<u>District 1</u>
1625 N. French Dr , Hobbs, NM 88240
<u>District II</u>
1301 W. Grand Avenue, Artesia, NM 88210
<u>District III</u>
1000 Rio Brazos Road, Aztec, NM 87410
<u>District IV</u>
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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

9363

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

Type of action:    Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method   Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method   Modification to an existing permit   Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: Williams Operating Co, LLC OGRID #: 120782
Address: PO Box 640 / 721 S Main Aztec, NM 87410
Facility or well name: Rosa Unit 014D
API Number:         30-039-31054         OCD Permit Number
U/L or Qtr/Qtr B Section 23 Township 31N Range 6W County: Rio Arriba
Center of Proposed Design: Latitude         36.88974N         Longitude         -107.42843W         NAD:         □1927 ☒ 1983
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment
Pett: Subsection F or G of 19.15.17.11 NMAC
☐ Lined ☐ Unlined Liner type: Thickness mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other Liner Seams: ☐ Welded ☐ Factory ☐ Other BECEIVED
Below-grade tank: Subsection I of 19.15.17.11 NMAC   Volume:
5. Alternative Method:

20

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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 <u>As per BLM specifications</u>				
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 acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.				
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No			
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  (Applies to temporary, emergency, or cavitation pits and below-grade tanks)  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☑ No ☐ NA			
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits)	☐ Yes ☐ No ☑ NA			
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five howesholds use for domestic or stock	☐ Yes ☑ No			
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site				
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☑ No			
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☑ No			
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ⊠ No			
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	☐ Yes ⊠ No			
Within a 100-year floodplain FEMA map	☐ Yes ⊠ No			

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 19.15.17.12 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  □ Previously Approved Design (attach copy of design) API Number:				
12. Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.				
☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC				
Previously Approved Design (attach copy of design)  API Number:				
☐ Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)				
13				
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.    Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC   Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC   Climatological Factors Assessment   Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC   Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC   Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC   Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC   Quality Control/Quality Assurance Construction and Installation Plan   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC   Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC   Nuisance or Hazardous Odors, including H <sub>2</sub> S, Prevention Plan   Cilimatological Factors Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC   Nuisance or Hazardous Odors, including H <sub>2</sub> S, Prevention Plan   Cilimatological Factors Assessment - based upon the appropriate requirements of 19.15.17.13 NMAC				
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.				
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative				
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)				
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 Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)				
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.				
Disposal Facility Name: Dis	posal Facility Name: Disposal Facility Permit Number:			
Disposal Facility Name: Dis	posal Facility Permit Number:			
Will any of the proposed closed-loop system operations and associated activities occur  ☐ Yes (If yes, please provide the information below) ☐ No	on or in areas that will not be used for future services.	vice and operations?		
Required for impacted areas which will not be used for future service and operations  Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC				
17. Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.				
Ground water is less than 50 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data ob	tained 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 ob	tained 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 ob	tained from nearby wells	☐ Yes ☐ No ☐ NA		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significal lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	cant watercourse or lakebed, sinkhole, or playa	☐ Yes ⊠ No		
Within 300 feet from a permanent residence, school, hospital, institution, or church in a Visual inspection (certification) of the proposed site; Aerial photo; Satellite im		☐ Yes ⊠ No		
Within 500 horizontal feet of a private, domestic fresh water well or spring that less that 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 (cert	g, in existence at the time of initial application.	☐ 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				
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual in	spection (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	l Mineral Division	☐ Yes ⊠ No		
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Society; Topographic map	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 19.15.17.11 NMAC  Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC				

Operator Application Certification:  I hereby certify that the information submitted with this application is true, accurate an	nd complete to the best of my knowledge and belief.		
	Title: Regulatory Specialist		
Signature: B_ Inshill	Date: <u>5/24/2011</u>		
e-mail address: ben.mitchell@williams.com	Telephone: 505-634-4206		
OCD Approval:  Permit Application (including closure plan)  Closure Plan (c	only) OCD Conditions (see attachment)		
OCD Representative Signature:	Approval Date: 6/10/2011		
OCD Representative Signature: Swatt . Kelly  Title: Compliance Office OC	D Permit Number:		
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC  Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report.  The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.			
	Closure Completion Date:		
Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternative of If different from approved plan, please explain.	Closure Method  Waste Removal (Closed-loop systems only)		
Disposal Facility Name:	Sposal Facility Permit Number:  sposal Facility Permit Number:  seas that will not be used for future service and operations?  sposal Facility Permit Number:  seas that will not be used for future service and operations?		
	NAD: □1927 □ 1983		
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.			
	Title:		
Signature:	Date:		
e-mail address:	Telephone:		

|District I |1625 N. French Dr., Hobbs, NM 88240 State of New Mexico Form C-102 Revised October 12, 2005 Instructions on back Energy, Minerals & Natural Resources Department District II 1301 W. Grand Avenue, Artesia, NM 88210 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies OIL CONSERVATION DIVISION District III 1000 Rio Brazos Rd., Aztec, NM 87410 1220 South St. Francis Dr. Santa Fe. NM 87505 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 AMENDED REPORT WELL LOCATION AND ACREAGE DEDICATION PLAT API Number 72319 / 71599 BLANCO MESAVERDE / BASIN DAKOTA Property Code Well Number Property Name 17033 ROSA UNIT 14D 'OGRID No. \*Operator Name \*Elevation 120782 WILLIAMS PRODUCTION COMPANY 6287 <sup>10</sup> Surface Location UL or lot no, Township Lot Idn Feet from the North/South line Section Feet from the East/West line RIO 23 1020 NORTH В 31N 1515 **EAST** ARRIBA <sup>11</sup> Bottom Hole Location Different From Surface UL or lot no. Section Feet from the North/South line Feet from the East/West line RIO 23 31N БW 500 NORTH 500 Α EAST ARRIBA 12 Dedicated Acres 19 Joint or Infall <sup>5</sup> Order No 320.0 Acres (E/2) - MV 320.0 Acres (N/2) - DK, MS NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION OPERATOR CERTIFICATION 16 5280.00 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. 050 500 N62°15.4E 8 1515 LEASE LEASE 2640. SF-078771 Signature SF-078771 SURFACE LOCATION LAT: 36.88953 N LONG. 107.42832 W BOTTOM-HOLE LAT: 36.89098 N LONG: 107.42484 W sen Motola Printed Name DATUM : NAD1983 DATUM : NAD 1983 18 SURVEYOR CERTIFICATION

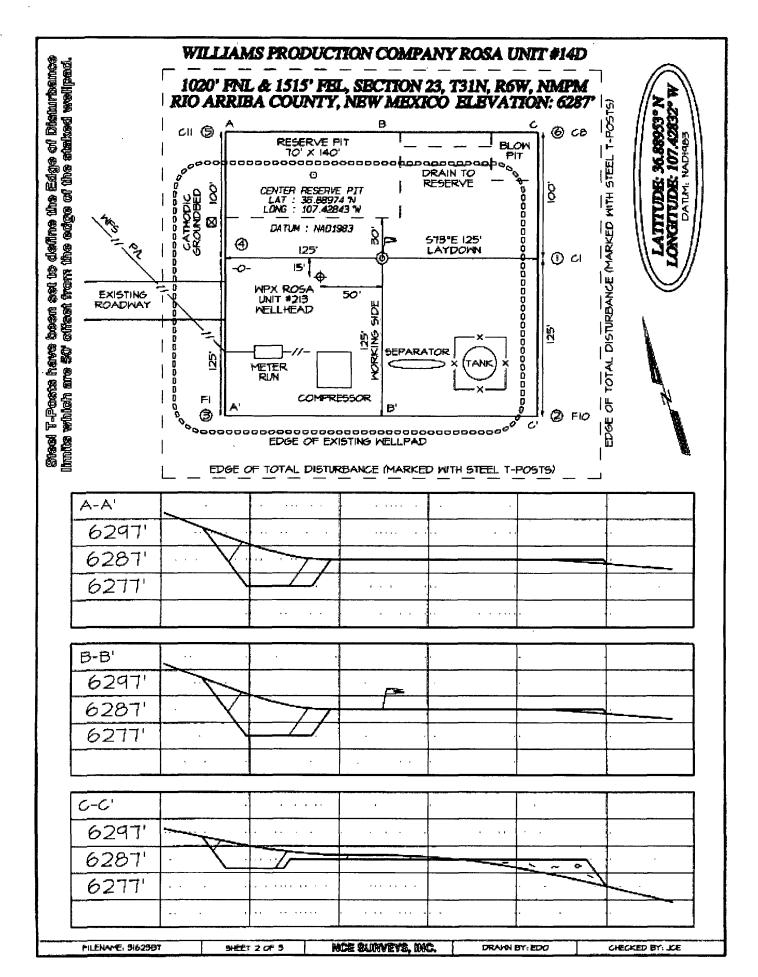
SURVEYUR CEMITICATION

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

Date of Survey: OCTOBER 4, 2010 Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



#### Hydrogeological Report Williams Production Company, LLC Rosa Unit #014D

#### Regional Hydrological Context

#### **Referenced Well Location:**

The referenced well and pit is located on Bureau of Land Management land within Farmington Field Office (FFO) management jurisdiction in Rio Arriba County, New Mexico. This site is positioned in the northeastern portion of the San Juan Basin, an asymmetrical syncline that extends from northwestern New Mexico into southwestern Colorado (Carson National Forest FEIS, 2008). Elevation of the referenced well is approximately 6287 feet MSL.

#### **General Regional Groundwater Description:**

As a portion of the San Juan Basin, the Jicarilla Ranger District is underlain by sandstone aquifers of the Colorado Plateau. The primary aquifer of potential concern at this location is the Uinta-Animas Aquifer, composed primarily of Lower Tertiary rocks in the San Juan Basin. The aquifer consists of the San Jose Formation; the underlying Animas formation and its lateral equivalent, the Nacimiento formation; and the Ojo Alamo Sandstone. The thickness of the Uinta-Animas aquifer generally increases toward the central part of the basin. In this region, the maximum thickness of the aquifer is approximately 3500 feet (USGS, 2001). This aquifer contains fresh to moderately saline water.

Groundwater generally flows toward the San Juan River and it tributaries, where it becomes alluvial groundwater or is discharged to stream flow. Additional information regarding the hydrogeologic setting can be found in the provided references.

#### **Site Specific Information:**

Surface Hydrology: The pit is located on a mesa top overlooking Navajo Reservoir to

the south. Topography slopes to the north, west, and south off

the mesa.

1st Water Bearing Formation:

Formation Thickness: Underlying Formation: Approximately 1,900 ft. Nacimiento, Tertiary

San Jose, Tertiary

Depth to Groundwater:

Depth to groundwater is estimated at greater than 100 feet bgs. Within a one-mile radius of this location, there were no iWATERS wells with recorded water depth information. However, cathodic data associated with the Rosa Unit Nos. 213 (approximately 228 feet from pit) & 014 (approximately 124 feet from pit), show depth to moisture at 292 feet (see Siting Criteria

Map I for details).

#### References:

Allen, Erin. Undated. Colorado Plateau Aquifers.

http://academic.emporia.edu/schulmem/hydro/TERM%20PROJECTS/2007/Allen/Aquifer.html.

New Mexico Energy, Minerals and Natural Resources Department, Division of Mining and Minerals. Database. 2010. Internet accessed January 2010.

New Mexico Office of the State Engineer. 2010. iWaters database. Internet accessed March 2010.

New Mexico WQCC. 2005. State of New Mexico Water Quality Act and the Water Control Commission Regulations.

United States Department of Agriculture, Forest Service. 2008. Final Environmental Impact Statement for Surface Management of Gas Leasing and Development. Jicarilla Ranger District, Carson National Forest, Rio Arriba County, New Mexico.

United States Department of the Interior. Bureau of Land Management. 2003. Final Farmington Resource Management Plan and Final Environmental Impact Statement. Farmington Field Office, Farmington, New Mexico.

United States Geological Survey. 2001. Ground Water Atlas of the United States: Arizona, Colorado, New Mexico and Utah. USGS Publication HA 730-C; <a href="http://capp.water.usgs.gov">http://capp.water.usgs.gov</a>.

Page 8 of 19

Rosa Unit 014D



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

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(in feet)

Sub Q Q Q Depth Depth Water POD Number basin Use County 64:16:4 Sec Tws Rng X Y Well Water Column

SJ 00011

IND R

32 31N D8W

V 278321 40818111

610

aroundere in a reduction to the terms. Pink

SJ 03685 POD1

DOM S

4 2 1 07 31N D6W

278814 4068772\*

460 310

Minimum Depth: 310 feet

153

Average Depth to Water:

r: 310 feet

Maximum Depth: 310 feet

Record Count: 2

PLSS Search:

Township: 31N

Range: 00W

\*UTM location was derived from PLSS - see Help

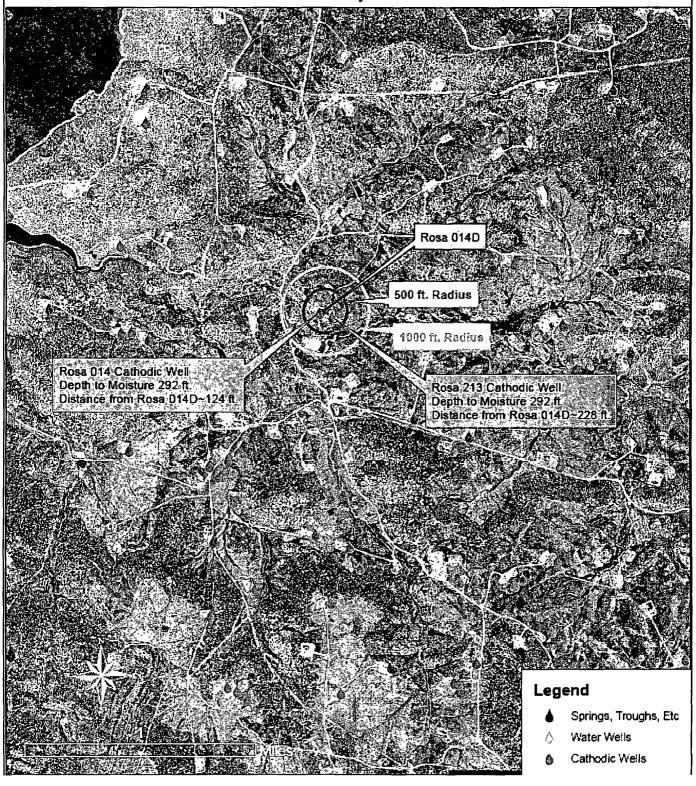
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed uncerstanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, rehability, usability, or suitability for any particular purpose of the data.

3/17/11 3:09 PM

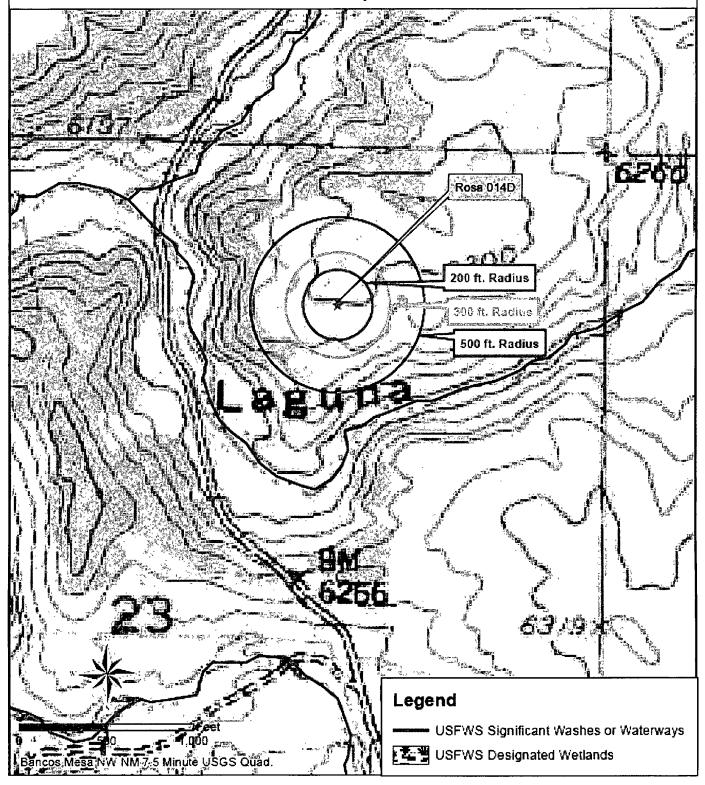
Page 1 of 1

WATER COLUMN/ AVERAGE DEPTH TO WATER

Siting Criteria Map I Water Wells, Cathodic Wells, & Springs Williams Production Company, LLC Proposed Rosa Unit No. 014D T31N, R06W, Section 23 NMPM Rio Arriba County, New Mexico



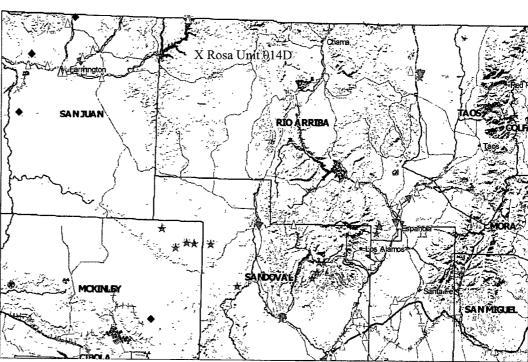
Siting Criteria Map II
Topographic Features
Williams Production Company, LLC
Rosa Unit No. 014D
T31N, R06W, Section 23 NMPM
Rio Arriba County, New Mexico

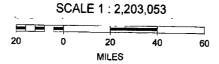


**Population** 

# **MMQonline Public Version**







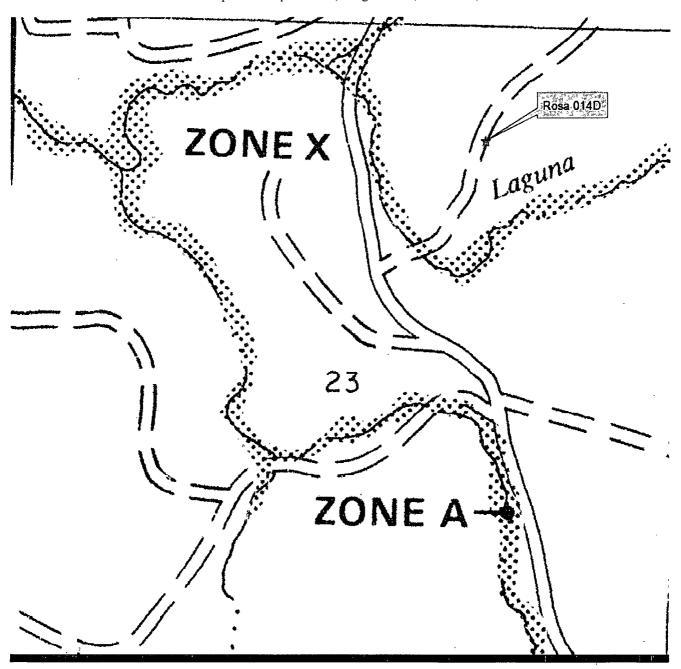


#### FEMA Map - 100-Year Floodplain:

This site is not located within a 100-year floodplain, according to FEMA maps (see attached FEMA map).

#### **Siting Criteria Compliance Demonstrations:**

The Rosa Unit #014D well is not located in an unstable area. The location is not situated over a mine or a steep slope. Excavated pit material will not be located within 300 feet of a continuously flowing water course or within 200 feet of any other significant water course, lakebed, sinkhole, or playa lake (see Siting Criteria Map II). The site is not within 500 feet of any reported riparian areas or wetlands; within 500 feet of any private, domestic fresh water well or spring; or within 1000 feet of any other fresh water well or spring (see Siting Criteria Map I). The proposed pit will not be within any incorporated municipal boundaries or defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. The location of the proposed pit is not within 300 feet of any permanent residence, school, hospital, institution, or church.



#### Williams Production Co., LLC San Juan Basin: New Mexico Assets

Temporary Pit Design and Construction Plan Drilling/Completion and Workover

In accordance with Rule 19.15.17 NMAC, the following plan describes the general design and construction (D&C) of temporary pits on Williams Production Co, LLC (WPX) locations in the San Juan Basin of New Mexico. This is WPX's standard procedure for all temporary pits to be utilized for the drilling, completion and/or workover of oil and gas wells operated by WPX. For those temporary pits which do not conform to this standard plan, a separate well specific D&C plan will be developed and utilized.

#### General Plan Requirements:

- 1. WPX will design and construct a temporary pit to contain liquids and solids associated with drilling, completion and workover of oil and gas wells which will prevent contamination of fresh water resources and protect public health and the environment.
- 2. Prior to excavation of the pit, topsoil will be stripped and stockpiled within the construction zone for later use during restoration.
- 3. WPX will post a well sign, not less than 12" by 24", on the well site prior to construction of the temporary pit. This sign will list the operator on record, the location of the well site by unit letter/section/township/range, and emergency telephone number(s).
- 4. WPX shall construct all new fences utilizing 48" steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts will be installed every 12 feet and corners shall be anchored utilizing a secondary T-post or similar bracing. Temporary pits will be fenced at all times excluding drilling/completion and/or workover operations when the rig is present on site, at which time the "front" side of the fence will be temporarily removed for operational purposes.
- 5. WPX shall construction the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to meet manufacturers' specifications and potential liner failure.
- 6. WPX shall construct the pit so that the slopes are no steeper than two horizontal to one vertical. Where steeper slopes are required due to surface owner and right-a-way restriction, an engineers certification of stability will be provided with the well pit application.
- 7. Pit well will be walked down by a crawler type tractor following construction and prior to liner installation.
- 8. All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements.
- 9. Geotextile will be installed beneath the liner when rocks, debris, sharp objects or irregularities can not be avoided.
- 10. All liners will be anchored in the bottom of a compacted earth-filled trench consistent with manufacturer's specifications and at least 18 inches deep.
- 11. WPX will minimize liner seams and orient them up and down, not across slope faces. Factory seams will be used whenever possible. Field seams will be overlapped per manufacturers' specifications. WPX will minimize the number of field seams in corners and irregularly shaped areas.
- 12. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides (secondary liner placed over the primary liner), and/or a manifold system.
- 13. The pit shall be protected from run-on by construction of diversion ditches around the location or around the perimeter of the pit in as necessary.
- 14. The volume of the pit shall not exceed 10 acre-feet, including freeboard
- 15. Temporary blow pits will be constructed to allow gravity flow to discharge into the lined reserve pit.
- Only the upper portion of the blow pit will be unlined as allowed in the Rule 19.15.17.11.F(11) NMAC.
- 17. WPX will modify this design if field and/or operating conditions do not effectively allow drainage of the blow pit and freestanding liquids pose a potential concern.

Page 15 of 19 Rosa Unit 014D

### Williams Production Co., LLC San Juan Basin: New Mexico Assets

Temporary Pit Maintenance & Operating Plan Drilling/Completion and Workover

In accordance with Rule 19.15.17 NMAC, the following plan describes the general operations and maintenance (O&M) of temporary pits on Williams Production Co, LLC (WPX) locations in the San Juan Basin of New Mexico. This is WPX's standard procedure for all temporary pits to be utilized for the drilling, completion and/or workover of oil and gas wells operated by WPX. For those temporary pits which do not conform to this standard O&M plan, a separate well specific O&M plan will be developed and utilized.

#### General Plan Requirements:

- 1. WPX will operate and maintain a temporary pit to contain liquids and solids associated with drilling, completion and workover of oil and gas wells which will prevent contamination of fresh water resources and protect public health and the environment.
- 2. WPX will to the extent practical conserve drilling fluids for reuse by transferring liquids to pits ahead of the rigs. All other fluids will be disposed by evaporation or transport to Basin Disposal, Inc in Bloomfield, New Mexico (Permit # NM-01-005).
- WPX shall maintain at least two (2) feet of vertical freeboard for a temporary pit.
- 4. WPX shall remove all free liquids from a temporary pit within 30 days from the date the drilling or workover rig is released.
- 5. Only fluids and solids generated during the drilling/completion/workover process may be discharged into a temporary pit. Other miscellaneous soild waste or debris will not be allowed.
- 6. WPX will not discharge or store any hazardous waste as defined under RCRA 40CFR 261 and 19.15.1.7.W(3) NMA in any temporary pit.
- 7. If any pit liner's integrity is compromised, or if any penetration of the liner occurs:
  - a. Above the liquid's surface, WPX shall repair the damage or replace the liner as necessary. WPX will notify the NMOCD Aztec District Office by phone or email within 48-hours of discovery.
  - b. Leak below the liquid's surface, WPX shall suspend operations, remove all liquids above the damaged liner within 48 hours, and repair the damage or replace the liner. WPX will notify and report to NMOCD as follows:
    - i. If the release is less than 25 bbls, the Aztec District Office by phone or email within 48-hours of discovery and repair.
    - ii. If the release is suspected to be greater than 25 bbls, the Aztec District Office and the Environmental Bureau Chief by phone for immediate verbal notification pursuant to 19.15.3.116.B (1)(d).
  - c. Written Spill/Release reports will be submitted on Form C-141 per 19.15.3.116.C NMAC within 15 days to the Aztec District Office.
- 8. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides (secondary liner placed over the primary liner), and/or a manifold system.
- 9. Diversion ditches, around the location or around the perimeter of the pit, shall be maintained as protection from run-on.
- 10. WPX shall immediately remove any visible layer of oil from the surface of a temporary pit following cessation of drilling/completion/workover operations. Oil absorbent booms will be utilized to contain and remove oil. An oil absorbent boom will stored on-site until the pit is covered.
- 11. WPX will inspect the temporary pits as follows to ensure compliance with this plan:
  - a. Daily during drilling or workover operations. Inspections will be included with the IADC reports.
  - b. Weekly as long as liquids remain in the pit. Electronic copies of the inspections will be kept at the WPX San Juan Basin office.
  - c. Copies of the inspections will be filed with the NMOCD Aztec District office upon pit closure.



#### Williams Production Co., LLC San Juan Basin: New Mexico Assets

Temporary Pit In-place Closure Plan Drilling/Completion and Workover (Groundwater >100 feet bgs)

In accordance with Rule 19.15.17.13 NMAC, the following plan describes the general in-place closure requirements of temporary pits on Williams Production Co, LLC (WPX) locations in the San Juan Basin of New Mexico. This is WPX's standard procedure for all temporary pits to be utilized for the drilling, completion and/or workovers of oil and gas wells operated by WPX. For those temporary pits which do not conform to this standard closure plan, a separate well/pit-specific closure plan will be developed and utilized.

All closure activities will include proper documentation and will be submitted to OCD within 60 days of the pit closure on a Closure Report using Division Form C-144. The Report will include the following:

- Details on Capping and Covering, where applicable
- Plot Plan (Pit Diagram)
- Inspection reports
- Sampling Results
- Division Form C-105: WELL COMPLETION OR RECOMPLETION REPORT AND LOG
- Copy of Deed Notice filed with the County Clerk (formatted to meet County requirements)

#### General Plan Requirements:

- All free-standing liquids will be removed from the pit at the start of the closure process.
   Liquids will be removed in a manner that the appropriate District Office approves including: recycled, reused, reclaimed, evaporated, and/or disposed of in a Division-approved facility.
   Once all free liquids are removed, the sludge will be stabilized by one of the following methods depending on equipment availability: blending with clean stockpiled soils or dewatering using a Bowl Decanter Centrifuge, then blending with clean stockpiles soils.
- 2. The preferred method of closure for all temporary pits will be on-site closure by in-place burial, provided all the criteria in 19.15.17.13.B are met.
- 3. The surface owner shall be notified of WPX's proposed closure plan using a means that provides proof of notice (i.e. certified mail/return receipt requested).
- 4. Within six months of the "rig-off" status occurring, WPX will ensure that the temporary pit is covered and recontoured, and that reseeding is in progress.
- 5. Notice of Closure will be given to the Aztec District office between 72 hours and one week of the scheduled closure via email or phone. The notification of closure will include the following:
  - a. Operator's Name (WPX)
  - b. Well Name and API Number
  - c. Location (USTR)
- 6. The pit liner shall be removed above "mud level" after stabilization. Removal of the liner will consist of manually or mechanically cutting the liner at the mud level and removing all remaining liner. Care will be taken to remove "all" of the liner (i.e. anchored material). All excessive liner will be disposed of at a licensed disposal facility (probably San Juan Regional Landfill, operated by Waste Management under NMED Permit SWM-052426).

Page 18 of 19 Rosa Unit 014D

7. A five-point composite sample will be taken of the pit using sampling tools; all samples will be tested per 19.15.17.13(B)(1)(b) NMAC. In the event that the criteria are not met (See Table 1), all contents will be handled per 19.15.17.13(B)(1)(a) (i.e. dig and haul to a Division-approved facility). Approval to haul will be requested of the Aztec District office prior to initiation.

Table 1: Closure Criteria for Temporary Pits in Non-sensitive Areas

Components	Testing Methods	Closure Limits (mg/Kg)
Benzene	EPA SW-846 Method 8021B or 8260B	0.2
BTEX	EPA SW-846 Method 8021B or 8260B	50
TPH	EPA SW-846 Method 8015 M(Full Range)*	2500
	or Method 418.1	
GRO/DRO	EPA SW-846 Method 8015M (GRO/DRO)	500
Chlorides	EPA SW-846 Method 300.1	1000

<sup>\*</sup> Preferred method

- 8. Upon completion of solidification and testing, the pit area will be backfilled with non-waste, earthen material compacted to native conditions to enable effective revegetation for successful evapotranspiration. A minimum of four feet of cover will be used, including replacement of one foot of suitable material to establish vegetation, or the background thickness of topsoil, whichever is greater.
- 9. Following cover, the site will be recontoured to meet the Surface Management Agency or surface owner requirements. Re-contouring will attempt to match fit, shape, line form, and texture of the surrounding geography. Re-shaping will provide drainage control, prevent ponding, and minimize erosion. Natural drainages will be unimpeded and stormwater Best Management Practices (BMPs) will be used to aid in soil stabilization and protect surface water quality.
- 10. Notification will be sent to the Aztec District office when the reclaimed area is seeded.
- 11. WPX shall seed the disturbed areas the first growing season after the pit is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other Division-approved methods. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted), consisting of at least three native plant species, including at least one grass, but not including noxious weeds. Cover will be maintained through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs. Note: WPX assumes the seeding stipulations, including mix and seeding methods, specified by the Surface Management Agency (BLM, BOR, USFS, Tribal, etc.) or Landowner as part of a surface use agreement or APD are Division-approved methods unless notified by the Division of their unacceptability.
- 12. Upon the abandonment of all wells on the pad, the temporary pit will be located with a steel marker no less than four inches in diameter, cemented in a hole three feet deep in the center of the on site burial. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the on site burial of the temporary pit. The plate will be easily removable and a four-foot tall riser will be threaded into the top of the collar marker and welded around the base with the operations information at the time of all wells on the pad abandoned. The information will include Operator Name, Lease Name, Well Name and number, USTR, and an indicator that the marker is an onsite pit burial location.

Page 19 of 19 Rosa Unit 014D

Form 3160-5 (February 2005)

## UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB No 1004-0137 Expires: March 31, 200

Expires: March 31, 2007 BUREAU OF LAND MANAGEMENT 5. Lease Serial No. SF-078771 SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an 6. If Indian, Allottee or Tribe Name abandoned well. Use Form 3160-3 (APD) for such proposals. 7. If Unit of CA/Agreement, Name and/or No. SUBMIT IN TRIPLICATE - Other instructions on page 2. Rosa 1 Type of Well 8. Well Name and No. Rosa Unit 14D Oil Well Gas Well Other 2. Name of Operator 9. API Well No Williams Production Company, LLC 30-039-31054 3a. Address 3b Phone No (include area code) 10. Field and Pool or Exploratory Area Blanco Mesa Verde/Basin Dakota PO Box 640 Aztec, NM 87410 505-634-4206 4 Location of Well (Footage, Sec., T., R., M., or Survey Description) 11 Country or Parish, State 1020' FNL & 1515' FEL, Section 23, 31N, 6W Rio Arriba, NM 12 CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Acidize Deepen Production (Start/Resume) Water Shut-Off Notice of Intent Alter Casing Fracture Treat Reclamation Well Integrity Other Temp Pit Notification Casing Repair New Construction Recomplete Subsequent Report Plug and Abandon Temporarily Abandon Change Plans Convert to Final Abandonment Notice Plug Back Water Disposal Injection 13 Describe Proposed or Completed Operation Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.) This correspondence is to notify the USFS that Williams Production is planning to use a temporary pit associated with the drilling and completion of the reference well and following discontinued use of the pit will close by onsite burial. The planned closure is consistent with the Surface Use Plan submitted with Williams APD. This notice is to comply with the NMOCD Pit Rule 19.15.17 NMAC requirement to notify surface owners of the operator's intended closure method. If site conditions do not allow Williams to close in-place, we will provide your office with prior notice should the USFS have any concerns. Please contact us if there are any questions or additional information is required 14 I hereby certify that the foregoing is true and correct Name (Printed/Typed)

Signature Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U S C Section 1001 and Title 43 U S C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the

Title 18 U S C Section 1001 and Title 43 U S C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fiaudulent statements or representations as to any matter within its jurisdiction