/11/2022	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/10/2022	ND	216	108	200	0.0431	
DRO >C10-C28*	<10.0	10.0	10/10/2022	ND	221	110	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	10/10/2022	ND					

Surrogate: 1-Chlorooctane 74.7 % 45.3-161

Surrogate: 1-Chlorooctadecane 89.0 % 46.3-178

Cardinal Laboratories

* = 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

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Celey D. Keene, Lab Director/Quality Manager



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October 17, 2022

ANDREW PARKER

AMEREDEV

2901 VIA FORTUNA , SUITE 600

AUSTIN, TX 78746

RE: REDBUD 8N

Enclosed are the results of analyses for samples received by the laboratory on 10/10/22 16:36.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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.

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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.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

AMEREDEV
 ANDREW PARKER
 2901 VIA FORTUNA , SUITE 600
 AUSTIN TX, 78746
 Fax To:

Received:	10/10/2022	Sampling Date:	10/10/2022
Reported:	10/17/2022	Sampling Type:	Soil
Project Name:	REDBUD 8N	Sampling Condition:	Cool & Intact
Project Number:	20220813-1610-COMPLETIONS	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: REDBUD 8N TOPSOIL 01 (H224754-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/14/2022	ND	2.32	116	2.00	4.87	
Toluene*	<0.050	0.050	10/14/2022	ND	2.21	110	2.00	4.79	
Ethylbenzene*	<0.050	0.050	10/14/2022	ND	2.15	107	2.00	4.59	
Total Xylenes*	<0.150	0.150	10/14/2022	ND	6.48	108	6.00	4.14	
Total BTEX	<0.300	0.300	10/14/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/13/2022	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	10/13/2022	ND	193	96.3	200	0.921	
DRO >C10-C28*	<10.0	10.0	10/13/2022	ND	194	96.9	200	1.85	
EXT DRO >C28-C36	<10.0	10.0	10/13/2022	ND					

Surrogate: 1-Chlorooctane 89.2 % 45.3-161

Surrogate: 1-Chlorooctadecane 94.5 % 46.3-178

Cardinal Laboratories

* = 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

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Amerede</u> Project Manager: <u>Andrew Parker</u> Address: <u>On-File</u> City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: <u>20220813-1610-COMPLETIONS</u> Project Location: <u>Redbut 8N</u> Sampler Name: <u>Christopher Turner</u>		BILL TO P.O. #: <u>20220813-1610-COMPLETIONS</u> Company: <u>Amerede</u> Attn: <u>aparker@amerede.com</u> Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
FOR LAB USE ONLY Lab I.D. _____ Sample I.D. _____ <u>A224754</u> <u>Redbut 8N Topsoil 01</u>		(G)RAB OR (C)OMP. <u>G1</u> # CONTAINERS <u>1</u>	MATRIX GROUNDWATER _____ WASTEWATER _____ SOIL <input checked="" type="checkbox"/> <u>✓</u> OIL _____ SLUDGE _____ OTHER: _____ ACID/BASE: _____ ICE / COOL <input checked="" type="checkbox"/> <u>✓</u> OTHER: _____
DATE: <u>10-10-22</u> TIME: <u>18:36</u> Relinquished By: <u>[Signature]</u> Received By: <u>[Signature]</u>		DATE: <u>10.10.22</u> TIME: <u>18:00</u>	ANALYSIS REQUEST Chloride <input checked="" type="checkbox"/> <u>✓</u> TPH (Giro+Dro+Mro) <input checked="" type="checkbox"/> <u>✓</u> BTEX (Benzene) <input checked="" type="checkbox"/> <u>✓</u>
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____ Observed Temp. °C <u>4.3</u> Corrected Temp. °C <u>3.7</u>		Sample Condition Cool <input checked="" type="checkbox"/> <u>✓</u> Intact <input checked="" type="checkbox"/> <u>✓</u> No <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: _____ (Initials) Turnaround Time: _____ Standard <input checked="" type="checkbox"/> <u>✓</u> Bacteria (only) <input type="checkbox"/> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Observed Temp. °C _____ Corrected Temp. °C _____
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 analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.			

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 152080

CONDITIONS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 152080
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	11/17/2022