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 June 6, 2013

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
12312 Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☒ Below grade tank registration
45-22035
☐ 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

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.

OIL CONS. DIV DIST. 3
OCT 30 2014

1.
Operator: Chevron Midcontinent, L.P. OGRID #: 241333
Address: P.O. Box 36366, Houston, Texas 77236
Facility or well name: Navajo O 12-2
API Number: 30-045-22035 OCD Permit Number:
U/L or Qtr/Qtr O Section 12 Township 25N Range 11W County: San Juan
Center of Proposed Design: Latitude 36.410793N Longitude 107.952268W NAD: ☐1927 ☒1983
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: 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 _____
Liner type: Thickness _____mil ☐ HDPE ☐ PVC ☐ Other _____

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 Four foot, pipe frame with square wire mesh (Variance Request Attached)

30

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): Andrew Olson Title: Facilities Engineering Team Lead

Signature: [signature] Date: 10/21/2014

e-mail address: AndrewOlson@chevron.com Telephone: (505) 333-1901

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

OCD Representative Signature: [signature] **Approval Date:** 11/10/14

Title: Environmental Spec **OCD Permit Number:**

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:**

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): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Chevron Midcontinent, LP
Below Grade Tank Registration Siting Criteria Compliance Demonstration
Navajo O 12-2

- **Groundwater is not less than 25 feet below the bottom of the below-grade tank:** Groundwater will be approximately 55 feet below the bottom of the BGT. This was calculated using information from the cathodic well located approximately 130 feet northwest of the Navajo O 12-2 Well Head and approximately 100 feet west of the proposed BGT location. The top of casing elevation for the cathodic well is 6,422 feet and the depth to groundwater is recorded as 60 feet; see the *attached* ***Data Sheet for Deep Ground Bed Cathodic Protection Wells***. (Depth to groundwater for water wells is measured from the top of casing so that all wells are labeled from a common point of interest.) This gives a groundwater elevation of 6362 feet. The topographic map indicates the site elevation to be 6422 feet; see ***Topographic Map***. The BGT is buried five (5) feet below ground surface which gives a bottom of the BGT elevation of 6417 feet. The difference between the BGT bottom elevation and groundwater elevation is 55 feet.

- **The below grade tank is not within 100 feet of a continuously flowing watercourse, significant water course, lake bed, sinkhole, wetland or playa lake:** The below-grade tank is not within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland, or playa lake.

    - The nearest continuously flowing watercourse is the San Juan River estimated to be 20 miles north of the proposed BGT location and the Navajo O 12-2 well site; see attached ***Topographic Map*** (scale at 1:12,000, nearest continuously flowing watercourse beyond the map boundaries).
    - The nearest significant watercourse is an unnamed first order tributary to the Gallegos Canyon Wash. The tributary is approximately 300 feet east of the proposed BGT location; see attached ***Topographic Map***.
    - There are no named lake beds or playa lakes within 100 feet for the proposed BGT location; see attached ***Topographic Map*** (scale at 1:12,000, nearest named lake bed or playa lake is beyond the map boundaries). The nearest unnamed lakebed or playa lake is estimated to be 3,300 feet north of the proposed BGT; see attached ***Topographic Map***.
    - The nearest wetland is located within the unnamed first order tributary, approximately 300 feet east of the proposed BGT location; see attached ***National Wetlands Inventory Map.***
    - There are no sinkholes located within 100 feet of the proposed BGT location at the Navajo O 12-2 well site; see attached ***Hydrogeologic Report.***

- ***The below grade tank is not within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption:***

    - There are no registered water wells located within 200 feet of the proposed BGT location at the Navajo O 12-2 well site; see attached ***New Mexico Office of the State Engineer (NMOSE) Water Column/Average Depth to Water Sheet*** (search radius is 65 meters (~215 feet) from the center of the proposed BGT).

Navajo O 12-2 Hydrogeologic Report

Topography and Surface Hydrology

The Navajo O 12-2 well site is located in what is considered the Colorado River Basin, within the Huerfano Trading Post NW, San Juan County, New Mexico, United States Geological Survey (USGS) 7.5-minute Quadrangle Map; see attached ***Topographic Map***. The largest, continuously flowing streams of the Colorado River Basin are the Animas and San Juan Rivers. The San Juan River is the closest continuously flowing waterway to the site and is approximately 20 miles north of the site. Most stream channels within the Colorado River Basin are ephemeral, with some being intermittent (Stone et al., 1983). The tributaries of the San Juan River that contribute large quantities of water during precipitation events are Canyon Largo, Gallegos Canyon, Chaco River, and the La Plata River. The nearest significant water course is an unnamed wash approximately 300 feet east of the proposed below grade tank and is a first order tributary of Gallegos Canyon. The general topographic slope of the site is to the northeast. Storm water runoff flows off of the Navajo O 12-2 well site toward the northeast and then follows storm water channels toward unnamed first order tributary to the Gallegos Canyon which is approximately 1,500 feet northeast of the site; see attached ***Topographic Map***.

The nearest wetland area to the Navajo O 12-2 well site is approximately 300 feet east of the BGT. This wetland area is identified as Riverine in accordance with the attached ***U.S. Fish and Wildlife Service National Wetlands Inventory Map.***

Geology

The area geology is comprised of mostly sandstone, mudstone, and siltstone. The underlying geologic unit in the area of the Navajo O 12-2 well site is the Nacimiento Formation. The **Nacimiento Formation (Tn)** is Paleocene in age and grades laterally into the Animas Formation (Tka) around Dulce, New Mexico thickening considerably around Durango, Colorado. The Animas occurs at the same stratigraphic interval as the Nacimientos (Fassett and Hinds, 1971, p. 34). The Nacimiento sits unconformably to conformably below the San Jose Formation, outcrops in a broad band inside the southern and western boundaries of the central basin and rises structurally as a narrow band along the west side of the Nacimiento Uplift (Baltz, 1967, p. 35). The Nacimiento is the surface formation in the eastern third of the San Juan Basin, and being nonresistant, erodes to low rounded hills or the formation of badlands-type physiography distinctive from the much more resistant overlying San Jose Formation. The Nacimiento Formation is present in only the southern two-thirds of the Basin where it conformably both overlies and intertongues with the much thinner Ojo Alamo Sandstone (Fassett, 1974, p. 229). Thickness ranges from 800 feet in the southern part to nearly 2,232 feet (Stone, et al, 1983, p. 30) in the subsurface of the northern part. In the eastern outcrops, the thickness is less than 500 feet to nearly 1,400 feet due to folding and erosion (Baltz, 1967, p. 1). In general, the total thickness of the Nacimiento thickens from the basin margins towards the basin center. The Nacimiento in the southern area is comprised predominantly of drab interbedded black and gray claystones and siltstones with some discontinuous relatively unconsolidated white, medium to coarse-grained arkosic sandstone with a few interbedded resistant sandstone strata (Stone, et al, 1983, p.30). To the north, the Naciemento Formation contains a much greater proportion of sandstone, and at some localized places more than 50 percent (Baltz, 1967, p. 1), although most of the sandstones extend only a few thousand feet (Brimhall, 1973, p. 201). Overall, the environment of deposition is predominantly lake deposits and to a lesser extent localization in stream channels (Brimhall, 1973, p. 201).

The local underlying geology of the basin is not conducive to sinkhole features, more predominant in soluble rocks such as limestone and dolomite, creating what is considered to be Karst features. Karst features are formed by the dissolution of soluble rocks, such as limestone and dolomite, and can be characterized by springs, caves, and sinkholes. There are no documented Karst features within 50 miles of Navajo O 12-2 well site in accordance with the ***United States Geological Survey (USGS)***.

Groundwater Hydrology

Most water supplies in the San Juan Basin are from groundwater that is accessed through wells completed within the surficial valley-fill deposits of Quaternary age and sandstones of Tertiary, Cretaceous, Jurassic, and Triassic age.

The Navajo O 12-2 well site lies in the Nacimiento Formation Aquifer which dips between 7 and 8 degrees to the southeast toward the center of the San Juan Basin (Frenzel, 1983). The Nacimiento Formation lies at the surface in a broad belt at the western and southern edges of the central basin and dips beneath the San Jose Formation in the basin center. (Frenzel, 1983).

There are no registered water wells within 200 feet (~60 meters) from the Navajo O 12-2 well site determined by a radius search of 65 meters (~ 215 feet) from the center of the BGT on the Navajo O 12-2 well site; see attached ***New Mexico Office of the State Engineer Water Column/Average Depth to Water Report.*** A cathodic well report was identified for the Navajo O 12-2 well site. The groundwater within the cathodic well report was recorded as 60 feet below ground surface; see the attached ***Data Sheet for Deep Ground Bed Cathodic Protection Wells.*** The estimated elevation of the cathodic well is 6422 feet. The estimated elevation of the Navajo O 12-2 well site is 6422 feet from the topographic map. Depth to groundwater beneath is estimated to be 55 feet below the bottom of the BGT, as the BGT is proposed to be placed five (5) feet below ground surface.

Resources

New Mexico Office of the State Engineer (NMOSE) New Mexico Water Right Reporting System (iWaters database)

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

United States Geological Survey, Karst in the United States: A Digital Map Compilation and Database; Weary, David J., and Doctor, Daniel H.

New Mexico Mining and Minerals Division (www.nmmines.com)

30-045-22035

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO
(Submit 3 copies to OCD Aztec Office)

Operator Union Oil Company of California Location: Unit ___ Sec. 12 Twp 25N Rng 11W

Name of Well/Wells or Pipeline Serviced Navajo 2-0-12

Elevation ___ Completion Date 12/14/89 Total Depth 300' Land Type* I

Casing, Sizes, Types & Depths 20' of 6" DIA. PVC - surface casing

If Casing is cemented, show amounts & types used None

If Cement or Bentonite Plugs have been placed, show depths & amounts used

None

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 60' Deep 45' Thick

SEE ATTACHED SHEET

Depths gas encountered: NA

Type & amount of coke breeze used: Carbo 60 2500 lbs

Depths anodes placed: 135' to 175'

Depths vent pipes placed: 175'

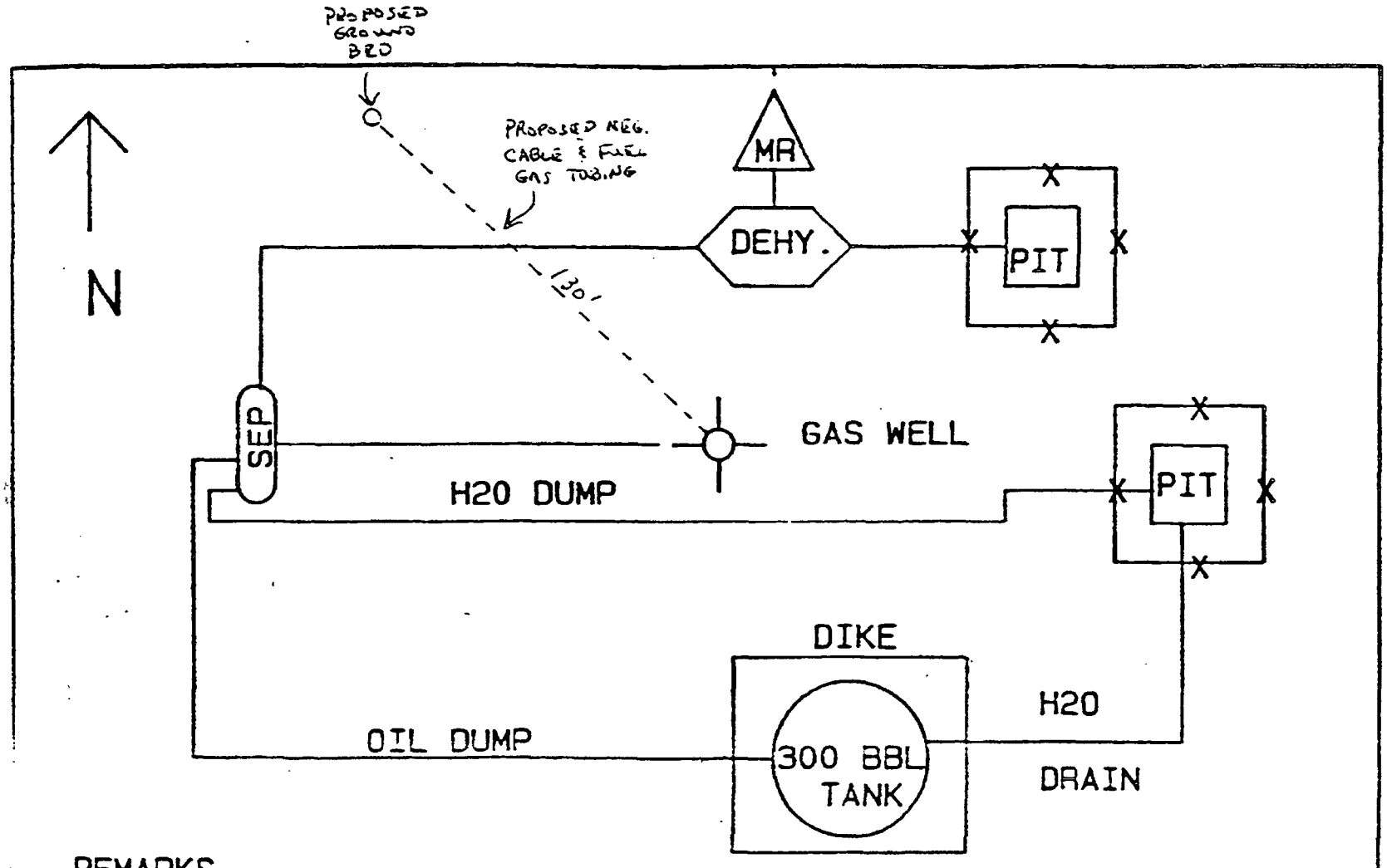
Vent pipe perforations: 135'

Remarks: Unocal was the operator at the time this groud bed was installed.

First ground bed installed at this location.

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included

*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.
If Federal or Indian, add Lease Number.



REMARKS

NAVAJO 2-0-12 DK
SEC 12 T25N R11W
LEASE # NOO-C-14-20-3781
METER NO. 56971

DATE: 08/27/89
SCALE: NONE

UNOCAL

WELL TYPE GROUNDBED DATA

DATA SHEET NO. 1 of

COMPANY Unocal JOB No. 751-00027 DATE: 12-14-89

WELL: Wauato # 2-0-12 PIPELINE:

LOCATION: SEC 12 TWP 25 RGE. 11 CO. Shw Sound STATE N [illegible]

ELEV. FT: ROTARY 300 FT: CABLE TOOL 0 FT: CASING 30 FT

GROUNDBED: DEPTH 300 FT. DIA. 6 IN. LBS 3000 LBS ANODES Lunda String

DEPTH, FT.	DRILLER'S LOG	EXPLORING ANODE TO STRUCTURE E	I	R	NO COKE I	WITH COKE I	ANODE NO.	DEPTH TOP OF ANODES
	First water 60							
	0-120 sand							
120			4.8					
5			4.9					
30			6.0					
5	Top of Lunda Anodes		6.2		6.4	18.8		135
40			6.5					
5			6.5					
50			6.1					
5			6.0		Lunda String			
60			6.2					
5			6.4					
70			6.2					
5			6.4					175
80			6.2					
5			6.0					
90			5.8					
5			5.9					
200			5.0					
5			5.2					
10			5.0					
5			4.3					
20			4.3					
5			4.2					
30			4.0					
5			4.0					
40			4.0					
5			4.0					
50			3.8					
5			3.6					
60			4.0					
5			4.0					
70			4.3					
5			3.8					
80			3.7					
5			3.6					
90			3.5					
5			4.0					
300	T.D. 300							

GROUNDBED RESISTANCE: (1) VOLTS 12.7 ÷ AMPS 18.8 = 0.67 OHMS

(2) VIBROGROUND ______ OHMS

GENERAL CATHODIC PROTECTION SERVICES CO

JOB NUMBER	DATE	INVOICE NO
751-00027	12/18/89	751415

Cathodic Protection Services
A LUKENS COMPANY

INVOICE

REMIT TO
P.O. BOX 297294
HOUSTON, TX 77297

PAYMENT DUE DATE
1/18/90

PAYMENT OF THE FULL AMOUNT OF THIS INVOICE IS DUE, IN ACCORDANCE WITH CONTRACT TERMS.

Unocal Oil & Gas Division
Unocal Corporation
P.O. Box 850
Bloomfield, NM 87413
Attn: Mr. Mike Tabet & Accts. Payable

CUSTOMER NUMBER
541168

CONTRACT NO. & NAME AFE - 392129

CONTRACT DATE 8/7/89 & 10/2/89

ITEM NO.	DESCRIPTION	PRICE	UNIT	% COMPLETE	AMOUNT EARNED
	Providing all necessary materials, labor, supervision, equipment and other pertinent items to install a groundbed to a depth of 300 feet, as follows:				
1.	Well: Navajo #2-0-12	$3,496.00	ea	100%	$3,496.00
a.	Provision and installation of (6" diameter) PVC surface casing = 20 ft.	17.50	ft	100%	350.00

NOTES

	$3,846.00
LESS – RETAINAGE @	
Plus 5.25% New Mexico State and San Juan County tax	201.92
LESS – PREVIOUS INVOICES	
AMOUNT OF THIS INVOICE →	$4,047.92

TERMS: NET 30 DAYS. LATE PAYMENT ADMINISTRATION FEE OF 1.5% PER MONTH WILL BE CHARGED AFTER THE DUE DATE.

ACCOUNTING COPY

Cathodic Protection Services Company
P. O. Box 388
Farmington, New Mexico 87499
1608 Schofield Lane
Farmington, New Mexico 87401
(505) 325-1946

February 2, 1990

Unocal Corporation
3300 N. Butler, Suite 201
Farmington, NM 87401

Attention: Mr. Steve Gregory

Subject: Major Water Zones in Cathodic Protection Deep-Well Groundbeds

Dear Mr. Gregory:

Per your recent request for information concerning the cathodic protection deep-well groundbeds for your well casings in the San Juan Basin area, we are pleased to submit the following information.

Township & Range	Depths Ranging From Shallowest to Deepest	Average Depth	Average Thickness of Water Zone
T-25N - R-10W	110' - 140'	122.5'	20'
T-25N - R-11W	60' - 140'	93.3'	45'
T-26N - R-7W	80' - 150'	112.5'	30'
T-27N - R-7W	80' - 200'	123.3'	22.5'
T-27N - R-6W	80' - 200'	131.1'	30'

This data reflects information supplied by the drilling logs acquired at the time the wells were drilled. The depths shown are based on the type of sand which was being extruded from the drilled hole and the dampness of the sand.

The thickness of the water zones are determined by the change in the strata which was being drilled.

It has been a pleasure providing this information to your company. If you have any further questions or desire additional information, please do not hesitate to contact us.

Sincerely,

Cathodic Protection Services Company

John Kerr, Corrosion Technician

cc: Mike Tabet

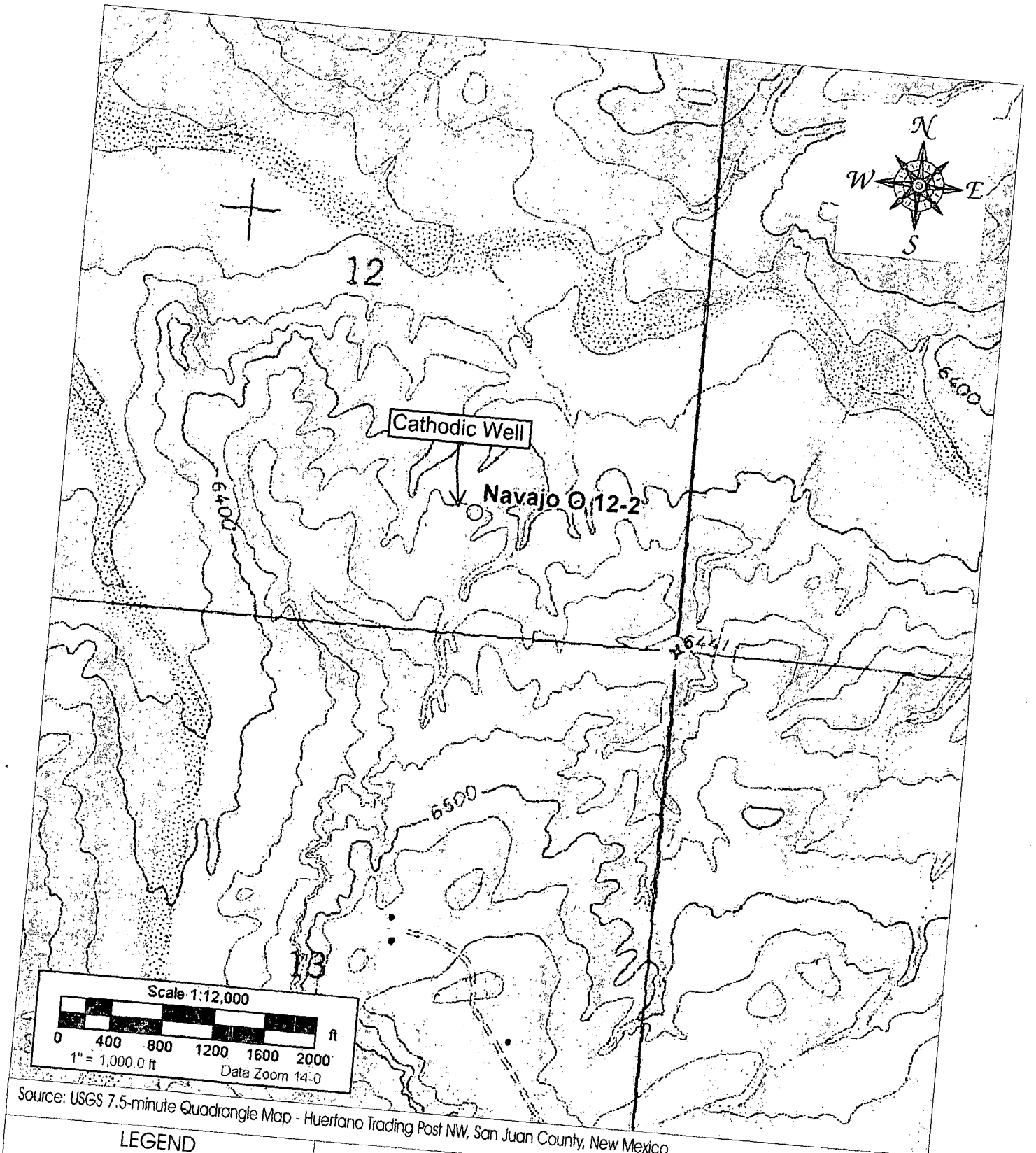
Cathodic Protection Services
A LUKENS COMPANY

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 235271.12 **Northing (Y):** 4033563.23 **Radius:** 65



Source: USGS 7.5-minute Quadrangle Map - Huerfano Trading Post NW, San Juan County, New Mexico

LEGEND

⊙ Below Grade Tank

envirotech
ENVIRONMENTAL SCIENTISTS & ENGINEERS

5796 U.S. HIGHWAY 64
Farmington, New Mexico 87401
505.632.0615

Topographic Map
Chevron North America
Navajo O 12-2
Section 12, Township 25 N, Range 11 W
San Juan County, New Mexico

PROJECT Number:92270-1249	Date Drawn: 10/6/14

DRAWN BY:	PROJECT MANAGER:
Toni McKnight	Greg Crabtree

Source: Google Earth (11/17/2013)

LEGEND

⊙ Below Grade Tank

Scale: 1":1000'

PROJECT Number:92270-1249 | Date Drawn: 10/6/14

envirotech
ENVIRONMENTAL SCIENTISTS & ENGINEERS

5796 U.S. HIGHWAY 64
Farmington, New Mexico 87401
505.632.0615

Aerial Map

Chevron North America
Navajo O 12-2
Section 12, Township 25 N, Range 11 W
San Juan County, New Mexico

DRAWN BY: Toni McKnight

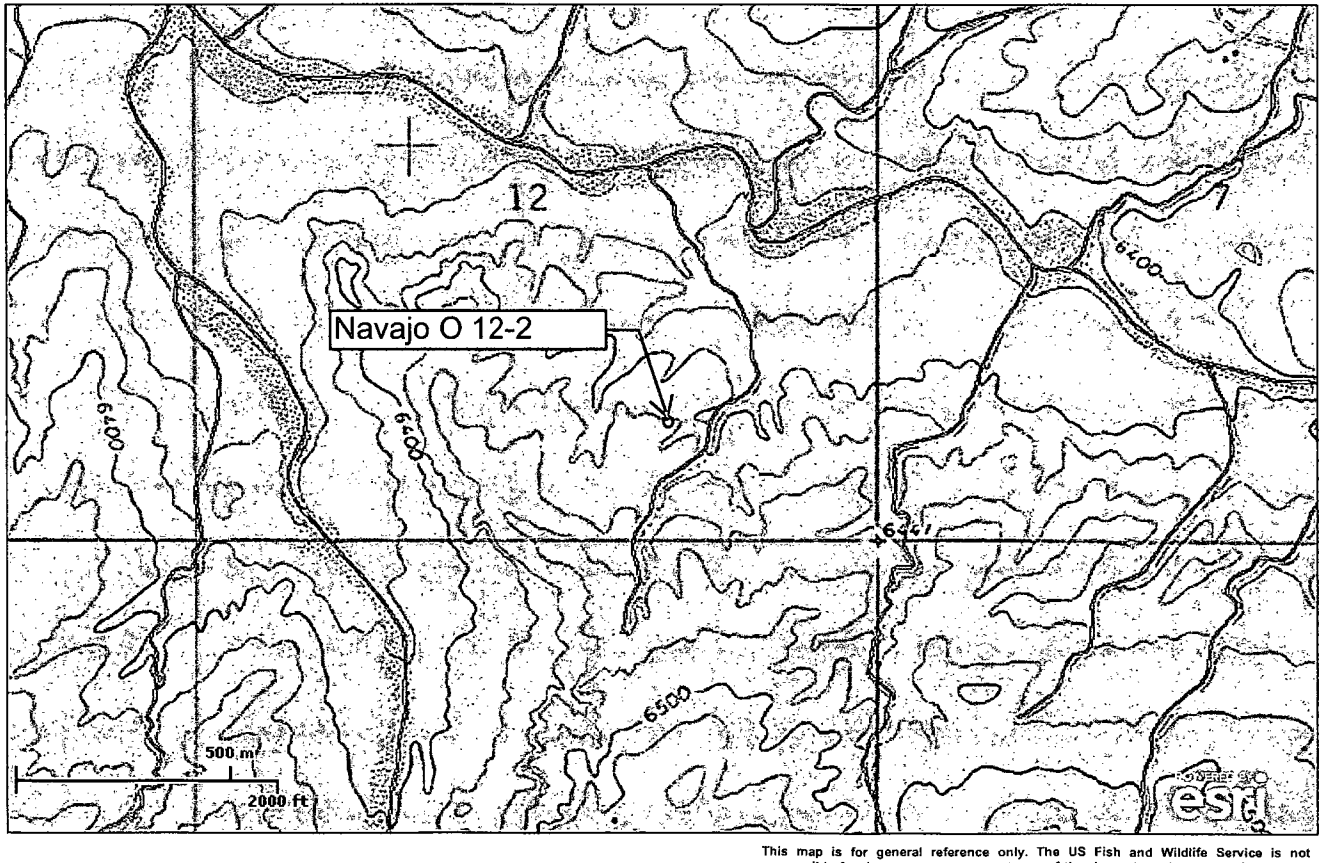
PROJECT MANAGER: Greg Crabtree

U.S. Fish and Wildlife Service

National Wetlands Inventory

Chevron North America

Oct 7, 2014



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

Riparian Status

- Digital Data

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

User Remarks:

Navajo O 12-2

Chevron Midcontinent, LP
Navajo O 12-2 Below Grade Tank Registration
Variance and Modification Explanation

Variance Explanation

All variance requests will provides equal or better protection of fresh water, public health and the environment.

C-144 Item #5 Fencing: Subsection D of 19.15.17.11 NMAC - The Operator shall fence any other pit or below-grade tank to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level.

Variance Requested: Chevron has requested a variance on the fencing material and plans to use 4 foot, piped frame fencing with square wire mesh.

NMAC 19.15.17.13 (E) 1: Landowner Closure Notice: The operator shall notify the surface owner by certified mail, return receipt requested that the operator plans closure operations at least 72 hours, but not more than one week, prior to any closure operation. Notice shall include well name, API number and location. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement.

Variance Requested: Chevron has requested a variance to notify the landowner by email if the landowner is determined to be a state, federal, or tribal entity.

Modification Explanation

Modification to Existing Below Grade Tank Permit/Registration: Chevron currently has a permit application submitted to the NMOCD for a 95 bbl double-walled, double-bottom tank. The bottom of this tank is located on the ground surface, parallel with the grading of the well site, and is not buried; however, during permitting processes in 2008, this tank was identified/permitted as a below grade tank.

Chevron is planning to replace this tank with another 95 bbl double-walled, double-bottom tank where the bottom of the tank will be place approximately five (5) feet below the ground surface in the same location as the current tank.

BELOW GRADE TANK (BGT) DESIGN AND CONSTRUCTION PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,

NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

CHEVRON USA INC., CHEVRON MIDCONTINENT, L.P., AND FOUR STAR OIL & GAS COMPANY

P.O. BOX 730

AZTEC, NEW MEXICO 87410

(505) 333-1901

CHEVRON
SAN JUAN BASIN
BELOW GRADE TANK DESIGN AND CONSTRUCTION PLAN

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(3) and 19.15.17.11 Chevron (representing Chevron USA Inc, Chevron Midcontinent, L.P., and Four Star Oil & Gas Company) submits this Design and Construction Plan for below grade tanks (BGTs) in New Mexico. This Plan contains standard conditions that attach to multiple BGTs.

1. Chevron will design and construct a BGT to contain liquids and solids, prevent contamination of fresh water, and protect public health and the environment. NMAC § 19.15.17.11(A).

2. Chevron will post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the BGT, unless the BGT is located on a site where there is an existing well, signed in compliance with NMAC § 19.15.16.8, that is operated by Chevron. Chevron will post the sign in a manner and location such that a person can easily read the legend. The sign will provide the following information: Chevron's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers. NMAC § 19.15.17.11(C).

3. Chevron will fence or enclose a BGT in a manner that prevents unauthorized access and will maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the BGT. NMAC § 19.15.17.11(D)(1).

4. Chevron will fence BGTs to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level. NMAC § 19.15.17.11(D)(3). Chevron may install tubular steel cattle panels, as it determines appropriate (photo of cattle panel fence submitted to NMOCD, 24 June 2009).

5. Chevron will screen the permanent opening on the tank top with expanding steel mesh in order to render it non-hazardous to wildlife, including migratory birds. NMAC § 19.15.17.11(E).

6. Chevron's BGTs will be constructed with the design features illustrated on the attached drawing.

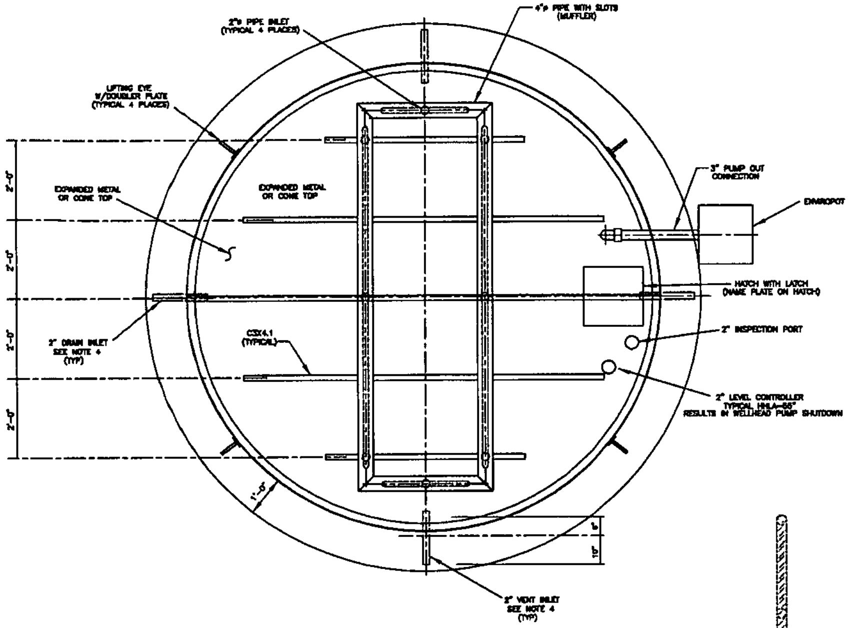
7. Only double-walled, double-bottomed BGTs will be installed.

8. Chevron will use 3/16" carbon steel which is resistant to the anticipated contents and resistant to damage from sunlight. NMAC § 19.15.17.11(I)(1).

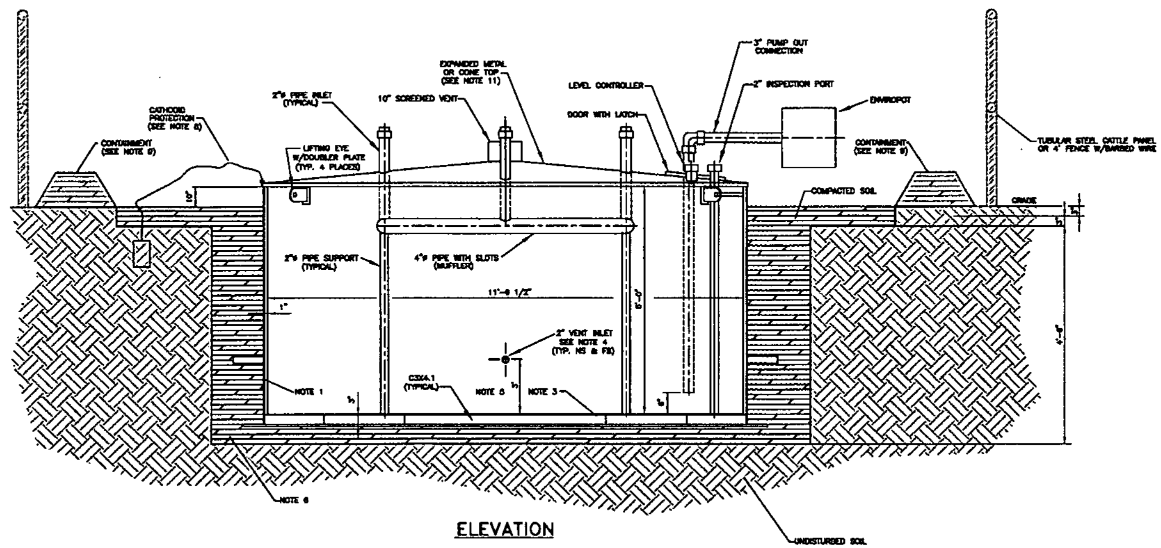
9. Chevron will construct a BGT foundation on a level base free of rocks, debris, sharp edges or irregularities to help prevent punctures, cracks or indentations of the liner or tank bottom. NMAC § 19.15.17.11(I)(2).

10. Chevron will construct a BGT to prevent overflow and the collection of surface water run-on. NMAC § 19.15.17.11(I)(3). Chevron, or a contractor representing Chevron, will install a level control device to help prevent overflow from the BGT and will use berms and/or a diversion ditch to prevent surface run on from entering the BGT. NMAC §§ 19.15.17.11(I)(3), 19.15.17.12(A)(7), and 19.15.17.12(D)(1).

11. All BGTs, in which the side walls are not open for visible inspection for leaks, will be double walled with leak detection capability. NMAC § 19.15.17.11(I)(4)(b).



PLAN



ELEVATION

NOTES

1. FABRICATOR TO PRESSURE TEST THE AREA BETWEEN THE TANK WALLS TO ENSURE LEAK-FREE DOUBLE CONTAINMENT.
2. TANK TO BE CONSTRUCTED OF 3/16" THK. ASTM A36 STEEL. ALL PIPING TO BE SCH. 40 CARBON STEEL.
3. DOUBLE WALL DOUBLE BOTTOM.
4. DEPENDING ON THE ORIENTATION OF THE EQUIPMENT ON LOCATION, ONE OF THE STUBS MAY BE CONNECTED TO THE DIFFUSER. ANY OF THE FOUR 2" STUBS THAT ARE NOT CONNECTED TO THE DIFFUSER WILL BE CAPPED BOTH INTERNALLY AND EXTERNALLY. THESE FOUR NOZZLES WILL NOT BE USED FOR THE MAJORITY OF PIT TANK INSTALLATIONS, SO THERE INTERNAL AND EXTERNAL CAPS SHALL BE SHOP-WELDED BY MANUFACTURE.
5. UNDERGROUND TANK CONNECTIONS AND TRANSFER LINES ARE WELDED. ALL UNDERGROUND TRANSFER LINES HAVE A FUSION BONDED EPOXY (FBE) COATING OR SIMILAR
6. CHEVRON WILL CONSTRUCT A BGT FOUNDATION ON A LEVEL BASE FREE OF ROCKS, DEBRIS, SHARP EDGES OR IRREGULARITIES TO HELP PREVENT PUNCTURES, CRACKS OR INDENTATIONS OF THE LINER OR TANK BOTTOM. NMAC 19.15.17.11(I)(2).
7. EXPANDED METAL TOP SHALL BE BOLTED, NOT WELDED.
8. EXTERNAL CATHODIC PROTECTION IS OPTIONAL.
9. CONTAINMENT SHALL BE BUILT TO THE SAN JUAN BERM COMPACTION SOP.
10. INTERNAL ANODES SHALL BE INSTALLED ONSITE.
11. EXPANDED METAL TOP WILL BE STANDARD AND SHOULD BE USED FOR THE MAJORITY OF PIT TANK INSTALLATIONS. CONE ROOF TOPS SHOULD BE CONSIDERED IN RESIDENTIAL AREAS.

Chevron
MidContinent/Alaska SBU
Chevron North America
Exploration and Production

REVISIONS

FILE:

AREA: SAN JUAN FIELD: CO: ST:
PROPERTY UNIQUE:
PROPERTY COMMON:
PROJECT:
DRAWING: 95 BBL DOUBLE WALL BELOW GRADE TANK 5'x12'

A2083 4/21/2011

BELOW GRADE TANK (BGT) OPERATING AND MAINTENANCE PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,

NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

CHEVRON USA INC., CHEVRON MIDCONTINENT, L.P., AND FOUR STAR OIL & GAS COMPANY

P.O. BOX 730

AZTEC, NEW MEXICO 87410

(505) 333-1901

CHEVRON
SAN JUAN BASIN
BELOW GRADE TANK OPERATIONS AND MAINTENANCE PLAN

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(3) and 19.15.17.12 Chevron (representing Chevron USA Inc, Chevron Midcontinent, L.P., and Four Star Oil & Gas Company) submits this Operating and Maintenance Plan (O&M Plan) for below grade tanks (BGTs) in New Mexico. This O&M Plan contains standard conditions that attach to multiple BGTs. If needed for a particular BGT, a modified O&M Plan will be submitted to the New Mexico Oil Conservation Division (NMOCD or the division) for approval prior to implementation.

GENERAL PLAN:

1. Chevron, or a contractor representing Chevron, will operate and maintain a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and environment. NMAC § 19.15.17.12(A)(1).

2. Chevron will not discharge into or store any hazardous waste in a BGT. NMAC § 19.15.17.12(A)(3).

3. If a BGT develops a leak or is penetrated below the liquid surface, Chevron will remove liquid above the damage within 48 hours, notify the appropriate division district office within 48 hours of discovery and will promptly repair the BGT. If a BGT develops a leak Chevron will remove liquid above the damage within 48 hours, notify the appropriate division district office within 48 hours of discovery and will promptly repair or replace the BGT. If replacement is required, the BGT will meet all specification included in the attached approved design drawing and comply with 19.15.17.11(I)(1-4).

4. Chevron, or a contractor representing Chevron, will use berms and/or diversion ditches to prevent surface run-on from entering the BGT by diverting surface water run-on away from the bermed area. NMAC §§ 19.15.17.12(A)(7) and 19.15.17.12(D)(1).

5. Chevron, or a contractor representing Chevron, will not allow a BGT to overflow and will maintain adequate freeboard on existing BGTs by routine inspections utilizing pumper trucks whose routes are timed based on known production rates. Fluid is pumped out on this schedule. For newly constructed BGTs Chevron, or a contractor representing Chevron, will maintain adequate freeboard by installing level control devices that automatically shut off inflow to alleviate potential overtopping. NMAC § 19.15.17.12(D)(1) and 19.15.17.12(D)(4).

6. Chevron, or a contractor representing Chevron, will remove any measurable layer of oil from the fluid surface of a below-grade tank. NMAC § 19.15.17.12(D)(2).

7. Chevron, or a contractor representing Chevron, will inspect the below-grade tank for leakage and damage at least monthly. The operator shall document the integrity of each tank at least annually and maintain a written record of the integrity for five years. The approved inspection form is attached.

Chevron: New Mexico Inspection Form for Below Grade Tanks

Inspection Date:_____

Below Grade Tank (BGT) Location:_____

Does the BGT have adequate freeboard to prevent overflow;	yes	no
Does the tank have visible leaks or sign of corrosion;	yes	no
Do tank valves, flanges and hatches have visible leaks;	yes	no
Is there evidence of significant spillage of produced liquids;	yes	no
Is this a single of double wall tank; _____		
Are berms and/or diversion ditches in place to prevent surface run-on from entering the BGT;	yes	no
Have visible or measurable layers of oil been removed from liquid surface fluid;	yes	no

BELOW GRADE TANK (BGT) CLOSURE PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,

NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

CHEVRON USA INC., CHEVRON MIDCONTINENT, L.P., AND FOUR STAR OIL & GAS COMPANY

P.O. BOX 730

AZTEC, NEW MEXICO 87410

(505) 333-1901

CHEVRON
SAN JUAN BASIN
BELOW GRADE TANK CLOSURE PLAN

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(3) and 19.15.17.13, Chevron (representing Chevron USA Inc, Chevron Midcontinent, L.P., and Four Star Oil & Gas Company) submits this Closure Plan for below grade tanks (BGTs) in New Mexico. This Closure Plan contains standard conditions that attach to multiple BGTs. If needed for a particular BGT, a modified Closure Plan for a proposed alternative closure will be submitted to the New Mexico Oil Conservation Division (NMOCD or the division) for approval prior to closure.

CLOSURE PLAN PROCEDURES AND PROTOCOLS (NMAC §§ 19.15.17.13).

1) Chevron, or a contractor acting on behalf of Chevron, will close a BGT within the time periods provided in NMAC § 19.15.17.13(G)(4), or by an earlier date required by NMOCD to prevent an imminent danger to fresh water, public health, or the environment. NMAC § 19.15.17.13(G)(4).

2) Chevron, or a contractor acting on behalf of Chevron, 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 within 60 days of cessation of the BGT's operation. NMAC §§ 19.15.17.13(G)(4.a). A list of Chevron currently approved disposal facilities is included at the end of this document.

3) Chevron, or a contractor acting on behalf of Chevron, shall 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. When required, prior approval for disposal will be obtained. NMAC § 19.15.17.13(G)(4.b). Documentation regarding disposal of the BGT and its associated liner, if any, will be included in the closure report.

4) In accordance with NMAC § 19.15.17.13(E)(1), Chevron will notify the surface owner by certified mail, return receipt requested, of its plans to close a BGT, at least 72 hours, but not more than one (1) week, prior to beginning closure activities. Chevron will notify the landowner by email if the landowner is determined to be a state, federal, or tribal entity. The notice shall include well name, API number and location. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance.

5) Chevron will also notify the appropriate division district office verbally and in writing at least 72 hours, but not more than one week, prior to any closure operation. The notice shall include the operator's name and the location to be closed by unit letter, section, township and range. If the closure is associated with a particular well, then the notice shall also include the well's name, number and API number. NMAC § 19.15.17.13(E)(2).

6) The proposed method of closure for this Closure Plan is waste excavation and removal.
NMAC §§ 19.15.17.13 (C).

7) Waste generated during closure will be handled and disposed of in accordance with applicable laws. NMAC § 19.15.35.8(C)(1)(m) provides that plastic pit liners may be disposed at a solid waste facility without testing before disposal, provided they are cleaned well.

8) Chevron, or a contractor acting on behalf of Chevron, will remove all contents and, if applicable, synthetic liners and transferring those materials to a division approved facility. NMAC § 19.15.17.13(C)(2).

9) Chevron, or a contractor acting on behalf of Chevron, will collect at a minimum, a five point composite sample to include any obvious stained or wet soils, or other evidence of contamination shall be taken under the liner or the below-grade tank and that sample shall be analyzed for the constituents listed in Table I of 19.15.17.13 NMAC.

Table I 19.15.17.13 NMAC
Navajo O 12-2 Well Site
Depth to Groundwater Beneath BGT (50 - 100 feet)

Constituent	Method	Limit
Chloride	EPA 300.0	10,000 mg/Kg
TPH	EPA SW-846 Method 418.1	2,500 mg/Kg
GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg

10) If any contaminant concentration is higher than the parameters listed in Table I of 19.15.17.13 NMAC, Chevron will notify the division of the results and obtain division approval before proceeding with closure. NMAC § 19.15.17.13(C)(3).

11) 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 NMAC § 19.15.17.13, Chevron will backfill the excavation with compacted, non-waste containing, earthen materials; construct a division prescribed soil cover; re-contour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements shall comply with NMAC § 19.15.17.13(H).

12) As per NMAC § 19.15.17.13(H), once Chevron has closed a BGT or is no longer using the BGT or an area associated with the BGT, Chevron will reclaim the BGT location and all areas associated with it including associated access roads not needed by the surface estate owner to a safe and stable condition that blends with the surrounding undisturbed area. Chevron will substantially restore impacted surface area to the condition that existed prior to its oil and gas operations by placement of soil cover as provided in NMAC § 19.15.17.13(H) (see below), re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography, and re-vegetate according to NMAC § 19.15.17.13(H).

13) Chevron may propose an alternative to the re-vegetation requirement of NMAC § 19.15.17.13(H)(1) if it demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health and the environment. The proposed alternative must be agreed upon in writing by the surface owner. Chevron will submit the proposed alternative, with written documentation that the surface owner agrees to the alternative, to the division for approval. NMAC § 19.15.17.13(H)(1).

14) Soil cover for closures where Chevron has removed the pit contents or remediated the contaminated soil to the division's satisfaction will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. NMAC § 19.15.17.13(H)(2).

15) Chevron will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. NMAC § 19.15.17.13(H)(4).

16) As per NMAC § 19.15.17.13(H)(5), Chevron will seed or plant disturbed areas during the first growing season after it is no longer using a BGT or an area associated with the BGT including access roads unless needed by the surface estate owner as evidenced by a written agreement with the surface estate owner, if any and written approval by NMOCD.

17) Seeding will be accomplished by drilling on the contour whenever practical or by other division approved methods. Chevron will obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) 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. During the two growing seasons that prove viability, Chevron will not artificially irrigate the vegetation. NMAC § 19.15.17.13(H)(5).

18) Chevron will notify the division when reclamation and re-vegetation are complete. NMAC § 19.15.17.13(H)(5).

19) Seeding or planting will be repeated until Chevron successfully achieves the required vegetative cover. NMAC § 19.15.17.13(H)(5).

20) Topsoils and subsoils will be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then will be reseeded in the first favorable growing season following closure of a pit, drying pad associated with a closed-loop system or below-grade tank. NMAC § 19.15.17.13(H)(5).

21) As per NMAC § 19.15.17.13(F), within 60 days of closure completion, Chevron will submit a closure report containing the elements required by NMAC § 19.15.17.13(F) including:

i) Confirmation sampling results,
ii) A plot plan ,
iii) Details on back-filling, capping and covering, where applicable, including revegetation application rates and seeding technique,
iv) Proof of closure notice to the surface owner, if any, and the division,
v) Name and permit number of disposal facility, and
vi) Photo documentation.

22) The closure report will be filed on NMOCD Form C-144. Chevron will certify that all information in the closure report and attachments is correct and that it has complied with all applicable closure requirements and conditions specified in the approved closure plan. NMAC § 19.15.17.13(F).

23) As requested, the following are the current Chevron approved Waste Disposal Sites for the identified waste streams:

Soils and Sludges

i) Envirotech Inc. Soil Remediation Facility, Permit No. NM-01-0011 Solids

ii) San Juan County Regional Land Fill (NMAC § 19.15.35.8 items only, with prior NMOCD approval when required)

Liquids

i) Agua Moss Crouch Mesa Facility, Sunco SWD #1 Permit No. NM-01-0009

ii) Basin Disposals Facility, Permit No. NM-01-005.

24) These waste disposal sites are subject to change if their certification is lost or they are closed or other more appropriate, equally protective sites become available. Chevron will provide notice if such a change is affected.