Form C-144 July 21, 2008

District I State of New Mexico	July 21, 2008
1625 N. French Dr., Hobbs, NM 88240 Energy Minerals and Natural Resources  District II 1301 W. Grand Avenue, Artesia, NM 88210 Department	For temporary pits, closed-loop systems, and
1301 W. Grand Avenue, Artesia, NM 88210 Department	below-grade tanks, submit to the appropriate
District III Oil Conservation Division	NMOCD District Office.  For permanent pits and exceptions submit to
1000 Rio Brazos Road, Azten M 37416 31 PM 1 23220 South St. Francis Dr.	For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and
1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505	provide a copy to the appropriate NMOCD District Office.
Pit, Closed-Loop System, Below-Grade 7	Sank, or
Proposed Alternative Method Permit or Closure F	
Type of action: Permit of a pit, closed-loop system, below-grade tank, o  Closure of a pit, closed-loop system, below-grade tank,	
Modification to an existing permit	or proposed atternative method
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	em, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result i	n pollution of surface water, ground water or the
environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable go	evernmental authority's rules, regulations or ordinances.
Operator: Chevron Midcontinent LP OGRID #-	241333
Operator: Chevron Midcontinent, LP OGRID #:  Address: P.O. Box 36366 Houston, TX 77236	211333
Facility or well name: Rincon Unit NP 137	
API Number: 30-039-06975 OCD Permit Number:	
U/L or Qtr/Qtr Otr/Qtr Section 24 Township 27 N Range 7W 0	
Centér of Proposed Design: Latitude 36 556766° Longitude 107.529231°	NAD: [_1927 [_] 1983
Surface Owner:    Federal   State   Private   Tribal Trust or Indian Allotment	
Pit: Subsection F or G of 19.15.17.11 NMAC	
Temporary: Drilling Workover	•
Permanent Emergency Cavitation P&A	
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC O	her
String-Reinforced	
Liner Seams: Welded Factory Other Volume: bb	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 wh intent)	ich require prior approval of a permit or notice of
☐ 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	
A.    Malayu grade tends. Subsection Left 10.16.17.11 NIMAC	
Below-grade tank: Subsection I of 19.15.17.11 NMAC	
Volume: 45bbl bbl Type of fluid: Produced Water	<del> </del>
Tank Construction material: <u>Steel</u>	
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic or	erflow shut-off
☐ Visible sidewalls and liner ☑ Visible sidewalls only ☐ Other	
Liner type: Thickness mil	·
5.	
(	
Alternative Method:	

State of New Mexico

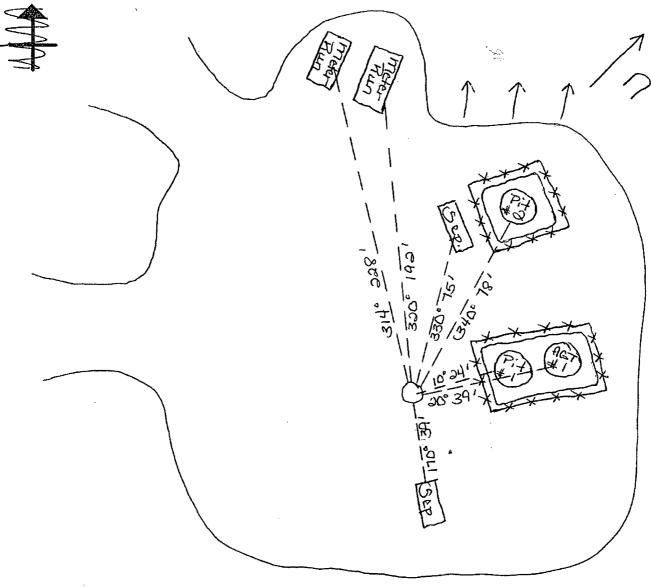
6.	
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)	
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, institution or church)	hospital,
Four foot height, four strands of barbed wire evenly spaced between one and four feet	
☐ Alternate. Please specify Four foot frame with steal wire mesh. ☐	
	The same of the sa
7.  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)	
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 consideration of approval.	office for
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
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 accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system.	priate district pproval.
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.	☐ Yes ⊠ No
- Please reference hydrogeologic report and printout from iWATERS database.	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa	
<ul> <li>lake (measured from the ordinary high-water mark).</li> <li>Please reference the attached topographic map with distance rings. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no watercourses within the distance specified above.</li> </ul>	☐ Yes ☑ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes ⊠ No
(Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Please reference the attached aerial photo. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time,	□ NA
there were no referenced buildings within the distance specified above.	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits)	⊠ NA
<ul> <li>Please reference the attached aerial photo. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no referenced buildings within the distance specified above.</li> </ul>	
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.  - Please reference the attached iWATERS printout. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at	☐ Yes ☑ No
the time, there were no wells or springs within the distances specified above.	☐ 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.	
The site is not within any known incorporated municipal boundaries, please reference the attached topographic map.	☐ Yes ☒ No
<ul> <li>Within 500 feet of a wetland.</li> <li>Please reference the attached topographic map with distance rings. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no wetlands within the distance specified above</li> </ul>	☐ Yes ⊠ No
Within the area overlying a subsurface mine.  - Please reference the attached topographic map	☐ Yes ☒ No
Within an unstable area.	
<ul> <li>Please reference the attached topographic map which includes FEMA flood map data. The map indicates the well site is outside of any known 100 year floodplains.</li> </ul>	☐ Yes ☑ No
Within a 100-year floodplain.	

II.
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:
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 19.15.17.12 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)
above ground steet tanks or nati-off bins and propose to implement waste removal for closure)
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 <sub>2</sub> S, 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
<u>Proposed Closure</u> : 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)
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 G of 19.15.17.13 NMAC

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground States Instructions: Please indentify the facility or facilities for the disposal of liquids, drief						
facilities are required.  Disposal Facility Name: Di	sposal Facility Permit Number:					
	sposal Facility Permit Number:					
Will any of the proposed closed-loop system operations and associated activities occu  ☐ 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 re Re-vegetation Plan - based upon the appropriate requirements of Subsection I of Site Reclamation Plan - based upon the appropriate requirements of Subsection	quirements of Subsection H of 19.15.17.13 NMAC f 19.15.17.13 NMAC					
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 of the provided below. Requests regarding changes to certain siting criteria may require a considered an exception which must be submitted to the Santa Fe Environmental B demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for	dministrative approval from the appropriate distr ureau office for consideration of approval. Justi,	rict office or may be				
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 of	btained 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 of	btained 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 of	btained from nearby wells	☐ Yes ☐ No ☐ NA				
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signifiance (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	icant watercourse or lakebed, sinkhole, or playa	☐ Yes ☐ No				
Within 300 feet from a permanent residence, school, hospital, institution, or church in  Visual inspection (certification) of the proposed site; Aerial photo; Satellite in		Yes No				
Within 500 horizontal feet of a private, domestic fresh water well or spring that less the watering purposes, or within 1000 horizontal feet of any other fresh water well or spring - NM Office of the State Engineer - iWATERS database; Visual inspection (ce.	ng, in existence at the time of initial application.	☐ Yes ☐ No				
Within incorporated municipal boundaries or within a defined municipal fresh water valopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval		Yes No				
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual i	nspection (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 area.	nd Mineral Division	☐ Yes ☐ No				
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Society; Topographic map	n Mineral Resources; USGS; NM Geological	☐ 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 19.15.17.13 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, accur	ate and complete to the best of my knowledge and belief.
Name (Print): Rodney Bailey	Title: Waste & Water Group Lead
Signature: Former Sonly	Date: March 1, 2010
e-mail address: Bailerg@chevron.com	Telephone: (432) 687 7123
20.  OCD Approval: ☐ Permit Application (including closure plan) ☐ Glosure P	lan (only) OCD Conditions (see attachment)
	Approval Date: 10/26/12
	Approval Date:
Title: Seviar Hydrodogist	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection Instructions: Operators are required to obtain an approved closure plan prior of the closure report is required to be submitted to the division within 60 days of the section of the form until an approved closure plan has been obtained and the closure plan	to implementing any closure activities and submitting the closure report. he completion of the closure activities. Please do not complete this
22.	11.00 (1.00 - 1.11)
Closure Method:  ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alterna ☐ If different from approved plan, please explain.	ative Closure Method  Waste Removal (Closed-loop systems only)
23.  Closure Report Regarding Waste Removal Closure For Closed-loop Systems Instructions: Please indentify the facility or facilities for where the liquids, dril two facilities were utilized.	That Utilize Above Ground Steel Tanks or Haul-off Bins Only: lling fluids and drill cuttings were disposed. Use attachment if more than
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 Yes (If yes, please demonstrate compliance to the items below) No	in areas that will not be used for future service and operations?
Required for impacted areas which will not be used for future service and operate  Site Reclamation (Photo Documentation)  Soil Backfilling and Cover Installation  Re-vegetation Application Rates and Seeding Technique	ions:
24.  Closure Report Attachment Checklist: Instructions: Each of the following it 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	ems must be attached to the closure report. Please indicate, by a check
25.	
Operator Closure Certification:  I hereby certify that the information and attachments submitted with this closure belief. I also certify that the closure complies with all applicable closure requirements.	
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telephone:

# Well Schematic NORTH



Schematic Key:	Belle Born Bernstein Britanis (France)				
Separator	SEP	Artificial Lift	AL	Condensate Tank	COND
Compressor	сом	Meter Run	METER RUN		
Dehydrator	DEH	Well Head C	<b>&gt;</b>	Water Tank	WATER

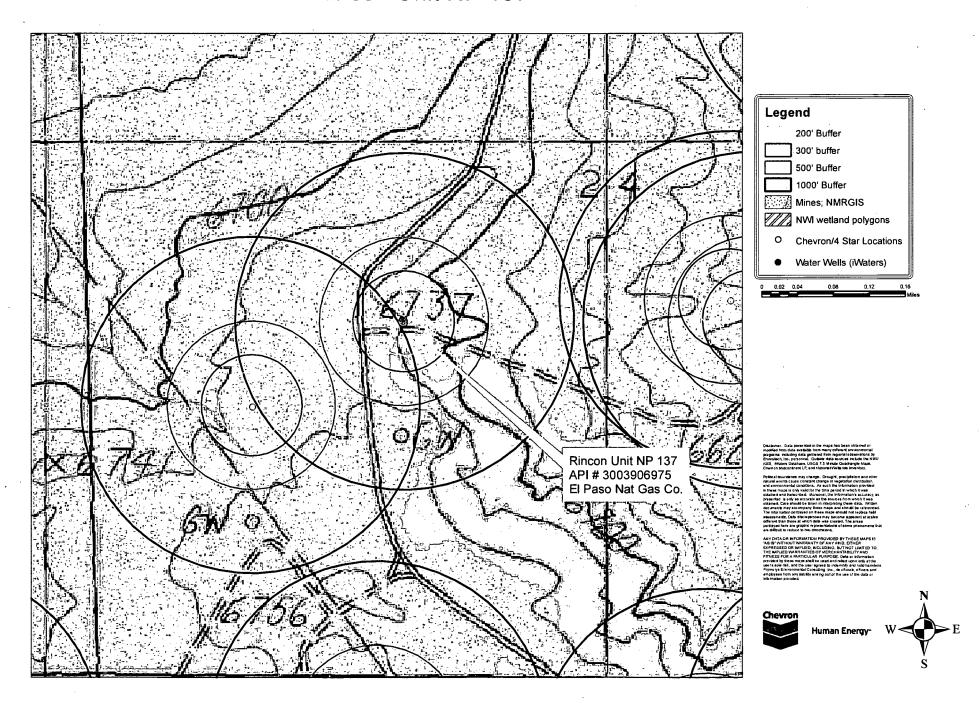
Measure any distance 1000ft or less of the following:

From wellhead to any continuous flowing or significant water course. \( \frac{\sqrt{1} \beta}{\text{Q}} \)

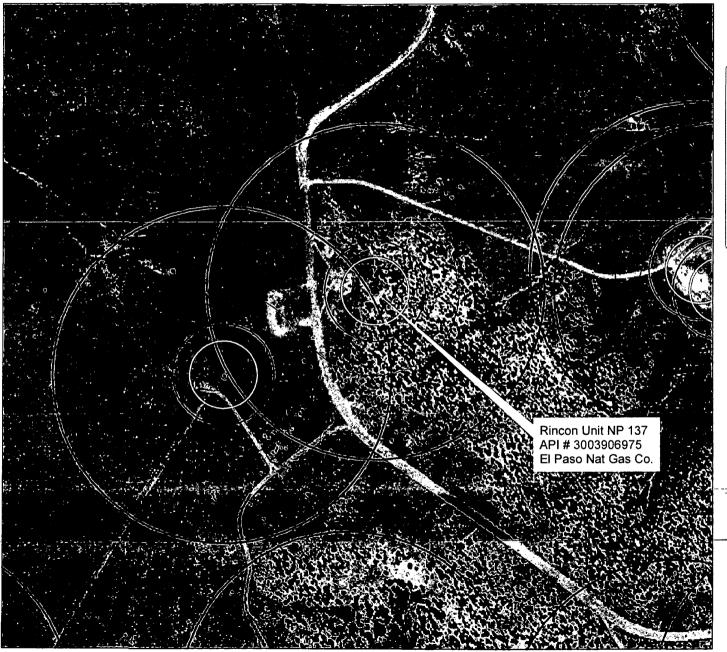
• From below-grade tanks to any permanent residence, school, church, hospital, etc.\_\_\_\_

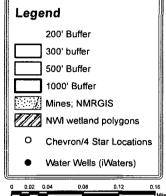
n/A

### Rincon Unit NP 137



### Rincon Unit NP 137





Discipliner: Data presentad in the maps has been obtained or modified from data aveilable from many deferred in sentimental programs including data garbered 5 con regional observations by Ermitotech, Inc., personnel. Outside data source in viciole the NNU.

Faithcall boundaries may change, Discipit, precipitation and other intercel swint Except organization data other, and a social technique for expectation data other, and except the information provides and except organization and except the ex

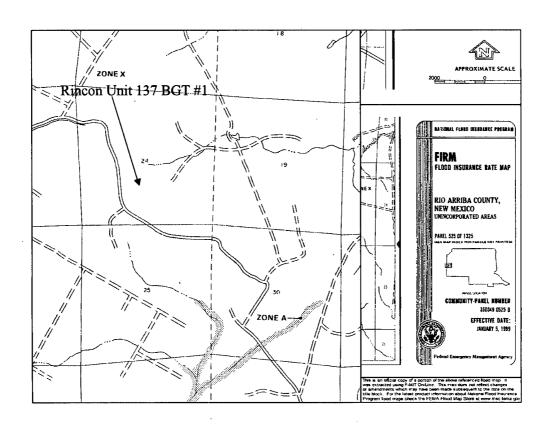
AS IS\* WITHOUT WARRANTY OF ANY ASID, EITHER EXPRESSED OR IMPUED, NULLDONG, BUT NOT UNITED TO THE MPUED WARRANTES OF MERCHANTABULTY AND FITNESS FOR A PRINCILLAR PURPOSE. Date or introneism provided by these maps are like used and relied user only at the war of sold real, and the user a greate to train may are held he had been expressed or the may are not of the entire or employees the man hybridge streng out of the use of the date or



Human Energy W



#### Rincon Unit 137 BGT 1 API #: 30-039-06975 Qtr./Qtr. Sec.24 T27N R7W



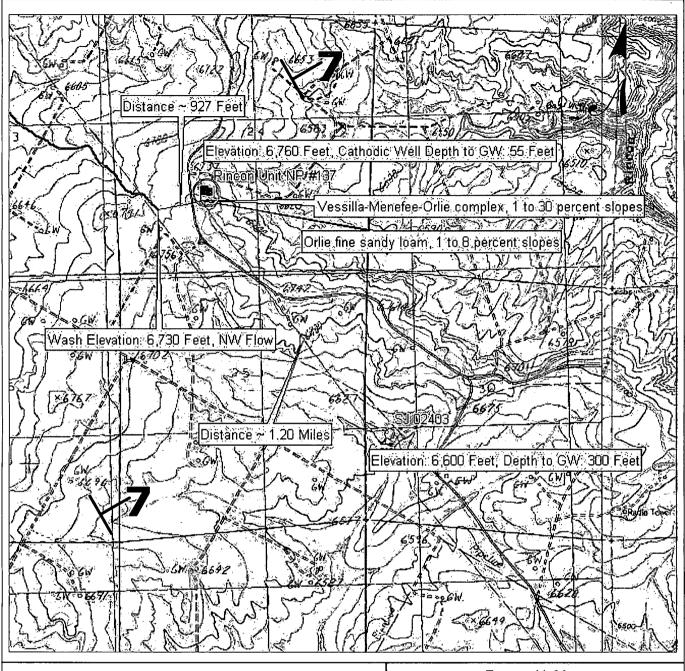
#### Rincon Unit NP #137 Groundwater Statement

The attached iWATERS database search and topographic map shows a water well approximately 1.20 miles to the south-east with a depth to groundwater of 300 feet. This water well is labeled on the topographic map with a red point. As evidenced on the attached topographic map, the water well is at an elevation 160 feet lower than the Rincon Unit NP #137 well site, which is represented by a blue flag on the topographic map. The attached cathodic well data sheet for a cathodic well drilled for the Rincon Unit NP #137 well site in 1976 shows a depth to groundwater of 55 feet. This cathodic well data sheet is stamped as being accepted by the OCD in May of 1990. The soil types at the Rincon Unit NP #137 well site are Vessilla-Menefee-Orlie complex, 1 to 30 percent slope and Orlie fine sandy loam, 1 to 8 percent slopes. This Vessilla-Menefee-Orlie complex is a well drained soil, characterized by slope alluvium over residuum weathered from sandstone and shale with a high to very low available water capacity. The Orlie fine sandy loam is a well drained soil, characterized by fan alluvium and/or slope alluvium derived from sandstone and shale with a high available water capacity. The nearest wash is approximately 927 feet to the west of the Rincon Unit NP #137 well site at an elevation of 6,730 feet. This is a north-west flowing ephemeral wash that only exists during periods of heavy precipitation. This wash is a first order tributary of Cuervo Lake. The Rincon Unit NP #137 well site lies in the San Jose Formation Aquifer which dips at 7 degrees to the north-east (Frenzel, 1983); see Topographic Map for aquifer dip direction. The San Jose Formation ranges from less than 200 feet in the west and south to nearly 2,700 feet in the basin center between Cuba and Gobernador (Frenzel, 1983). These findings indicate that the depth to groundwater is greater than 50 feet from the bottom of the BGT at the Rincon Unit NP #137 well site. All above information, excluding the aquifer dip, was confirmed by a visual inspection performed by Envirotech, Inc.

The San Jose Formation (Tsj) is the youngest Tertiary unit in the San Juan Basin and was named by Simpson (1948, p. 277-283). It is of early Eocene age and as early as 1875 was correlated with the Wasatch Formation in Wyoming. The San Jose is the surface formation in the eastern two-thirds of the San Juan Basin. Although largely exposed in New Mexico, the San Jose also straddles the New Mexico/Colorado State boundaries. It outcrops in its west, south and northeast boundaries in a broad, and in some places irregular, southeasterly trending band in the Blanco Canyon to Largo Canyon area. On the east side, it rises structurally and outcrops in a narrow band along the west face of the Nacimiento Uplift forming the eastern boundary of the San Juan Basin. There are several smaller, isolated remnants of the San Jose Formation west of the central exposure. The San Jose has eroded deeply in some areas and because of differential resistance to erosion of its various sandstone and shale units, produces a large thickness variance and in some places formation of very rugged topographic expression (Baltz, 1967, p. 45). In some places it erodes to horseshoe-shaped badlands and massive cliffs. The San Jose overlays the nonresistant slope-forming Nacimiento Formation (Tn). Thickness of the San Jose ranges from less than 200' at the outcrop on the west and south sides to almost 2700 feet in the the Basin center (Stone, etal, p. 25). The thickness is 1300' or less on the southern part of the Tapicitos Plateau where the San Jose structurally rises and its upper beds are eroded. In the Largo Plains area (Largo Canyon) which marks the western exposure of the preserved San Jose, more than half of the Formation was removed by erosion (Baltz, p. 46). The San Jose Formation contact is that of an angular

unconformity surface with the underlying Paleocene-age Nacimiento Formation near the Nacimiento Uplift, but is slightly disconformable to conformable in the Basin center (Stone, etal, p. 25).

The San Jose Formation is comprised of four identifiable rock facies (in ascending order) called the Cuba Mesa, the Regina, the Llaves and the Tapicitos Members. These four members are only present in the far eastern part of the basin (Brimhall, 1973, p. 198). Within the preserved area, only the Cuba Mesa and Regina are widespread throughout the basin. The oldest Member of the San Jose is the Cuba Mesa (150-800 feet thick), which is largely a massive cliff-forming buff and yellow, rusty-weathering cross-bedded arkosic coarse-grained sandstone with lenticular reddish, green and gray shale beds (Baltz, p. 46). The Cuba Mesa is overlain in the southern two-thirds of the area by drab-colored variegated shale and interbedded soft to hard sandstones known as the Regina Member (100 to 1700 feet thick) and overlain in the northern one-third by a thick sequence of sandstone called the Llaves (50 to 1300 feet thick) which in turn intertongues and grades southward into the Regina. In the northeastern part of the area, the upper Llaves Member grades southward and westward into the red silty mudstones, siltstones and interbedded poorly consolidated sandstones of the Tapicitos Member (120-500 feet thick) (Stone, etal, p. 25).



## LEGEND

Aquifer Strike & Dip

V Ephemeral Wash

Well Area Soil Type

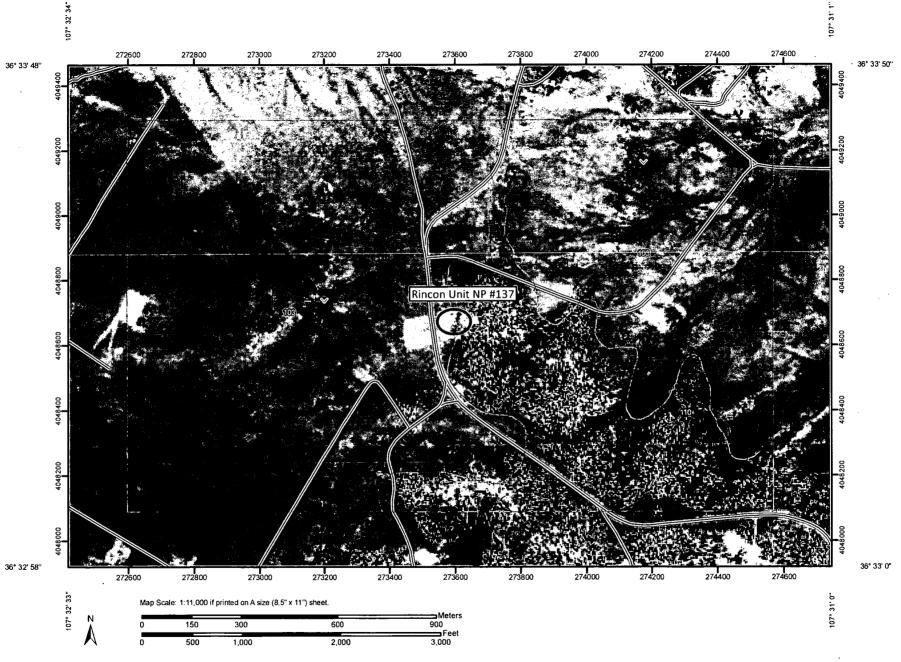
Distance

Topographic Map Rincon Unit NP #137 Sec 24, Twp 27N, Rge 7W Rio Arriba County, New Mexico

SCA	SCALE: NTS				E NO.	1	REV		
PROJECT N092270-0342				11001	. 110.	•			
				REVISIO	NS				
NO.	DATE	BY			DESCRI	PTION			
MAF	DRWN	JPM		DATE	3/09/1	0			



5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615



#### **MAP LEGEND** MAP INFORMATION Map Scale: 1:11,000 if printed on A size (8.5" × 11") sheet. Area of Interest (AOI) Very Stony Spot Area of Interest (AOI) Wet Spot The soil surveys that comprise your AOI were mapped at 1:24,000. Soils Please rely on the bar scale on each map sheet for accurate map Other Soil Map Units measurements. **Special Line Features Special Point Features** Gully Source of Map: Natural Resources Conservation Service 3 Blowout Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Short Steep Slope Coordinate System: UTM Zone 13N NAD83 Borrow Pit 33 This product is generated from the USDA-NRCS certified data as of Clay Spot Ж the version date(s) listed below. **Political Features** Closed Depression Cities Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba Gravel Pit × and Sandoval Counties Water Features Survey Area Data: Version 10, Dec 19, 2008 Oceans **Gravelly Spot** Date(s) aerial images were photographed: 10/13/1997 Landfill Streams and Canals 0 The orthophoto or other base map on which the soil lines were Lava Flow Transportation ٨ compiled and digitized probably differs from the background Rails Marsh or swamp imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. Interstate Highways Mine or Quarry US Routes Miscellaneous Water Major Roads Perennial Water Local Roads Rock Outcrop + Saline Spot Sandy Spot Severely Eroded Spot Sinkhole Slide or Slip Sodic Spot Spoil Area Stony Spot

### **Map Unit Legend**

Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties (NM650)							
Map Unit Symbol Map Unit Name		Acres in AOI	Percent of AOI				
103	Orlie fine sandy loam, 1 to 8 percent slopes	461.8	78.8%				
110 Vessilla-Menefee-Orlie complex, 1 to 30 percent slopes		124.4	21.2				
Totals for Area of Interes	t	586.2	100.0%				

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

#### 110—Vessilla-Menefee-Orlie complex, 1 to 30 percent slopes

#### **Map Unit Setting**

Elevation: 6,100 to 7,200 feet

Mean annual precipitation: 13 to 16 inches Mean annual air temperature: 45 to 49 degrees F

Frost-free period: 100 to 130 days

#### **Map Unit Composition**

Vessilla and similar soils: 45 percent Menefee and similar soils: 25 percent Orlie and similar soils: 20 percent

#### **Description of Vessilla**

#### Setting

Landform: Breaks

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Nose slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Slope alluvium over residuum weathered from

sandstone

#### Properties and qualities

Slope: 1 to 30 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water capacity: Very low (about 2.1 inches)

#### Interpretive groups

Land capability (nonirrigated): 7s

Ecological site: Pinus edulis-Juniperus monosperma/Quercus gambelii/Bouteloua gracilis (F035XG134NM)

#### **Typical profile**

0 to 1 inches: Sandy loam 1 to 15 inches: Sandy loam 15 to 60 inches: Bedrock

#### **Description of Menefee**

#### Setting

Landform: Breaks

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Colluvium over residuum weathered from shale

#### Properties and qualities

Slope: 2 to 30 percent

Depth to restrictive feature: 10 to 20 inches to paralithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low

to moderately high (0.00 to 0.20 in/hr) Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water capacity: Very low (about 2.0 inches)

#### Interpretive groups

Land capability (nonirrigated): 7e

Ecological site: Pinus edulis-Juniperus monosperma/Quercus

gambelii/Bouteloua gracilis (F035XG134NM)

#### Typical profile

0 to 3 inches: Clay loam 3 to 10 inches: Clay loam 10 to 60 inches: Bedrock

#### **Description of Orlie**

#### Setting

Landform: Mesas

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Side slope

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Slope alluvium derived from sandstone and shale

#### Properties and qualities

.Slope: 1 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)

Available water capacity: High (about 11.1 inches)

#### Interpretive groups

Land capability (nonirrigated): 6c

Ecological site: Gravelly Loamy (R036XB006NM)

#### Typical profile

0 to 4 inches: Silt loam 4 to 14 inches: Clay loam 14 to 60 inches: Clay loam

#### **Data Source Information**

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval

Counties

Survey Area Data: Version 10, Dec 19, 2008

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

#### 103—Orlie fine sandy loam, 1 to 8 percent slopes

#### **Map Unit Setting**

Elevation: 6,200 to 7,500 feet

Mean annual precipitation: 13 to 16 inches Mean annual air temperature: 45 to 49 degrees F

Frost-free period: 100 to 130 days

#### **Map Unit Composition**

Orlie and similar soils: 80 percent

#### **Description of Orlie**

#### Setting

Landform: Mesas, fan remnants

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Side slope, talf

Down-slope shape: Linear, convex

Across-slope shape: Linear

Parent material: Fan alluvium and/or slope alluvium derived from

sandstone and shale

#### Properties and qualities

Slope: 1 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/

cm)

Available water capacity: High (about 10.8 inches)

#### Interpretive groups

Land capability (nonirrigated): 6c

Ecological site: Gravelly Loamy (R036XB006NM)

#### Typical profile

0 to 3 inches: Fine sandy loam 3 to 13 inches: Clay loam

13 to 60 inches: Sandy clay loam

#### **Data Source Information**

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval

Counties

Survey Area Data: Version 10, Dec 19, 2008

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

Elevation 6760' Completion Date 10/18/76 Total Depth 300' Land Type* F  Casing, Sizes, Types & Depths None  If Casing is cemented, show amounts & types used None  If Casing is cemented, show amounts & types used None  To 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. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbs.  Type & amount of coke breeze used: type unknown 5000 lbs.  WAY1 4 1990  Depths vent pipes placed: 280'  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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	Operator Union Oil Company of California Location: Unit Sec. 24 Twp27N Rng7W
And the control of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses 6 Well Bore Schematics should	Name of Well/Wells or Pipeline Serviced Rincon #137 DK/MV
And the control of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses 6 Well Bore Schematics should	
And the control of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses 6 Well Bore Schematics should	Elevation 6760' Completion Date 10/18/76 Total Depth 300' Land Type* F
If Casing is cemented, show amounts & types used None    None   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. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbsk	Holic Holic
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. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbsk	If Casing is compated show amounts to tunes used. Now
Depths & thickness of water zones with description of water when possible:  Fresh, Clear, Salty, Sulphur, Etc. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbski MAY1 4 1990  Depths anodes placed: 195' to 285' MAY1 4 1990  Depths vent pipes placed: 280' OIL CON. DIM 1  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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	TI Casing is cemented, snow amounts a types used None
None  Depths & thickness of water zones with description of water when possible:  Fresh, Clear, Salty, Sulphur, Etc. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbsk  Depths anodes placed: 195' to 285'  Depths vent pipes placed: 280'  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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	The Company of Double 11 to 12
Depths & thickness of water zones with description of water when possible:  Fresh, Clear, Salty, Sulphur, Etc. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbs/ MAYI 4 1990  Depths anodes placed: 195' to 285' MAYI 4 1990  Depths vent pipes placed: 280' OIL CON. DIV.  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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	
Fresh, Clear, Salty, Sulphur, Etc. 55' - 70' Deep 15'Thick  170' - 185' Deep 15' Thick  Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbs/K  Depths anodes placed: 195' to 285' MAY1 4 1990  Depths vent pipes placed: 280' OIL CON. DIV.  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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 6 Well Bore Schematics should	None
Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbs/R  Depths anodes placed: 195' to 285'  Depths vent pipes placed: 280'  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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 6 Well Bore Schematics should	Depths & thickness of water zones with description of water when possible:
Depths gas encountered: NA  Type & amount of coke breeze used: type unknown 5000 lbs MAY1 4 1990  Depths anodes placed: 195' to 285' MAY1 4 1990  Depths vent pipes placed: 280' OIL CON. DIV.  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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 6 Well Bore Schematics should	Fresh, Clear, Salty, Sulphur, Etc. 55' - 70' Deep 15'Thick
Type & amount of coke breeze used: type unknown 5000 lbsk.  Depths anodes placed: 195' to 285' MAYI 4 1990  Depths vent pipes placed: 280'  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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 6 Well Bore Schematics should	170' - 185' Deep 15' Thick
Type & amount of coke breeze used: type unknown 5000 lbs/K	Depths gas encountered: NA
Depths anodes placed:  Depths vent pipes placed:  Vent pipe perforations:  216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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	
Depths vent pipes placed: 280'  Vent pipe perforations: 216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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 6 Well Bore Schematics should	
Vent pipe perforations:  216'  Remarks: El Paso Natural Gas Co. was the operator at the time this ground 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 6 Well Bore Schematics should	
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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 6 Well Bore Schematics should	
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logs, including Drillers Log, Water Analyses & Well Bore Schematics should	First ground bed installed at this location
	If any of the above data is unavailable, please indicate so. Copies of all
be submitted when available. Unplugged abandoned wells are to be included.	be submitted when available. Unplugged abandoned wells are to be included.
*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.	*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  If Federal or Indian, add Lease Number.



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

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

,			(qua	ırter	s a	re s	malle	est to I	argest)	(NAD83	3 UTM in me	eters)	(	In feet)	
	Sub			Q	Q	Q				a			Depth	Depth	Water
POD Number	basin	Use	County	64	16	4	Sec	Tws	Rng	<u> </u>	Υ,	Distance	Well	Water(	Column
SJ 02403		DOM	RA	3	1	3	30	27N	06W	274714	4047115*	1935	505	300	205
SJ 00195		OFM	SJ			2	15	27N	07W	271133	4051089*	3433	1633	500	1133
RG 81025	СН	STK	RA	3	3	4	35	27N	07W	272236	4044920*	4002	560	465	95
SJ 02404		STK	RA	3	3	4	35	27N	07W	272236	4044920*	4002	550	250	300
SJ 02409		STK	RA	2	2	1	01	26N	07W	273634	4044666*	4022	700	400	300
SJ 03274		STK	RA	. 4	4	3	35	27N	07W	272033	4044938*	4059	450		
SJ 00213		IND	RA	4	4	1	32	27N	06W	276897	4045750*	4425	1308	485	823
SJ 02408		STK	RA	3	1	2	21	27N	07W	269160	4049516*	4503	400	300	100
SJ 00061		DOM	RA	3	3	3	32	27N	06W	276278	4044923*	4627	445	301	144
SJ 00062		DOM	RA	3	3	3	32	27N	06W	276278	4044923*	4627	452	301	151
SJ 03001		DOM	RA	1	2	2	07	27N	06W	276165	4052831*	4879	141	41	100
											Averag	je Depth to	Water:	334	ieet
												Minimum	Depth:	41 1	feet
												Maximum	Depth:	500 1	feet

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 273587

Northing (Y): 4048688

Radius: 5000

<sup>\*</sup>UTM location was derived from PLSS - see Help

## 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

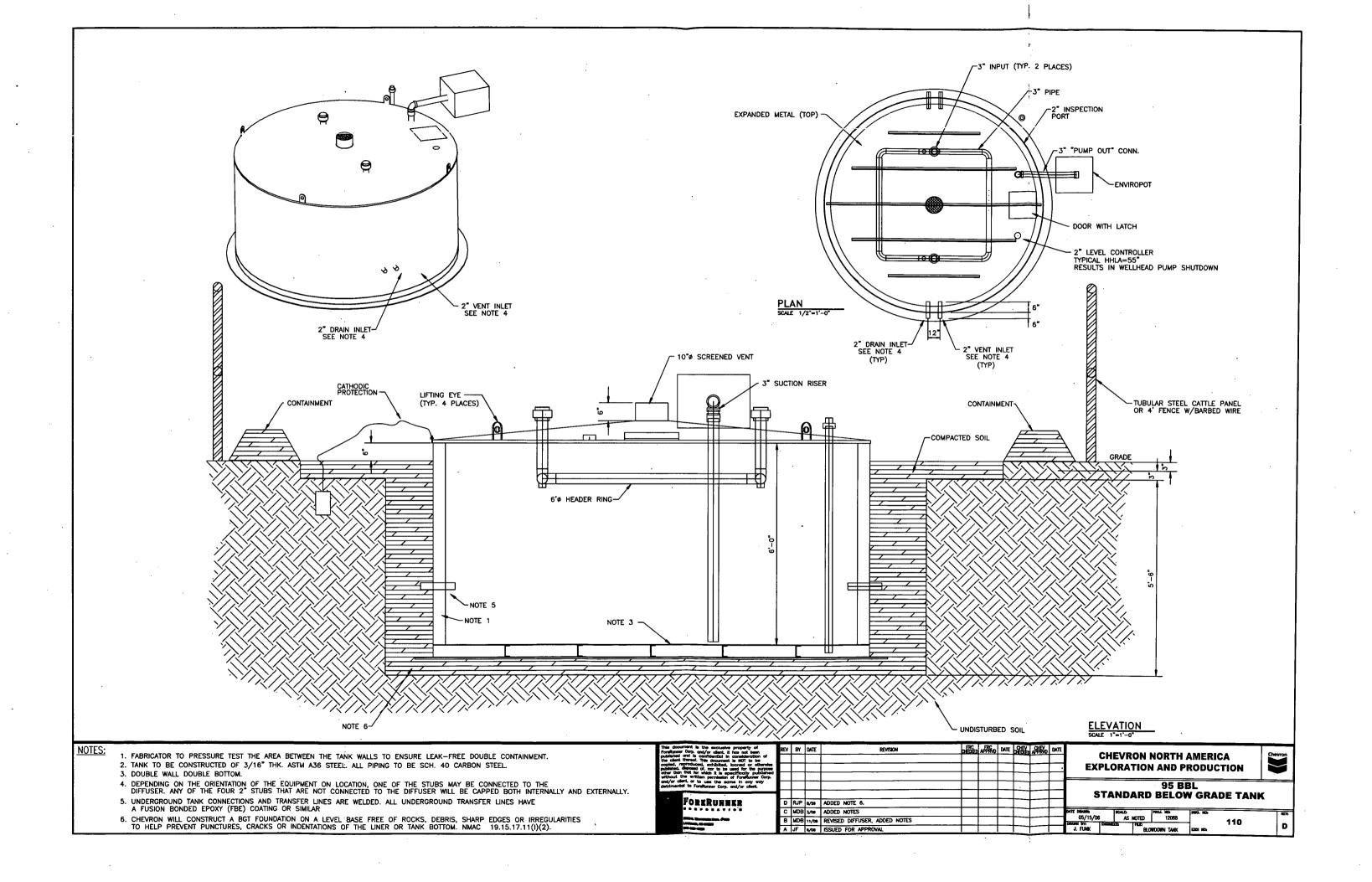
#### INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) 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 or enclose a BGT located within 1000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six feet in height with at least two strands of barbed wire at the top. Chevron will close and lock all gates associated with the fence when responsible personnel are not on-site. NMAC § 19.15.17.11(D)(2).
- 5. 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). As illustrated on the attach photo.
- 6. 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).
- 7. Chevron's BGTs will be constructed with the design features illustrated on the attached drawing.
- 8. Only double-walled, double-bottomed BGTs will be installed.
- 9. 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).
- 10. 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).
- 11. 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).
- 12. 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).
- 13. Chevron, as the operator of a below-grade tank constructed and installed prior to June 16, 2008 that does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and is not included in Paragraph (6) of Subsection I of 19.15.17.11 NMAC, is not required to equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as it demonstrates integrity. If the existing below-grade tank does not demonstrate integrity, the operator shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, as illustrated in the approved drawing. Chevron shall comply with the operational requirements of 19.15.17.12 NMAC.

14. Chevron, as the operator of a below-grade tank constructed and installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible, shall equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within five years after June 16, 2008. If the existing below-grade tank does not demonstrate integrity, Chevron shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, as illustrated in the approved drawing. Chevron shall comply with the operational requirements of 19.15.17.12 NMAC.



# 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 Operating and Maintenance Plan

#### INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) 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. If Chevron as an operator of a below-grade tank that was constructed and installed prior to June 16, 2008 that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and discovers that the below-grade tank does not demonstrate integrity or that the below-grade tank develops any of the conditions identified in Paragraph (5) of Subsection A of 19.15.17.12 NMAC, then Chevron or their representative shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC and install a below-grade tank that complies with the requirements of Paragraphs

- (1) through (4) of Subsection I of 19:15:17:11 NMAC. NMAC § 19:15:17:12(D)(5). If replacement is required, the BGT will meet all specification included in the attached approved design drawing.
- 5. If Chevron as the operator of the below-grade tank that was constructed and installed prior to June 16, 2008 that does not comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and equips or retrofits the existing tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, then Chevron or their representative shall visually inspect the area beneath the below-grade tank during the retrofit and document any areas that are wet, discolored or showing other evidence of a release on form C-141. Chevron shall demonstrate to the division whether the evidence of contamination indicates that an imminent threat to fresh water, public health, safety or the environment exists. If the division determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, the operator shall complete the retrofit or the replacement of the below-grade tank. If Chevron or division determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then Chevron shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement. NMAC § 19.15.17.12(D)(6). If replacement is required, the BGT will meet all specification included in the attached approved design drawing.
- 6. 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).
- 7. 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).
- **8.** Chevron, or a contractor representing Chevron, will remove a visible or measurable layer of oil from the fluid surface of a BGT. NMAC § 19.15.17.12(D)(2).
  - **9.** Chevron, or a contractor representing Chevron, will inspect the BGT to assess compliance with NMAC § 19.15.17.12, Operational Requirements, at least once monthly and maintain a written record of each inspection for at least five (5) years. The approved inspection form is attached.

# Chevron: New Mexico Inspection Form for Below Grade Tanks

Inspection	Date:	

elow 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;	<del></del>	<del></del>
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)(4) 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 §§ 19.15.17.9(C) and 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(A), 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(A).
- 2) Chevron, or a contractor acting on behalf of Chevron, will close an existing BGT that does not meet the requirements of NMAC § 19.15.17.11(I)(1 through 4) or is not included in NMAC § 19.15.17.11(I)(5) within five years after June 16, 2008, if not retrofitted to comply with § 19.15.17.11(I)(1 through 4). NMAC § 19.15.17.13(A)(4).
- 3) Chevron shall close an existing below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not retrofitted to comply with Paragraphs 1) through (4) of Subsection I of 19.15.17.11 NMAC, prior to any sale or change of operator pursuant to 19.15.9.9 NMAC.
- 4) Chevron, or a contractor acting on behalf of Chevron, will close a permitted BGT within 60 days of cessation of the BGT's operation or as required by the transitional provisions of NMAC § 19.15.17.17(B) in accordance with a closure plan that the appropriate division district office approves. NMAC §§ 19.15.17.13(A)(9) and 19.15.17.9(C).
- 5) In accordance with NMAC § 19.15.17.13(J)(1), Chevron will notify the surface owner by certified mail, return receipt requested, of its plans to close a BGT prior to beginning closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance. Chevron will also notify the appropriate division district office verbally or by other means 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(J)(2).

- 6) Chevron, or a contractor acting on behalf of Chevron, will remove liquids and sludge from a BGT prior to implementing a closure method and will dispose of the liquids and sludge in a division approved facility. NMAC § 19.15.17.13(E)(1). A list of Chevron currently approved disposal facilities is included at the end of this document.
- 7) The proposed method of closure for this Closure Plan is waste excavation and removal. NMAC §§ 19.15.17.13 (E)(1).
- 8) 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(E)(2). Documentation regarding disposal of the BGT and its associated liner, if any, will be included in the closure report.
- 9) 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.
- 10) Chevron, or a contractor acting on behalf of Chevron, will remove on-site equipment associated with a BGT unless the equipment is required for some other purpose. NMAC § 19.15.17.13(E)(3).
- 11) Chevron, or a contractor acting on behalf of Chevron, will test the soils beneath the BGT to determine whether a release has occurred. At a minimum, 5 point composite samples 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 0.2mg/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 50mg/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 250mg/kg; or the background concentration, whichever is greater. Chevron, or a contractor acting on behalf of Chevron, will notify the NMOCD Division District office of its results on form C-141. NMAC § 19.15.17.13(E)(4).
- 12) If Chevron or the division determines that a release has occurred, Chevron will comply with NMAC §§ 19.15.29 and 19.15.30, as appropriate. NMAC § 19.15.17.13(E)(5).
- 13) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in NMAC § 19.15.17.13(E)(4), 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)(G, H and I). NMAC § 19.15.17.13(E)(6).

- 14) As per NMAC § 19.15.17.13(G)(1), 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), recontour 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(I). NMAC § 19.15.17.13(G)(1).
- 15) Chevron may propose an alternative to the re-vegetation requirement of NMAC § 19.15.17.13(G)(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(G)(2).
- 16) 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)(1).
- 17) 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)(3).
- 18) As per NMAC § 19.15.17.13(I)(1) and 19.15.17.13(G)(2), 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.
- 19) 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(I)(2).
- 20) Chevron will notify the division when it has seeded or planted and when it successfully achieves re-vegetation. NMAC § 19.15.17.13(I)(5).
- 21) Seeding or planting will be repeated until Chevron successfully achieves the required vegetative cover. NMAC § 19.15.17.13(I)(3).

- 22) When conditions are not favorable for the establishment of vegetation, such as periods of drought, the division may allow Chevron to delay seeding or planting until soil moisture conditions become favorable or may require Chevron to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices. NMAC § 19.15.17.13(I)(4).
- 23) As per NMAC § 19.15.17.13(K), within 60 days of closure completion, Chevron will submit a closure report containing the elements required by NMAC § 19.15.17.13(K) 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.
- 24) 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(K).
- 25) 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) Key Energy Disposal Facility, Permit No. NM-01-0009
- ii) Basin Disposals Facility, Permit No. NM-01-005.
- 26) 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.