District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

REVISED UNIT LTR & PLAT
(Appr. byocd 12-10-08) Form C-144
July 21, 2008

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.

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# 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.
l.
Operator: Williams Operating Co, LLC OGRID #: 120782
Address: PO Box 640 / 721 S Main Aztec, NM 87410
Facility or well name: JAECO 26-3 16 #1 COM
API Number: 3003930026 OCD Permit Number:
U/L or Qtr/Qtr G Section 16 Township 26N Range 03W County: Rio Arriba
Center of Proposed Design: Latitude <u>36.489179</u> Longitude <u>-107.145041</u> NAD: □1927 ☑ 1983
Surface Owner:   Federal   State   Private   Tribal Trust or Indian Allotment
Temporary: Drilling   Workover   Permanent   Emergency   Cavitation   P&A
Tank Construction material:  Secondary containment with leak detection   Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  Visible sidewalls and liner   Visible sidewalls only   Other  Liner type: Thickness   mil   HDPE   PVC   Other  5.
Alternative Method:

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

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 per BLM-BIA	
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	
☐ 12 × 24 , 2 lettering, providing operator smaller, site rocation, and emergency telephone numbers  ☐ Signed in compliance with 19.15.3.103 NMAC	
Z og. et a companie and system to	
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 of the Santa Fe En	office for
consideration of approval.  Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
10.	
Siting Criteria (regarding permitting): 19.15.17.10 NMAC	
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appro-	
office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a	pproval.
Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dryi above-grade tanks associated with a closed-loop system.	ing pads or
	☐ Yes ⊠ No
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	
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).	☐ Yes ☒ No
- 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.	☐ Yes ⊠ No
<ul> <li>(Applies to temporary, emergency, or cavitation pits and below-grade tanks)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	∐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes No
<ul> <li>(Applies to permanent pits)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	⊠ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock	☐ Yes ⊠ No
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	☐ Yes ☑ No
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 inspection (certification) of the proposed site	☐ Yes ⊠ No
Within the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☑ No
Within an unstable area.	☐ Yes ☑ No
<ul> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	
Within a 100-year floodplain FEMA map	☐ Yes 🖾 No

C-144 Page 2 of 20 JAECO 26-3 16 #1

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.  Mark Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
<ul> <li>✓ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC</li> <li>✓ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>✓ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> </ul>
<ul> <li>✓ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>✓ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC</li> <li>and 19.15.17.13 NMAC</li> </ul>
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 19.15.17.11 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)
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
Usuality 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 H₂S, 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
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

C-144 Page 3 of 20 JAECO 26-3 16 #1

16. Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if facilities are required.	
Disposal Facility Name: Disposal Facility Permit Number:	
Disposal Facility Name: Disposal Facility Permit Number:	
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future ser  Yes (If yes, please provide the information below)  No	
Required for impacted areas which will not be used for future service and operations:  Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	С
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 sour provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate dist considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Just demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	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 obtained from nearby wells	☐ Yes ☒ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☒ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	⊠ Yes □ No □ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ⊠ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes 🛭 No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☒ No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ⊠ No
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ⊠ No
Within a 100-year floodplain FEMA map	☐ Yes ☑ No
18. On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan.	an. 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.  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 cann  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	15.17.11 NMAC

C-144 Page 4 of 20 JAECO 26-3 16 #1

19.	
Operator Application Certification:	
I hereby certify that the information submitted with this application is true, accu	rate and complete to the best of my knowledge and belief.
Name (Print): Mighael K. Isane	Title: Sr. EH & S Specialist
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Signature: by Bolly Cherkus	Date: 1-22-09
e-mail address: myke.lane@williams.com	Telephone: 505-634-4219
20.  OCD Approval: Permit Application (including closure plan) Closure I	Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Branchon Fould  Title: Enviro & pec	Approval Date: 2-10-09
Title: Enviro spec	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection Instructions: Operators are required to obtain an approved closure plan prior The closure report is required to be submitted to the division within 60 days of section of the form until an approved closure plan has been obtained and the complete the complete that the complete the complete that the complete that the complete the complete that the complete thas the complete that the complete that the complete that the comp	to implementing any closure activities and submitting the closure report. the completion of the closure activities. Please do not complete this
22.	
Closure Method:  Waste Excavation and Removal On-Site Closure Method Altern If different from approved plan, please explain.	native Closure Method
23.  Closure Report Regarding Waste Removal Closure For Closed-loop System Instructions: Please indentify the facility or facilities for where the liquids, dr. two facilities were utilized.	
Disposal Facility Name:	Disposal Facility Permit Number:
Disposal Facility Name:	
Were the closed-loop system operations and associated activities performed on c  Yes (If yes, please demonstrate compliance to the items below)  No	
	<i>4</i>
Required for impacted areas which will not be used for future service and operation Site Reclamation (Photo Documentation)	uons:
Soil Backfilling and Cover Installation	
Re-vegetation Application Rates and Seeding Technique	
24. <u>Closure Report Attachment Checklist:</u> Instructions: Each of the following is mark in the box, that the documents are attached.	tems must be attached to the closure report. Please indicate, by a check
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)	
	itude NAD: 🗌 1927 🔲 1983
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 require	
Name (Print):	Title:
Signature:	Date:
e-mail address.	Telephone:

## District 1

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 89210

District III

1000 Rio Brazos Rd., Azlec, NA 87410

District IV.

# State of New Mexico

Energy, Minerals & Natural Resources Department.

OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

Santa Fe. NM 87505

Form C-102

Revised June 10, 2003:

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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Property	Code	,			Property N 26-3 16	làme:		100	Well Number M
ocrud 1/20782		į.			Operator N JAECO	inde,			Elevation ) 6.4
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UL or let no. G	Section 16	Township 26N	Runge 3 W	Lot Ida	Feet from the 2.300	North South line	Feet from the	EsstWest line EAST	County RIO ARRIBA
THE STATE OF THE S	en e	,	11 Bot	tom Hole	e Location If	Different From	Surface		,
UL or lot no.	Sertion	Township.	Karago	Lot Idu	Feet from the	North/South line	Feet from the	East/West line	County
Deficited Acre		Infill "Co	nsolidation Co	pide B Orde	er No.	- N		3	***

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 17 OPERATOR CERTIFICATION 5284 84 I hereby certify that the information contained herein is true and complete to the best of my knowledge and beltef. Signaturo Printed Name Title and B-soul Address 1450 SECTION 16 18 SURVEYOR CERTIFICATION 5280 I hereby certify that the well location shown on this plat. was platted from field notes of actual surveys made by me or under my supervision, and that the same it true 5284 25

## Hydrogeological Report Williams Production Company, LLC Jaeco 26-3 16 #1 Regional Hydrological Context

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

The referenced well and pit is located on the Jicarilla Apache Reservation 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 7044 feet MSL.

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

As a portion of the San Juan Basin, the Jicarilla Reservation is underlain by sandstone aquifers of the Colorado Plateau. The primary aquifer of potential concern at this location is the Unita-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 Unita-Animas aquifer generally increases toward the central part of the basin. In the northeastern part of the San Juan Basin, 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 in lowlands draining towards a wash associated with

Tapicito Creek. According to topographic maps, there is one ephemeral wash to the west of the location; the wash appears to be greater than 200

feet from the site.

1st Water Bearing Formation:San Jose, TertiaryFormation Thickness:Approximately 2200 ft.Underlying Formation:Nacimiento/Animas

**Depth to Groundwater:** Depth to groundwater is estimated at greater than 100 feet bgs. The four

nearest iWATERS wells for which water depth information was available were all located approximately 5 miles from the pit. All of these wells have recorded depth to groundwater between 210 and 750 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. 2008. Internet accessed October 2008.

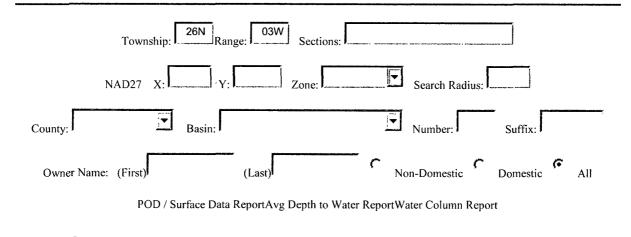
New Mexico Office of the State Engineer. October 2008. iWaters database. Internet accessed October 2008.

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. Groundwater 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>.



#### WATER COLUMN REPORT 10/01/2008

Х

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

Depth Depth Water

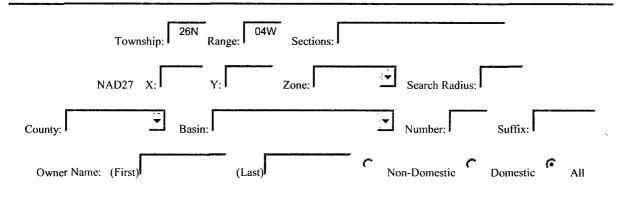
(in feet)
POD Number

ws Rng Secqqq Zone

Y Well Water Column

No Records found, try again

# New Mexico Office of the State Engineer POD Reports and Downloads



POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

#### WATER COLUMN REPORT 10/01/2008

X

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

Depth Depth Water

(in feet)
POD Number

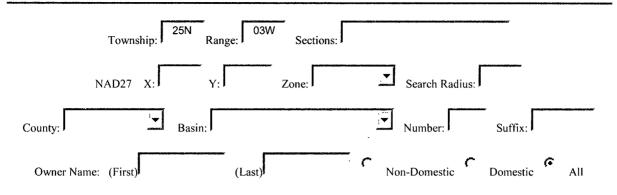
Tws Rng Sec qqq Zone

Well Water

Column

No Records found, try again

# New Mexico Office of the State Engineer POD Reports and Downloads



POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

#### WATER COLUMN REPORT 10/01/2008

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Depth Depth Water (in feet) POD Number Rng Sec q q q Zone х Well Water Column RG 79470 125 379 25N 03W 24 504 4 4 4 RG 45161 475 25N 03W 33 3 4 1 640 165 RG 49658 25N 03W 36 1 4 4 160 18 142 SJ 02203 420 25N 03W 01 2 4 665 245 SJ 01305 25N 03W 08 750 485 3 1 3 265 SJ 02695 25N 1 2 510 225 285 03W 13 3 SJ 02224 25N 03W 18 1 325 56 269 SJ 02520 1000 850 150 25N 03W 22 2 2 SJ 02520 DCL 03W 22 1000 850 150 25N SJ 02949 25N 03W 23 260 75 185 SJ 02414 25N 03W 25 250 130 120 SJ 03228 25N 03W 25 550 160 390 SJ 03231 25N 03W 25 335 90 245 SJ 02416 25N 03W 26 150 110 40 SJ 02519 25N 27 1215 650 565 03W SJ 02519 DCL 1215 650 565 25N 03W 27 SJ 02517 DCL 25N 03W 32 250 100 150 SJ 02517 25N 03W 32 250 100 150 SJ 02518 DCL 250 25N 03W 33 1 2 4 110 140 SJ 02415 25N 03W 35 2 4 2 50 30 20 SJ 01453 25N 03W 36 2 2 132 70 62

Record Count: 22

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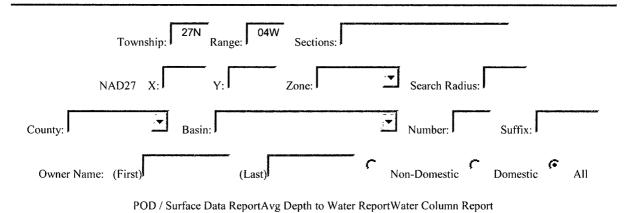
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295

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# New Mexico Office of the State Engineer POD Reports and Downloads



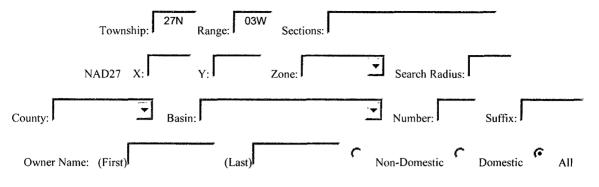
WATER COLUMN REPORT 10/01/2008

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

	(quarter	s are	e bi	gge	st	to	smallest)			Depth	Depth	Water	(in feet
POD Number	Tws	Rng	Sec	q	q	q	Zone	x	Y	Well	Water	Column	
SJ 00048	27N	04W	01							143			
SJ 01049	27N	04W	18	4	2	2				15			
SJ 01205	27N	04W	34	4	4	4				3054	750	2304	

Record Count: 3

# New Mexico Office of the State Engineer POD Reports and Downloads



POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

#### WATER COLUMN REPORT 10/01/2008

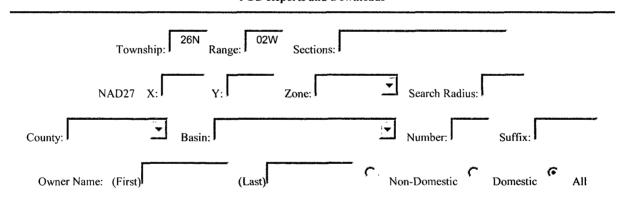
(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Tws Rng Sec q q q Zone

Depth Depth Water (in feet) Well Water Column

No Records found, try again

POD Number

# New Mexico Office of the State Engineer POD Reports and Downloads



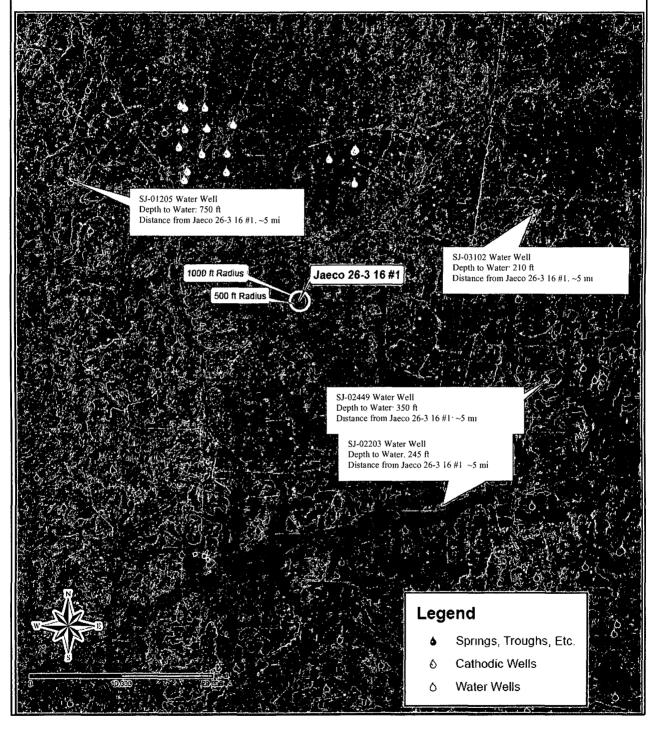
POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

#### WATER COLUMN REPORT 10/01/2008

· •	•					3=SW 4=SE smallest			Depth	Depth	Water	(in feet)
POD Number	Tws	Rng	Sec	q o	ΡF	Zone	x	Y	Well	Water	Column	
SJ 02963	26N	02W	02	3 3	3 2				1300			
SJ 03102	26N	02W	04	1 4	1 1				630	210	420	
SJ 02842	26N	02W	10	4	1 1				7603			
SJ 02889	26N	02W	12	3 3	3				7658			
SJ 03489	26N	02W	14	2 2	2 2				600			
SJ 02449	26N	02W	21	4	1 4				605	350	255	
SJ 02101	26N	02W	22	1 4	1 4				600	150	450	
SJ 03425	26N	02W	22	4 :	1 4				1500			
SJ 00419	26N	02W	22	4 4	1 1				160	15	145	
SJ 02964	_ 26N	02W	23	1 2	2 2				342	150	192	
SJ 02905	26N	02W	24	3 3	3 3				500	180	320	

Record Count: 11

# Siting Criteria Map I Water Wells, Cathodic Wells, & Springs Williams Exploration and Production Company Jaeco 26-3 16 #1 T26N, R3W, Section 16, NMPM Rio Arriba County, New Mexico



Siting Criteria Map II Topographic Features Williams Exploration and Production Company Jaeco 26-3 16 #1 T26N, R3W, Section 16, NMPM Rio Arriba County, New Mexico Jaeco 26-3 16 #1 200 ft radius 300 ft radius 500 ft radius Legend Significant Washes or Waterways Schmitz Ranch 7 5 Minute USGS Quad.

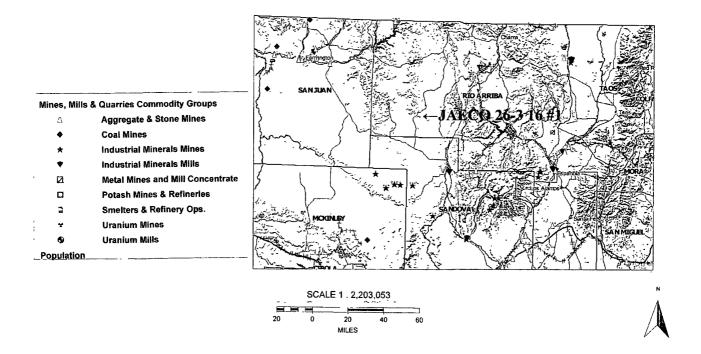
#### FEMA Map - 100-Year Floodplain:

As this location is within the Jicarilla Apache Reservation, FEMA maps are not available for the site. However, ortho and topographic maps indicate that the location is not within a floodplain.

## **Siting Criteria Compliance Demonstrations:**

The Jaeco 26-3 16 #1 is not situated over a mine or a steep slope (see attached New Mexico Mines, Mills, and Quarries Map). Excavated pit material will not be located within 300 feet of a continuously flowing water course or 200 feet of a significant water course. The USFWS has not digitally mapped this area for wetlands, but topographic and ortho maps indicate that this upland region is not within 500 feet of any riparian areas or wetlands. The pit is not 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 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 pit is not within 300 feet of any permanent residence, school, hospital, institution, or church.

# **MMQonline Public Version**



## 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.
- 16. 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.

## 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).
- 3. 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 solid 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:
  - d. Daily during drilling or workover operations. Inspections will be included with the IADC reports.
  - e. Weekly as long as liquids remain in the pit. Electronic copies of the inspections will be kept at the WPX San Juan Basin office.
  - f. Copies of the inspections will be filed with the NMOCD Aztec District office upon pit closure.
- 12. WPX shall remove all free liquids from a blow/flare (cavitation) pit within 48 hours after completing operations. WPX may request additional time to remove liquids from the Aztec District office if it is not feasible to meet the 48 hour requirement.

## 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:

- 1. 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:
  - g. Operator's Name (WPX)
  - h. Well Name and API Number
  - i. 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).

- 7. Solidification of the remaining pit contents shall be achieved by mixing non-waste-containing, earthen material. The solidification process will be accomplished using a combination of natural drying and mechanical mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed safe and stable. The mixing ratio shall not exceed 3 parts non-waste to 1 part pit contents.
- 8. 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

- 9. 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.
- 10. 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.
- 11. Notification will be sent to the Aztec District office when the reclaimed area is seeded.
- 12. 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 (unimpacted), 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.
- 13. 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.