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-144
Revised April 3, 2017

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action:
- ☐ Below grade tank registration
- ☐ Permit of a pit or proposed alternative method
- ☒ Closure of a pit, below-grade tank, or proposed alternative method
- ☐ Modification to an existing permit/or registration
- ☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

BGT1 Closure Report

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Hilcorp Energy Company OGRID #: 372171
Address: 382 Road 3100 Aztec, NM 87410
Facility or well name: WF Federal 29 2
API Number: 3004530058 OCD Permit Number:
U/L or Qtr/Qtr P Section 29 Township 30N Range 14W County: San Juan
Center of Proposed Design: Latitude 36.780122 Longitude -108.325878 NAD83
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____bbl Dimensions: L_____ x W_____ x D_____

3.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 95 bbl Type of fluid: Produced Water
Tank Construction material: Metal
☐ Secondary containment with leak detection ☒ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____mil ☐ HDPE ☐ PVC ☒ Other Unspecified

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*
☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
☐ Alternate. Please specify_____

6.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other_____

☐ Monthly inspections (If netting or screening is not physically feasible)

7.

Signs: Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. **Siting criteria does not apply to drying pads or above-grade tanks.**

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit . NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)** - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)** - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. **(Does not apply to below grade tanks)** - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. **(Does not apply to below grade tanks)** - FEMA map	☐ Yes ☐ No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

10.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.

Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ A List of wells with approved application for permit to drill associated with the pit.
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method

14.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	

adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

16.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): _____ Title: _____

Signature:_____ Date: _____

e-mail address:_____ Telephone: _____

18.
OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure ~~Plan~~ Report (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Jaclyn Burdine **Approval Date:** 08/01/2022

Title: Environmental Specialist-A **OCD Permit Number:** BGT1

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☒ **Closure Completion Date: 5/19/2022**

20.
Closure Method:

☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

21.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☒ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☐ Disposal Facility Name and Permit Number
- ☒ Soil Backfilling and Cover Installation
- ☒ Re-vegetation Application Rates and Seeding Technique
- ☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

22.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Amanda Walker Title: Operations/Regulatory Technician – Sr

Signature: Date: 7/19/2022

e-mail address: mwalker@hilcorp.com Telephone: (346) 237-2177

Hilcorp Energy Company
San Juan Basin
Below Grade Tank Closure Report

Lease Name: WF Federal 29 2
API No.: 30-045-30058

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure of the below-grade tank referenced above. All proper documentation regarding closure activities is being included with the C-144.

General Plan:

1. HILCORP shall close a below-grade tank within 60 days of cessation of operations per Subsection G.4 of 19.15.17.13 NMAC. This will include a) below-grade tanks that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, HILCORP will file the C144 Closure Report as required.

   The below-grade tank referenced above was permitted and closed within 60 days of cessation of the below-grade tanks operation.

2. HILCORP shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The facilities to be used will be Basin Disposal (Permit #NM-01-005), JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.

   All recovered liquids were disposed of at Basin Disposal (Permit #NM-01-005) and any sludge or soil required to be removed to facilitate closure was hauled to Envirotech Land Farm (Permit #NM-01-011) and JFJ Landfarm % IEI (Permit #NM-01-0010B). The liner was cleaned per Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC was disposed of at the San Juan County Regional Landfill located on CR 3100.

3. HILCORP will receive prior approval to remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.

   The below-grade tank was disposed of in a division-approved manner.

4. If there is any on-site equipment associated with a below-grade tank, then HILCORP shall remove the equipment, unless the equipment is required for some other purpose.

   All on-site equipment associated with the below-grade tank was removed.

5. HILCORP will test the soils beneath the below-grade tank to determine whether a release has occurred. HILCORP shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyzed for the constituents listed in Table I of 19.15.17.13 NMAC. Hilcorp shall notify the division of its results on form C-141.

7/19/2022

A five point composite sample was taken of the below-grade tank using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached). Form C-141 is attached.

Components	Tests Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	100
Chlorides	EPA 300.0	250

6. If HILCORP or the division determines that a release has occurred, then HILCORP shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

   A release was determined for the above referenced well.

7. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Table I of 19.15.17.13 NMAC, then HILCORP shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.

   The below-grade tank area passed all requirements of Paragraph (4) of Subsection E of 19.15.17.13 NMAC and was backfilled with compacted, non-waste containing, earthen material.

8. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email or verbally. The notification of closure will include the following:
   i. Operator's name
   ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.

   Notification is attached.

9. The surface owner shall be notified of HILCORP's closing of the below-grade tank 72 hours, but not more than one week, prior to closure as per the approved closure plan via certified mail, return receipt requested.

   The closure process notification to the landowner was sent via email. (See Attached) (Well located on Federal Land, certified mail is not required for Federal Land per BLM/OCD MOU.)

10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

    The below-grade tank area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Re-shaping including drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final recontour has a uniform appearance with smooth surface, fitting the natural landscape.

11. HILCORP shall seed the disturbed areas the first favorable growing season following closure of a below-grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will be used on federally regulated lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. A uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre- disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. Hilcorp will repeat seeding or planting will be continued until successful vegetative growth occurs.

Provision 13 was accomplished through complying with BLM seeding requirements as allowed by the BLM/OCD MOU.

12. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material, with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.

    The below-grade tank area was backfilled and more than four feet of cover was achieved and the cover included one foot of suitable material to establish vegetation at the site.

13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:
    - Soil Backfilling and Cover Installation (See Report)
    - Re-vegetation application rates and seeding techniques (See Report)
    - Photo documentation of the site reclamation (Included as an attachment)
    - Confirmation Sampling Results (Included as an attachment)
    - Proof of closure notice (Included as an attachment)

Kandis Roland

From: Kandis Roland
Sent: Friday, May 13, 2022 10:17 AM
To: Venegas, Victoria, EMNRD; 'Joyner, Ryan N'
Cc: Mandi Walker; Kandis Roland; Brandon Sinclair; Mitch Killough; Chad Perkins; Ben Mitchell; Lisa Jones; Joey Becker; Clara Cardoza; Jamie Huffman
Subject: 72 Hour BGT Notification - WF Federal 29 2 (30-045-30058)
Attachments: WF Federal 29 2 BGT Approved.pdf

Subject: 72 Hour BGT Closure Notification

Anticipated Start Date: Thursday, May 19, 2022 at approximately 9:00 AM

The subject well has a below-grade tank that will be permanently removed. The BGT permit is attached. Please contact me at any time if you have any questions or concerns.

Well Name:	WF FEDERAL 29 2		
API#:	3004530058		
Location:	Unit P, Section 29, T030N, R014W		
Footages:	795' FSL & 665' FEL		
Operator:	Hilcorp Energy	**Surface Owner:**	BLM
Reason:	Well was P&A'd		

Please forward to anyone that I may have missed.

Thanks,

Kandis Roland
HILCORP ENERGY
San Juan East/South Regulatory
713.757.5246
kroland@hilcorp.com

Pre-Closure Photos

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Hilcorp Energy Company	OGRID 372171
Contact Name Mitch Killough	Contact Telephone 713-757-5247
Contact email mkillough@hilcorp.com	Incident #
Contact mailing address 1111 Travis Street, Houston, Texas 77002	

Location of Release Source

Latitude 36.780128 Longitude -108.325224
(NAD 83 in decimal degrees to 5 decimal places)

Site Name WF Federal 29 2	Site Type Well
Date Release Discovered: 5/26/2022 – *Date of Hall Environmental Analytical Laboratory report*	API# 30-045-30058

Unit Letter	Section	Township	Range	County
P	29	30N	14W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Historical release discovered during the permanent removal of a below-grade tank (BGT). Refer to attached memo (dated 6/14/2022) for additional information.

Per the memo attached, Hilcorp determined that chlorides exceeded the BGT closure criteria thresholds shown in Condition 7 of the closure plan. Thus, indicating that a potential release occurred. However, chlorides did not exceed the Closure Criteria for Soils Beneath Below-Grade Tanks listed in Table I of 19.15.17.13 NMAC for groundwater depths (51-100 ft). Hilcorp will proceed with the backfill and ensure that the excavation is backfilled in accordance with Conditions 9 and 11 of the BGT Closure Plan.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Mitch Killough Title: Environmental Specialist

Signature: _____ Date: 06/14/2022

email: mkillough@hilcorp.com Telephone: 713-757-5247

OCD Only

Received by: _____ Date: _____

Memorandum

To: Victoria Venegas, New Mexico Oil Conservation Division (NMOCD)

From: Mitch Killough, Hilcorp Energy Company (Hilcorp)

Date: 6/14/2022

Subject: WF Federal 29 2 – Permanent Closure of a Below-Grade Tank (BGT)

On 5/13/2022, Hilcorp submitted a 72-hour notice prior to the permanent closure of a BGT at the WF Federal 29 2, San Juan County, New Mexico. As required by Condition 7 *(found in the enclosed Closure Plan, received by the NMOCD in 12/2008)*, Hilcorp personnel proceeded to collect a 5-pt composite soil sample on 5/19/2022 to determine if any contaminant concentrations exceeded the BGT closure criteria thresholds, per Condition 7. Upon receiving analytical results on 5/26/2022, Hilcorp determined that chlorides exceeded the BGT closure criteria thresholds shown in Condition 7 of the closure plan. Thus, indicating that a potential release occurred (refer to table below). However, chlorides did not exceed the Closure Criteria for Soils Beneath Below-Grade Tanks listed in Table I of 19.15.17.13 NMAC for groundwater depths (51-100 ft bgs).

SOIL ANALYTICAL RESULTS
WF FEDERAL 29 2
HILCORP ENERGY COMPANY - L48 WEST

Soil Sample Identification	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	GRO+DRO (mg/kg)	TPH (mg/kg)
Bottom Comp 0-6"	5/19/2022	<0.020	<0.041	<0.041	<0.081	<0.183	7700	<4.1	<9.9	<50	<14.0	<64.0
NMOCD BGT Closure Criteria		**0.2**	**NE**	**NE**	**NE**	**50**	**250**	**NE**	**NE**	**NE**	**NE**	**100**
Table I of 19.15.17.13 NMAC		**10**	**NE**	**NE**	**NE**	**50**	**10,000**	**NE**	**NE**	**NE**	**1,000**	**2,500**

In accordance with 19.15.17.13(C)(3)(c) NMAC, all contaminant concentrations are less than the parameters listed in Table I of 19.15.17.13 NMAC for groundwater depths (51-100 ft). Hilcorp will proceed with closure and ensure that the excavation is backfilled in accordance with Conditions 9 and 11 of the Closure Plan.

Enclosures: Hall Lab Report (dated 5/26/2022)
Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application (received by the NMOCD in 12/2008)
Preliminary Site Characterization Assessment (provided by Ensolum, LLC; dated 6/3/2022)

Hilcorp Energy Company
1111 Travis Street, Houston, Texas 77002
T 713.209.2400 F 713.289.2750

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 26, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: WF Federal 29 002 OrderNo.: 2205927

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/20/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2205927**
Date Reported: **5/26/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Bottom Comp 0-6"
Project: WF Federal 29 002
Collection Date: 5/19/2022 9:41:00 AM
Lab ID: 2205927-001 **Matrix:** SOIL **Received Date:** 5/20/2022 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/20/2022 11:40:54 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/20/2022 11:40:54 AM
Surr: DNOP	97.5	51.1-141		%Rec	1	5/20/2022 11:40:54 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	5/21/2022 1:10:00 PM
Surr: BFB	85.9	37.7-212		%Rec	1	5/21/2022 1:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.020		mg/Kg	1	5/21/2022 1:10:00 PM
Toluene	ND	0.041		mg/Kg	1	5/21/2022 1:10:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	5/21/2022 1:10:00 PM
Xylenes, Total	ND	0.081		mg/Kg	1	5/21/2022 1:10:00 PM
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	5/21/2022 1:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	7700	300		mg/Kg	100	5/24/2022 10:17:45 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205927**

26-May-22

Client: HILCORP ENERGY

Project: WF Federal 29 002

Sample ID: **MB-67621**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **67621**	RunNo: **88218**
Prep Date: **5/23/2022**	Analysis Date: **5/23/2022**	SeqNo: **3127932** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-67621**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **67621**	RunNo: **88218**
Prep Date: **5/23/2022**	Analysis Date: **5/23/2022**	SeqNo: **3127933** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Sample ID: **MB-67621**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **67621**	RunNo: **88201**
Prep Date: **5/23/2022**	Analysis Date: **5/23/2022**	SeqNo: **3128092** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-67621**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **67621**	RunNo: **88201**
Prep Date: **5/23/2022**	Analysis Date: **5/23/2022**	SeqNo: **3128093** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205927**

26-May-22

Client: HILCORP ENERGY

Project: WF Federal 29 002

Sample ID: **LCS-67589**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **67589**	RunNo: **88170**
Prep Date: **5/20/2022**	Analysis Date: **5/20/2022**	SeqNo: **3126837** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.7	64.4	127			
Surr: DNOP	4.6		5.000		91.7	51.1	141			

Sample ID: **MB-67589**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **67589**	RunNo: **88170**
Prep Date: **5/20/2022**	Analysis Date: **5/20/2022**	SeqNo: **3126838** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.1	51.1	141			

Sample ID: **LCS-67548**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **67548**	RunNo: **88170**
Prep Date: **5/19/2022**	Analysis Date: **5/20/2022**	SeqNo: **3126893** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		101	51.1	141			

Sample ID: **LCS-67574**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **67574**	RunNo: **88170**
Prep Date: **5/19/2022**	Analysis Date: **5/20/2022**	SeqNo: **3126895** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.5	51.1	141			

Sample ID: **MB-67548**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **67548**	RunNo: **88170**
Prep Date: **5/19/2022**	Analysis Date: **5/20/2022**	SeqNo: **3126897** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		112	51.1	141			

Sample ID: **MB-67574**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **67574**	RunNo: **88170**
Prep Date: **5/19/2022**	Analysis Date: **5/20/2022**	SeqNo: **3126899** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205927**

26-May-22

Client: HILCORP ENERGY

Project: WF Federal 29 002

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A88182**	RunNo: **88182**
Prep Date:	Analysis Date: **5/21/2022**	SeqNo: **3126062** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.2	72.3	137			
Surr: BFB	2000		1000		202	37.7	212			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **A88182**	RunNo: **88182**
Prep Date:	Analysis Date: **5/21/2022**	SeqNo: **3126063** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		93.9	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205927**

26-May-22

Client: HILCORP ENERGY

Project: WF Federal 29 002

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B88182**	RunNo: **88182**
Prep Date:	Analysis Date: **5/21/2022**	SeqNo: **3126090** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	80	120			
Toluene	0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.7	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B88182**	RunNo: **88182**
Prep Date:	Analysis Date: **5/21/2022**	SeqNo: **3126091** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		96.9	70	130			

Sample ID: **2205927-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **Bottom Comp 0-6"**	Batch ID: **B88182**	RunNo: **88207**
Prep Date:	Analysis Date: **5/24/2022**	SeqNo: **3127129** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.8117	0	91.8	68.8	120			
Toluene	0.76	0.041	0.8117	0	93.5	73.6	124			
Ethylbenzene	0.76	0.041	0.8117	0	93.1	72.7	129			
Xylenes, Total	2.3	0.081	2.435	0	92.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.73		0.8117		90.4	70	130			

Sample ID: **2205927-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **Bottom Comp 0-6"**	Batch ID: **B88182**	RunNo: **88207**
Prep Date:	Analysis Date: **5/24/2022**	SeqNo: **3127130** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.020	0.8117	0	85.7	68.8	120	6.86	20	
Toluene	0.71	0.041	0.8117	0	87.1	73.6	124	7.11	20	
Ethylbenzene	0.70	0.041	0.8117	0	86.3	72.7	129	7.57	20	
Xylenes, Total	2.1	0.081	2.435	0	85.2	75.7	126	8.53	20	
Surr: 4-Bromofluorobenzene	0.69		0.8117		84.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Hilcorp Energy | Work Order Number: 2205927 | RcptNo: 1

Received By: Juan Rojas 5/20/2022 7:05:00 AM

Completed By: Tracy Casarrubias 5/20/2022 7:50:27 AM

Reviewed By: 5-20-22

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: JR 5/20/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: branden.sinclair@hilcorp.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 2-day

Project Name: WF Federal 29 #002

Project #:

Project Manager: Mitch Killough

Sampler: Branden Sinclair

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.1-0.1=2.0(°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2205927	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl, F, Br, NO_3, NO_2, PO_4, SO_4)	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
5-19	0941	soil	Bottom Comp 0-6"	4 oz jar	cool	001	✓	✓					✓			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5-19	1505		Mustan Wat		5/19/22	1505
5/19/22	1752	Mustan Waeter				

Remarks: cc: mkillough@hilcorp.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

RECEIVED
2008 DEC 8 PM 4 42

Form C-144
July 21, 200

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
Existing BGT
BGT1
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Modification to an existing permit
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances

1.
Operator: XTO Energy, Inc. OGRID #: 5380
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name: WF Federal 29 #2
API Number: 3004530058 OCD Permit Number:
U/L or Qtr/Qtr P Section 29 Township 30N Range 14W County: San Juan
Center of Proposed Design: Latitude 36.780122 Longitude 108.325878 NAD: ☐ 1927 ☒ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____bbl Dimensions: L_____ x W_____ x D_____

3.
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other _____
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 95 bbl Type of fluid: Produced Water
Tank Construction material: Steel
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other Visible sidewalls, vaulted, automatic high-level shut off, no liner
Liner type: Thickness _____mil ☐ HDPE ☐ PVC ☐ Other _____

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.

Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*

☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☒ Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing

7.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☒ Other Expanded metal or solid vaulted top

☐ Monthly inspections (If netting or screening is not physically feasible)

8.

Signs: Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC

9.

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. **Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.**

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☒ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☒ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to permanent pits)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☒ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☒ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☒ Yes ☐ N
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☒ Yes ☐ N
Within a 100-year floodplain. - FEMA map	☐ Yes ☒ N

11.
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____ *(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

13.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

18.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Kim Champlin Title: Environmental Representative

Signature: Kim Champlin Date: 11/24/08

e-mail address: kim_champlin@xtoenergy.com Telephone: (505) 333-3100

20.
OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: **Victoria Venegas** Approval Date: **02/22/2022**

Title: **Environmental Specialist** OCD Permit Number: **BGT1**

21.
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:**

22.
Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

23.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: Disposal Facility Permit Number:

Disposal Facility Name: Disposal Facility Permit Number:

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

☐ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☐ Disposal Facility Name and Permit Number
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude Longitude NAD: ☐ 1927 ☐ 1983

25.
Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Title:

Signature: Date:

e-mail address: Telephone:

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

1999 NOV 22 PM 11:56

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
30-045-30058	86620	TWIN MOUNDS PC EXT.

⁴ Property Code	⁵ Property Name	⁶ Well Number
23904	WF Federal 29	2

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
019219	RICHARDSON OPERATING COMPANY	5500'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P.	29	30 N	14 W		795	South	665	East	SanJuan

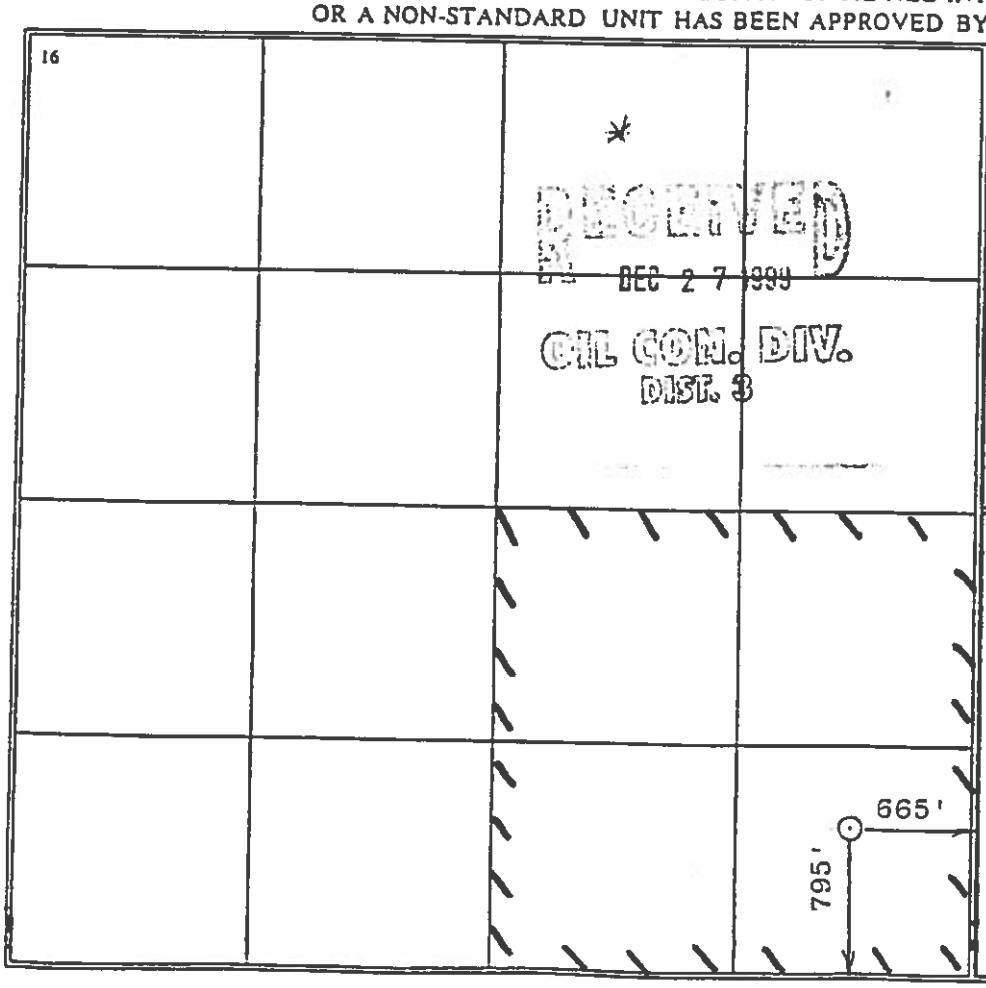
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature: BRIAN WOOD

Printed Name: CONSULTANT

Title: NOV. 19, 1999

Date

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey: [illegible]-99

Signature and Seal of Professional Surveyor:

GREGG G. HOODLESTON NEW MEXICO 6844 REGISTERED LAND SURVEYOR

Certificate Number

Lodestar Services, Inc.
PO Box 4465, Durango, CO 81302

Pit Permit Siting Criteria Information Sheet

Client:	XTO Energy
Project:	Pit Permits
Revised:	10/26/2008
Prepared by:	Daniel Newman

API#:	3004530058	USPLSS:	T30N,R14W,29P
Name:	WF FEDERAL 29 #2	Lat/Long:	36.780122 / -108.325878
Depth to groundwater:	between 50' and 100'	Geologic formation:	Kirtland and Fruitland Formations
Distance to closest continuously flowing watercourse:	4 miles south to the San Juan River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	1879' east of Stevens Arroyo	Soil Type:	Entisols
Permanent residence, school, hospital, institution or church within 300'	No	Annual Precipitation:	8.08 inches average
Domestic fresh water well or spring within 500'	No	Precipitation Notes:	no significant precipatation events
Any other fresh water well or spring within 1000'	No		
Within incorporated municipal boundaries	No	Attached Documents:	
Within defined municipal fresh water well field	No		Topo map, ground water data map, ariel photo, mines and quarries map, FEMA map
Wetland within 500'	No	Mining Activity:	Yes, above Navajo Mine
Within unstable area	Potentially - above Navajo Mine		
Within 100 year flood plain	Zone X		

Additional Notes:

WF FEDERAL 29 #2 Below Ground Tank
Hydrogeologic Report for Siting Criteria

General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be situated near Coolidge Arroyo, northeast of Twin Mounds and the town of Kirtland.

The predominant geologic formation is the Fruitland Formation/Kirtland Shale of Late Cretaceous age, which underlies surface soils and is often exposed as broad shalely hills (Dane and Bachman, 1965). Deposits of Quaternary alluvial sands also occur prominently near the surface of the area, especially near streams and washes. The Fruitland Formation consists of interbedded sandy shale, carbonaceous shale, sandstone and coal units. The Kirtland Shale is divided into a lower shale member, a middle sandstone unit and an upper sandy shale member. The two formations are difficult to differentiate and are often treated together. The combined thickness of the Fruitland-Kirtland interval ranges from 100 to 2000 feet (Stone et al., 1983).

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan Basin (Stone et al., 1983). Aquifers within the Fruitland-Kirtland Formations are primarily limited to the Farmington Sandstone Member, which is the middle unit within the Kirtland Shale. Reported discharge from stock wells is about 10 gallons per minute (Stone et al., 1983). The aquifer supplies low yielding stock wells.

The prominent soil type at the proposed site is enitsols, which are defined as soils that exhibit little to no profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Dry and arid weather further prohibit active recharge. The climate of the region is arid, averaging just over 8 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu).

The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

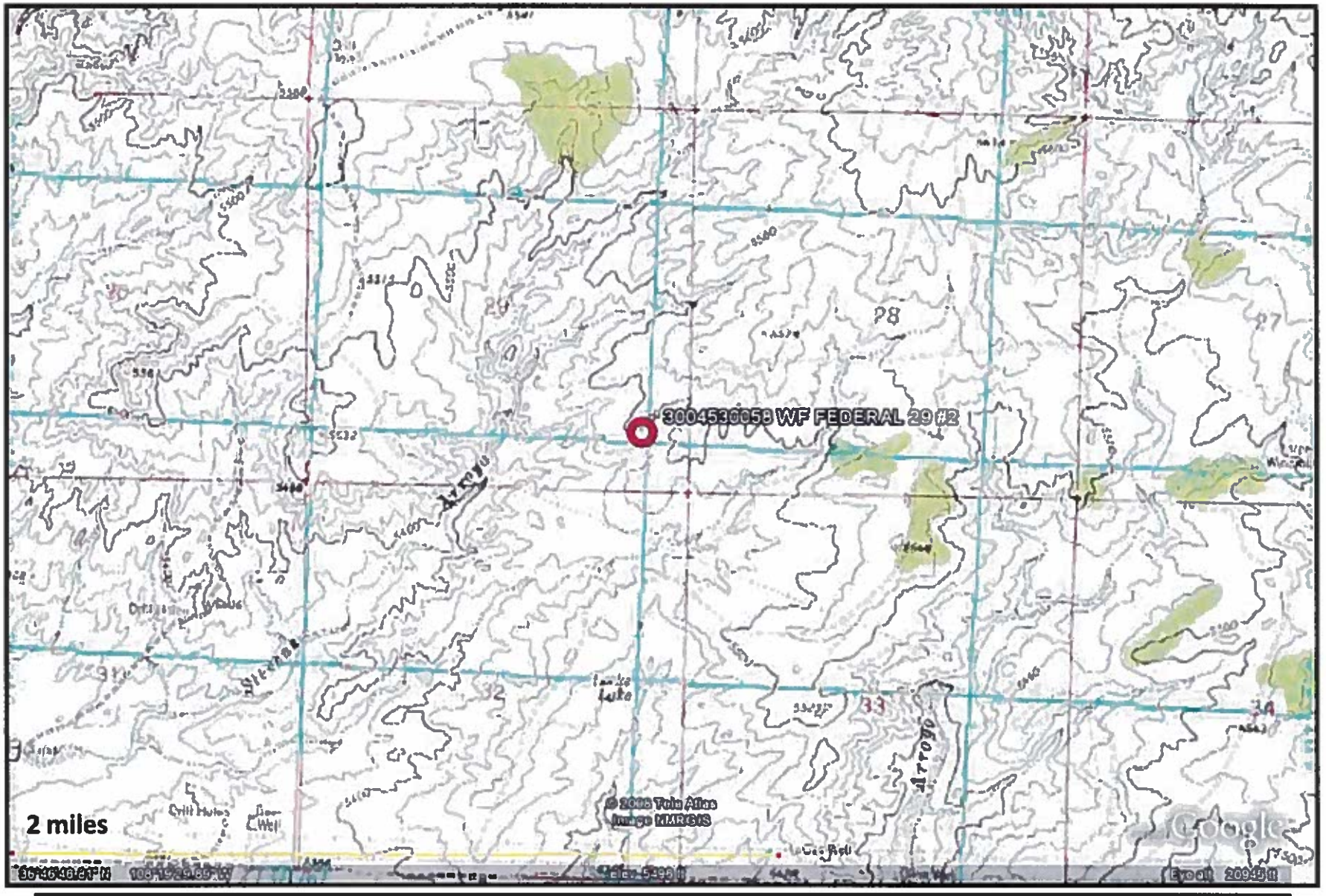
Site Specific Hydrogeology

Depth to groundwater is estimated to be between 50 and 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.

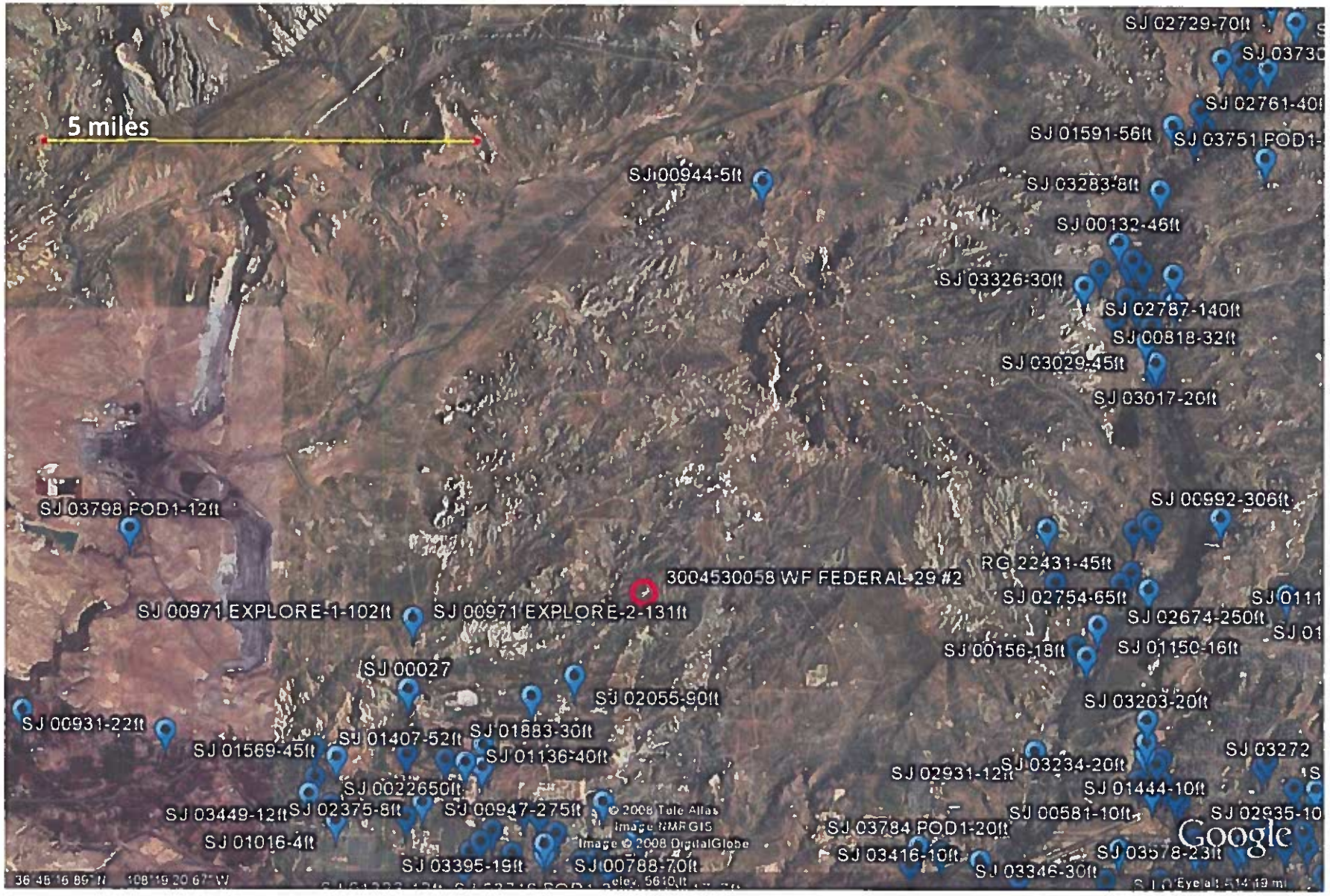
Beds of water-yielding sandstone are primarily confined to the Farmington Sandstone Member of the Fruitland Formation, which is 20-480 feet thick (Stone et al., 1983). The site is located in a shalely unit of the Fruitland Formation, as evidenced by the relatively flat topography that is easily eroded by arroyos. The eroded surfaces of the arroyos do not expose thick sequences of sandstone outcrops, the presence of which might indicate a water-bearing unit within the immediate subsurface.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. Wells located at similar elevations and distances from the San Juan River contain groundwater at depths ranging from 6 to 90 feet. The site in question is located on a relatively flat area at an elevation of approximately 5489 feet. The closest well to the proposed site sits at an elevation of approximately 5410 feet, at a distance if approximately one and a half to the southwest. This site puts groundwater at a distance of 90 feet below the ground surface.

Exposures of shale at the surface and within channel cuts of arroyos suggest groundwater is restricted to deeper sandstone units. However, proximity of the site to the San Juan River should also be considered. Groundwater data recorded from wells drilled at similar distances from the San Juan River and within comparable topographic settings is greater than 50 feet. Therefore, depth to groundwater is estimated to be between 50 and 100 feet.



Lodestar Services, Inc PO Box 4465 Durango, CO 81302	WF FEDERAL 29#2 T30N,R14W,29P SAN JUAN COUNTY, NM	TOPOGRAPHIC MAP



Lodestar Services, Inc PO Box 4465 Durango, CO 81302	WF FEDERAL 29#2 T30N,R14W,29P SAN JUAN COUNTY, NM	i-Waters Ground Water Data Map

New Mexico Office of the State Engineer

New Mexico Office of the State Engineer

POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 10/21/2008

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
RG	29N	13W	19				1	30	30	30
RG	29N	13W	29	C			1	6	6	6
SJ	29N	13W	01				4	18	40	28
SJ	29N	13W	02				7	17	90	34
SJ	29N	13W	04				2	10	16	13
SJ	29N	13W	05				4	10	20	16
SJ	29N	13W	06				1	12	12	12
SJ	29N	13W	08				2	4	30	17
SJ	29N	13W	09				13	9	50	17
SJ	29N	13W	10				15	9	38	20
SJ	29N	13W	11				9	10	39	19
SJ	29N	13W	14				33	4	30	6
SJ	29N	13W	15				2	4	25	15
SJ	29N	13W	16				3	21	35	27
SJ	29N	13W	17				2	8	20	14
SJ	29N	13W	18				1	11	11	11
SJ	29N	13W	21				3	6	20	11
SJ	29N	13W	21		261218	2079099	1	5	5	5
SJ	29N	13W	22				28	7	35	16
SJ	29N	13W	22		261533	2080965	1	15	15	15
SJ	29N	13W	23				7	6	30	15
SJ	29N	13W	24				1	32	32	32
SJ	29N	13W	25				1	75	75	75

New Mexico Office of the State Engineer
POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 10/21/2008

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
SJ	29N	14W	05				1	90	90	90
SJ	29N	14W	06				2	30	52	41
SJ	29N	14W	07				6	6	50	24
SJ	29N	14W	08				3	50	275	132
SJ	29N	14W	12		259584	2086850	1	20	20	20
SJ	29N	14W	13				2	4	10	7
SJ	29N	14W	13		259540	2085641	1	6	6	6
SJ	29N	14W	17				7	3	28	13
SJ	29N	14W	18				6	7	25	17

New Mexico Office of the State Engineer
POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 10/21/2008

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
SJ	29N	15W	04				1	22	22	22
SJ	29N	15W	06				1	14	14	14
SJ	29N	15W	11				6	4	45	15
SJ	29N	15W	11	W	336000	2092200	1	25	25	25
SJ	29N	15W	12				6	6	110	38
SJ	29N	15W	13				2	12	20	16

New Mexico Office of the State Engineer
POD Reports and Downloads

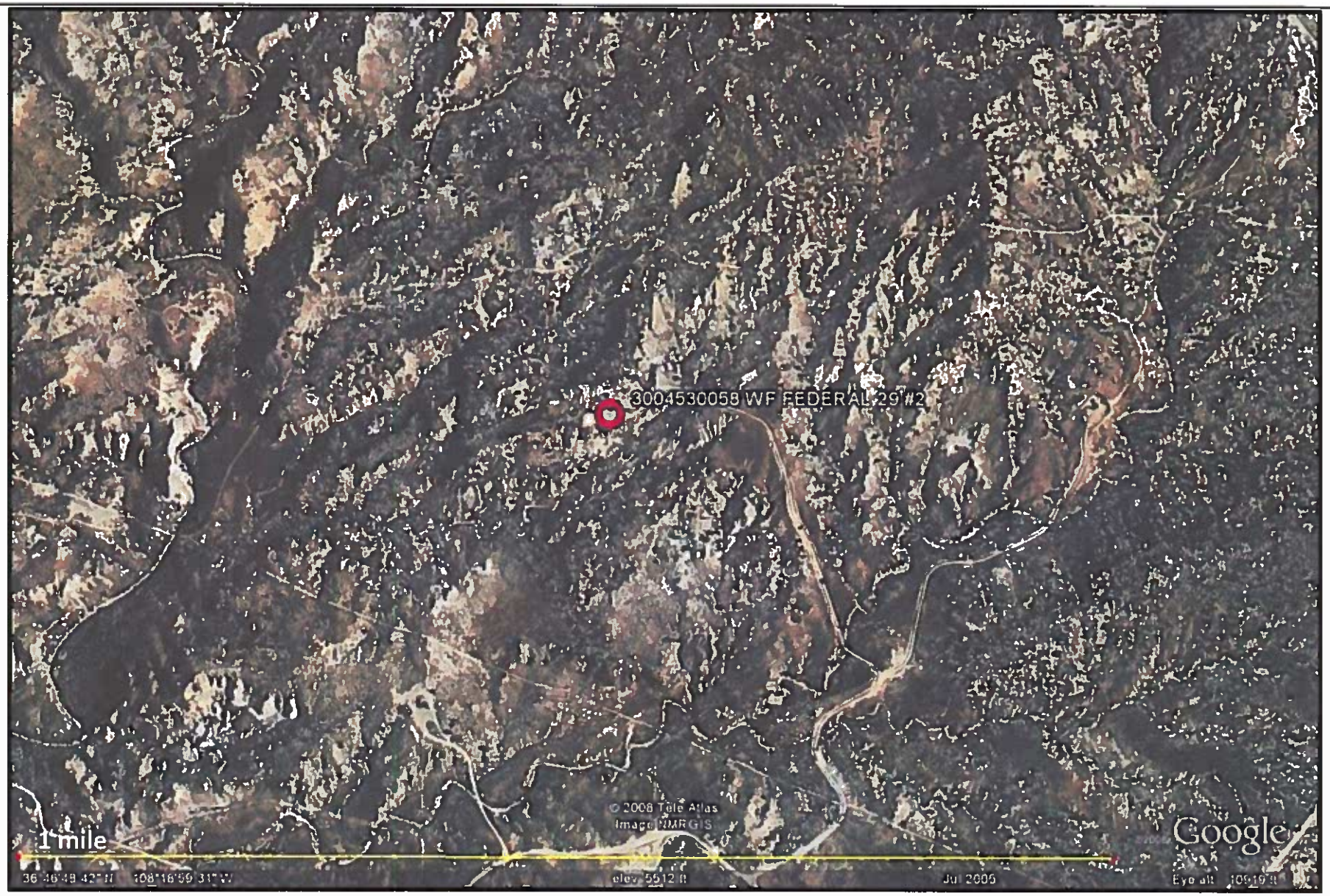
AVERAGE DEPTH OF WATER REPORT 10/20/2008

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
RG	30N	13W	30				1	45	45	45
SJ	30N	13W	01				1	27	27	27
SJ	30N	13W	05				2	8	46	27
SJ	30N	13W	08				18	8	56	27
SJ	30N	13W	09				3	32	140	91
SJ	30N	13W	11				1	58	58	58
SJ	30N	13W	17				3	9	45	25
SJ	30N	13W	26				8	230	350	286
SJ	30N	13W	27				1	250	250	250
SJ	30N	13W	28				2	306	306	306
SJ	30N	13W	29				10	15	65	31
SJ	30N	13W	30				1	21	21	21
SJ	30N	13W	32				4	10	18	14
SJ	30N	13W	35				1	200	200	200

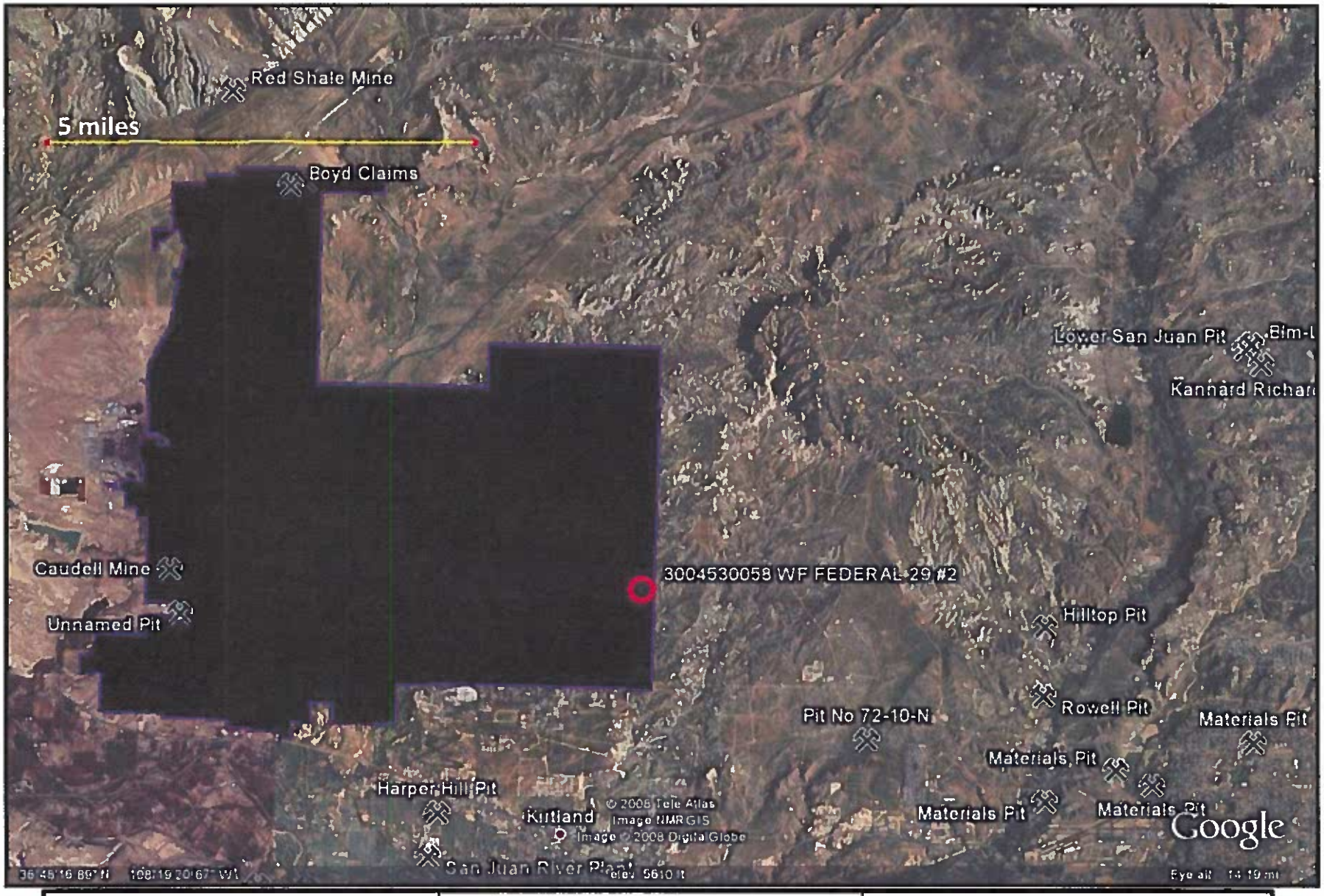
New Mexico Office of the State Engineer
POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 10/20/2008

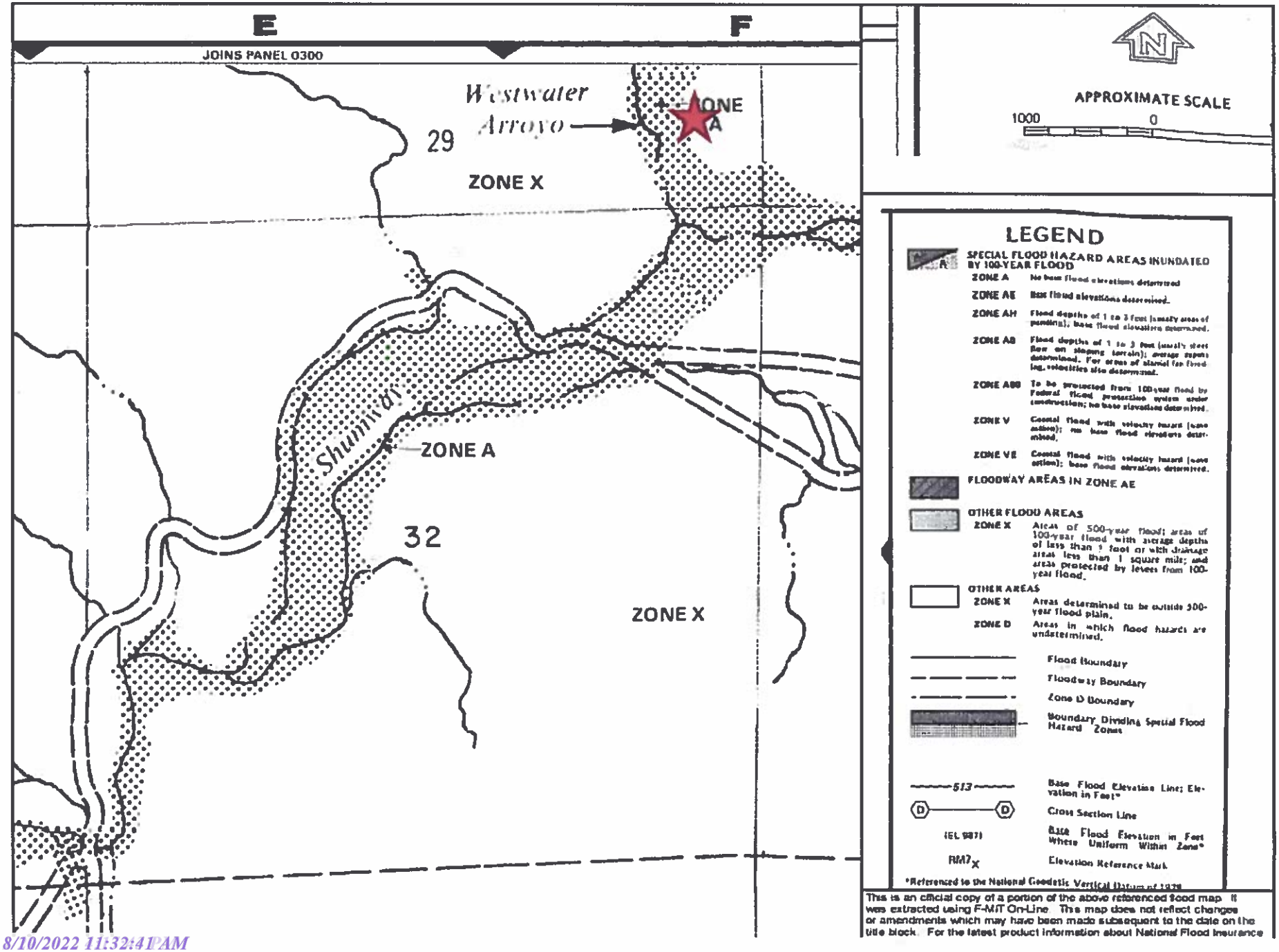
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
SJ	31N	13W	02				2	19	70	45
SJ	31N	13W	03				2	11	22	17
SJ	31N	13W	09				4	40	180	108
SJ	31N	13W	10				11	4	65	22
SJ	31N	13W	15				2	10	24	17
SJ	31N	13W	21				1	6	6	6
SJ	31N	13W	22				6	5	40	24
SJ	31N	13W	23				1	14	14	14
SJ	31N	13W	27				5	20	70	38
SJ	31N	13W	28				5	2	70	21
SJ	31N	13W	33				4	6	56	24



Lodestar Services, Inc PO Box 4465 Durango, CO 81302	WF FEDERAL 29#2 T30N,R14W,29P SAN JUAN COUNTY, NM	AERIAL PHOTOGRAPH



Lodestar Services, Inc PO Box 4465 Durango, CO 81302	WF FEDERAL 29#2 T30N,R14W,29P SAN JUAN COUNTY, NM	Mines and Quarries Map



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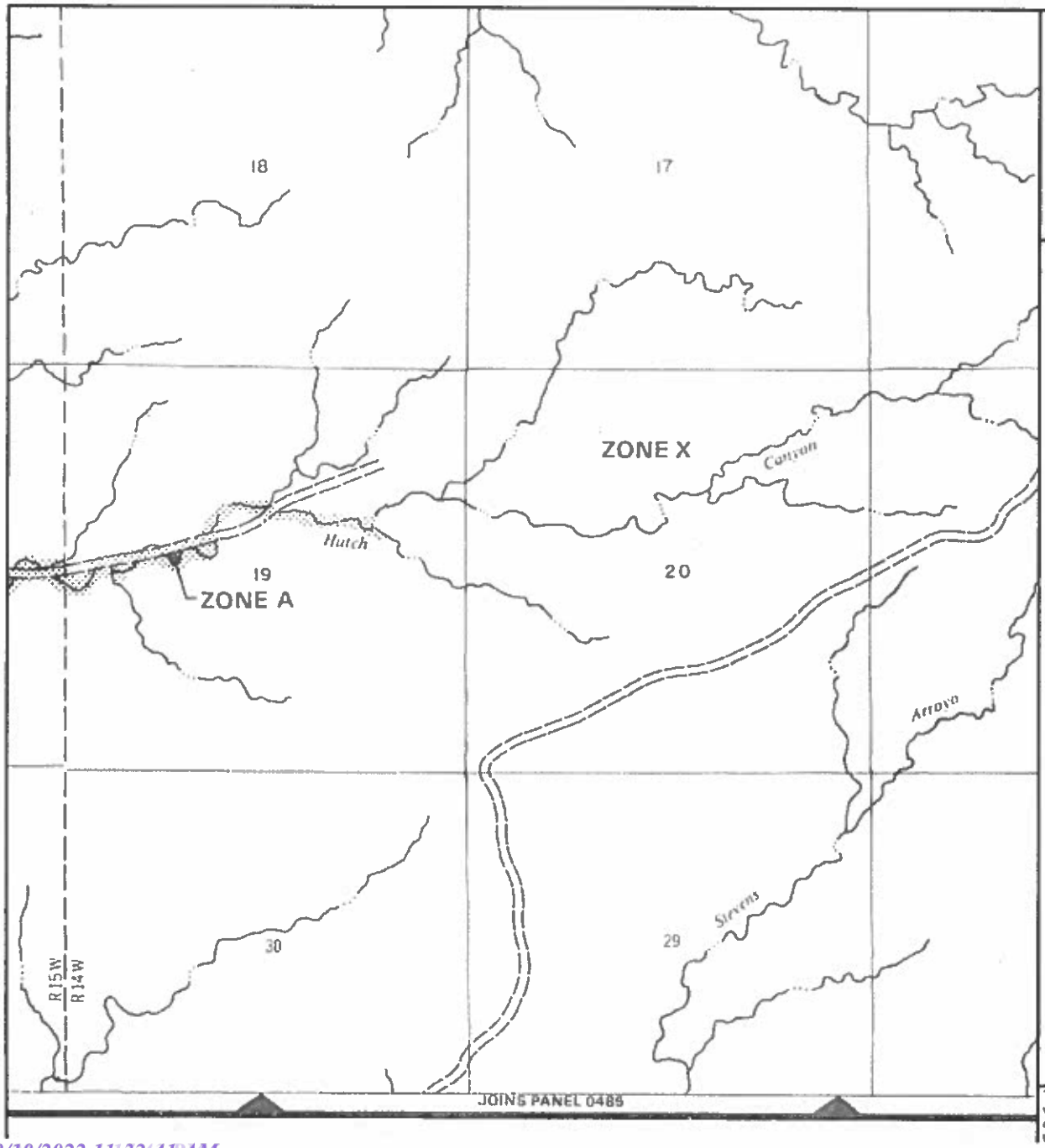

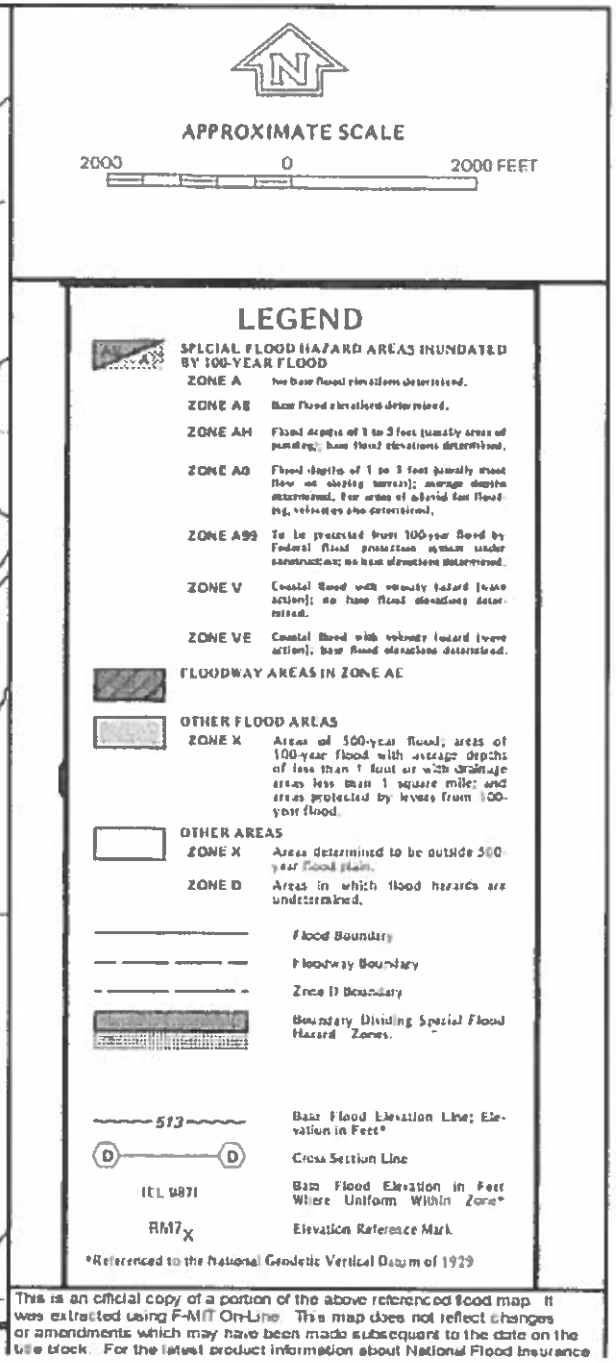

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XTO Energy Inc.
San Juan Basin (Northwest New Mexico)
General Design and Construction Plan
For Below-Grade Tanks

In accordance with Rule 19.15.17.11 NMAC the following information describes the design and construction of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

General Plan

1. XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.

2. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the existing well site operated by XTO where the existing below-grade tank is located. The sign will list the Operator on record as the operator, the location of the well site by unit letter, section, township, range, and emergency telephone numbers.

3. XTO is requesting approval of an alternative fencing to be used on below-grade tank locations. Below-grade tank locations will be fenced utilizing 48" steel mesh field-fence (hogwire) with pipe railing along the top. A 6' chain link fence will be utilized around the well pad if the well site is within a city limits or ¼ mile of a permanent residence, school, hospital, institution or church. Below-grade tanks located within 1000' of a permanent residence, school, hospital, institution or church will be fenced by 6' chain link fence with at least two strands of barbed wire at the top. All gates associated with below-grade tanks will remain closed and locked when responsible individuals are not on site.

4. XTO shall construct below-grade tanks with an expanded metal covering or solid vaulted top on the top of the below-grade tank.

5. XTO will ensure that below-grade tanks are constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight. Tanks will be constructed of A36 carbon steel with 3/16" sides and ¼" bottom. (See attached drawing).

6. The below-grade tank system will have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom. Sand bedding (4") will be placed on top of a level foundation to ensure prevention of punctures, cracks or indentations of the liner or tank bottom.

7. XTO will construct a berm and/or diversion ditch in a manner that prevents the collection of surface water run-on. Below-grade tanks will be equipped with automatic high level shut-off devices as well as manually operated shut-off valves. (See attached drawing).

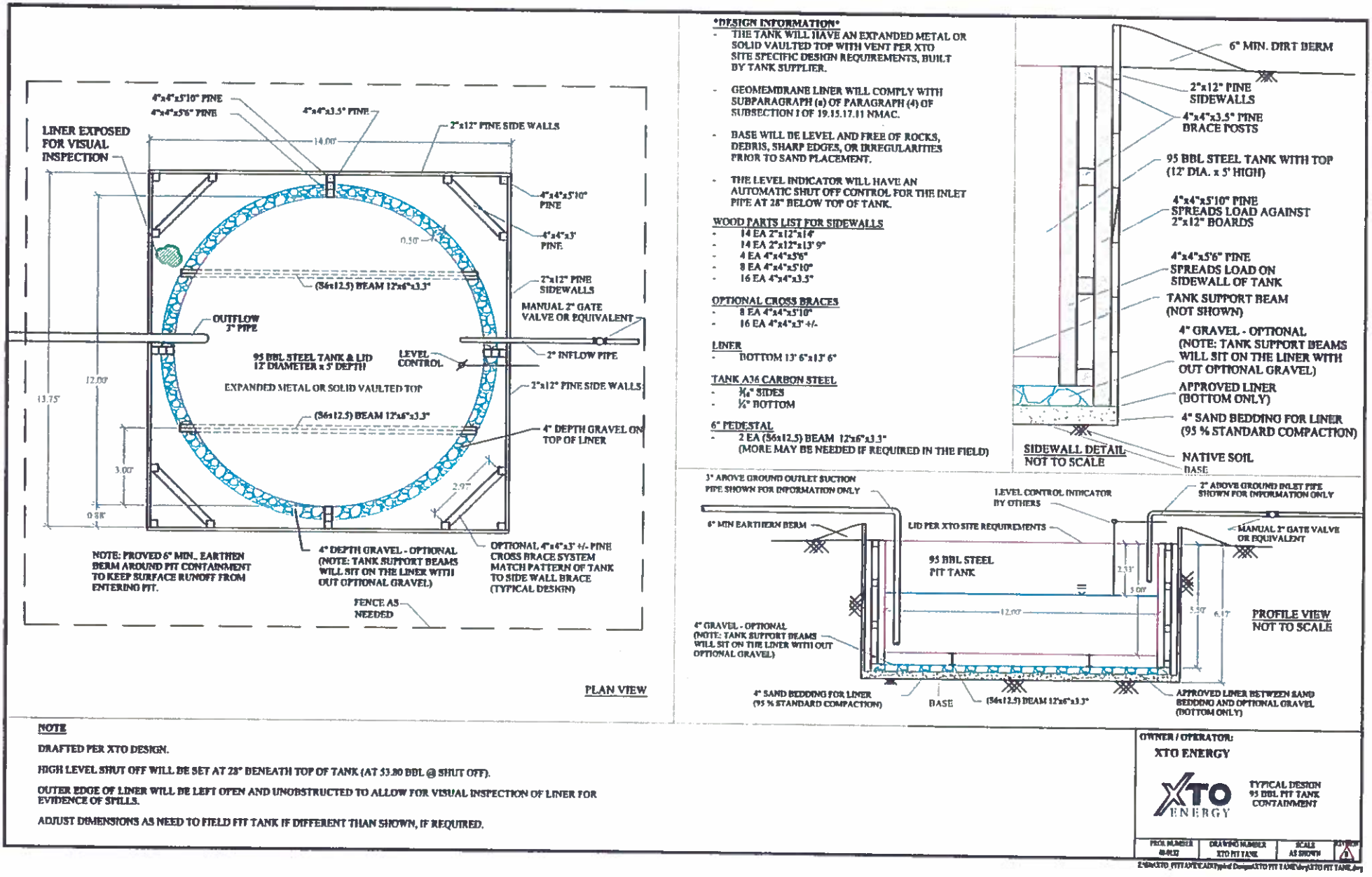
8. XTO will construct and use below-grade tanks that do not have double walls. The below-grade tank sidewalls will be open for visual inspection for leaks. The sidewalls of the cellar will be constructed with 2" X 12" pine sidewalls and 4" X 4" pine brace posts. The below-grade tank

bottom will be elevated a minimum of 6" above the underlying ground surface and the below-grade tank will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. (See attached drawing).

9. XTO will equip below-grade tanks designed in this manner with a properly functioning automatic high-level shut-off control device and manual controls to prevent overflows. (See attached drawing).

10. XTO will demonstrate to the OCD that the geomembrane liner complies with the specifications of Subparagraph (a) of Paragraph (4) of Subsection I of 19.15.17.11 NMAC and obtain approval from OCD prior to the installation of the design. The geomembrane liner shall have a hydraulic conductivity no greater than 1 x 10-9 cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidics and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. (See attached drawing).

11. The general specifications for design and construction are attached.


LINER EXPOSED FOR VISUAL INSPECTION
4"x4"x5'10" PINE
4"x4"x5'6" PINE
4"x4"x3.5" PINE
2"x12" PINE SIDE WALLS
14.00'
4"x4"x5'10" PINE
4"x4"x3' PINE
0.50'
(S6x12.5) BEAM 12'x6"x3.3"
2"x12" PINE SIDEWALLS
MANUAL 2" GATE VALVE OR EQUIVALENT
OUTFLOW 3" PIPE
95 BBL STEEL TANK & LID 12' DIAMETER x 5' DEPTH
LEVEL CONTROL
2" INFLOW PIPE
EXPANDED METAL OR SOLID VAULTED TOP
2"x12" PINE SIDE WALLS
12.00'
13.75'
(S6x12.5) BEAM 12'x6"x3.3"
4" DEPTH GRAVEL ON TOP OF LINER
3.00'
2.97'
0.38'
NOTE: PROVED 6" MIN., EARTHEN BERM AROUND PIT CONTAINMENT TO KEEP SURFACE RUNOFF FROM ENTERING PIT.
4" DEPTH GRAVEL - OPTIONAL (NOTE: TANK SUPPORT BEAMS WILL SIT ON THE LINER WITH OUT OPTIONAL GRAVEL)
OPTIONAL 4"x4"x3' +/- PINE CROSS BRACE SYSTEM MATCH PATTERN OF TANK TO SIDE WALL BRACE (TYPICAL DESIGN)
FENCE AS NEEDED
PLAN VIEW
DESIGN INFORMATION
- THE TANK WILL HAVE AN EXPANDED METAL OR SOLID VAULTED TOP WITH VENT PER XTO SITE SPECIFIC DESIGN REQUIREMENTS, BUILT BY TANK SUPPLIER.
- GEOMEMBRANE LINER WILL COMPLY WITH SUBPARAGRAPH (a) OF PARAGRAPH (4) OF SUBSECTION I OF 19.15.17.11 NMAC.
- BASE WILL BE LEVEL AND FREE OF ROCKS, DEBRIS, SHARP EDGES, OR IRREGULARITIES PRIOR TO SAND PLACEMENT.
- THE LEVEL INDICATOR WILL HAVE AN AUTOMATIC SHUT OFF CONTROL FOR THE INLET PIPE AT 28" BELOW TOP OF TANK.
WOOD PARTS LIST FOR SIDEWALLS
- 14 EA 2"x12"x14'
- 14 EA 2"x12"x13' 9"
- 4 EA 4"x4"x5'6"
- 8 EA 4"x4"x5'10"
- 16 EA 4"x4"x3.5"
OPTIONAL CROSS BRACES
- 8 EA 4"x4"x5'10"
- 16 EA 4"x4"x3' +/-
LINER
- BOTTOM 13' 6"x13' 6"
TANK A36 CARBON STEEL
- ¾" SIDES
- ½" BOTTOM
6" PEDESTAL
- 2 EA (S6x12.5) BEAM 12'x6"x3.3" (MORE MAY BE NEEDED IF REQUIRED IN THE FIELD)
6" MIN. DIRT BERM
2"x12" PINE SIDEWALLS
4"x4"x3.5" PINE BRACE POSTS
95 BBL STEEL TANK WITH TOP (12' DIA. x 5' HIGH)
4"x4"x5'10" PINE SPREADS LOAD AGAINST 2"x12" BOARDS
4"x4"x5'6" PINE SPREADS LOAD ON SIDEWALL OF TANK
TANK SUPPORT BEAM (NOT SHOWN)
4" GRAVEL - OPTIONAL (NOTE: TANK SUPPORT BEAMS WILL SIT ON THE LINER WITH OUT OPTIONAL GRAVEL)
APPROVED LINER (BOTTOM ONLY)
4" SAND BEDDING FOR LINER (95 % STANDARD COMPACTION)
NATIVE SOIL BASE
SIDEWALL DETAIL NOT TO SCALE
3" ABOVE GROUND OUTLET SUCTION PIPE SHOWN FOR INFORMATION ONLY
6" MIN EARTHEN BERM
LEVEL CONTROL INDICATOR BY OTHERS
2" ABOVE GROUND INLET PIPE SHOWN FOR INFORMATION ONLY
LID PER XTO SITE REQUIREMENTS
MANUAL 3" GATE VALVE OR EQUIVALENT
95 BBL STEEL PIT TANK
2.33'
5.00'
12.00'
5.50'
6.17'
4" GRAVEL - OPTIONAL (NOTE: TANK SUPPORT BEAMS WILL SIT ON THE LINER WITH OUT OPTIONAL GRAVEL)
4" SAND BEDDING FOR LINER (95 % STANDARD COMPACTION)
BASE
(S6x12.5) BEAM 12'x6"x3.3"
APPROVED LINER BETWEEN SAND BEDDING AND OPTIONAL GRAVEL (BOTTOM ONLY)
PROFILE VIEW NOT TO SCALE
NOTE
DRAFTED PER XTO DESIGN.
HIGH LEVEL SHUT OFF WILL BE SET AT 28" BENEATH TOP OF TANK (AT 53.80 BBL @ SHUT OFF).
OUTER EDGE OF LINER WILL BE LEFT OPEN AND UNOBSTRUCTED TO ALLOW FOR VISUAL INSPECTION OF LINER FOR EVIDENCE OF SPILLS.
ADJUST DIMENSIONS AS NEED TO FIELD PIT TANK IF DIFFERENT THAN SHOWN, IF REQUIRED.
OWNER / OPERATOR:
XTO ENERGY
XTO ENERGY
TYPICAL DESIGN 95 BBL PIT TANK CONTAINMENT
DRAWING NUMBER
XTO PIT TANK
SCALE
AS SHOWN

XTO Energy Inc.
San Juan Basin (Northwest New Mexico)
General Maintenance and Operating Plan
For Below-Grade Tanks

In accordance with Rule 19.15.17.12 NMAC the following information describes the operation and maintenance of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

General Plan

1. XTO will operate and maintain below-grade tanks to contain liquids and solids, maintain the integrity of the liner and secondary containment system, prevent contamination of fresh water and protect public health and the environment. Fluid levels will be monitored weekly and high levels will be removed as necessary. Monthly inspections will be conducted to monitor integrity of below-grade tank systems and below-grade tanks will be equipped with automatic high-level shut-off devices.

2. XTO will not allow below-grade tanks to overflow and will use berms and/or diversion ditch to prevent surface run on to enter the below-grade tank. Below-grade tanks will be equipped with automatic high-level shut-off control devices as well as manually operated shut-off valves. See attached drawing for vault design and placement of diversion berms and shut-off devices.

3. XTO will continuously remove any visible or measurable layer of oil from the fluid surface of below-grade tanks in order to prevent significant accumulation of oil.

4. XTO will inspect the below-grade tank monthly and maintain written records for five years. Monthly inspections will consist of documenting the following: (see attached template),
   - Well Name
   - API #
   - Sec., Twn., Rng.
   - XTO Inspector's name
   - Inspection date and time
   - Visible tears in liner
   - Visible signs of tank overflow
   - Collection of surface run on
   - Visible layer of oil
   - Visible signs of tank leak
   - Estimated freeboard

5. XTO will maintain adequate freeboard to prevent over topping of the below-grade tank. High level shut-off devices control the freeboard at an average of 28" beneath the top of the tank.

6. XTO will not discharge into or store any hazardous waste in any below-grade tank.

7. If a below-grade tank develops a leak, or if any penetration of a below-grade tank occurs below the liquids surface, XTO will remove all liquids above the damage or leak line within 48 hours,

notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the below-grade tank. If an existing below-grade tank does not meet current requirements of Paragraphs 1-4 of Subsection I of 19.15.17.11 NMAC the tank will be modified or retrofitted to comply. If compliance can not be achieved XTO will implement the approved closure plan.

MONTHLY BELOW GRADE TANK INSPECTION FORM

Well Name: _____ **API No.:** _____

Legals **Sec:** _____ **Township:** _____ **Range:** _____

XTO Inspector's Name	Inspection Date	Inspection Time	Any visible liner tears (Y/N)	Any visible signs of tank overflows (Y/N)	Collection of surface run on (Y/N)	Visible layer of oil (Y/N)	Any visible signs of a tank leak (Y/N)	Freeboard Est. (ft)

Notes: Provide Detailed Description: _____

Misc:

XTO Energy Inc.
San Juan Basin (Northwest New Mexico)
General Closure Plan
For Below-Grade Tanks

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

General Plan

1. XTO will close below-grade tanks within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.

2. XTO will close a below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.

3. XTO will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.

4. XTO will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:
   - Envirotech Permit No. NM01-0011 and IEI Permit No. NM 01-0010B
     - Soil contaminated by exempt petroleum hydrocarbons
     - Produced sand, pit sludge and contaminated bottoms from storage of exempt wastes
   - Basin Disposal Permit No. NM01-005
     - Produced water

5. XTO will remove the below-grade tank and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office has approved prior to removal. Any associated liners will be removed, properly cleaned and disposed of per 19.15.9.712 NMAC at San Juan County Landfill. Documentation of the final disposition will be included in the closure report.

6. XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.

7. XTO will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be

analyzed for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. XTO will notify the division of its results on form C-141.

8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.

9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.

10. Notice of Closure operations will be given to the Aztec Division District III office between 72 hours and one week prior to the start of closure activities via email or verbally.
The notification will include the following:
    i. Operator's name
    ii. Well Name and API Number
    iii. Location by Unit Letter, Section, Township, and Range

The surface owner shall also be notified prior to the implementation of any closure operations of below-grade tanks as per the approved closure plan using certified mail, return receipt requested.

11. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

12. A minimum of 4 feet of cover shall be achieved and the cover shall include 1 foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. Soil cover will be constructed to the site's existing grade and ponding of water and erosion of the cover material will be prevented with drainage control, natural drainages and silt traps where needed.

13. XTO will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

14. All closure activities will include proper documentation and be available for review upon request and will be submitted in closure report form to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on form C-144 and incorporate the following:
    - i. Proof of closure notice to division and surface owner;
    - ii. Details on capping and covering, where applicable;
    - iii. Inspection reports;
    - iv. Confirmation sampling analytical results;
    - v. Disposal facility name(s) and permit number(s);
    - vi. Soil backfilling and cover installation;
    - vii. Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable);
    - viii. Photo documentation of the site reclamation.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 82620
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

QUESTIONS

Facility and Ground Water *Please answer as many of these questions as possible in this group. More information will help us identify the appropriate associations in the system.*	
Facility or Site Name	WF Federal 29 2
Facility ID (f#), if known	*Not answered.*
Facility Type	Below Grade Tank - (BGT)
Well Name, include well number	WF Federal 29 2
Well API, if associated with a well	3004530058
Pit / Tank Type	*Not answered.*
Pit / Tank Name or Identifier	*Not answered.*
Pit / Tank Opened Date, if known	*Not answered.*
Pit / Tank Dimensions, Length (ft)	*Not answered.*
Pit / Tank Dimensions, Width or Diameter (ft)	*Not answered.*
Pit / Tank Dimensions, Depth (ft)	*Not answered.*
Ground Water Depth (ft)	*Not answered.*
Ground Water Impact	*Not answered.*
Ground Water Quality (TDS)	*Not answered.*

Below-Grade Tank *Subsection I of 19.15.17.11 NMAC*	
Volume / Capacity (bbls)	120
Type of Fluid	Produced Water
Pit / Tank Construction Material	Steel
Secondary containment with leak detection	*Not answered.*
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	*Not answered.*
Visible sidewalls and liner	*Not answered.*
Visible sidewalls only	True
Tank installed prior to June 18. 2008	*Not answered.*
Other, Visible Notation. Please specify	visible sidewalls, vaulted, automatic high level shut off, no liner
Liner Thickness (mil)	*Not answered.*
HDPE (Liner Type)	*Not answered.*
PVC (Liner Type)	*Not answered.*
Other, Liner Type. Please specify (Variance Required)	*Not answered.*

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 82620
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

QUESTIONS

Fencing	
Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)	
Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*	*Not answered.*
Four foot height, four strands of barbed wire evenly spaced between one and four feet	*Not answered.*
Alternate, Fencing. Please specify (Variance Required)	4' hogwire

Netting	
Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
Screen	*Not answered.*
Netting	*Not answered.*
Other, Netting. Please specify (Variance May Be Needed)	expanded metal or solid vaulted top

Signs	
Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have their own sign in compliance with Subsection C of 19.15.17.11 NMAC.)	
12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	*Not answered.*
Signed in compliance with 19.15.16.8 NMAC	True

Variances and Exceptions	
Justifications and/or demonstrations ofequivalency are required. Please refer to 19.15.17 NMAC for guidance. ***Please check a box if one or more of the following is requested, if not leave blank:***	
Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.	*Not answered.*
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	*Not answered.*

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 82620
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

QUESTIONS

Siting Criteria (regarding permitting)

19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. **Siting criteria does not apply to drying pads or above-grade tanks.**

Siting Criteria, General Siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank	No
NM Office of the State Engineer - iWATERS database search	*Not answered.*
USGS	*Not answered.*
Data obtained from nearby wells	*Not answered.*

Siting Criteria, Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark)	No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption	No

Proposed Closure Method	
Below-grade Tank	Below Grade Tank - (BGT)
Waste Excavation and Removal	True
Alternate Closure Method. Please specify (Variance Required)	*Not answered.*

Operator Application Certification	
Registered / Signature Date	11/24/2008

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ACKNOWLEDGMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 82620
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

ACKNOWLEDGMENTS

☑	I acknowledge that I have received prior approval from the OCD to submit documentation of a legacy below-grade tank on behalf of my operator.
☑	I hereby certify that the information submitted with this documentation is true, accurate and complete to the best of my knowledge and belief.

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CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 82620
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

CONDITIONS

Created By	Condition	Condition Date
vvenegas	None	2/22/2022

ENSOLUM

June 3, 2022

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Preliminary Site Characterization Assessment
WF Federal 29 #2
San Juan County, New Mexico
Hilcorp Energy Company

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Preliminary Site Characterization Assessment* associated with the closure of the the below grade tank (BGT) located on the plugged and abandoned WF Federal 29 #2 natural gas production well pad (Site). The Site is located in Section 29, Township 30 North, Range 14 West in San Juan County, New Mexico.

SITE CHARACTERIZATION

The Site is located approximately 3 miles northeast of Kirtland, New Mexico, on land managed by the United States Bureau of Land Management (BLM). As part of the site characterization, local geology/hydrogeology and nearby sensitive receptors were assessed in accordance with Title 19, Chapter 15, Part 17, Sections 10 and 13 of the New Mexico Administrative Code (NMAC). This information is further discussed below.

Geology and Hydrogeology

Based on United States Geological Survey (USGS) geologic mapping, the Site is located within the Fruitland Formation/Kirtland Shale of Late Cretaceous age. In the report titled “Hydrogeology and Water Resources of San Juan Basin, New Mexico” (Stone, et. al., 1983), the Fruitland Formation “consists of interbedded sandy shale, carbonaceous shale, clayey sandstone, coal, and sandstone”. This formation contains the main coal reserves within the San Juan Basin. The Kirtland Shale consists of a lower shale member, middle sandstone member, and upper shale member. The Kirtland Shale is a significant petroleum reservoir in the Sand Juan Basin. These two formations are difficult to distinguish and are often treated as a single unit. The combined thickness of the Fruitland Formation/Kirtland Shale ranges from 100 to 2,000 feet.

Groundwater is generally located within the coal beds of the formation, with hydrogeologic characteristics highly variable depending on the location within the basin. The Fruitland Formation/Kirtland Shale yields relatively small quantities of water (<10 gallons per minute) and is not highly used by livestock and/or domestic purposes.

Potential Sensitive Receptors

Potential nearby receptors were assessed through desktop reviews of USGS topographic maps, Federal Emergency Management Administration (FEMA) Geographic Information System (GIS) maps, New Mexico Office of the State Engineer (NMOSE) database, aerial photographs, and site-specific observations.

Based on the New Mexico Oil Conservation Division (NMOCD) approved BGT permit (NMOCD Form C-144, approved on February 22, 2022), groundwater at the Site is estimated to be between 50 and 100 feet below ground surface (bgs). The nearest fresh-water well to the Site is NMOSE permitted domestic water well SJ-02055, located approximately 1.48 miles to the southwest (Appendix A). The recorded depth to water on the NMOSE database is 90 feet bgs. The land surface at well SJ-02055 is approximately 5,410 feet above mean sea level (amsl), which is approximately 80 feet lower in elevation than the Site (Site is located at an elevation of 5,489 feet amsl). Of note, Figure 1 indicates NMOSE points of diversion (PODs) located in close proximity to the Site location (PODs beginning with SJ-02197). Based on the NMOSE permit, these PODs are associated with dewatering of the surface coal mine owned by the Public Service Company of New Mexico (PNM). These PODs appear in a grid formation and are gathering points located within and around the coal mine and not typical groundwater supply wells. Depth-to-water information is not presented on the NMOSE database for these PODs.

The Site is located equidistant (approximately 1,500 feet) between two significant watercourses, one unnamed to the southeast and Stevens Arroyo to the northwest. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and greater than 300 feet from any wetland (Figure 1). No wellhead protection areas, springs, or domestic/stock wells are located within a ½-mile from the Site (Figure 1). The Site is not within a 100-year floodplain, overlying a subsurface mine, or located within an area underlain by unstable geology (area designated as low potential karst by the BLM). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site.

SITE CLOSURE CRITERIA

Based on the information presented above and in accordance with the *Table 1, Closure Criteria for Soils Beneath Below-Grade Tanks, Drying Pads Associated with Closed-Loop Systems, and Pits where Contents are Removed* (19.15.17.13 NMAC), the following closure criteria should be applied to the Site:

- Chloride: 10,000 milligrams per kilogram (mg/kg)
- Total Petroleum Hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 2,500 mg/kg
- TPH-GRO + TPH-DRO: 1,000 mg/kg
- A combination of benzene, toluene, ethylbenzene, and xylenes (BTEX): 50 mg/kg
- Benzene: 10 mg/kg

We appreciate the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,
Ensolum, LLC

Stuart Hyde, LG
Senior Geologist
(970) 903-1607
shyde@ensolum.com

Ashley Ager, MS, PG
Program Director
(970) 946-1093
aager@ensolum.com

Attachments:

Figure 1: Site Characterization

Appendix A: NMOSE Point of Diversion Summary, Well SJ-02055

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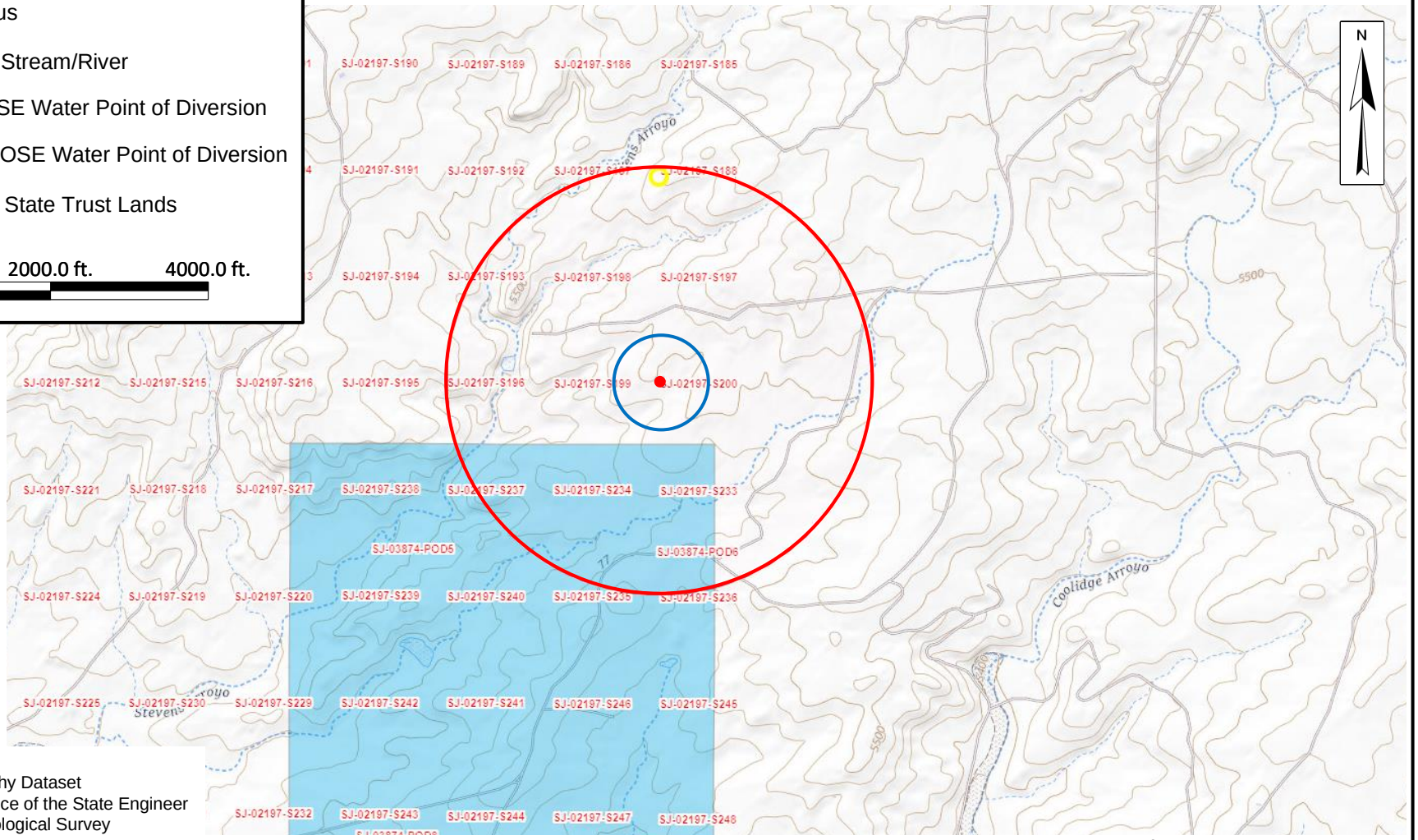
FIGURES

LEGEND:

- Site Location
- 500 Foot Radius
- ½ Mile Radius
- USGS NHD Stream/River
- Active NMOSE Water Point of Diversion
- Pending NMOSE Water Point of Diversion
- New Mexico State Trust Lands

0.0 ft. 2000.0 ft. 4000.0 ft.



Note:
NHD – National Hydrography Dataset
NMOSE – New Mexico Office of the State Engineer
USGS – United States Geological Survey

Image Courtesy of NMOSE GIS, ESRI, USGS

ENSOLUM
Environmental & Hydrogeologic Consultants

SITE CHARACTERIZATION
HILCORP ENERGY COMPANY
WF Federal 29 #2
San Juan County, New Mexico
36.78009°N, 108.32589°W

FIGURE
1

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APPENDIX A

NMOSE Point of Diversion Summary, Well SJ-02055

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	SJ 02055		1	1	05	29N	14W	201867	4073640*

Driller License: 724 **Driller Company:** HARGIS, JOHN C.

Driller Name: HARGIS, JOHN C.

Drill Start Date:	05/02/1987	**Drill Finish Date:**	05/12/1987	**Plug Date:**	
Log File Date:	05/15/1987	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	1 GPM
Casing Size:	4.50	**Depth Well:**	150 feet	**Depth Water:**	90 feet

Water Bearing Stratifications:	Top	Bottom	Description
	80	90	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	80	150

***UTM location was derived from PLSS - see Help**

WF Federal 29 #2

Pit Closure Pictures.

WF Federal 29 #2 07/19/22

View Looking North

View Looking South

View Looking East

View Looking West

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CONDITIONS

Action 126623

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 126623
	Action Type: [C-144] Below Grade Tank Plan (C-144B)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Closure report shows that release was confirmed. Variance requested as the limits stayed within the 19.15.29 and 19.15.17 NMAC table limits for remediation requirements. Variance granted. All other closure protocols were met BGT Closure report approved.	8/10/2022