

**Reclamation Plan for Rule 915.b.
Desert Eagle Operating/10797
Red Rocks 35-08
Location Number: 484359
3/15/2025**

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1.0 Location Description

1.1 Site Characterization

The site elevation is 5,563 feet. The environmental setting is arid disturbed grassland, which is sparsely vegetated. The area is previously disturbed from ranching, dirt roads, and oil and gas well development. Vegetation includes Blue Grama, Side-oats Grama, Western Wheatgrass, Great Plains Yucca, One-seed Juniper, Plains Prickly Pear, and Tree Cholla. There is no nearby surface water. The estimated depth to ground water is greater than 1,200 feet based on drilling experience at the nearby Red Rocks 1-13, API #05-071-09920, and other nearby Red Rocks wells. The area is not immediately upgradient of a wetland or riparian corridor. It is relatively flat, as shown on the attached Construction Layout Drawing (Attachment A). The pre-disturbance vegetation coverage is an estimated 75 percent. The Oil and Gas location was approved for an approximately 1.10 acre working pad during well development. There is an approximately 8-foot elevation change across the Working Pad Surface. To minimize vegetation removal and soil disturbance to the area sufficient to site and level the drill rig and equipment and approved on the Form 2A, less than the full 1.10 acres was utilized. The production pad is estimated to be 0.22 acres with an estimated 0.33 acres remaining for reclamation. With an approximately 0.04 acre area disturbed by access road construction and an approximately 0.01 acre area disturbed by off location flowline installation, the total maximum estimated disturbed area is .55 acres, Table 1.

Table 1. Disturbance Area

Location	Oil and Gas Location Disturbance (ac)	New Access (ac)	Flowlines (ac)	Total Disturbance (ac)	Well Pad	Interim Reclaimed Area (ac)
Red Rocks 35-08	0.5	0.04	0.01	0.55	0.22	0.33

There are no utilities corridors near the location. The Red Rocks 35-08 well was air-drilled, there was no mud used, no acid stimulation, no flow back, there were no hydrocarbons or water produced. Topographic, a third party environmental company, performed soil sampling and analysis at five locations within the Red Rocks OGD (Attachment B, Figure A-1, Figure A-1, Figure A-3). The report finds *'the naturally occurring pH levels across the Analysis Area exceed Table 915-1 Cleanup Concentration values. Given that the highest recorded pH values were from undisturbed background samples, further delineation is not warranted or feasible. It is the professional opinion of Topographic that additional investigation would not provide meaningful data, as native soils inherently exceed regulatory thresholds.'*

1.2 Reference Area Characterization

The Oil and Gas Location is located on disturbed arid ranchland. Vegetation includes Blue Grama, Side-oats Grama, Western Wheatgrass, Great Plains Yucca, One-seed Juniper, Plains Prickly Pear, and Tree Cholla. The Reference Area is located at 37.471798, -103.538466. The Reference Area was identified during a July 2022 on-site

environmental review based on a location with vegetation and cover consistent with the Red Rocks 35-08 Location. Soil sample areas are provided in Attachment B, Figure A-1, Figure A-1, Figure A-3 and Figure 1 (2pages), RR 35-08 Proposed Soil Testing Location Map.

1.3 Timing

Schedule of completed and planned and reclamation activities including, but not limited to:

1. Soil sampling - Investigative soil sample results taken on 1/29/2025 were received from Eurofin Denver on 2/29/2025 (Attachment E). No additional soil samples are required. The Red Rocks 35-08 well was air-drilled, there was no mud used, no acid stimulation, no flow back, there were no hydrocarbons or water produced. Rule 915.e.(2).c Guidance. E&P Waste Spills and Releases will broadly fall into two categories of liquid wastes: hydrocarbons (crude oil and condensate) and produced water. • For Spills and Releases of hydrocarbons only, where produced water is not known to be Spilled, Operators will analyze for the Table 915-1 Organic Compounds in Soils and Soil TPH (C6-C36). • For Spills and Releases that are known to contain produced water, may contain produced water, including commingled hydrocarbon and produced water Spills, or historical Releases where it is unknown whether the Released fluid was hydrocarbons, produced water, or a mixture Operators will analyze for the Table 915-1 Organic Compounds in Soils, Soil TPH (C6-C36), Soil Suitability for Reclamation, and Metals in Soils. Additionally, Topographic found, *'the naturally occurring pH levels across the Analysis Area exceed Table 915-1 Cleanup Concentration values. Given that the highest recorded pH values were from undisturbed background samples, further delineation is not warranted or feasible.'*
2. Consultation for a requested Seed mixture with the Surface Owner completed pre-drilling.
3. Stormwater BMP installation - wattles installed pre-drilling.
4. Soil movement and recontouring - not required.
5. Decompaction - Week of March 24th
6. Topsoil Placement - topsoil in-situ
7. Soil Amendments - Week of March 24th if required.
8. Seedbed preparation - Week of March 24th
9. Seeding - March 28th
10. Seedbed stabilization-March 29th-March 30

2.0 Soil Properties

2.1 Soil description

Soil at the Oil and Gas Location is Soil Unit VT - Villedry-Travessilla complex according to the Natural Resources Conservation Service Map Unit Descriptions. The typical profile for this soil type is silt loam and sandy loam with 1 to 8 percent slopes. The A-horizon is 0 to 5 inches of silt and sandy loam overlaying 4 to 15 inches of silt loam silty clay loam, and sandy loam. The soil type is well drained. The depth to the restrictive feature is alternately 20 to 40 inches and 6 to 20 inches. The NRCS soil unit descriptions are provided on the attached Custom Soils Resources Report (Attachment C). The soil map unit and its boundary are shown on the attached Soil Unit Map (Attachment D). The soil unit is listed below in Table 2.

Table 2. Soil Unit

Soil Unit	Drainage Class	Available Water Capacity	Depth to Restrictive Feature
VT – Villedry-Travessilla complex, 1 to 8 percent slopes	Well drained	6.6 inches	Alternately 20 to 40 inches and 6 to 20 inches.

2.2 Subsoil

No subsoil will be replaced.

2.3 Topsoil

As provided in the Stormwater Management Plan and the Topsoil Protection Plan provided with the Form 2A, vegetation removal and soil disturbance on the Oil and Gas Location was minimized to the area sufficient to site and level the drill rig and equipment. Minimal topsoil was disturbed, and no topsoil was effectively salvaged or stored. After germination, if yellowing or the leaves or other indications of lack of plant nutrition is observed, Operator will apply a recommended fertilizer to the existing topsoil in situ to promote plant health and growth.

2.4 Affected Soil Analysis/Soil Suitability for Reclamation

The lack of E&P waste as described in COGCC OPERATOR GUIDANCE RULE 915.E.(2).C. - SOIL SAMPLING AND ANALYSIS - SAMPLE ANALYSIS, that there was no hydraulic fracturing, acid stimulation, flowback, that there were no hydrocarbons or produced water, and the background pH in the test areas (Attachment E) indicates the soil was not affected by E&P waste does not support further testing or reclamation.

2.5 Contouring and Compaction Alleviation

The Oil and Gas Location is largely flat. There is slight variation in grade across the location. No cut and fill was required to support the location, and minimal topsoil was disturbed. The reclaimed area has been blended with the surrounding surface to restore the natural grade and hydrology patterns. Staked stormwater wattles are in place and additional wattles will be placed as needed to protect the area from stormwater run on and runoff.

To decompact soil layers, in March 2024 areas to be reclaimed were ripped to an estimated depth of 18 inches unless restrictive features were encountered at a shallower depth. Additional ripping to provide subsequent decompaction will be used to improve the soil structure and to promote soil aeration, water infiltration, and microbial activity, which will promote plant growth.

3.0 Seeding

3.1 Seed Mixture Consultation

The area will be re-tilled to re-establish a seedbed. The seed mix applied in March 2024 was identified as a site-specific seed mix in coordination with the Natural Resource Conservation Service District Conservationist, the Las Animas County Extension Service, and the surface owner. Germination and plant viability were compromised due to lack of moisture. The same seed mix will be applied with straw mulch added to help retain moisture.

3.2 Seed Mixture

The seed mix is listed in Table 3. The seed mix will be certified weed-free.

Table 3. Anticipated Seed Mix

Plant Species	Mix %	Common Name	Scientific Name	Applied Live Seed By Weight	Applied Live Seed per Square Foot
Grass	20	Blue Grama	Bouteloua Gracilis "alma"		
Grass	25	Side-oats Grama	Boutelous curtipendula "Niner"		
Grass	30	Western Wheatgrass	Pascopyrum Smithii 'Arriba"		
Grass	15	Buffalo Grass	Buchloe dactyloides 'Texoka'		
Grass	10	Green Needlegrass	Nassella Viridula "Lodorm'		
TOTAL	100			10-12 lbs./acre	80-100 seeds/sq.ft.

3.3 Seeding Methods

The seedbed will be re-tilled. The bed will be drill-seeded to ½" and straw mulch applied and crimped. Water will be applied as needed to support germination and viability.

4.0 Site Stabilization and Stormwater Erosion

4.1 Site Stabilization Methods

The Oil and Gas Location is largely flat. There is slight variation in grade across the location. There is an approximately 8-foot elevation change across the Working Pad Surface. The flow direction is shown on the Construction Layout Drawing (Exhibit A). During construction and drilling, wattles were placed on the east and west sides of the location. Staked wattles have been placed around the area visibly lacking plant growth, per the direction of surface flow, and are maintained. If there is evidence of ponding or erosion from the location, stormwater diversions will be created to avoid stormwater channelization. The pre-disturbance coverage is an estimated 75 percent. Revegetation will be monitored for growth and a vegetative cover that reflects 80 percent of the reference area condition. Straw mulch will be applied and crimped to prevent erosion and stabilize the bare seeded soil. Additional mulch will be added as needed.

4.2 Stormwater Controls

Stormwater inspection will occur at a minimum of once every 7 days, consistent with stormwater requirements administered by CDPHE. Inspection frequency may be reduced to once every 30 days after the site is stabilized with interim reclamation. During inspection, DEO will look for evidence of erosion, runoff, stabilization and vegetative success from interim reclamation. Inspections will ensure that erosion and sediment controls identified in this plan are maintained, functioning properly, and that there is no evidence of movement of soils, ponding, or erosion. Staked wattles have been placed around the area visibly lacking plant growth, per the direction of surface flow, and are maintained.

5.0 Weeds

5.1 Weed Management for Vegetation Establishment

Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. If weed infestation occurs, DEO will consult with the local weed control agency or other weed control experts.

5.2 Weed Management

No State or County-listed noxious weeds have been observed in or near the project area. If noxious weeds and undesirable species are observed, DEO will consult with the local weed control agency or other weed control experts to eradicate the weeds. DEO will undertake efforts to avoid damage to desirable plant seedlings if herbicide is used.

6.0 Fencing

Per landowner agreement, fencing is installed only at the wellhead.

7.0 Monitoring

Recordkeeping will include conformance with recordkeeping requirements in for compliance with all 100 Series rules and administered by CDPHE. Stormwater inspection will occur at a minimum of once every 7 days, consistent with stormwater requirements administered by CDPHE. Inspection frequency may be reduced to once every 30 days after ground disturbance is complete, and the site is stabilized with interim reclamation. During inspection, DEO will look for evidence of erosion, runoff, stabilization and vegetative success from interim reclamation. Inspections will ensure that erosion and sediment controls identified in this plan are maintained, functioning properly, and that there is no evidence of movement of soils, ponding, or erosion. DEO will monitor and record for compliance with the revegetation standards, a crop assessment of density and height, presences of weeds and other undesirable species, site stabilization, and stormwater erosion and will record deficiencies identified and corrected. Monitoring will be conducted more frequently during and after high precipitation events, snow melt, or significant weed treatments to identify and mitigate stabilization or any other issues before site degradation occurs.

8.0 Justifications

Per the Topographic report (Exhibit B, Figure A-1, Figure A-1, Figure A-3), the agronomic properties of the soil was not impacted by E&P activities. As reported, *the naturally occurring pH levels across the Analysis Area exceed Table 915-1 Cleanup Concentration values. Given that the highest recorded pH values were from undisturbed background samples, further delineation is not warranted or feasible. It is the professional opinion of Topographic that additional investigation would not provide meaningful data, as native soils inherently exceed regulatory thresholds.* Leaving the soil in-situ provides background levels of pH consistent with pH levels in the test area where the native grasses with root depth of up to 3' survive. The location is not immediately upgradient of surface water or riparian areas. The nearest mapped features are field verified gullies lacking an ordinary high water mark. There are no water wells within 0.5 miles of either location. The estimated depth to groundwater is greater than 1,200 feet, based on previous helium well drilling for Red Rocks 1-13 (API #05-071-09920) and other Red Rocks wells. The location is not within a Sensitive Area for water resources. There will be no cumulative impacts to water wells or surface water because of the distances to water wells and surface water, the depth to groundwater, well development without use of pits or ponds, and no liquids storage during production. There will be minimal air and noise pollution from the trucks and equipment for seeding and potential watering, less native ground will be disturbed, and more area of undisturbed ground will be available for wildlife. Leaving the soil in-situ and completing the reclamation plan in this arid, sparsely vegetated rangeland will not harm public health, safety, welfare, the environment and wildlife resources.

Individual plant root depth is provided in Table 3.

Table 3. Plant Root Depth

Common Name	Scientific Name	Root Depth*
Blue Grama	Bouteloua Gracilis "alma"	12" - 6'
Side-oats Grama	Boutelous curtipendula "Niner"	2' - 4'
Western Wheatgrass	Pascopyrum Smithii 'Arriba'	8" - 12'
Buffalo Grass	Buchloe dactyloides 'Texoka'	6'-8'
Green Needlegrass	Nassella Viridula "Lodorm'	4' - 5'

* US Forest Service

Sources:

<https://www.fs.usda.gov/database/feis/plants/graminoid/bougra/all.html#:~:text=Blue%20grama%20roots%20are%20usually,116%2C147%2C357%5D.>

<https://www.fs.usda.gov/database/feis/plants/graminoid/boucur/all.html#:~:text=Sideoats%20grama%20typically%20has%20many,roots%20per%20plant%20%5B215%5D.>

<https://www.fs.usda.gov/database/feis/plants/graminoid/passmi/all.html>

<https://www.fs.usda.gov/database/feis/plants/graminoid/boudac/all.html>

<https://www.fs.usda.gov/database/feis/plants/graminoid/nasvir/all.html#:~:text=Green%20needlegrass%20has%20a%20deep,needle%2Dand%2Dthread%20grass.>

Attachments

Reclamation Figure A-1

Supporting Data

Table 915-1

Root Depth Information Table

Vegetation Photo

Attachment A: Construction Layout Drawings (4)

Attachment B: Soil pH Analysis and Delineation Feasibility at Red Rocks Helium Wells

Figure A-1

Figure A-2

Figure A-3

Figure 1 (2 pages)

Attachment C: Custom Soil Resource Report

Attachment D: Soil Unit Map

Reclamation Plan for Rule 915.b.
Desert Eagle Operating/10797
Red Rocks 35-08

Reclamation Figure



Path: S:\ENVIRONMENTAL\DESERT_EAGLE_OPERATING_ILC\RED_ROCKS_SOIL_SAMPLING_-_LAS_ANIMAS_CO\2-0_WORK_PRODUCT\2-2_GIS_CAD\Pro\RedRocksReclamation\RedRocksReclamation.aprx

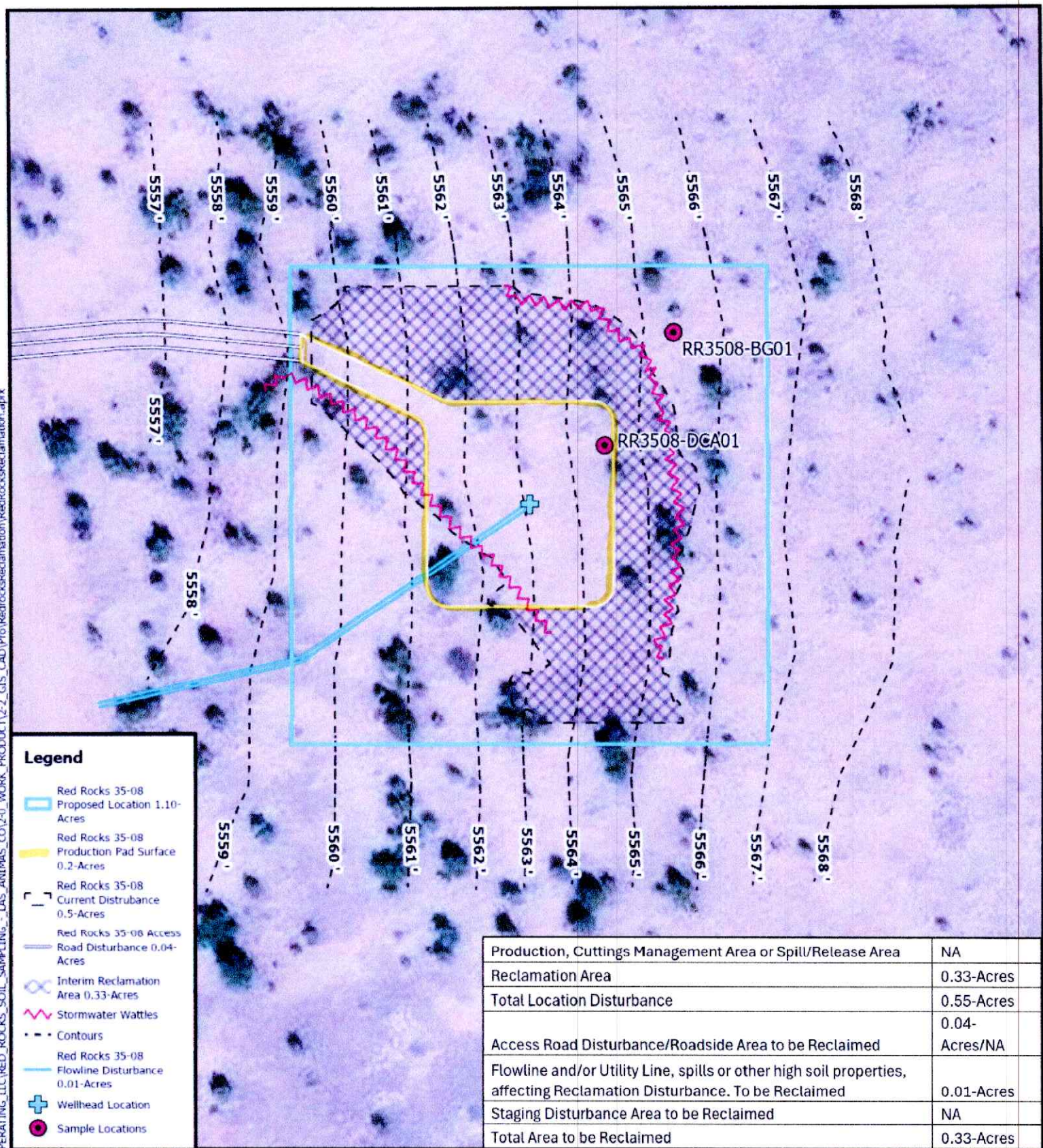
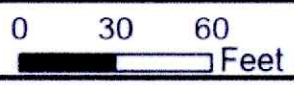


FIGURE 1 OF 1



**FIGURE A-1
RECLAMATION MAP
RED ROCKS 35-08
LAS ANIMAS COUNTY COLORADO
NE 1/4 SE 1/4 SEC. 35 T29S R55W 6TH P.M.
DESERT EAGLE OPERATING, LLC**

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
520 STACY COURT
UNIT B
LAFAYETTE, COLORADO
PHONE: (303) 666-0379
FAX: (817) 744-7554

DATE: 3/15/2025

Reclamation Plan for Rule 915.b.
Desert Eagle Operating/10797
Red Rocks 35-08

Supporting Data

1. Soil Data Analysis - Table 915-1 Attachment E
 2. Root Depth Information- Table 3 Attachment G
 - a. Existing species
 - b. Proposed seed mixture
 3. Vegetation Photo
-

Red Rocks 35-08		1/29/2025	1/29/2025
CLEANUP CONCENTRATIONS		SS1 RR3508-DCA01	SS2 RR3508-BG01
Contaminant of Concern	Concentrations		
Soil TPH (total volatile [C6-C10] and extractable [C10- C36] hydrocarbons)	500mg/kg	20	15
Soils and Groundwater - liquid hydrocarbons including condensate and oil	below visual detection limits	0	0
Soil Suitability for Reclamation			
Electrical conductivity (EC) (by saturated paste method)	<4mmhos/cm	1.30	0.81
Sodium adsorption ratio (SAR) (by saturated paste method)	<6	0.32	0.19
pH (by saturated paste method)	6-8.3	8.4	8.3
boron (hot water soluble soil extract)	2mg/l	11	10
Organic Compounds in Groundwater			
benzene	5µg/l		
toluene	560 to 1,000µg/l		
ethylbenzene	700µg/l		
xylene (sum of o-, m- and p- isomers = total xylenes)	1,400 to 10,000µg/l		
naphthalene	140µg/l		
1,2,4-trimethylbenzene	67µg/l		
1,3,5-trimethylbenzene	67µg/l		
Groundwater Inorganic Parameters			
total dissolved solids (TDS)	<1.25 X local background		
chloride ion	250mg/l or <1.25 X local background		
sulfate ion	250mg/l or <1.25 X local background		
Soils	Residential Soil Screening Level Concentrations (mg/kg)	Protection of Groundwater Soil Screening Level Concentrations (mg/kg)	
Organic Compounds in Soils			
benzene	1.2	0.0026 (M)	nd
toluene	490	0.69 (M)	nd
ethylbenzene	5.8	0.78 (M)	nd
xylene (sum of o-, m- and p- isomers = total xylenes)	58	9.9 (M)	nd
1,2,4-trimethylbenzene	30	0.0081 (R)	nd
1,3,5-trimethylbenzene	27	0.0087 (R)	nd
acenaphthene	360	0.55 (R)	nd
anthracene	1800	5.8 (R)	nd
benz(a)anthracene	1.1	0.011 (R)	nd
benzo(b)fluoranthene	1.1	0.3 (R)	nd
benzo(k)fluoranthene	11	2.9 (R)	nd
benzo(a)pyrene	0.11	0.24 (M)	nd
chrysene	110	9 (R)	nd
dibenzo(a,h)anthracene	0.11	0.096 (R)	nd
fluoranthene	240	8.9 (R)	nd
fluorene	240	0.54 (R)	0.0069
indeno(1,2,3-cd)pyrene	1.1	0.98 (R)	nd

1-methylnaphthalene	18	0.006 (R)	nd	nd
2-methylnaphthalene	24	0.019 (R)	nd	nd
naphthalene	2	0.0038 (R)	nd	nd
pyrene	180	1.3 (R)	nd	nd
Metals in Soils				
arsenic	0.68	0.29 (M)	6.90	6.90
barium	15000	82 (M)	220	270
cadmium	71	0.38 (M)	0.22	0.24
chromium (VI)	0.3	0.00067 (R)	0.19	nd
copper	3100	46 (M)	14	15
lead	400	14 (M)	10.0	11.0
nickel	1500	26 (R)	15	16
selenium	390	0.26 (M)	0.38	0.32
silver	390	0.8 (R)	0.043	0.056
zinc	23000	370 (R)	41	51

The letter "(R)" following a protection of Groundwater soil screening level indicates the concentration is derived from a risk-based approach. The letter "(M)" following a protection of Groundwater soil screening level indicates the concentration is derived from the drinking water MCL.

Attachment F

Root Depth

Table 3. Plant Root Depth

Common Name	Scientific Name	Root Depth*
Blue Grama	Bouteloua Gracilis "alma"	12" - 6'
Side-oats Grama	Boutelous curtipendula "Niner"	2' - 4'
Western Wheatgrass	Pascopyrum Smithii 'Arriba"	8" - 12'
Buffalo Grass	Buchloe dactyloides 'Texoka'	6'-8'
Green Needlegrass	Nassella Viridula "Lodorm'	4' - 5'

* US Forest Service



Looking North



Looking East

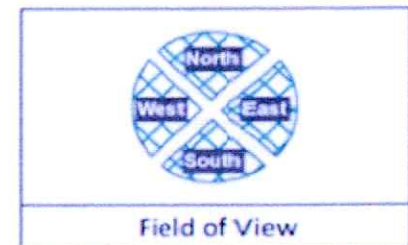


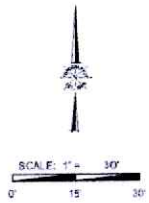
Looking West



Looking South

Operator: Desert Eagle Operating LLC
Location: Red Rocks 35-08
Photo Date: 3/10/25
Photo Time: 1:20 p.m.
Las Animas County
NE 1/4 SE 1/4 Sec. 35, T29S R55W 6th P.M





- EXISTING 1" CONTOUR
- EXISTING 5" CONTOUR
- - - PROPOSED FLOWLINE
- - - WORKING PAD SURFACE
- OIL AND GAS LOCATION
- STRAW WATTLES
- WELLHEAD
- ➔ DRAINAGE

WELLHEAD ELEVATIONS

GRADED ELEVATION 5,563.11'
UNGRADED ELEVATION 5,563.11'

EARTHWORK QUANTITIES

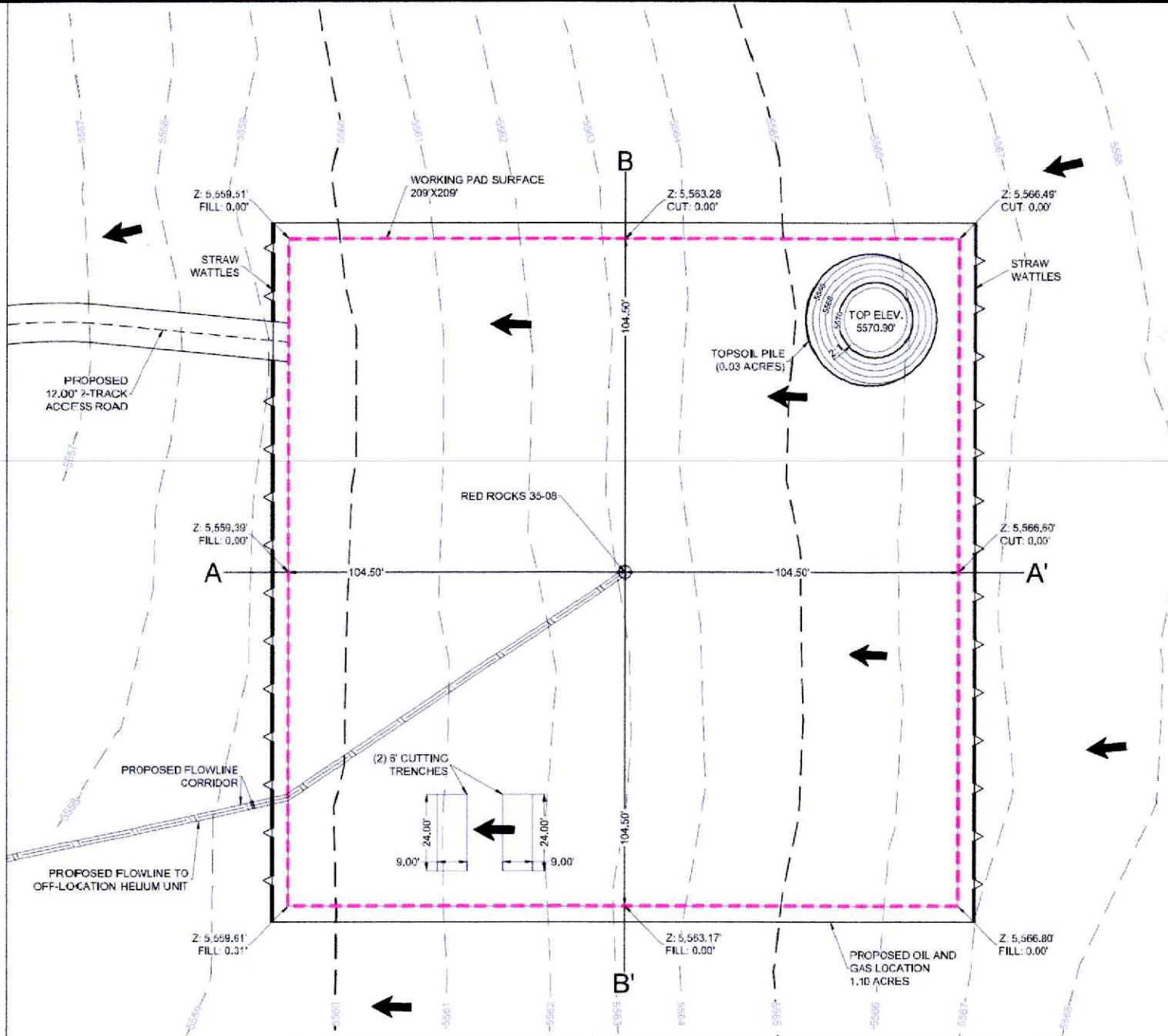
CUT: 186 CY
FILL: 35 CY
TOPSOIL (6"): 150 CY
EXPORT: 0 CY
FILL FACTOR: 1.15

DISTURBANCE AREAS

WORKING PAD SURFACE (AC): 1.00
OIL & GAS LOCATION (AC): 1.10
PROPOSED ACCESS ROAD (AC): 0.04
FLOWLINE CORRIDOR (AC): 0.16

NOTES

1. THIS SITE HAS NO NECESSARY EXCAVATION, AS THE DRILL RIG IS SELF-LEVELING. ALL EARTHWORK FOR THE SITE IS TOPSOIL PRESERVATION ONLY.
2. FLOWLINE CORRIDOR/ACREAGE ONLY INCLUDES ACREAGE OUTSIDE OF OIL AND GAS AREA.



Attachment A - Page 1



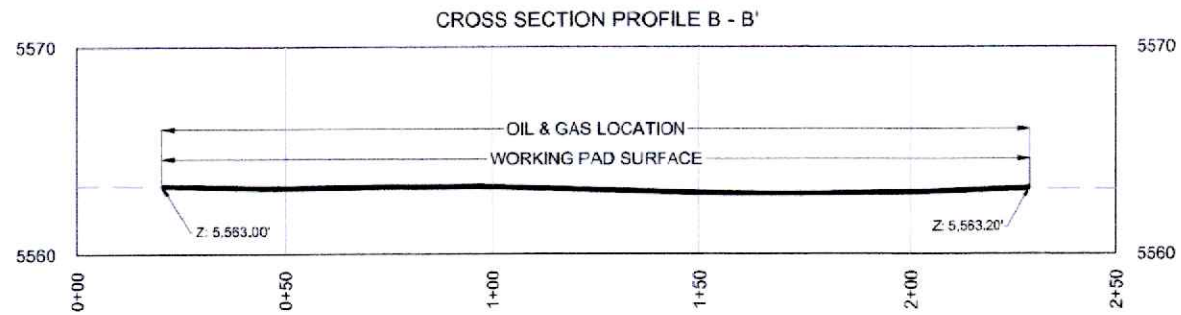
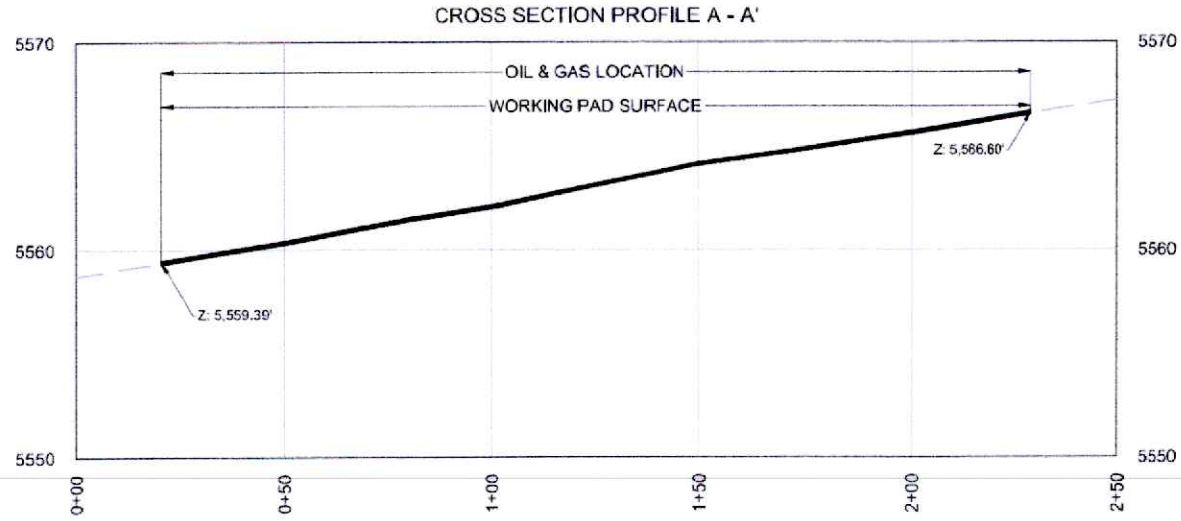
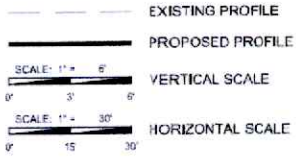
CONSTRUCTION LAYOUT - PLAN VIEW

RED ROCKS 35-08 LAS ANIMAS COUNTY
NE 1/4 SE 1/4 SEC. 35 T29S R55W 6TH P.M.

DESERT EAGLE OPERATING

PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL ENGINEERING OR SURVEY DOCUMENT.

DATE	11/10/2022
DRAWN BY:	TJM
REVIEWED BY:	CCC
SCALE	1" = 30'
SHEET	1 OF 1
REVISION	
XXX	XXXXXX
XXX	XXXXXX
XXX	XXXXXX



Attachment A - Page 2



CONSTRUCTION LAYOUT - CROSS SECTIONS

RED ROCKS 35-08 LAS ANIMAS COUNTY
NE 1/4 SE 1/4 SEC. 35 T29S R55W 6TH P.M.

DESERT EAGLE OPERATING

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL ENGINEERING OR SURVEY DOCUMENT.

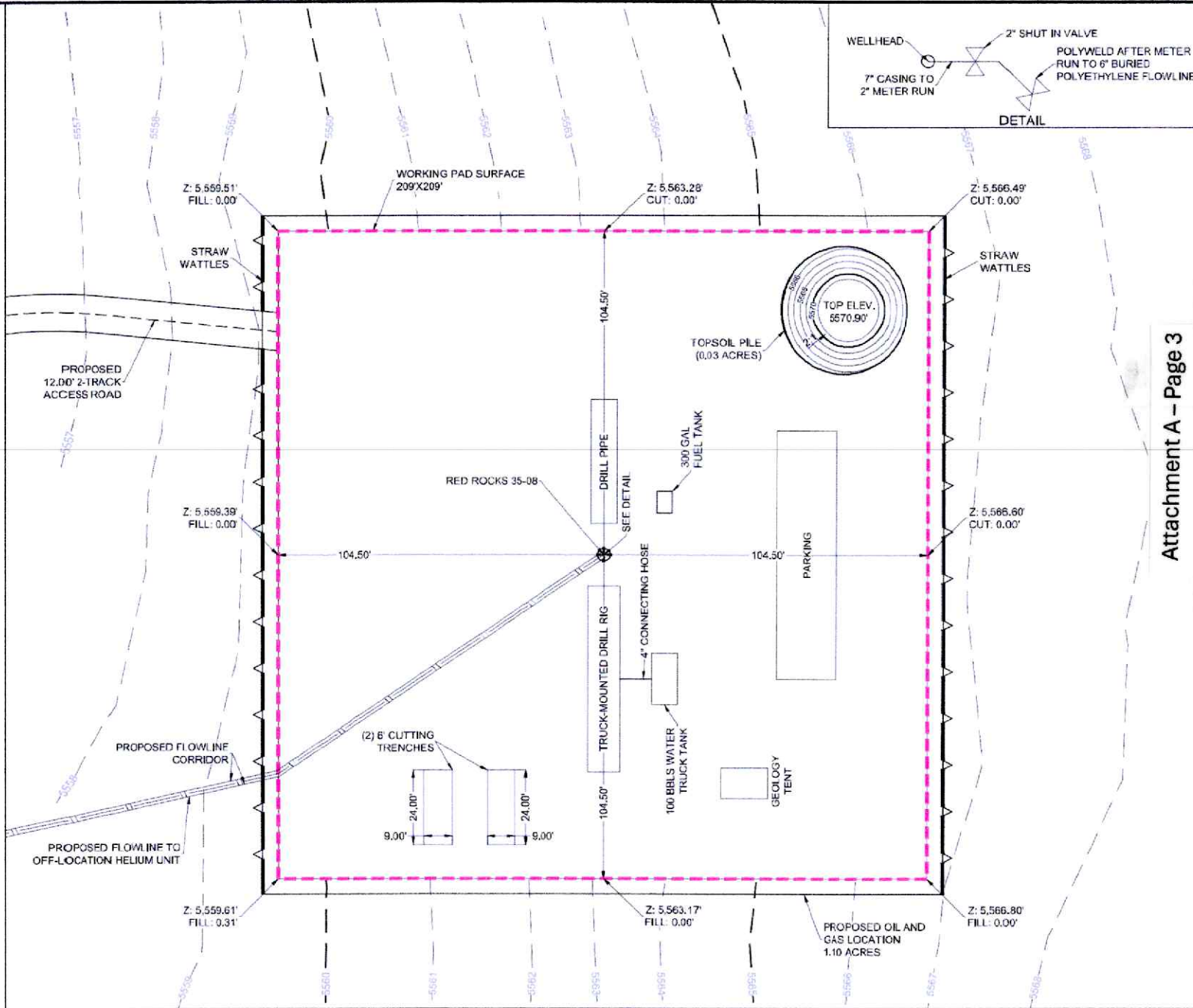
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DRAWN BY:	TJM
REVIEWED BY:	CCC
SCALE:	1" = 30'
SHEET:	2 OF 4
REVISION:	
XXX	XXXXXXXX
XXX	XXXXXXXX





NOTES:

- 1.) THERE IS NO DISTINCTION BETWEEN PRELIMINARY DRILL RIG LAYOUT AND WELL COMPLETION LAYOUT FOR THIS DEVELOPMENT.
- 2.) THERE IS NO STIMULATION LAYOUT FOR THIS DEVELOPMENT.
- 3.) THERE IS NO FLOWBACK FOR THIS DEVELOPMENT.
- 4.) THE WELL WILL BE DRILLED WITH AIR. THERE WILL BE NO HYDRAULIC FRACKING, STIMULATION, OR FLOWBACK. THE WELL IS NOT ANTICIPATED TO PRODUCE WATER. FRESHWATER WILL BE USED FOR SURFACE DUST CONTROL.



Attachment A – Page 3

PRELIMINARY DRILL RIG LAYOUT

RED ROCKS 35-08 LAS ANIMAS COUNTY
NE $\frac{1}{4}$ SE $\frac{1}{4}$ SEC. 35 T29S R55W 6TH P.M.

DESERT EAGLE OPERATING

PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL ENGINEERING OR SURVEY DOCUMENT.

DATE	11/10/2022
DRAWN BY:	TJM
REVIEWED BY:	CCG
SCALE	1" = 30'
SHEET	3 OF 4
REVISION:	
XXX	XXXXXX
XXX	XXXXXX
XXX	XXXXXX

Soil pH Analysis and Delineation Feasibility at Red Rocks Helium Wells

The following is a discussion of analytical results from soil samples collected from five (5) Red Rocks helium well locations (Red Rocks 1-13, 1-14, 1-16, 35-08, and 35-11) operated by Desert Eagle Operating, LLC in Las Animas County, Colorado. With the exception of pH, all Soil Suitability for Reclamation analytes were within acceptable ranges as listed in *Environmental Impact Prevention – 900 Series Table 915-1 Cleanup Concentrations*. This discussion focuses specifically on pH levels at the Red Rocks 35-08 helium well location and the feasibility of further delineation.

At each well location, soil samples were collected in accordance with ECMC Rule 915.e.(2) Guidance Document sampling protocols and ECMC Form 27 Site Investigation and Remediation Workplans approved sampling locations. Between two (2) and fourteen (14) samples were obtained per location based on investigatory requirements and ECMC guidance. Samples collected from on, or in the immediate vicinity of, each helium well pad are herein referred to as a sample series. Each sampling series included one (1) up-gradient background sample (denoted as BG-01) from an undisturbed area to establish a baseline for naturally occurring contaminants to be compared to Table 915-1 Cleanup Concentration values. Background sample locations were carefully chosen to avoid areas of known violations or potential impacts from drilling operations. **Table-1** below presents pH values for the background samples at each Red Rocks location.

Table-1

Sample ID	Result (pH)	Highest Result in Series (pH)
RR3511-BG01	7.8	8.5
RR3508-BG01	8.3	8.4
RR113-BG01	8.9	8.9^
RR114-BG01	8.5	8.8
RR116-BG01	8.8	8.8^

***Bolded entry indicates result outside of Table 915-1 Cleanup Concentration range**

**** ^ Indicates highest result in series is Background (BG)**

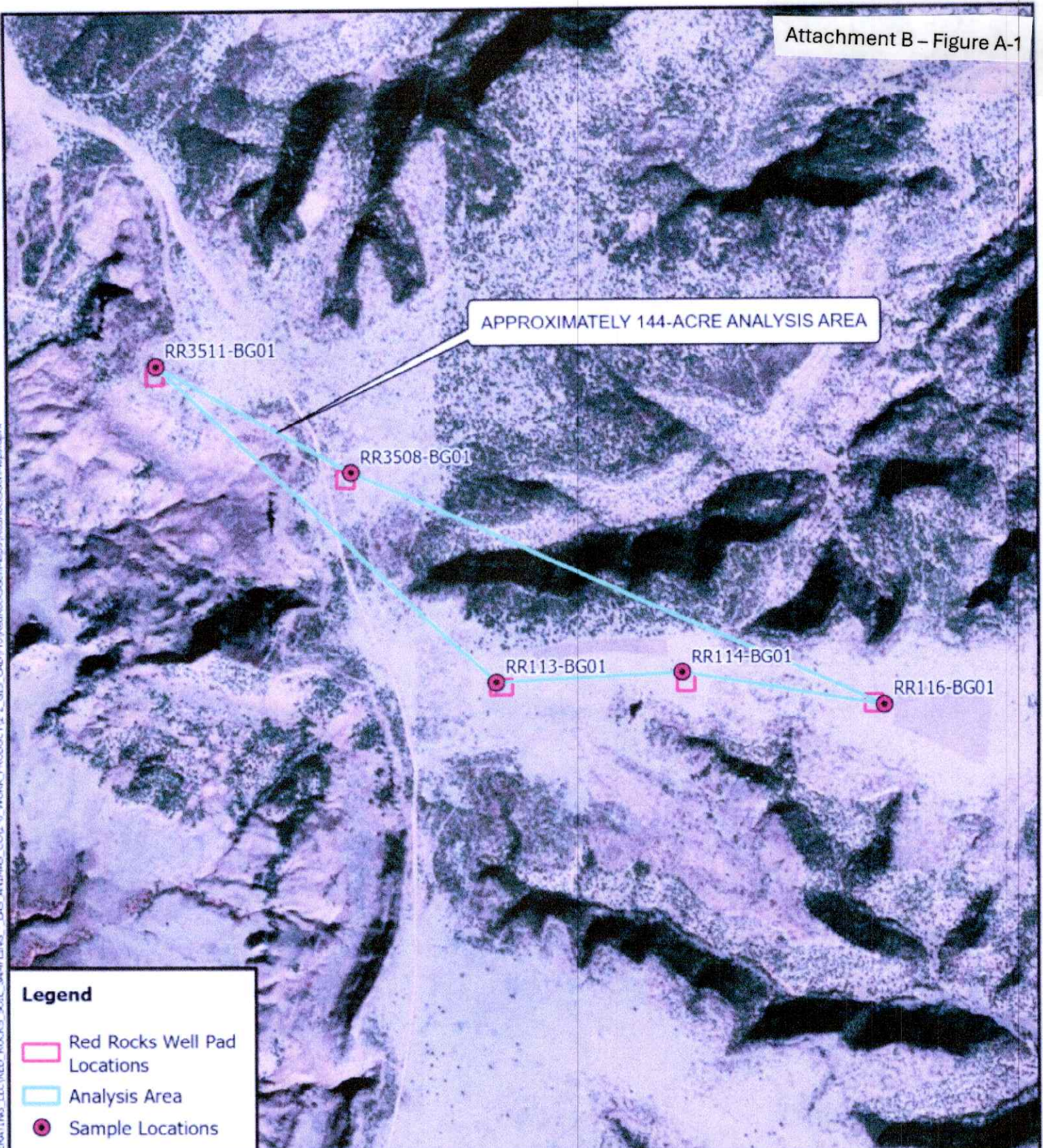
As shown in **Figure A-1**, the Analysis Area spans approximately 144-acres, wherein pH values in undisturbed native soils range from 7.8 to 8.9. Analytical results for the sample series collected from Red Rocks 1-13 and Red Rocks 1-16 exhibit the highest pH concentrations in soils collected from the background sample locations (RR113-BG01 and RR116-BG01). As these samples were collected from undisturbed native soils it is reasonably assumed that the pH concentrations are representative of the greater 144-acre Analysis Area and are not the result of helium well drilling operations.

The naturally occurring pH levels across the Analysis Area exceed Table 915-1 Cleanup Concentration values. Given that the highest recorded pH values were from undisturbed background samples, further delineation is not warranted or feasible. It is the professional opinion of Topographic that additional investigation would not provide meaningful data, as native soils inherently exceed regulatory thresholds.

Respectfully,

Austin Lindsay

Austin Lindsay
 Environmental Project Manager
 Remediation Consultant



Legend

- Red Rocks Well Pad Locations
- Analysis Area
- Sample Locations



FIGURE 1 OF 3

0 750 1,500
Feet

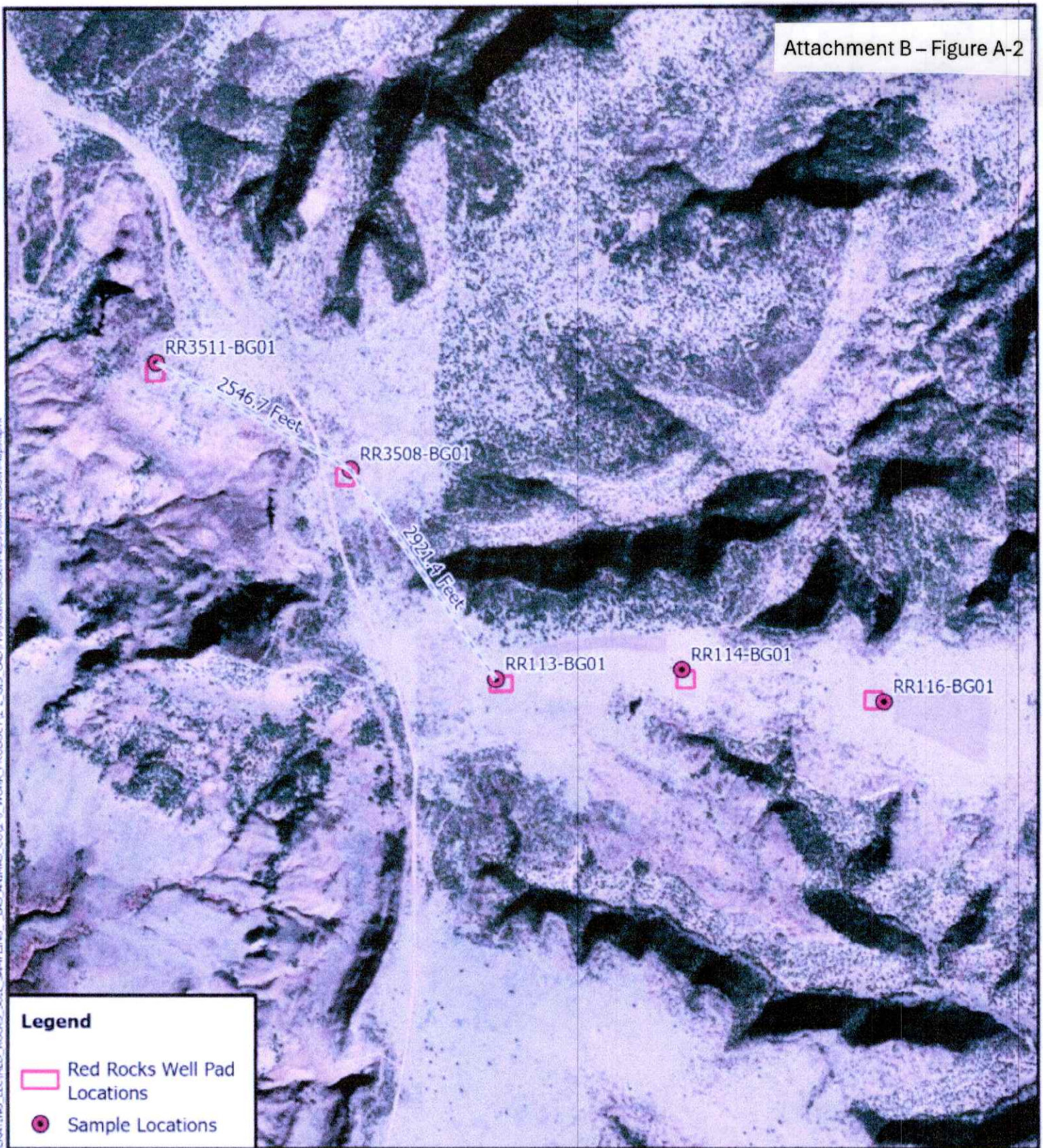
**FIGURE A-1
ANALYSIS AREA MAP
RED ROCKS WELL LOCATIONS
LAS ANIMAS COUNTY, COLORADO
DESERT EAGLE OPERATING, LLC**



481 WINSOTT ROAD
SUITE 200
BENBROOK, TEXAS 76126
PHONE: (817) 744-7512
FAX: (817) 744-7554

DATE: 3/6/2025

PART: S:\ENVIRONMENTAL\DESERT_EAGLE_OPERATING_LLC\RED_ROCKS_SOIL_SAMPLING_LAS_ANIMAS_CO\2-0_WORK_PRODUCT\2-2_GIS_CAD\Photo\RedRocksGenMaps\RedRocksGenMaps.aprx



Legend

- Red Rocks Well Pad Locations
- Sample Locations



FIGURE 2 OF 3

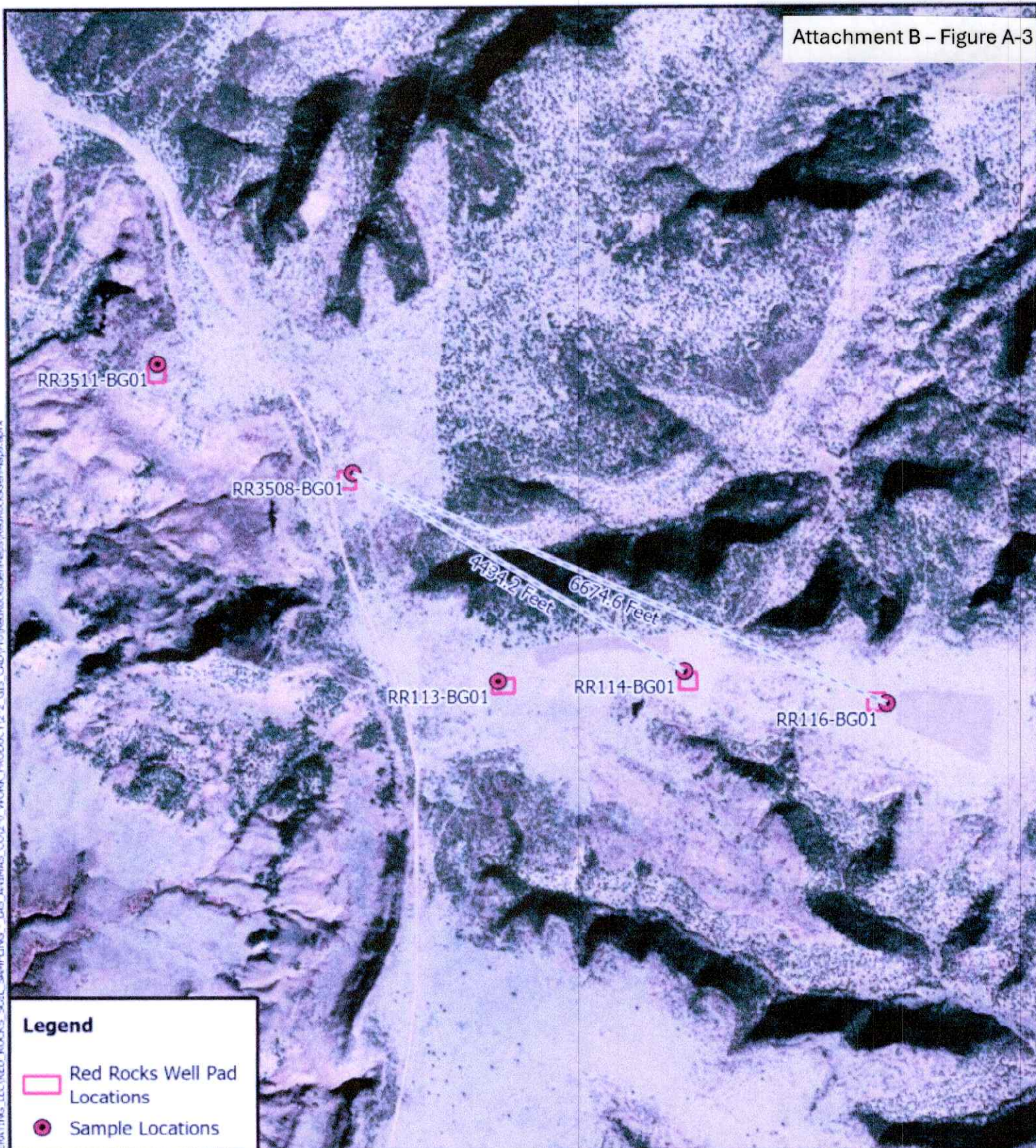
0 750 1,500
Feet

FIGURE A-2
ANALYSIS AREA DISTANCE MAP
RED ROCKS WELL LOCATIONS
LAS ANIMAS COUNTY, COLORADO
DESERT EAGLE OPERATING, LLC

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY

481 WINS COTT ROAD
 SUITE 200
 BENBROOK, TEXAS 76126
 PHONE: (817) 744-7512
 FAX: (817) 744-7554

DATE: 3/7/2025



Legend

- Red Rocks Well Pad Locations
- Sample Locations



FIGURE 3 OF 3

0 750 1,500
Feet

FIGURE A-3
ANALYSIS AREA DISTANCE MAP
RED ROCKS WELL LOCATIONS
LAS ANIMAS COUNTY, COLORADO
DESERT EAGLE OPERATING, LLC



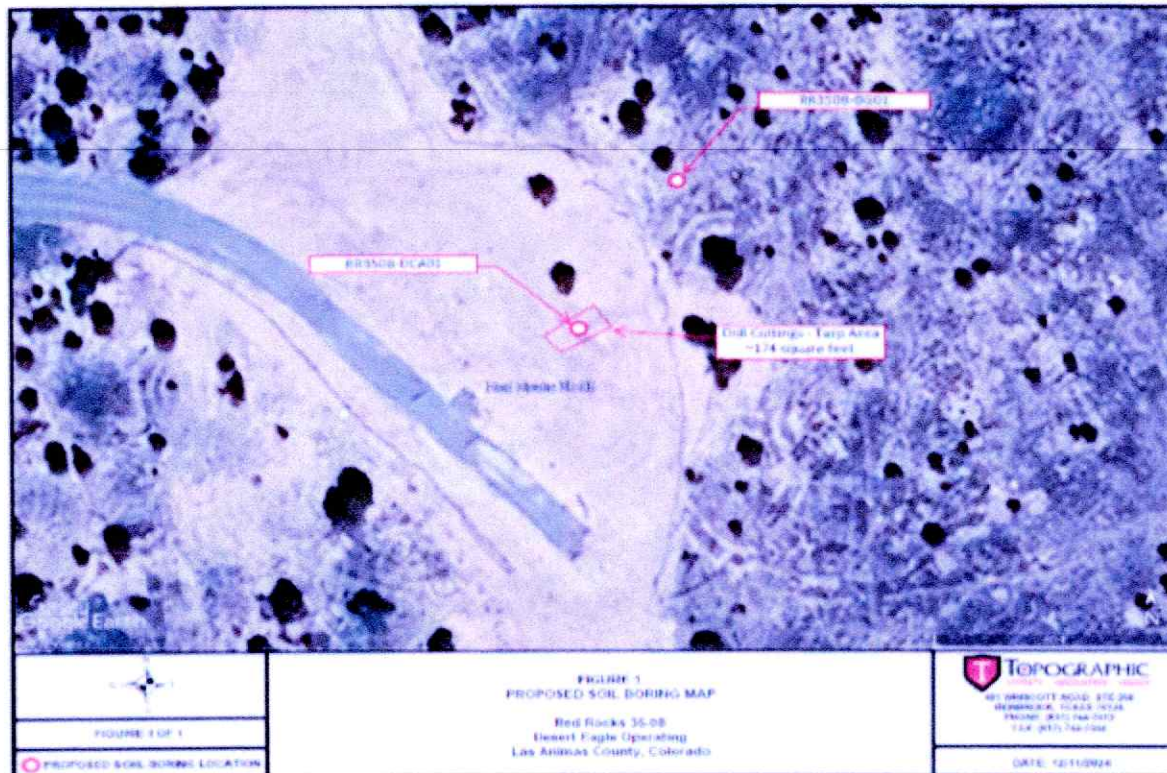
481 WINS COTT ROAD
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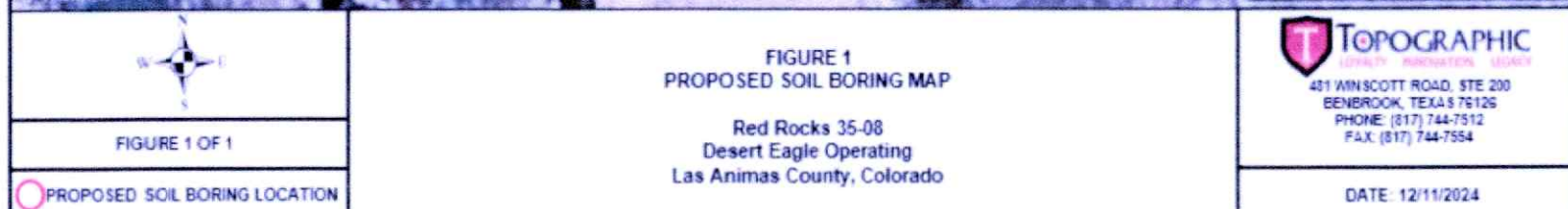
Reclamation Plan for Rule 915.b.
Desert Eagle Operating/10797
Red Rocks 35-08

Red Rocks 35-08 Desert Eagle Operating Las Animas County Colorado			
Sample ID	Depth (bgs)	Latitude	Longitude
RR3508-DCA01	1-3'	37.471960	-103.539412
RR3508-BG01	1-3'	37.472100	-103.539299

*DCA - Drill Cutting Area ~174 square feet
**BG - Background ~50' up-gradient



Reclamation Plan for Rule 915.b.
Desert Eagle Operating/10797
Red Rocks 35-08



Las Animas County Area, Colorado, Parts of Huerfano and Las Animas Counties

VT—Villedry-Travessilla complex, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3jq1
Elevation: 4,500 to 6,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 50 to 53 degrees F
Frost-free period: 130 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Villedry and similar soils: 50 percent
Travessilla and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Villedry

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over residuum weathered from sandstone

Typical profile

A - 0 to 4 inches: silt loam
BA - 4 to 7 inches: silt loam
Bt - 7 to 15 inches: silty clay loam
Btk - 15 to 25 inches: silty clay loam
Bk1 - 25 to 33 inches: clay loam
2Bk2 - 33 to 38 inches: gravelly loam
R - 38 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 2 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 6c

Hydrologic Soil Group: C

Ecological site: R069XY006CO - Loamy Plains, LRU's A and B
10-14 Inches, P.Z.

Forage suitability group: Loamy (G069XW017CO)

Other vegetative classification: Loamy (G069XW017CO), Loamy
Plains #6 (069XY006CO_2)

Hydric soil rating: No

Description of Travessilla

Setting

Landform: Scarps

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Slope alluvium and/or residuum weathered from
sandstone

Typical profile

A - 0 to 5 inches: sandy loam

AC - 5 to 11 inches: sandy loam

Bk - 11 to 14 inches: sandy loam

R - 14 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent

Depth to restrictive feature: 6 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: R069XY053CO - Sandstone Breaks LRU's A and B

Forage suitability group: Needs Field Review (G069XW050CO)

Other vegetative classification: Needs Field Review (G069XW050CO), Sandstone Breaks #53 (069XY053CO_2)

Hydric soil rating: No

Minor Components

Almagre

Percent of map unit: 8 percent

Landform: Interfluves

Landform position (two-dimensional): Summit, footslope

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R069XY006CO - Loamy Plains, LRU's A and B
10-14 Inches, P.Z.

Other vegetative classification: Loamy (G069XW017CO), Loamy Plains #6 (069XY006CO_2)

Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

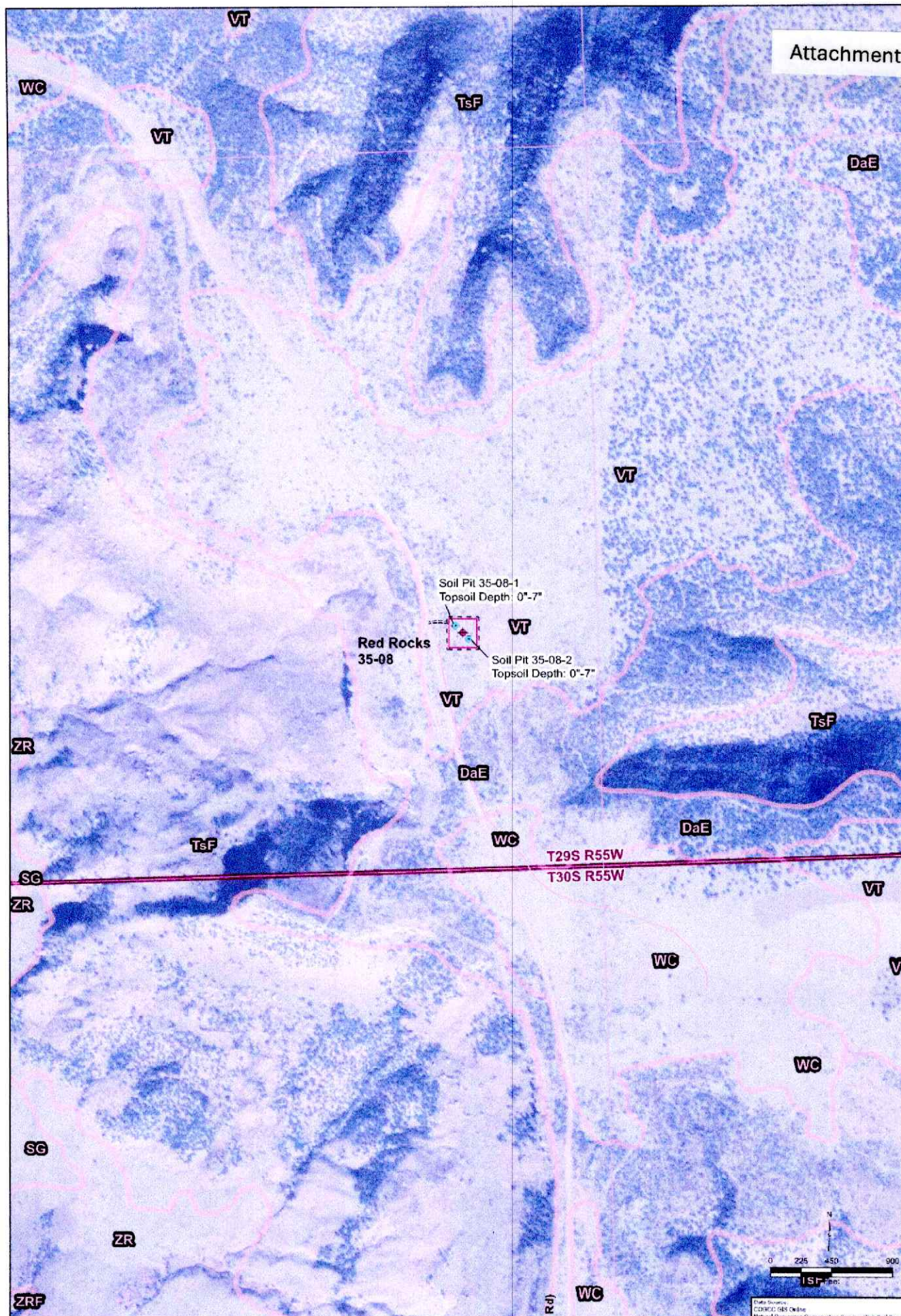
Landform: Scarps

Hydric soil rating: No

Data Source Information

Soil Survey Area: Las Animas County Area, Colorado, Parts of Huerfano and Las Animas Counties

Survey Area Data: Version 24, Aug 31, 2021



<p>Aote Technical, LLC</p> <p>Desert Eagle Operating</p> <p>Red Rocks 35-08</p> <p>Soil Unit Map</p> <p>Las Animas County</p> <p>NE¼SE¼ Sec.35, T29S R55W 6th P.M.</p> <p>Date: 10/19/22</p>	<p>Legend</p> <ul style="list-style-type: none"> Conventional Vertical Helium Gas Well Working Pac Surface Oil & Gas Location Flowline Tie In to Helium Processing Unit Access Road, Private Two-track 	<p>NRCS Soil Survey</p> <p>Soil Map Unit</p> <p>Soil Map Unit Description</p> <p>DaE: Dalerose-Rock outcrop complex, 3 to 25 percent slopes</p> <p>VT: Villedry-Travessilla complex, 1 to 8 percent slopes</p> <p>WC: Plughat-Villegreen complex, 1 to 4 percent slopes</p>
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