

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NAPP2131670294
District RP	
Facility ID	
Application ID	

Remediation Plan

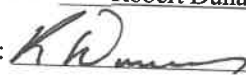
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

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

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

Printed Name: Robert Dunaway Title: Senior Environmental Engineer
Signature:  Date: 11/30/22
email: rhodunaway@eprod.com Telephone: 575-628-6802

OCD Only

Received by: Jocelyn Harimon Date: 11/30/2022

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

Signature: _____ Date: _____

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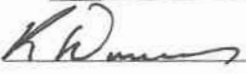
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Printed Name: Robert Dunaway Title: Senior Environmental Engineer
Signature:  Date: 11/30/22
email: rhodunaway@eprod.com Telephone: 575-628-6802

OCD Only

Received by: Jocelyn Harimon Date: 11/30/2022

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

Signature: Robert Hamlet Date: 4/20/2023



November 18, 2022

#5E31002-BG10

Mr. Robert Hamlet
 NMOCD District 2
 811 S. First St
 Artesia, New Mexico 88210

SUBJECT: Remediation Plan for the A-18 Lateral Release (nAPP2131670294), Eddy County, New Mexico

Mr. Hamlet:

On behalf of Enterprise Field Services LLC (Enterprise), Souder, Miller & Associates (SMA) has prepared this Remediation Plan for a release of produced water and natural gas related to oil and gas gathering activities at the A-18 Lateral (nAPP2131670294) site. The site is in Unit J, Section 28, Township 22S, Range 26E, Eddy County, New Mexico, on Federal land managed by the Bureau of Land Management (BLM). A topographic map showing the release location is included as Figure 1 and an aerial site map is included as Figure 2.

The gas portion of this release constitutes venting that occurred during an emergency or malfunction, as authorized by New Mexico Oil Conservation Division (NMOCD) regulations at NMAC 19.15.28.8.A and B(1). This release therefore is not prohibited by NMAC 19.15.29.8.A.

Table 1, summarizes information regarding the release.

Table 1: Release Information and Closure Criteria			
Name	A-18 Lateral	Company	Enterprise Field Services LLC
Incident Number	nAPP2131670294	Location	32.360476, -104.29649
Date Release Discovered	November 12, 2021	Land Status	Federal (BLM)
Source of Release	Hole in gathering pipeline		
Released Volume	4 barrels (bbls) Produced Water 1,193 Mcf Natural Gas	Recovered Volume	0 bbls Produced Water 0 Mcf Natural Gas
NMOCD Closure Criteria	<50 feet to groundwater		

1.0 Background

On November 12, 2021, a release of produced water and natural gas was discovered at the A-18 Lateral site due to a hole in the gathering pipeline. Site characterization including initial excavation, sampling, and delineation of the release area has been performed and is described in SMA's *Site Characterization Report for the A-18 Lateral Release (nAPP2131670294), Eddy County, New Mexico* dated August 3, 2022. The initial excavation area and delineation boring locations are illustrated on Figure 3 and an interpretive cross section is included as Figure 4. A copy of the approved request for extension is included in the attachments.

2.0 Site Information and Closure Criteria

The A-18 Lateral is an active gathering pipeline located approximately one mile west of Carlsbad, New Mexico on Federal (BLM) land at an elevation of approximately 3,266 feet above mean sea level (amsl).

Depth to Groundwater

A search of the New Mexico Office of the State Engineer (OSE) New Mexico Water Rights Reporting System (NMWRRS) and the United States Geological Society (USGS) National Water Information System yielded three results within ½-mile of the site (Appendix B). Two USGS wells are reported to be within 500 feet of the site with depths to groundwater of 166 and 199 feet below ground surface (bgs). Additionally, one OSE well is reported within ½-mile of the site and reports a depth to groundwater of 187 feet bgs. Based on this data and the elevation differential between the site and the wells, it is estimated that depth to groundwater at the site is 156 feet bgs. Registered wells in the vicinity are shown on Figure 1. Also, no groundwater was encountered in the borings advanced during site characterization activities, of which one boring was advanced to a depth of 101 feet bgs.

Wellhead Protection Area

As stated above, there are three known groundwater sources within ½-mile of the location, according to the OSE NMWRRS and USGS National Water Information System. At least one source appears to be used for livestock water.

Distance to Nearest Significant Watercourse

The site is located within McKittrick Draw as illustrated on Figures 1 and 2.

Closure Criteria

Table 2 demonstrates the Closure Criteria applicable to this location. Figures 1 and 2 demonstrate that, due to the proximity of McKittrick Wash and the high karst potential of underlying rock, the site does lie within a sensitive area as described in Paragraph (4) of Subsection (C) of 19.15.29.12 NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of less than 50 feet bgs.

3.0 Proposed Remediation Strategy

Based on the discussions with NMOCD personnel via web-conference on August 10 and November 2, 2022, SMA proposes to utilize a semi-active vapor extraction system to remediate the residual impacted soil and underlying rock at the release site. The semi-active system was discussed as favorable to accommodate the remote location of the release site which has no feasible access to an electrical connection. Placement of a generator within the channel of McKittrick Draw is inadvisable. The proposed system will employ solar-powered, inline ventilation fans mounted on vapor extraction wells. Lithology at the site appears to be favorable for vapor extraction and generally consists of alluvial fill underlain by dolomite interbedded with siltstone. The dolomite exhibits karst features with small vugs concentrated in lenses disbursed throughout the unit.

Source Removal Excavation

Following pipeline repair and initial remedial excavation and sampling, the excavation was backfilled with the stockpiled spoils to allow for drill rig access to the release area. Prior to installation of the vapor extraction system, the spoils will be re-excavated from the original excavation footprint and delivered to Lea Land, LLC's landfarm near Hobbs, New Mexico for disposal/remediation. The excavation will be backfilled with clean, imported material and graded to match existing surface topography.

Vapor Extraction System Pilot Test

A pilot test is planned to determine the suitability of the proposed vapor extraction system. The pilot test system will be based on three vapor extraction wells to be installed within the main body of the contaminant plume as identified on Figure 5.

Borings will be installed using a combination of hollow-stem auger and air-rotary drilling techniques. Following boring advancement, a four-inch diameter Schedule 40 PVC well casing with 0.020 slot screen will be installed within the boring. Total well depths and screening intervals will be determined based on the position of the borings within the contaminant plume and field data collected during well installation. The screened casing will be surrounded with 20-30 grade silica sand and topped with three feet of hydrated bentonite pellets to act as a seal to prevent surface water from entering the boring. The remainder of the well would be grouted to the surface with neat Portland cement.

Each well will be completed on the surface with an elevated six-inch diameter steel enclosure that will extend two feet above the ground surface. The steel enclosure will protect the PVC well casing and allow for a solar-powered, inline ventilation fan to be installed on top of the well. The elevated completion will be concreted in place with a two-foot by two-foot, four-inch thick concrete pad sloped away from the well to encourage drainage. A small ball valve sampling port will be installed near the base of the well enclosure to allow monitoring of the well gases. A solar panel and ancillary equipment will be installed immediately adjacent to the well on a separate support. The well construction detail is included as Figure 6.

SMA proposes to sample each vapor extraction well at the immediately after startup of the system, 12 hours after startup, 24 hours after startup and then weekly for two months. Sampling will be performed utilizing the small ball valve installed near the base of the steel vent surface enclosure; a flexible tube will be attached to the ball valve and gas from the wells will be collected using a XiTech 1060H sampling box in one-liter Tedlar sample bags for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260 and total petroleum hydrocarbons by EPA Method 8015. The samples will also be field screened for volatile organic compounds (VOCs) using a calibrated photoionization detector (PID) and for CO₂ concentrations using a multi-gas monitor.

A trend analysis of constituent concentrations will be conducted following the final sampling event to assess the effectiveness of pilot vapor extraction system. Should the system be deemed to be effective, the remainder of the system will be constructed as described below. Should the system be deemed ineffective, modifications will be evaluated, or the pilot system will be decommissioned.

Full Vapor Extraction System

Should the pilot test system be deemed effective as described above, the full vapor extraction system will include the three pilot study wells supplemented with an additional nine vapor extraction wells to achieve coverage of the contaminant plume as illustrated on Figure 5. The wells will be constructed and sampled in the same manner as the pilot study wells, with the sampling schedule modified to a quarterly basis.

4.0 Proposed Site Closure Determination Criteria

Based on the results of the pilot study and after consultation with the NMOCD, Closure Criteria will be proposed for NMOCD concurrence in the Pilot Study Report.

Upon approval of no further action required from the NMOCD, the vapor extraction wells will be properly plugged and abandoned in accordance with the well plugging plan of operations filed with the New Mexico Office of the State Engineer

A-18 Lateral Remediation Plan
November 18, 2022

Page 4 of 4

5.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization, regulatory liaison, and preparing this remediation plan. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this remediation plan, please contact Heather Woods at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:



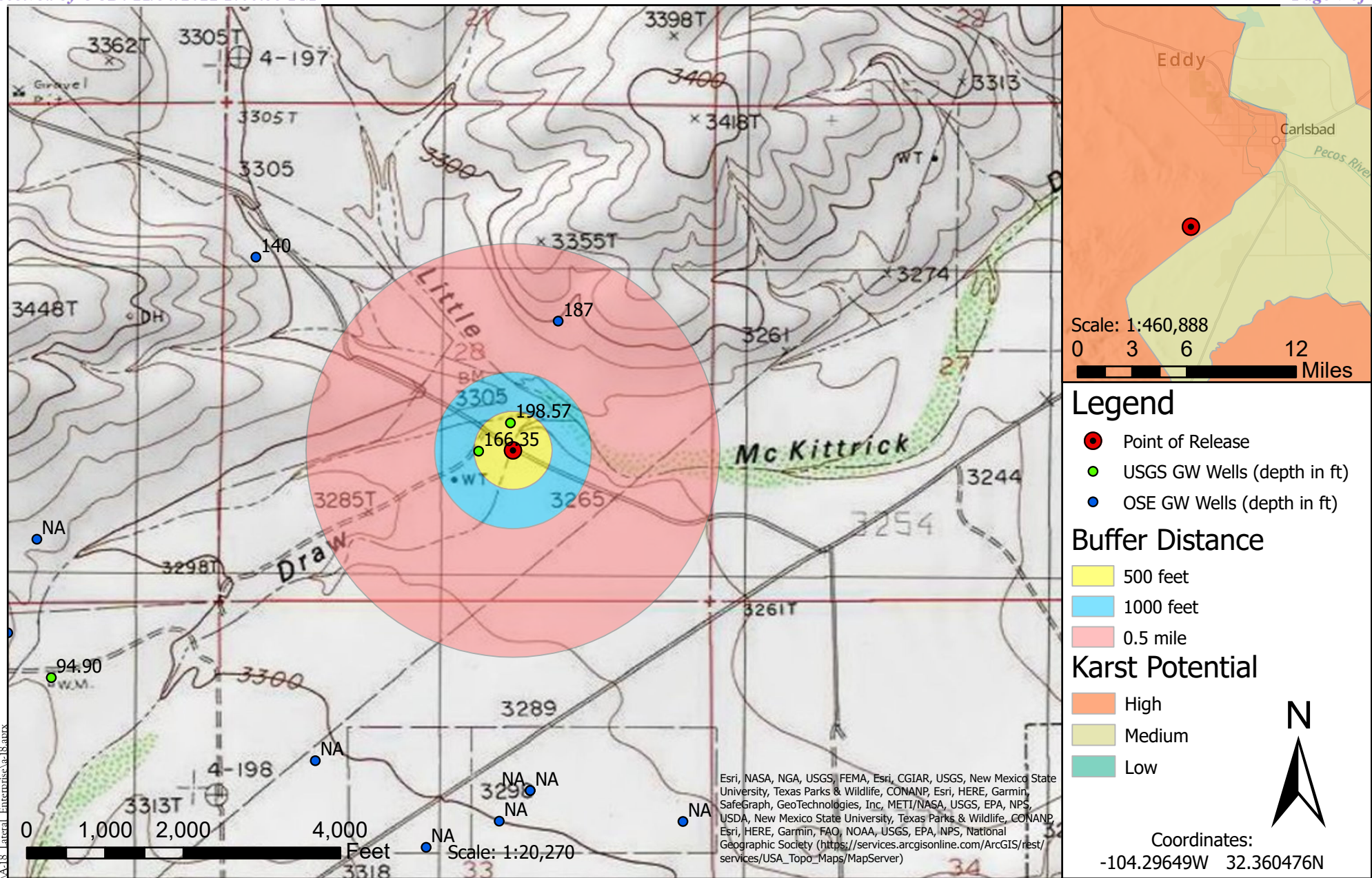
Heather M. Woods, P.G.
Project Geoscientist



Reid S. Allan, P.G.
Principal


ATTACHMENTS:

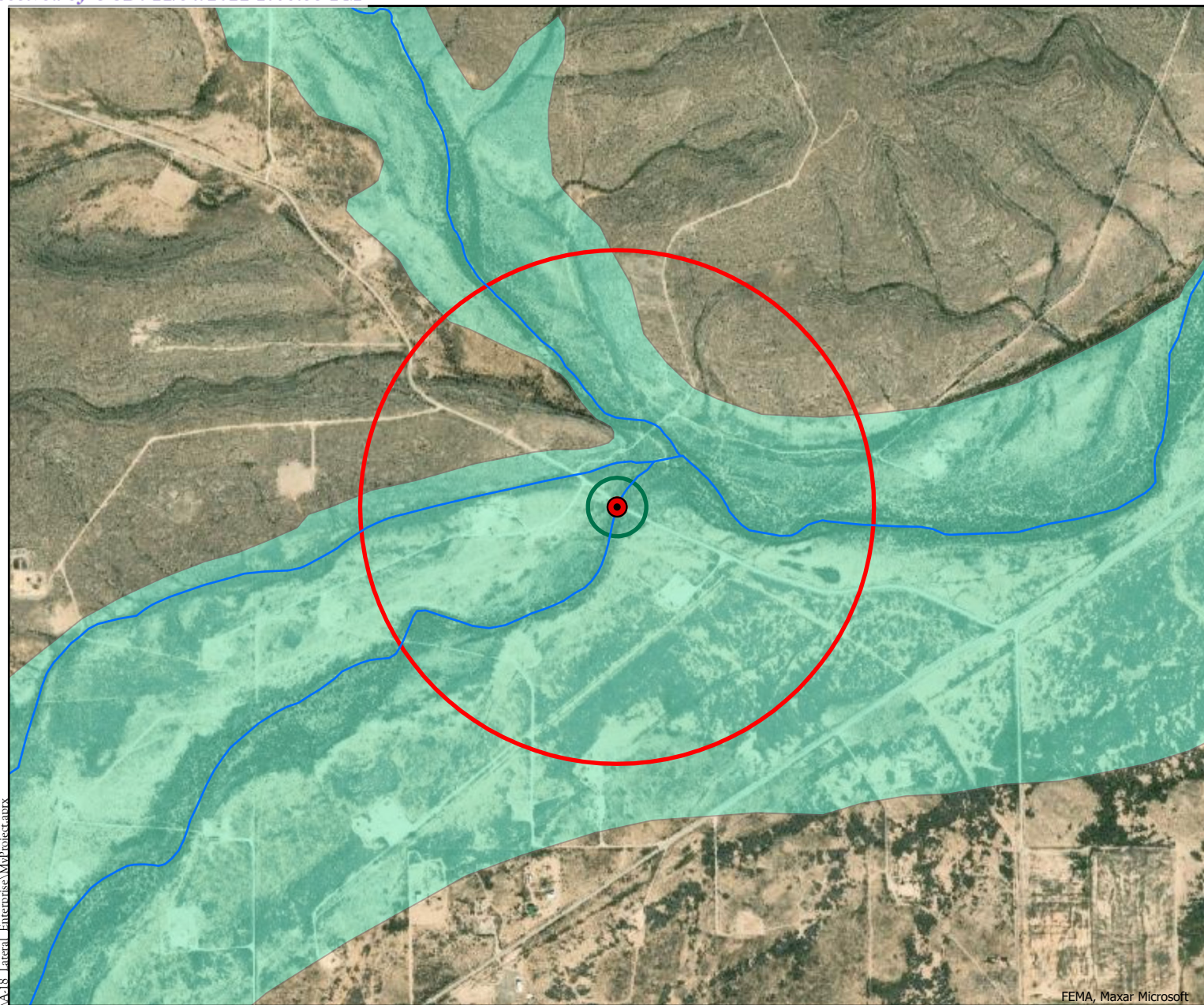
Figure 1: Topographic Site Map
Figure 2: Aerial Site Map
Figure 3: Excavation and Boring Location Map
Figure 4: Cross Section
Figure 5: Proposed SVE System Map
Figure 6: Well Construction Detail
Copy of Approved Extension Request



Topographic Site Map
A-18 Lateral - Enterprise Field Services LLC
UL: J S: 28 T: 22S R: 26E, Eddy County, New Mexico

Figure 1

Date Saved: 8/16/2022 By: _____ Date: _____ Descr: _____ By: _____ Date: _____ Descr: _____ © Souder, Miller & Associates, 2021, All Rights Reserved	Revisions Drawn _____ Date 8/22/2022 Checked _____ Approved _____	 <p>201 South Halagueno Street Carlsbad, New Mexico 88221 (575) 689-7040 Serving the Southwest & Rocky Mountains</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



Legend

- Point of Release
- Streams/Canals
- 0.5 Mile Radius
- 300 Foot Radius
- FEMA Flood Zones



Scale: 1:18,681
 0 1,500 3,000
 Feet

Coordinates:
 -104.29649W 32.360476N

FEMA, Maxar Microsoft

Aerial Site Map
 A-18 Lateral - Enterprise Field Services LLC
 UL: J S: 28 T: 22S R: 26E, Eddy County, New Mexico

Figure 2

Revisions

By: _____ Date: _____ Descr: _____
 By: _____ Date: _____ Descr: _____

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Drawn Sarahmay Schlea
 Date 4/14/2022
 Checked _____
 Approved _____




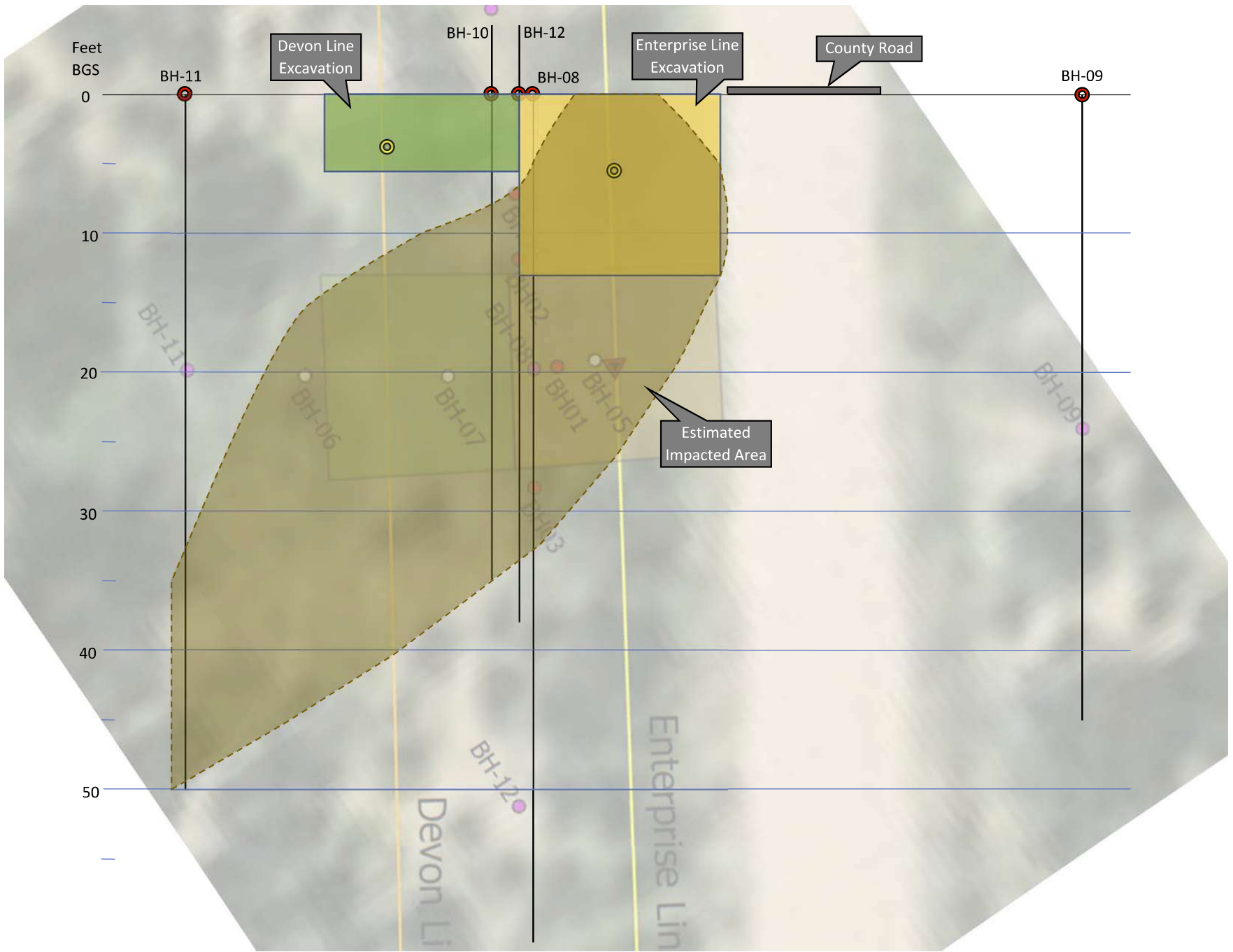
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Boring Location Map
A-18 Lateral - Enterprise Field Services LLC
UL: J S: 28 T: 22S R: 26E, Eddy County, New Mexico

Figure 3

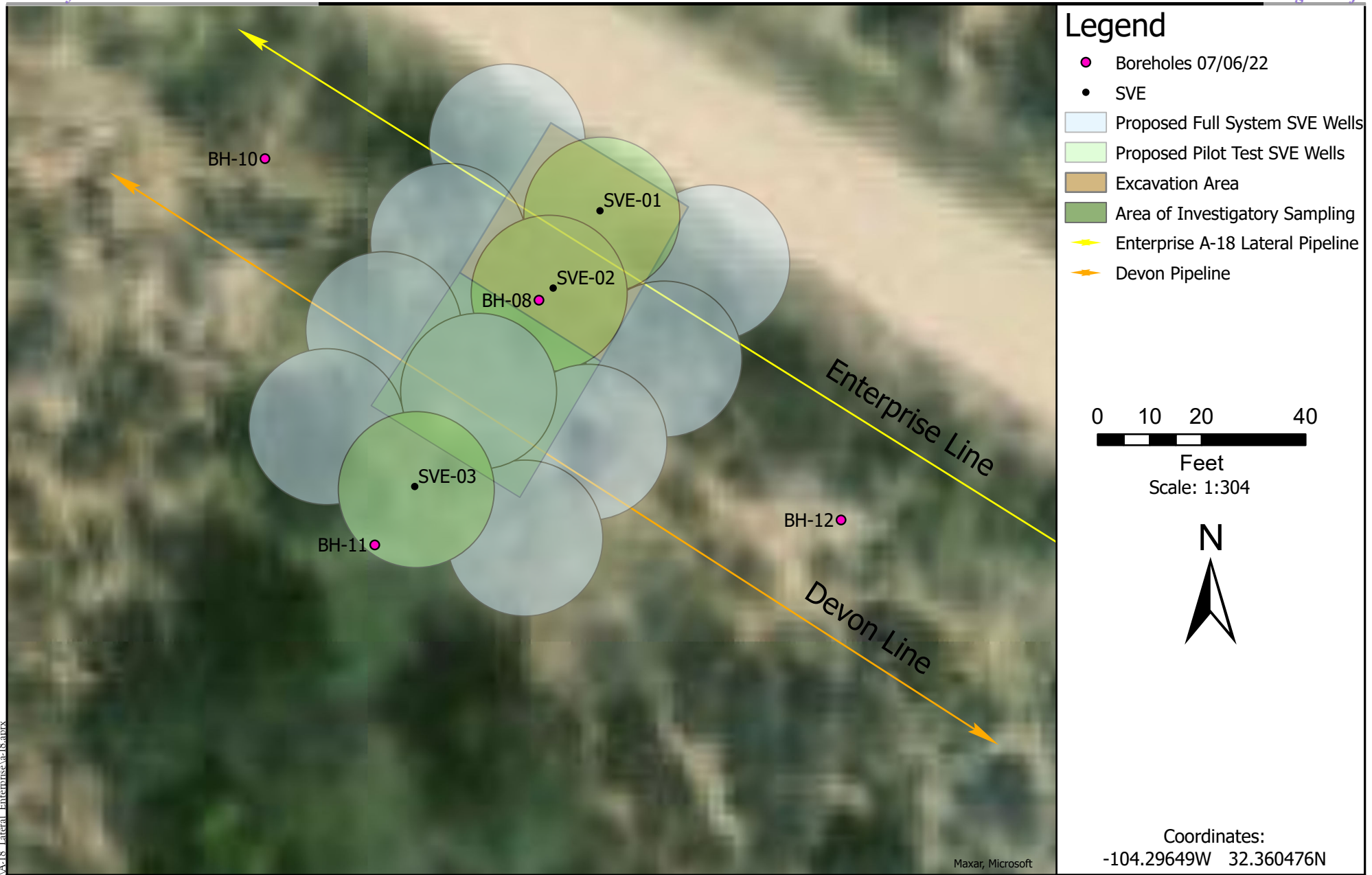
Date Saved: 7/26/2022	Revisions	Drawn Date Checked Approved	Sarahmay Schlea 8/3/2022		201 South Halaguena Street Carlsbad, New Mexico 88221 (575) 689-7040 Serving the Southwest & Rocky Mountains
	By: _____ Date: _____ Descr: _____ By: _____ Date: _____ Descr: _____ © Souder, Miller & Associates, 2021, All Rights Reserved				



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www.soudermiller.com


Cross Section
A-18 Lateral - Enterprise Field Services LLC
UL:J S:28 T:22S R:26E, Eddy County, New Mexico

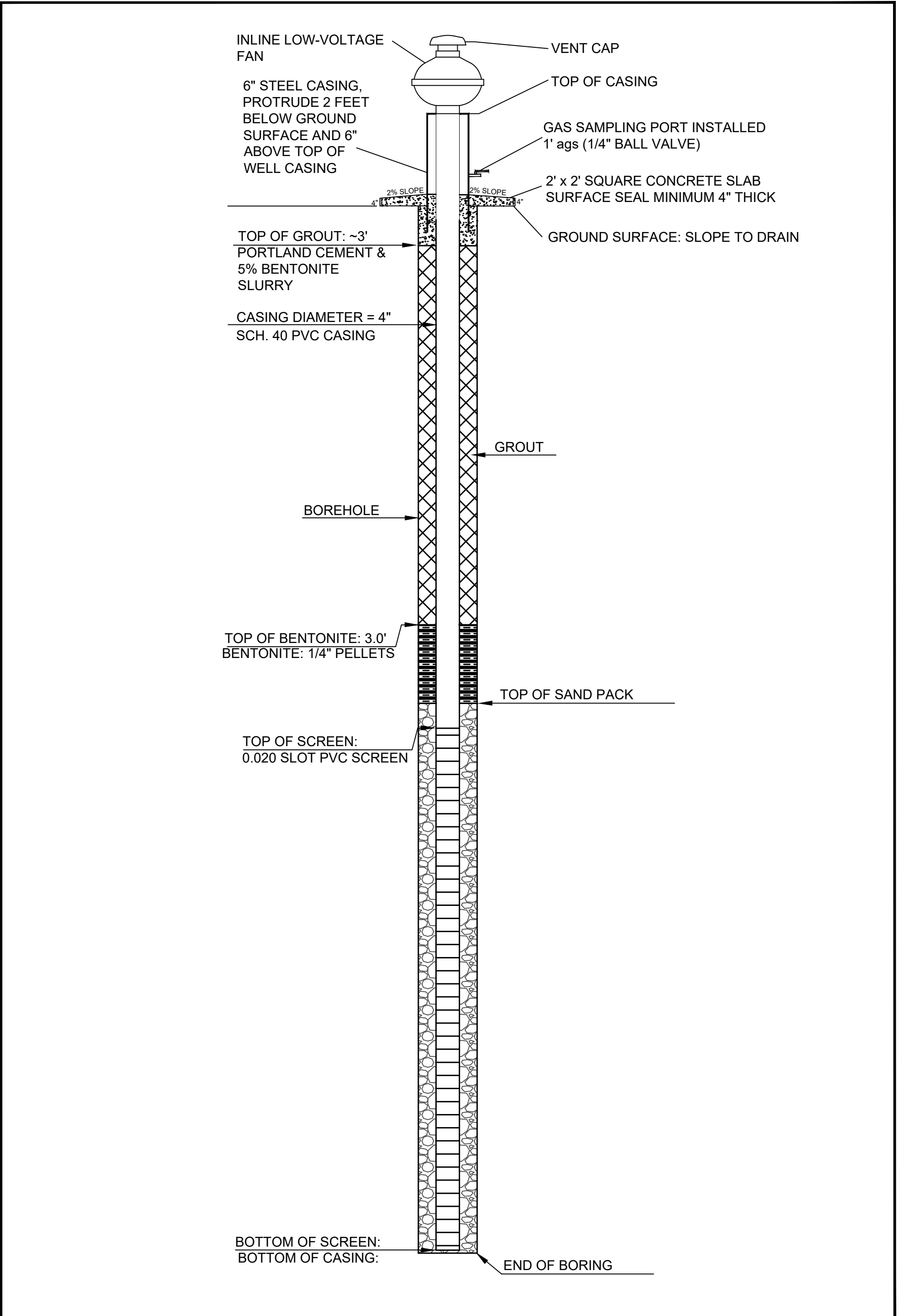
Designed:	HMW	Date:	10/21/2022
Drawn:	HMW	Scale:	NTS
Checked:	RSA	Project No:	5E31002
Revisions:		Sheet:	Figure 4




Proposed SVE System Map
A-18 Lateral - Enterprise Field Services LLC
UL: J S: 28 T: 22S R: 26E, Eddy County, New Mexico

Figure 5

Date Saved: 10/21/2022 User: jssj@deser	Revisions	Drawn		201 South Halagueno Street Carlsbad, New Mexico 88221 (575) 689-7040 Serving the Southwest & Rocky Mountains
	By: _____ Date: _____ Descr: _____ By: _____ Date: _____ Descr: _____ © Souder, Miller & Associates, 2021, All Rights Reserved	Sarahmay Schlea Date: 10/21/2022 Checked _____ Approved _____		





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WELL CONSTRUCTION DETAIL
A-18 LATERAL - ENTERPRISE FIELD SERVICES, LLC.
UL:J S:28 T:22S R:26E, EDDY COUNTY, NEW MEXICO

Drawn MAE	Checked AJE	Approved SAM
Date: SEPTEMBER 2022		
Scale: Horiz: NA Vert: NA		
Project No: 5E31002		
Sheet: FIGURE 5		

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Heather Woods

From: Dunaway, Robert <rhodunaway@eprod.com>
Sent: Tuesday, August 9, 2022 10:22 AM
To: Heather Woods
Subject: [EXTERNAL]FW: (Extension Approval) NAPP2131670294 A-18 LATERAL

Please include this in the A-18 final report when we finally get there.



Robert Dunaway
Senior Environmental Engineer
W: 575-628-6802
C: 361-815-0990
rhodunaway@eprod.com

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Tuesday, August 9, 2022 7:16 AM
To: Dunaway, Robert <rhodunaway@eprod.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Subject: [EXTERNAL] (Extension Approval) NAPP2131670294 A-18 LATERAL

[Use caution with links/attachments]

RE: Incident #NAPP2131670294

Robert,

Your request for an extension to **November 6th, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>



From: Dunaway, Robert <rhodunaway@eprod.com>
Sent: Monday, August 8, 2022 5:29 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] Extension Request, nAPP2131670294

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Enterprise Field Services is requesting an extension of the A-18 Lateral remediation effort (nAPP2131670294) from 8/8/2022 to 11/8/2022. The previous request had been rejected and a Site Assessment and explanation was requested.

The Site Assessment has been completed and uploaded to the OCD portal as of Wednesday 8/3. The delay in completion was due to a two month wait time for a drilling crew for the core sampling. As mentioned in the last email (below) Enterprise has set up a meeting with OCD to discuss a path forward on Wednesday 8/10.



Robert Dunaway
Senior Environmental Engineer
W: 575-628-6802
C: 361-815-0990
rhodunaway@eprod.com

From: Dunaway, Robert
Sent: Wednesday, July 20, 2022 6:38 AM
To: 'ocd.enviro@state.nm.us' <ocd.enviro@state.nm.us>
Cc: 'Mendez, Brenda (BJMendez@eprod.com)' <BJMendez@eprod.com>; Reinermann, Paul (PSREINERMANN@eprod.com) <PSREINERMANN@eprod.com>
Subject: Extension Request, nAPP2131670294

Enterprise Field Services is requesting an extension of the A-18 Lateral remediation effort (nAPP2131670294) from 8/8/2022 to 11/8/2022. Per the previous OCD and Enterprise discussions, Enterprise has completed soil boring to fully delineate the site. Lab results are forthcoming. After this, Enterprise will need to consult with the OCD to determine the best path forward to remediating the site.



Robert Dunaway
Senior Environmental Engineer
W: 575-628-6802
C: 361-815-0990
rhodunaway@eprod.com

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1000 Rio Brazos Rd., Aztec, NM 87410
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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 162690

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 162690
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Revised Remediation Plan is Approved. Please keep the OCD updated on the effectiveness of the pilot vapor extraction system. Contact the OCD if you have any further questions.	4/20/2023