

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

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Cabinet Secretary

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Deputy Secretary

Dylan Fuge, Division Director (Acting)
Oil Conservation Division



BY ELECTRONIC MAIL ONLY

February 1, 2023

Randy Thompson
Blackhawk Energy (Jicarilla Energy Co.)
700 Dekalb Street
Farmington, NM 87401
rthompson@blackhawkenergycorp.com

RE: Blackhawk Energy (Jicarilla Energy Co.) - Notice of an Administratively Complete Discharge Permit Application for Espinosa Canyon Treatment Plant

Dear Mr. Thompson:

The New Mexico Energy, Minerals and Natural Resource Department's Oil Conservation Division (OCD) has reviewed your amended discharge permit application, dated January 19, 2023, for Blackhawk Energy's (Blackhawk), formerly known as the Jicarilla Energy Co., Espinosa Canyon Treatment Plant. OCD has determined that the amended discharge permit application is administratively complete.

Given OCD's determination, Blackhawk must provide public notice within 30 days of receipt of this letter (i.e., March 3, 2023) in accordance with the requirements of 20.6.2.3108(B) NMAC to the general public in the locale of the Compressor Station by each of the methods listed below:

1. Prominently posting a synopsis of the public notice at least 2 feet by 3 feet in size, in English and in Spanish, outside of the Compressor Station's main administrative office at 700 Dekalb St., Farmington, New Mexico, 87401 and at the OCD's Aztec Office located at 1000 Rio Brazos Rd., Aztec, New Mexico, 87410 for 30 days;
2. Providing written notice of the discharge by mail or electronic mail, to owners of record of all properties within a 1/3 mile distance from the boundary of the property where the discharge site is located; if there are no properties other than properties owned by the discharger within a 1/3 mile distance from the boundary of property where the discharge site is located, Blackhawk shall provide notice to owners of record of the next nearest adjacent properties not owned by the discharger;
3. Providing notice by certified mail, return receipt requested, to the owner of the discharge site if the applicant is not the owner; and

4. Publishing a synopsis of the notice in English and in Spanish, in a display ad at least three inches by four inches **not** in the classified or legal advertisements section, in the Farmington Daily Times. Note, the public notice in the application appears to contain an error. The provided notice had the following: "The aquifer most likely to be affected is approximately 250 feet in depth, and the total dissolved solids concentration of this aquifer is approximately 1,000 milligrams per liter (mg/L), and can range from 500 to 4,000 mg/L 420 mg/l." The actual published public notice should correct this error.

As per 20.6.2.3108(F) NMAC, the notice must also include the address and phone number within OCD by which interested persons may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices; the notice must also include a statement that OCD will accept comments and statements of interest regarding the application and will create a facility-specific mailing list for persons who wish to receive future notices. The following OCD contact information must be included in the notice:

Shelly Wells – Environmental Specialist Advanced
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
(505) 469-7520
Shelly.Wells@emnrd.nm.gov

Within 15-days of completion of the public notice requirements in 20.6.2.3108(B) NMAC, Blackhawk must submit to the OCD proof of the notice, including affidavit of mailing(s) and the list of property owner(s), proof of publication, and an affidavit of posting, as appropriate.

Also, as part of the discharge permit application, Blackhawk was required to submit a Closure/Post Closure Plan for OCD approval. OCD has reviewed this plan and hereby approves the Closure/Post Closure Plan. The financial assurance (FA) associated with this plan is \$281,890. The FA must be on OCD-prescribed forms, or forms otherwise acceptable to the OCD, payable to the OCD. Bond forms can be found at the bottom of OCD's Forms Page located at <https://www.emnrd.nm.gov/ocd/ocd-forms/>. The FA is due to the OCD within 30-days of email receipt of this letter (i.e., March 3, 2023).

If you have any questions, please do not hesitate to contact me by phone at (505) 469-7520 or by email at Shelly.Wells@emnrd.nm.gov. On behalf of the OCD, I wish to thank you and your staff for your cooperation during this process.

Regards,

Shelly Wells

Shelly Wells
Environmental Specialist- Advanced

Blackhawk Energy (Jicarilla Energy Co)
Espinosa Treatment Plant
Discharge Permit Application

Site Characteristics

Site Name: Espinosa Treatment Plant

Operator: Blackhawk Energy (Jicarilla Energy Co.)

OGRID: 11859

Contact: Randy Thompson, VP of Operations

Address: 700 Dekalb St
Farmington, NM 87401

NMOCD Facility ID: fWJF0429931696

Purpose of the Facility: Compressor Station

Land Type: Fee

Owner: Blackhawk Energy (Jicarilla Energy Co.)

Address: 700 Dekalb St
Farmington, NM 87401

Surface Location: Unit B, Section 13, Township 30N, Range 04W, Rio Arriba County, NM

GPS: 36.816399, -107.205641

The Espinosa Canyon Amine Plant is a natural gas gathering and boosting facility that is owned and operated by Blackhawk Energy which processes gas produced by Blackhawk Energy from adjoining well fields. It has the following processes: (1) compression, (2) dehydration, and (3) ancillary equipment including fuel and instrument air systems, generators. An aerial map is presented as *Figure 1*, and a facility diagram is presented as *Figure 2*.

Soil Types

The two main soil types present at the facility are Orie Loam, 0-8% slopes and the Parkelei-Menefee-Vessilla complex, 2-20% slopes. A map of the soil types can be found on the attached Soil Amp from the USDA. Information on both of these soil types are attached to this document for reference, taken from the USDA website.

Hydrologic/Geologic Information

Surface water run-off from the Espinosa Canyon Amine Plant is expected to follow the local topographic contours, see on *Figure 4, Topographic Map*. There are two significant bodies of water within one mile of the perimeter of the facility. The Espinosa Canyon Wash runs south along the western border of the facility. This wash flows intermittently and is dry most of the year. The Cabresto Canyon Wash runs west to east approximately 300 feet from the northern edge of the facility, see *Figure 3, Water Radius Map*. This wash also flows intermittently and is dry most of the year.

The flooding potential at the facility is small. Based on the attached wetlands map from the US Fish and Wildlife Service. The map shows a small area of wetlands mapped within the banks of the two ephemeral washes that run near the facility. The wetland classification code for this area is R4SBC.

System Riverine (R) : The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.

Subsystem Intermittent (4) : This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.

Class Streambed (SB) : Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.

Water Regime Seasonally Flooded (C) : Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

Relatively shallow groundwater in the San Juan Basin is found in the Quaternary alluvium deposits that fill stream channels; however, the primary sources of groundwater are the Tertiary sandstones that compose the Uinta-Animas aquifer. The Uinta-Animas aquifer is a fluvial deposit that includes the San Jose formation, the underlying Animas formation and its lateral equivalent, the Nacimiento, and the Ojo Alamo sandstone. These fluvial deposits are heterogeneous in nature and contain localized variations in water quality and quantity (COGCC 2000). In the northeastern part of the San Juan Basin, the maximum thickness of the aquifer is approximately 3,500 feet (USGS 2001). Groundwater recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the hydrologic units. The available data in the area nearest the District indicate recharge in the area of Durango, Colorado. Groundwater generally flows toward the San Juan River and its tributaries, where it is discharged to streamflow, to the alluvium that is locally present in canyons, or to evapotranspiration (USGS 2001).

Some water wells drilled to the San Jose, Nacimiento, and Ojo Alamo formations have demonstrated flow rates of 100 gallons per minute (gpm). Most wells display water yields of less than 20 gpm (BLM 1987). Groundwater recharge for the District area is derived from the edges of the San Juan Basin, a geologic structure mainly in southern Colorado where the rock formations are closer to the surface. The primary groundwater quality concerns identified by the State of New Mexico (NMED 2001) in the San Juan River watershed are caused by releases from leaking storage tanks and from oil and gas production including pipelines, storage, distribution, and refining sites. The Uinta-Animas aquifer contains fresh to moderately saline groundwater. Dissolved solids generally increase along the groundwater flow path toward the San Juan River. Although the chemical composition of the groundwater depends upon the characteristics of the producing aquifer and the location of discharge, groundwater is generally considered hard (BLM 1987).

According to the New Mexico Office of the State Engineer, there are no water wells within $\frac{1}{4}$ mile of the Espinosa Treatment Plant. (New Mexico Office of the State Engineer 2022). The closest water well is SJ-01291 at a distance of 2.1 miles south of the facility with a depth to groundwater of 250 feet, see attached iWATERS database report and *Figure 5, Water Well Map*. (New Mexico Office of the State Engineer 2022) The quality of groundwater ranges from fair to poor and the total dissolved solids (TDS) content in the San Juan Basin exceeds 1,000 milligrams per liter (mg/L), and can range from 500 to 4,000 mg/L (BLM 1987; USGS 2001).

The aquifer in the area of interest is the San Jose formation. The aquifer is composed of discontinuous, fluvial channel sandstones and over-bank mudstones. The San Jose formation is exposed at the surface. Soil cover is sandy and immature, and derived from weathered San Jose formation or, near intermittent streams, sandy alluvium.

Water flows in a northern direction across the facility, See *Figure 2, Facility Diagram* and *Figure 4, Topographic Map*. Currently, no groundwater or surface water impacts have been found at this location.

Stormwater Management

Stormwater at the site flows in a northern direction across the location. The southern boundary of the site is built up to limit surface water from entering the site from the south and is directed along the roadway at the eastern edge of the location. The facility itself is designed to be lower in the middle of the facility where no on-site equipment or chemicals are stored. The northern boundary and the southern boundary of the facility are slightly built up to direct on-site stormwater towards the center of the facility where it will pool and evaporate.

Potential Discharges

There will be no intentional discharges from the facility to surface or groundwater. Any discharge from the facility would be the result of an unintentional discharge that was the result of a spill at the facility.

Materials stored at the site are listed below with the disposal method for that material.

- *Produced water* is generated from the East Blanco Gas Field operated by Blackhawk Energy (Jicarilla Energy Co). The waste materials discharged to a salt water disposal (SWD) well, Simms Federal Well Number 1; API Number 3003922756).
- *Condensate* is produced through the compression process and settles into the aboveground condensate storage tank. Condensate is stored on-site and hauled off by licensed contractors to be sold.
- Periodic regeneration of dehydration units and *triethylene glycol* (TEG) creates a waste stream that settles into the glycol discharge tank. This waste is considered an exempt waste as stated in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations listed in 40CFR261.4(b)(5). The glycol tank fills at a rate of approximately 1,000 gallons per year. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.
- The compressor engine produces small amounts of *lube oil* waste that pumps into the below grade waste oil tank. The waste oil tank fills at a rate of approximately 500 gallons per year. Wastes are manifested or tracked with appropriate contractor for transportation and disposal. The industrial process also produces a small amount of solid waste from the used oil filter and oily rags. These wastes are considered nonexempt as stated in the RCRA Subtitle C and D regulations. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.

Collection and Storage Systems

The Espinosa Canyon Amine Plant has several on-site storage containers filled with materials to be stored for use or disposal. A list of the containers and their contents are below for reference. The location of each of the containers can be referenced on *Figure 2, Facility Diagram*.

ID	Contents	Size	Material	Spill Prevention
EO-1	Chevron HDAX 5200 Low Ash Engine Oil	300 gallons	Steel	Sized Containment - 800 gallon capacity
EO-2	Chevron HDAX 5200 Low Ash Engine Oil	475 gallons	Steel	Sized Containment - 800 gallon capacity
EO-3	Chevron HDAX 5200 Low Ash Engine Oil	300 gallons	Steel	Sized Containment - 800 gallon capacity
EO-4	Chevron HDAX 5200 Low Ash Engine Oil	475 gallons	Steel	Sized Containment - 800 gallon capacity
EO-5	Chevron HDAX 5200 Low Ash Engine Oil	300 gallons	Steel	Sized Containment - 750 gallon capacity
EO-6	Chevron HDAX 5200 Low Ash Engine Oil	475 gallons	Steel	Sized Containment - 750 gallon capacity
EO-7	Mobil 5W-40 Oil	55 gallons	Steel	Sized Containment - 75 gallon capacity
EO-8	Shell Rotella 15W-40 Oil	55 gallons	Steel	Sized Containment - 75 gallon capacity
EO-9	Mobil Pegasus 805 Ultra Oil	300 gallons	Steel	Sized Containment - 750 gallon capacity

T-1	ThermoGuard 50 Coolant	475 gallons	Steel	Sized Containment - 800 gallon capacity
T-2	ThermoGuard 50 Coolant	225 gallons	Poly	Sized Containment - 750 gallon capacity
T-3	ThermoGuard 50 Coolant	140 gallons	Poly	Sized Containment - 170 gallon capacity
T-4	ThermoGuard 50 Coolant	300 gallons	Steel	Sized Containment - 540 gallon capacity
GLY-1	Triethylene Glycol (TEG)	1000 gallons	Steel	Lined Earthen Berm - 49 bbl (2,058 gallon) capacity
SO-1	Slop Oil Tank	300 bbls (12,600 gallons)	Steel	Lined Earthen Berm - 580 bbl (24,360 gallon) capacity
SO-2	Slop Oil Tank	300 bbls (12,600 gallons)	Steel	Lined Earthen Berm - 580 bbl (24,360 gallon) capacity
A-1	Amine (NOT IN SERVICE)	50 bbls (2,100 gallons)	Steel	Lined Earthen Berm - 390 bbl (16,380 gallon) capacity
D-1	De-Ionized Water (NOT IN SERVICE)	50 bbls (2,100 gallons)	Steel	Lined Earthen Berm - 390 bbl (16,380 gallon) capacity
C-1	Condensate	400 bbls (16,800 gallons)	Steel	Lined Earthen Berm - 525 bbl (22,050 gallon) capacity
S-1	Septic Tank - Raw Sewage	1,000 gallons	Concrete	Leak Detection Gauge
BGT-1	Waste Triethylene Glycol (TEG)	500 Gallons	Steel - Double Walled	Leak Detection Gauge
BGT-2	Lube Oil Skid Drain	500 Gallons	Steel - Double Walled	Leak Detection Gauge

On-Site Equipment

The Espinosa Canyon Amine Plant also has several pieces of equipment on-site for compression of gas, power generation, gas treatment, liquid knockout, and gas dehydration. A list of the on-site equipment is below, and the location of the equipment can be referenced on *Figure 2, Facility Diagram*.

ID	Model	Serial Number	HP
Compressor-1	CAT G3516 TALE	WPW-01542	1113 HP
Compressor-2	CAT G3516 TALE	WPW-01539	1113 HP
Compressor-3	CAT G3516 TALE	WPW-02104	1113 HP
Generator-1	Ford WSG-1068	07R566831	96 HP
Generator-2	CAT G3512	WO-3871706	861 HP

ID	Description	Material	Contents
V-1	Thermal Oxidizer Knockout (Not in Use)	Steel	Gas, Condensate and Water
V-2	Fuel Gas Knockout	Steel	Gas, Condensate and Water
V-3	Fuel Gas Knockout	Steel	Gas, Condensate and Water
V-4	Glycol Contactor	Steel	Gas, Condensate and Water
V-5	Glycol Knockout	Steel	Gas, Condensate and Water
V-6	Amine Contactor	Steel	Gas, Condensate and Water
V-7	Amine Knockout	Steel	Gas, Condensate and Water
V-8	Inlet Knockout	Steel	Gas, Condensate and Water

Underground Lines

The Espinosa Treatment Plant has numerous flowlines for the transportation of gas and liquids throughout the location. The majority of these lines are above ground, with only a few lines being below ground for gravity feeding purposes. The waste oil line to the below grade waste oil tank is below ground, as well as the line transporting waste TEG to the waste TEG tank. Additionally, flowlines to the above ground condensate tank and the slop oil tanks are underground and dumping to these tanks is controlled by compressed air powered pneumatic devices. All of these lines are open air lines, dumping to tanks on gravity or with pneumatic pumps. These lines are open on the end where they enter the tank and are only subject to atmospheric pressure. These dump lines are not under pressure. Lines are made of steel and will be 2" or 3" diameter lines.

Effluent and Waste Solids from Non-process Streams

Both effluents and waste solids in the non-process streams are produced by the following sources:

- *Domestic Trash* - Small amounts of trash are generated (usually less than one pound per day). These wastes are collected and sent to an appropriate landfill.
- *Sanitary Waste* - Sanitary waste is generated and collected in the septic tank at approximately 40 gallons per day. The waste is treated in a leach field just west of the septic tank.

Liquid Containments

The Espinosa Treatment Plant contains aboveground process tanks. All aboveground tanks have sized secondary containment capable of containing at least 110% of the tank volume. Earthen berms are used for containment around the condensate tank, the slop oil tanks, the TEG storage tank, and the Amine and de-ionized water tank. These berms are lined with a 40-mil poly liner to prevent infiltration of any spilled material into the soil. Engine oil and coolants have sized secondary containments made of steel.

The Espinosa Treatment Plant maintains two below grade tanks for the collection waste oil and TEG at the facility. These tanks are steel and have a double wall for leak detection and protection of leaks from the tank entering the soil beneath the below grade tank. These tanks are checked monthly for leaks by opening the leak detection piping that exposes the inside of the

double walled space and checking the area for liquid. If liquid is found within the double-walled portion of the tank, the tank will be assessed for a leak. If a leak is discovered, the tank will be emptied immediately and the tank repaired.

The Espinosa Treatment Plant maintains a below ground septic tank. The septic tanks sit approximately 4 feet underground. The septic tank accepts approximately 40 gallons per day of sanitary waste that feeds a leach field just west of the tank.

Routine Inspection and Maintenance Plan

As part of daily plant walk-throughs, plant personnel visually inspect tanks and equipment. All tanks and equipment are also inspected weekly as part of the weekly AVO inspection required by 20.5.50 NMAC. Above ground tanks are inspected for leaks as a part of this inspection process. Below grade tanks are inspected monthly by checking the double-walled portion of the tank for the presence of liquid. Inspections are documented and performed using an app called iAuditor.

Spill Prevention and Reporting

All liquid storage at this facility occurs in tanks that have sized secondary containment for the containment of leaks. Containments are either earthen berms lined with 40-mil poly liner, steel containments designed as secondary containments for the containers they are placed under, or double-walls designed to prevent tank leaks from reaching the environment.

Should a release occur at the facility, the leaked liquid will pool within the secondary containment for the material that has leaked. The spilled material will be removed by vac truck immediately, and the liner cleaned and inspected for holes. Reporting of leaks will be completed pursuant to 19.15.29 NMAC regarding the volume and type of notification required. All cleanup and remediation of releases will occur pursuant to 19.15.29 NMAC.

Facility Closure Plan

Once activities at the location have completed, the facility will be closed, and the area reclaimed according to the closure plan detailed below.

Liquid Removal

All liquids will be removed from liquid containers and equipment and disposed of as required or re-used at other Blackhawk facilities where applicable. Chemical containments will be emptied, and their contents disposed of. Engine oils will be taken to other sites with compression operated by Blackhawk Energy or recycled according to applicable regulations regarding the recycling of oil.

Condensate will be sold to Blackhawk's oil transportation and sales vendor and produced water will be disposed of at Blackhawk's Saltwater Disposal well or transported to a third-party commercial disposal well.

Unused coolants will be taken to other sites with compression operated by Blackhawk Energy, returned to the vendor from which they were obtained, or disposed of with a local disposal contractor like Safety Kleen or Clean Harbors.

Excess liquid in the septic tank will be removed by a third-party vendor certified to haul untreated sewage waste and hauled for disposal to the Farmington Wastewater Treatment Plant.

The deionized water tank and the amine tank are not in service and have been empty for several years. Unused glycol will be removed from the above ground glycol tank and transported by a third-party vendor to another Blackhawk location to be used for other oil and gas operations.

Liquids in the slop oil tank will be heated to separate the oil and water, as is the current process, and the oil will be sold to Marathon and transported off site under their custody. Separated water will then be disposed of at Blackhawk's Saltwater Disposal well or transported to a third-party commercial disposal well.

Estimated cost of liquids removal activities: \$9,740

Equipment Removal

On-site equipment will be cleaned and removed from the location for disposal, recycling, or re-use, depending on the condition of the on-site equipment at the time of site closure. All equipment will be disposed of or recycled in a manner approved by the NMOCD.

Compressors and generators will be removed from location to be used at another location operated by Blackhawk, will be sold for re-use or disposed of as scrap metal.

The two (2) below grade tanks will be closed pursuant to NMAC 19.15.17.13 regarding the closure of below grade tanks. Tanks will be removed and reused at another location operated by Blackhawk or will be disposed of or recycled in accordance with NMOCD requirements.

All above ground tanks will be removed and reused at another location operated by Blackhawk or will be disposed of or recycled in accordance with NMOCD requirements.

Knockouts, contactors, and separators will be cleaned out, and the cleanout water disposed of at Blackhawk's saltwater disposal well or transported to a third-party commercial disposal well. The knockout, contactor or separator will then be transported to another Blackhawk location for re-use or will be disposed of or recycled in accordance with NMOCD requirements.

Above ground piping and meter runs will be disconnected by a third-party contractor and will be recycled as scrap metal. All underground piping will be excavated and removed by a third-party contractor, with all piping being recycled as scrap metal.

The underground septic tank will be removed by a third-party contractor and will be disposed of at the San Juan County Municipal Landfill.

Other non-production type equipment and materials will be removed from the site, and either sold to a third party, recycled, or disposed of at the municipal landfill. Materials include a trailer, storage container with spare parts, fencing, liner materials, culverts and assorted equipment stored on location.

Estimated cost of equipment removal activities: \$148,900

Environmental Remediation

Any areas of visual staining or soil impacts encountered and observed after all equipment has been removed will be remediated pursuant to 19.15.29 NMAC standards for the site, with confirmation samples being collected pursuant to those listed in Table I for sites over 100 feet to

groundwater. Impacted soils will be removed by a third-party contractor under the direction of a third-party environmental contractor. Once impacted soils have been removed, confirmation samples will be collected pursuant to 19.15.29 NMAC Table I for sites over 100 feet to groundwater. Impacted soils will be transported to an NMOCD approved soil remediation facility. Currently, the only remediation facility in operation in the area is Envirotech's Landfarm #2, NMOCD permit number NM-01-0011.

Estimated cost of environmental remediation activities: \$50,300

Reclamation

After all equipment and materials have been removed, the site will be reclaimed. All gravel brought in for berms and walking areas will be removed by a third-party contractor and will be hauled to other Blackhawk locations for use on berms or parking areas. The site will be flattened, and contoured to match the natural drainage of the surrounding area and to prevent ponding of water on the former location of the treatment plant. Due to the site being located on private property, the area will be revegetated pursuant to landowner specifications after the site was been flattened and recontoured by a third party.

Estimated cost of reclamation activities: \$72,950

Total Estimated Costs: \$281,890

Public Notice

Upon approval of this discharge permit application, Blackhawk energy (Jicarilla Energy Co.) will provide public notice as required in 20.6.2.3108(A) NMAC. A physical copy of the notice will be posted at the Blackhawk Energy, LLC office at 700 Dekalb St, Farmington, New Mexico 87401 and at the NMOCD Aztec Office located at 1000 Rio Brazos Rd, Aztec, New Mexico 87410.

A notice will also be placed in the Farmington Daily Times as the paper of general circulation in the discharge area.

Blackhawk Energy, LLC (formerly known as Jicarilla Energy Co), with offices at 700 Dekalb St, Farmington, NM 87401, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for renewal of their discharge plan permit (GW-356) for their Espinosa Canyon Treatment Plant located in the NW 'A, NE 'A of Section 13, Township 30 North, Range 4 West in Rio Arriba County, New Mexico. The facility does not have a physical mailing address but is located approximately 16 miles southwest of Dulce, New Mexico.

The facility provides compression and dehydration of natural gas. Materials generated or used at the facility include field-grade and treated pipeline quality natural gas; new and used compressor lubrication oil; gear oil; waste waters from facility operations and engine or scrubber wash downs; condensate; and sanitary waste water. The facility generates approximately:

(1) 8,400 to 12,600 gallons per year

of condensate generated through the natural gas compression process and (2) 1,000 gallons per year of waste water derived from the regeneration of dehydration units and triethylene glycol (TEG)

All of these wastes are considered exempt wastes as stated in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations listed in 40 CFR261.4(b)(5). These wastes are manifested or tracked with appropriate contractor for transportation and disposal.

In addition, the facility generates approximately 500 gallons per year of lube oil waste produced by the compressor engines. This waste is considered non-exempt as stated in the RCRA Subtitle C and D regulations and is manifested or tracked with appropriate contractor for transportation and disposal. The industrial process also produces a small amount of solid waste from the used oil filter and oily rags. These wastes are considered non exempt as stated in the RCRA Subtitle C and D regulations. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.

All liquids utilized at the facility are stored in dedicated above ground or below-grade storage tanks prior to offsite disposal or recycling at an OCD approved site. All storage tanks are within properly engineered and OCD approved secondary containments. The aquifer most likely to be affected is approximately 250 feet in depth, and the total dissolved solids concentration of this aquifer is approximately 1,000 milligrams per liter (mg/L), and can range from 500 to 4,000 mg/L 420 mg/l.

Any interested person or persons may obtain information; submit comments or request to be placed on a facility-specific mailing list for future notices by contacting Shelly Wells at the New Mexico OCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 469-7520. The OCD will accept comments and statements of interest regarding the renewal and will create a facility-specific mailing list for persons who wish to receive future notices.

Map Unit Description: Orlie loam, 0 to 8 percent slopes---Carson National Forest, New Mexico,
Part of Rio Arriba County

Carson National Forest, New Mexico, Part of Rio Arriba County

OiC—Orlie loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2vd1v

Elevation: 6,000 to 7,750 feet

Mean annual precipitation: 10 to 16 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 100 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Orlie and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orlie

Setting

Landform: Valley sides

Landform position (three-dimensional): Rise

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Alluvium derived from sandstone and shale

Typical profile

A - 0 to 2 inches: loam

Bt - 2 to 22 inches: clay loam

C - 22 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high (0.21 to 0.71 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6c

Map Unit Description: Orlie loam, 0 to 8 percent slopes---Carson National Forest, New Mexico,
Part of Rio Arriba County

Hydrologic Soil Group: C
Ecological site: R036XB006NM - Loamy
Hydric soil rating: No

Minor Components

Millpaw

Percent of map unit: 5 percent
Landform: Fans
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: R036XB002NM - Clayey
Hydric soil rating: No

Cementlake

Percent of map unit: 4 percent
Landform: Valley sides, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R036XB010NM - Salty Bottomland
Hydric soil rating: No

Menefee

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F036XA001NM - Pinyon Upland
Hydric soil rating: No

Vessilla

Percent of map unit: 2 percent
Landform: Hills, ridges, breaks, mesas, structural benches
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: F036XB133NM - Pinyon-Utah juniper/skunkbush
sumac
Hydric soil rating: No

San mateo

Percent of map unit: 1 percent
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R036XB010NM - Salty Bottomland

Map Unit Description: Orlie loam, 0 to 8 percent slopes---Carson National Forest, New Mexico,
Part of Rio Arriba County

Hydric soil rating: No

Data Source Information

Soil Survey Area: Carson National Forest, New Mexico, Part of Rio Arriba
County

Survey Area Data: Version 9, Sep 8, 2022

Map Unit Description: Parkelei-Menefee-Vessilla complex, 2 to 20 percent slopes---Carson National Forest, New Mexico, Part of Rio Arriba County

Carson National Forest, New Mexico, Part of Rio Arriba County

PmF—Parkelei-Menefee-Vessilla complex, 2 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2tdl8

Elevation: 6,560 to 7,750 feet

Mean annual precipitation: 12 to 17 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 100 to 130 days

Farmland classification: Not prime farmland

Map Unit Composition

Parkelei and similar soils: 45 percent

Menefee and similar soils: 20 percent

Vessilla and similar soils: 20 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Parkelei

Setting

Landform: Hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Alluvium derived from sandstone and shale

Typical profile

A - 0 to 2 inches: fine sandy loam

Bt - 2 to 38 inches: sandy clay loam

Bk - 38 to 80 inches: sandy loam

Properties and qualities

Slope: 2 to 10 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.21 to 0.71 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

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

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Map Unit Description: Parkelei-Menefee-Vessilla complex, 2 to 20 percent slopes---Carson National Forest, New Mexico, Part of Rio Arriba County

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4c

Hydrologic Soil Group: C

Ecological site: R036XB006NM - Loamy

Hydric soil rating: No

Description of Menefee

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from shale and/or slope alluvium derived from shale

Typical profile

A - 0 to 3 inches: clay loam

AC - 3 to 9 inches: clay loam

Cr - 9 to 60 inches: bedrock

Properties and qualities

Slope: 5 to 20 percent

Depth to restrictive feature: 8 to 20 inches to paralithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.28 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)

Sodium adsorption ratio, maximum: 5.0

Available water supply, 0 to 60 inches: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F036XA001NM - Pinyon Upland

Hydric soil rating: No

Description of Vessilla

Setting

Landform: Ridges

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Map Unit Description: Parkelei-Menefee-Vessilla complex, 2 to 20 percent slopes---Carson National Forest, New Mexico, Part of Rio Arriba County

Parent material: Alluvium derived from sandstone and/or eolian deposits derived from sandstone and/or residuum weathered from sandstone

Typical profile

A - 0 to 3 inches: sandy loam

C - 3 to 17 inches: sandy loam

R - 17 to 27 inches: bedrock

Properties and qualities

Slope: 5 to 20 percent

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

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Gypsum, maximum content: 1 percent

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

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F035XF627AZ - Sandstone Upland (JUOS, PIED)
13-17" p.z. (Provisional)

Other vegetative classification: pinyon juniper woodland (null_5)

Hydric soil rating: No

Minor Components**Teequee**

Percent of map unit: 4 percent

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R036XB015NM - Shallow Savanna

Hydric soil rating: No

Nalivag

Percent of map unit: 4 percent

Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R036XB006NM - Loamy

Hydric soil rating: No

Map Unit Description: Parkelei-Menefee-Vessilla complex, 2 to 20 percent slopes---Carson National Forest, New Mexico, Part of Rio Arriba County

Lindrith

Percent of map unit: 4 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R036XB006NM - Loamy
Hydric soil rating: No

Royosa

Percent of map unit: 2 percent
Landform: Dunes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R036XB011NM - Sandy
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

Data Source Information

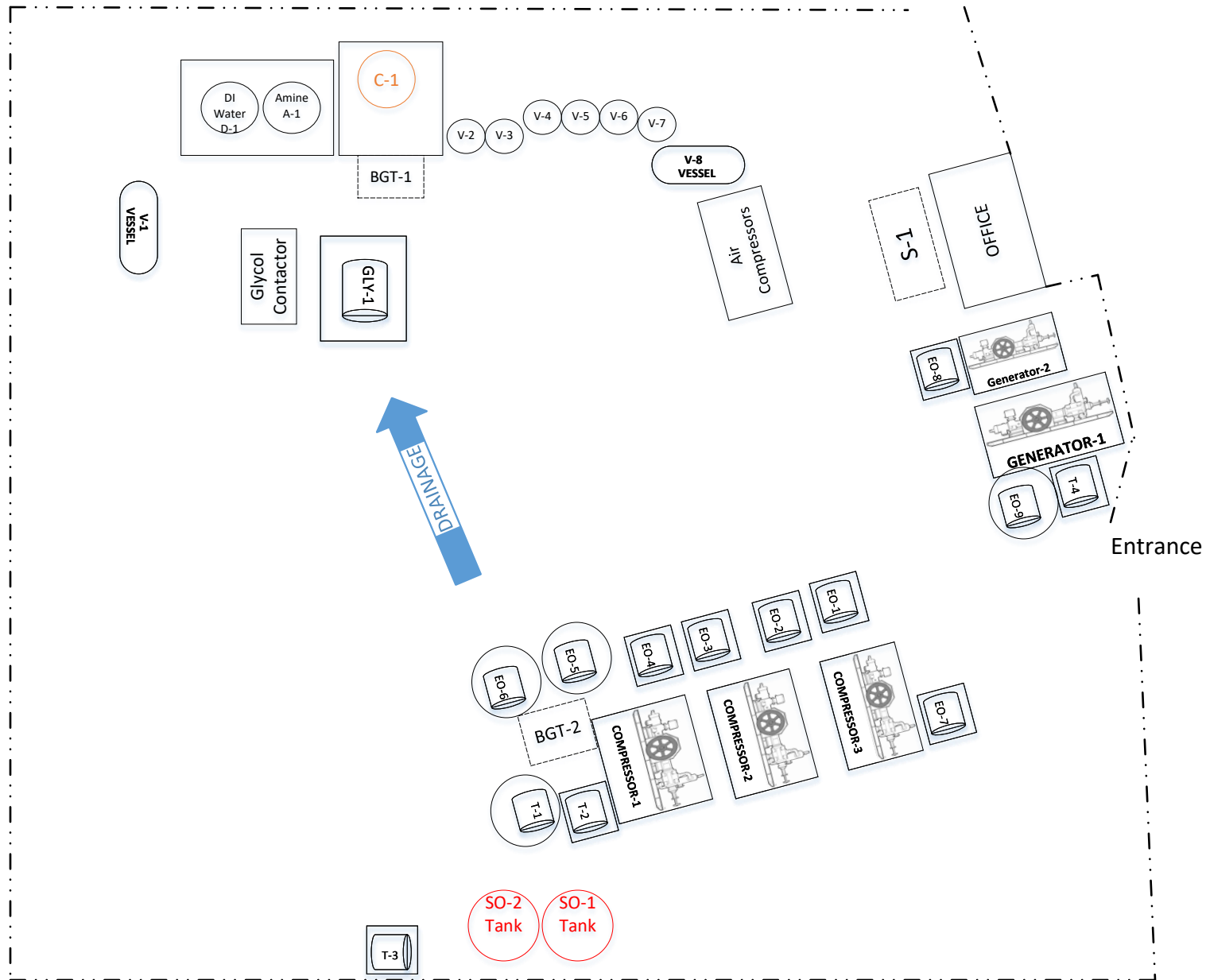
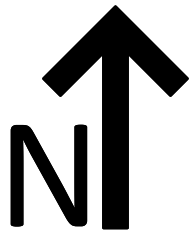
Soil Survey Area: Carson National Forest, New Mexico, Part of Rio Arriba County
Survey Area Data: Version 9, Sep 8, 2022

**FIGURE 1 – AERIAL MAP****LEGEND**

Drawn By: James McDaniel
Date: 11/5/2022



Company: Blackhawk Energy
Facility: Espinosa Treatment Plant
Facility #: fWJF0429931696
Location: Sec 13, Twn 30N, Rge 04W,
Rio Arriba County, NM
36.816399, -107.205641
Source: Google Earth



Drawn By: James McDaniel
Date: 11/5/2022



FIGURE 2 – INVESTIGATION MAP

Company: Blackhawk Energy
Facility: Espinosa Treatment Plant
Facility #: fWJF0429931696
Location: Sec 13, Twn 30N, Rge 04W,
Rio Arriba County, NM
36.816399, -107.205641

Source: Google Earth

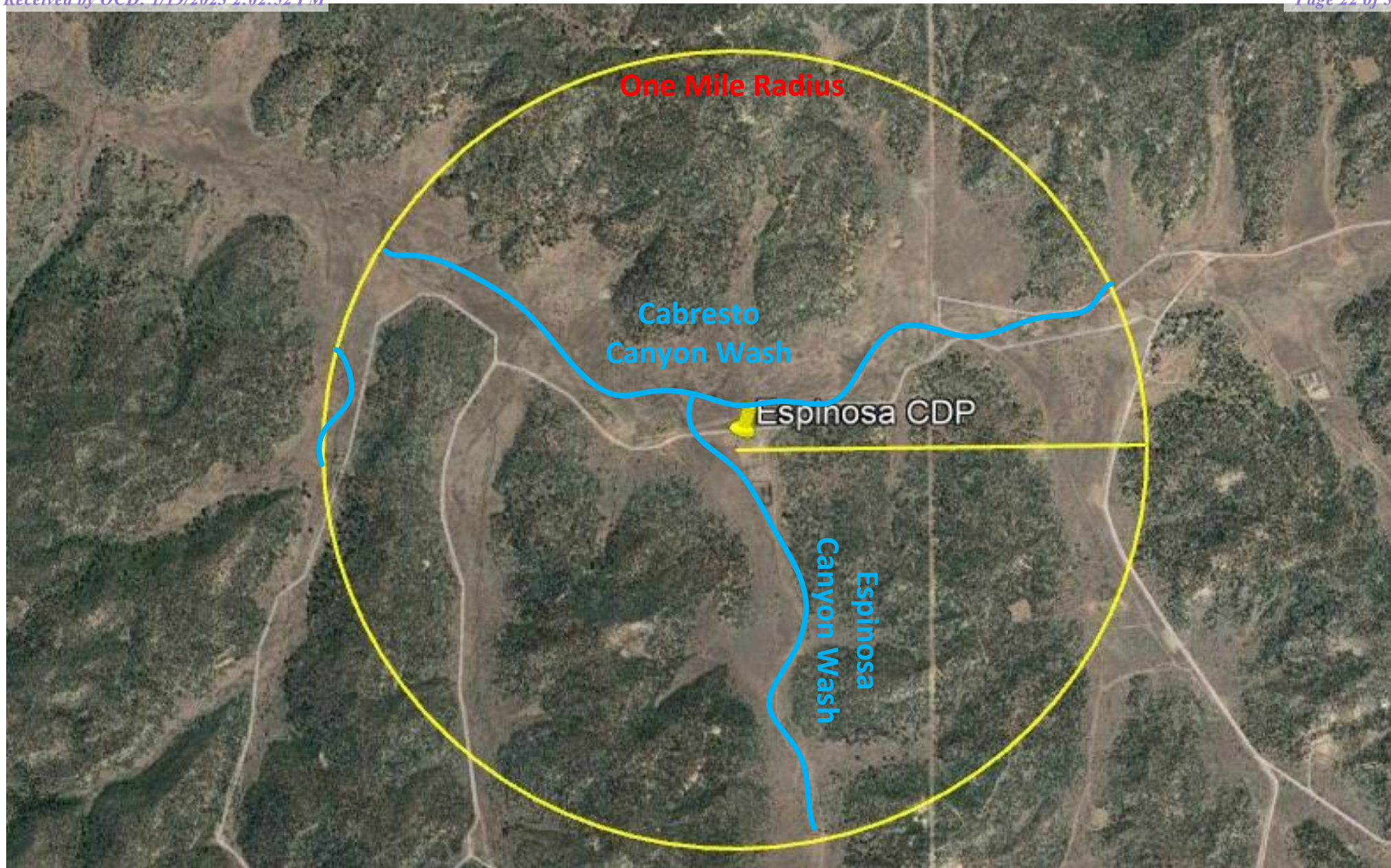
LEGEND



Fencing

S-1

Underground Tank




Drawn By: James McDaniel
Date: 11/5/2022

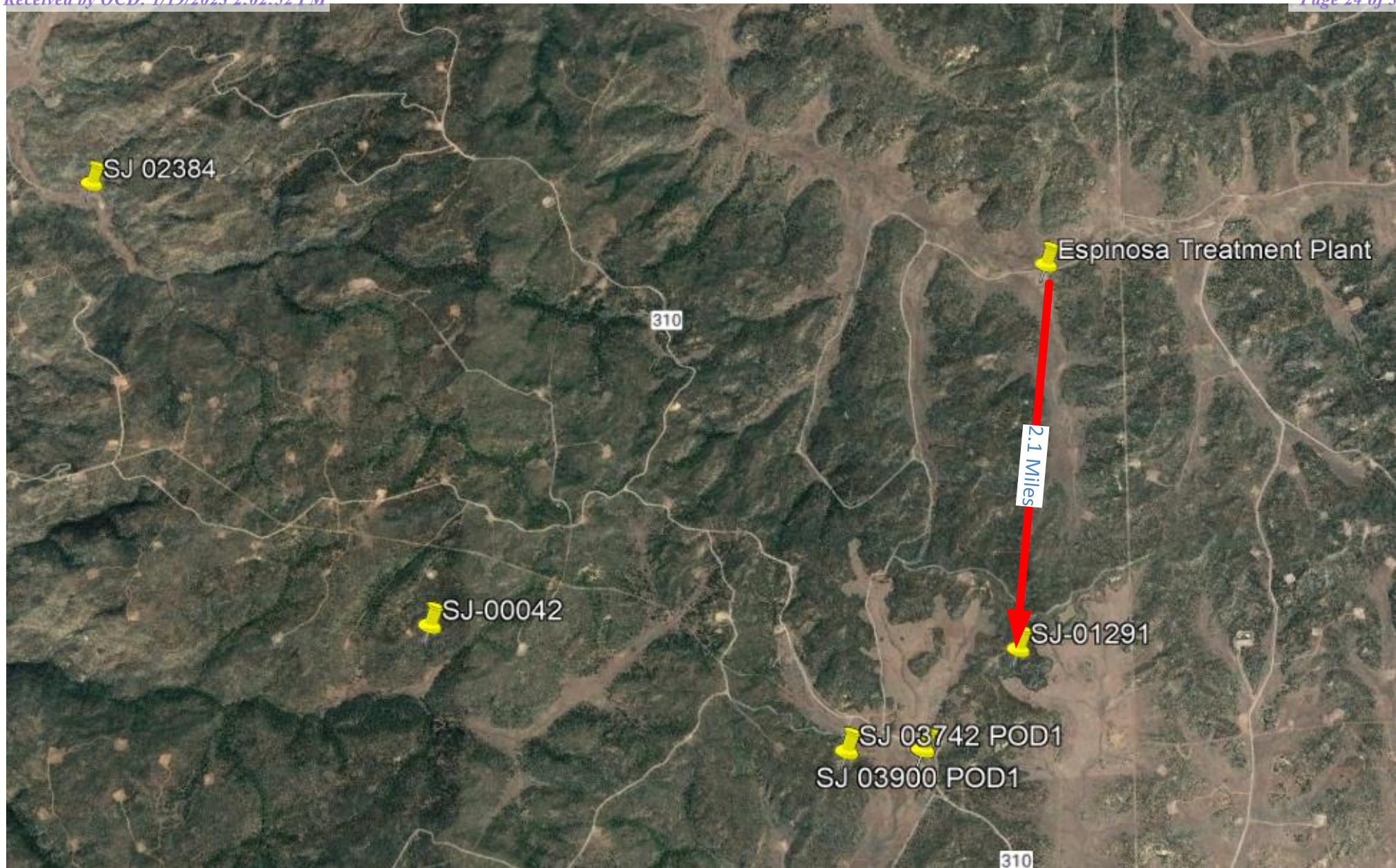


FIGURE 3 – WATER RADIUS MAP

Company: Blackhawk Energy
Facility: Espinosa Treatment Plant
Facility #: fWJF0429931696
Location: Sec 13, Twn 30N, Rge 04W,
Rio Arriba County, NM
36.816399, -107.205641
Source: Google Earth

LEGEND

 Significant Waterway



Drawn By: James McDaniel
Date: 11/16/2022



FIGURE 5 – TOPOGRAPHIC MAP

Company: Blackhawk Energy
Facility: Espinosa Treatment Plant
Facility #: fWJF0429931696
Location: Sec 13, Twn 30N, Rge 04W,
Rio Arriba County, NM
36.816399, -107.205641

Source: Google Earth

LEGEND



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tw	Rng	X	Y	DepthWell	DepthWater	Water Column
SJ 00042		SJ	RA			1	28	30N	04W	297901	4073566*	62		
SJ 01291		SJ	RA	4	1	25	30N	04W	302930	4073243*		500	250	250
SJ 02384		SJ	RA	3	1	3	07	30N	04W	294736	4077762*	185	95	90
SJ 03742 POD1		SJ	RA	4	4	3	26	30N	04W	301401	4072375*	480	210	270
SJ 03900 POD1		SJ	RA	4	4	4	26	30N	04W	302124	4072384	380	200	180

Average Depth to Water: **188 feet**

Minimum Depth: **95 feet**

Maximum Depth: **250 feet**

Record Count: 5

PLSS Search:

Township: 30N **Range:** 04W

*UTM location was derived from PLSS - see Help

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

11/5/22 9:48 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer
Wells with Well Log Information

No wells found.

PLSS Search:

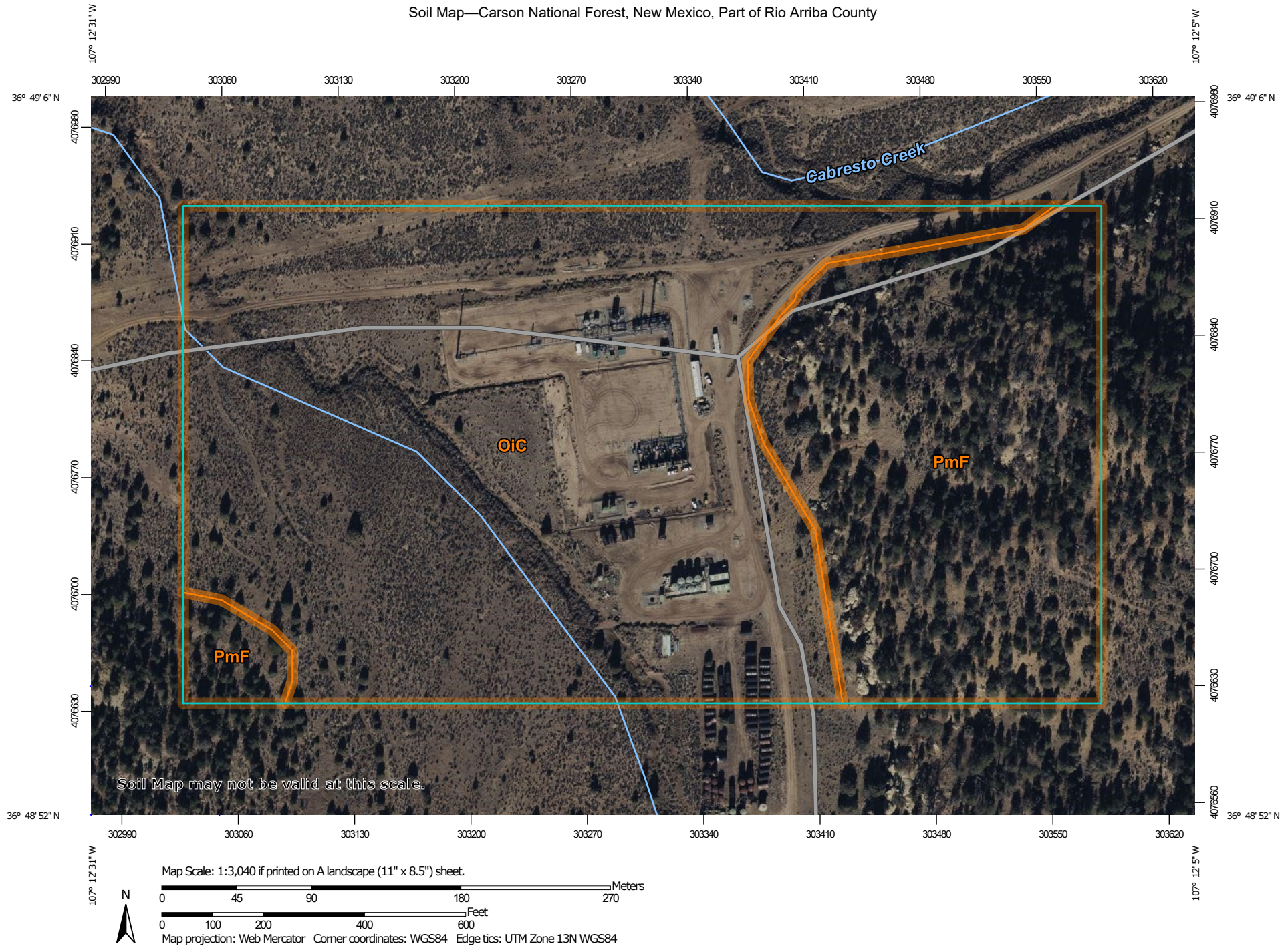
Township: 30N **Range:** 03W

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 particular purpose of the data.

11/16/22 11:57 AM

WELLS WITH WELL LOG INFORMATION

Soil Map—Carson National Forest, New Mexico, Part of Rio Arriba County



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

11/4/2022
Page 1 of 3

Soil Map—Carson National Forest, New Mexico, Part of Rio Arriba County

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Carson National Forest, New Mexico, Part of Rio Arriba County

Survey Area Data: Version 9, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 16, 2021—Dec 3, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Soil Map—Carson National Forest, New Mexico, Part of Rio Arriba County

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
OiC	Orlie loam, 0 to 8 percent slopes	27.3	66.9%
PmF	Parkelei-Menefee-Vessilla complex, 2 to 20 percent slopes	13.5	33.1%
Totals for Area of Interest		40.8	100.0%





U.S. Fish and Wildlife Service

National Wetlands Inventory



Espinosa Wetland







U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

November 4, 2022

Wetlands

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland

-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond

-  Lake
-  Other
-  Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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 177631

CONDITIONS

Operator: JICARILLA ENERGY CO P.O. 1048 Farmington, NM 87401	OGRID: 11859
	Action Number: 177631
	Action Type: [UF-DP] Generic Discharge Plan (DISCHARGE PLAN SERVICE COMPANIES)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	2/1/2023