<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-144 Revised June 6, 2013

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

Santa 1 c, 14141 87505 to the appropriate 14410cb bisatet office.
Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application
Type of action: Below grade tank registration  Permit of a pit or proposed alternative method  Closure of a pit, below-grade tank, or proposed alternative method  Modification to an existing permit/or registration  Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the
environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinance.
Operator: WPX Energy Production, LLC OGRID #: 120782
Address: PO Box 640/721 S Main Aztec, NM 87410
Facility or well name: NE Chaco Com #209H, NE Chaco Com #210H, NE Chaco Com #243H, NE Chaco Com #244H, NE Chaco Com #271H
API Number: 30-039-31292, 30-039-31293, 30-039-31294, 30-039-31205, and 30-039-31288 OCD Permit Number:
U/L or Qtr/Qtr L Section 16 Township 23N Range 6W County: Rio Arriba
Center of Proposed Design: Latitude N36.22198 Longitude W107.48257 NAD: ☐1927 ☒ 1983
Surface Owner: ☑ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment
2.    Bit: Subsection F. Got Left 0 15 17 11 NMAC    # BGT within 100' of
Pit: Subsection F, G or J of 19.15.17.11 NMAC   Temporary:   Drilling   Completion   Workover     Permanent   Emergency   Cavitation   P&A   Multi-Well Fluid Management     Lined   Unlined Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other     String-Reinforced   Liner Seams:   Welded   Factory   Other   Volume:   bbl Dimensions:   x W x D
3.
■ Below-grade tank: Subsection I of 19.15.17.11 NMAC
Volume: 120 bbl Type of fluid: Produced Water
Tank Construction material: Double Wall, Double Bottom Steel
☑ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other
Liner type: Thicknessmil
4.
Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
5.
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)
☐ Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church) ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
I our root neight, rour straints of barber whe evenly spaced between one and rour rect

As per BLM specifications

Alternate. Please specify

### Smith, Cory, EMNRD

From: Smith, Cory, EMNRD

**Sent:** Thursday, May 19, 2016 9:43 AM

To: 'Watson, Debbie'

Cc: Powell, Brandon, EMNRD; Fields, Vanessa, EMNRD

**Subject:** C-144 BGT NE Chaco Com #209, 210H #243H #244H and #271H

### Debbie,

Per our phone conversation, WPX intends to closure the BGT that is within 100' of the significant water course and move it to within the containment outside of the 100' on Monday May 23, 2016. OCD has approved the closure plan only for the C-144 submitted on April 26,2016 with the following conditions.

 WPX will close the BGT within 30 days and submit the closure report within 60 days of closure as indicated by the approved closure plan.

As a reminder WPX will need to register the new BGT as soon as possible.

If you have any questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

6.  Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
Screen Netting Other	
☐ Monthly inspections (If netting or screening is not physically feasible)	
7.	
Signs: Subsection C of 19.15.17.11 NMAC	
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	
☑ Signed in compliance with 19.15.16.8 NMAC	
8.	
Variances and Exceptions:  Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.	
Please check a box if one or more of the following is requested, if not leave blank:	
☑ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.	
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
9.	
Siting Criteria (regarding permitting): 19.15.17.10 NMAC  Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acce	eptable source
material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	
General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.  - □ NM Office of the State Engineer - iWATERS database search; □ USGS; □ Data obtained from nearby wells	Yes No
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.  NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
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. ( <b>Does not apply to below grade tanks</b> )  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. (Does not apply to below grade tanks)  - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
<ul> <li>Within an unstable area. (Does not apply to below grade tanks)</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. (Does not apply to below grade tanks) - FEMA map	☐ Yes ☐ No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured	☐ Yes ☒ No
from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ 162 ☑ 140
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes ☐ No
<ul> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map: Visual inspection (certification) of the proposed site  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  Within 500 horizontal feet of a spring or a private, domestic fresh water well or spring, in the existence at the time of the initial application;  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site    yes   No	Within 100 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
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.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  - NM Office of the State Engineer - IWATERS database search; Visual inspection (certification) of the proposed site    Within 300 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site    Writhin 100 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 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  - Wisual inspection (certification) of the proposed site   Yes   No    Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   Yes   No    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 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   Yes   No    Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of	Temporary Pit Non-low chloride drilling fluid	
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  Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 300 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Permanent Pit or Multi-Well Fluid Management Pit  Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map, Visual inspection (certification) of the proposed site  Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland identification map; Topographic map; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Within	or playa lake (measured from the ordinary high-water mark).	
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 300 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Permanent Pit or Multi-Well Fluid Management Pit  Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark) Topographic map; Visual inspection (certification) of the proposed site  Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland US Fish and Wildlife Wetland Identification and the state Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland US Fish and Wildlife Wetl		☐ Yes ☐ No
watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 300 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  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 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application. Please indicate, by a check mark in the box, that the documents are attached to the application. Please indicate, by a check mark in the box, that the documents are attached to the application of the appropriate requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC    Mydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.10 NMAC    Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.1		☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit  Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  Topographic map; Visual inspection (certification) of the proposed site  Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  Visual inspection (certification) of the proposed site; Aerial photor, Satellite image  Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  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  Stiting Criteria Compliance Demonstrations - based upon the appropriate requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC  Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.13 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  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.  Previously Approved Design (attach copy of design) API Number:  Ope	Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a 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 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  NMO frice of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  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 (2) of Subsection B of 19.15.17.9 NMAC  Stiting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  Solesian Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  Previously Approved Design (attach copy of design) API Number:	Within 300 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
lake (measured from the ordinary high-water mark).  Topographic map; Visual inspection (certification) of the proposed site  Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  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 Data (Temporary and Emergency Pits) - 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  Stiting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 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  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.  Perviously Approved Design (attach copy of design) API Number:	Permanent Pit or Multi-Well Fluid Management Pit	
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Wes □ 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 (2) of Subsection B of 19.15.17.9 NMAC  □ Sting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  □ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  □ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  □ Previously Approved Design (attach copy of design) API Number: □ or Permit Number: □  II.  Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.11 NMAC  □ Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  □ Design Plan - based upon the appropriate requirements of 19.15.17.19 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  □ Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  □ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  □ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.19 NMAC  □ Design Plan - based upon the appropriate requirements of 19.15.17.19 NMAC  □ Design Plan - based upon the appropriate requirements of 19.15.17.1	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
initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site    Yes   No	Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.    Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC   Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC   Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC   Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC   Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC   Previously Approved Design (attach copy of design)   API Number:	Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  A List of wells with approved application for permit to drill associated with the pit.  Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the docattached.    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     Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC     Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC     Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC     Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC	NMAC
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  A List of wells with approved application for permit to drill associated with the pit.  Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	Previously Approved Design (attach copy of design) API Number: or Permit Number:	
Previously Approved Design (attach copy of design) API Number: or Permit Number:	attached.  Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  A List of wells with approved application for permit to drill associated with the pit.  Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 and 19.15.17.13 NMAC  Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	
	☐ Previously Approved Design (attach copy of design) API Number: or Permit Number:	

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	
<ul> <li>□ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>□ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>□ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>□ Quality Control/Quality Assurance Construction and Installation Plan</li> </ul>	
<ul> <li>□ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>□ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>□ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan</li> <li>□ Emergency Response Plan</li> </ul>	
☐ 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	
Closure Plan - based upon the appropriate requirements of Subsection C of 19.13.17.9 NMAC and 19.13.17.13 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 Completion Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Management Pit Alternative	☐ Multi-well Fluid
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems)  In-place Burial On-site Trench Burial	
Alternative Closure Method  14.	
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be closure plan. Please indicate, by a check mark in the box, that the documents are attached.  □ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC □ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC □ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) □ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC □ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC □ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
15.	
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. In 19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
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
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	□ Vas □ Na

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No
Within the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
<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
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC  Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.  Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC  Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC  Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannowally considered to the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Therefore a propriate requirements of Subsection H of 19.15.17.13 NMAC  Therefore a propriate requirements of Subsection H of 19.15.17.13 NMAC  Therefore a propriate requirements of Subsection H of 19.15.17.13 NMAC  Therefore a propriate requirements of Subsection H of 19.15.17.13 NMAC  Therefore a propriate requirements of Subsection H of 19.15.17.13 NMAC  Departor Application Certification:  I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and believe the propriate requirements of the pr	11 NMAC 15.17.11 NMAC ot be achieved)
e-mail address: deborah.watson@wpxenergy.com Telephone: 505-333-1880/505-386-9693	
OCD Approval: Permit Application Including closure plan) Closure Plan (only) OCD Conditions (see attachment)  OCD Representative Signature:  Approval Date: 5/15  Title: Lovices mental Spec.  OCD Permit Number:	9/14
19.  Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC  Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting  The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not	the closure report.
section of the form until an approved closure plan has been obtained and the closure activities have been completed.  Closure Completion Date:	comprete inis
section of the form until an approved closure plan has been obtained and the closure activities have been completed.	

Operator Closure Certification:	
	s submitted with this closure report is true, accurate and complete to the best of my knowledge and applicable closure requirements and conditions specified in the approved closure plan.
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telephone:

# Hydrogeological Report NE Chaco Com #209H, NE Chaco Com #210H, NE Chaco Com #243 NE Chaco Com #244, NE Chaco Com #271H N36.22198, W107.48257 Regional Hydrological Context

### Referenced Well Location:

The referenced wells and BGT are located on Bureau of Land Management land within Farmington Field Office (FFO) 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 location is approximately 6,858 feet MSL.

General Regional Groundwater Description:

As a portion of the San Juan Basin, the FFO region 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 its 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 general region surrounding the BGT is characterized by

badlands, mesas, and relatively flat lowland valleys. There are many broad, braided, shallow washes in the area. The BGT is

located in upper Escrito Canyon.

1st Water Bearing Formation:

Formation Thickness:

Underlying Formation: Depth to Groundwater: San Jose, Tertiary

Approximately 1,900 ft. Nacimiento, Tertiary

Depth to groundwater is estimated to be approximately 88 feet

below the bottom of the BGT. A Ground Bed Drilling Log for NE Chaco Com 209H, 210H, 243H, and 244H reports water at

93 feet below ground surface (bgs).

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. 2016. iWaters database. Internet accessed March 2016.

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.

### Siting Criteria Compliance Demonstrations NE Chaco Com #209H, NE Chaco Com #210H, NE Chaco Com #243H NE Chaco Com #244H, NE Chaco Com #271H N36.22198, W107.48257

### 19.15.17.10. A.8 Siting Criteria - Below Grade Tanks

(a) An operator shall not locate a Below Grade Tank within 100 feet of continuously flowing watercourse, significant water course, lakebed, sinkhole, wetland or playa lake.

The BGT is not located within 100 feet of any continuously flowing water course, significant water course, lakebed, sinkhole, wetlands or playa lake as indicated on the attached topographic map (Figure 1).

(b) An operator shall not locate a Below Grade Tank within 200 feet of a spring or a fresh water well used for public or livestock consumption.

The BGT is not located within 200 feet of a spring or a fresh water well used for public or livestock consumption, as indicated on the attached aerial photograph (Figure 2) and iWaters print outs.

(c) An operator shall not locate a Below Grade Tank where depth to groundwater is less than 25 feet from the bottom of the tank.

Depth to groundwater is estimated to be greater than 100 feet below the bottom of the BGT based on the following (refer to table below and Figure 3):

- NE Chaco Com 209H/210H/243H/244H~at the same location. The bed log reports depth to water at 93 feet bgs. (see enclosed ground bed log)
- NE Chaco Com 199H/200H/269H ~1.4 miles NW and ~191 feet lower in elevation.
- Chaco 2308 14E #151H located ~0.73 mi southwest and ~36 feet lower in elevation. The ground bed log reports depth to water at 86 feet bgs. (see enclosed ground bed log)
- Water well SJ 01156 located ~2.45 mi northwest and ~38 feet higher in elevation. The log reports depth to water at 200 feet bgs. (see enclosed iWaters print out)

Source of GW Data	Latitude/Longitude	Legal Description	Elevation (ft)	Distance from BGT	Depth to Water (ft bgs)	
Ground Bed NE Chaco Com 209H/210H/243H/244H	N36.22095, W107.46886	L-16-23N-6W	6,858	Same location	93	
Ground Bed NE Chaco Com #199H, 200H, 269H	N36.236145, W107.500618	L-8-23N-6W	6,832	1.4 miles NW	86	
Water Well SJ 01156	N36.231549, W107.51101	18-23N-06W	6,896	2.45 miles NW	200	

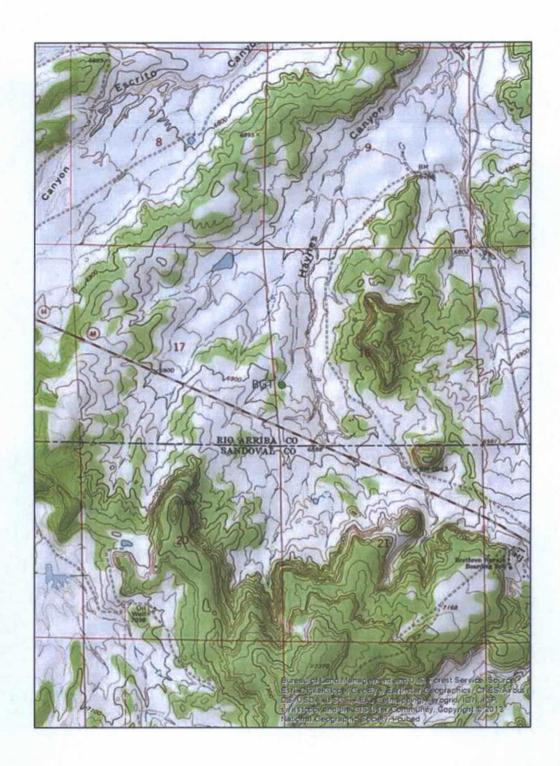


Figure 1. Topographic Map
NE Chaco Com #209H, NE Chaco Com #210H, NE Chaco Com #243H,
NE Chaco Com #244H, and NE Chaco Com #271H
Section 16, Township 23N, Range 06W
N36.22198, W107.48257
Rio Arriba County, NM
Scale 1:24,000

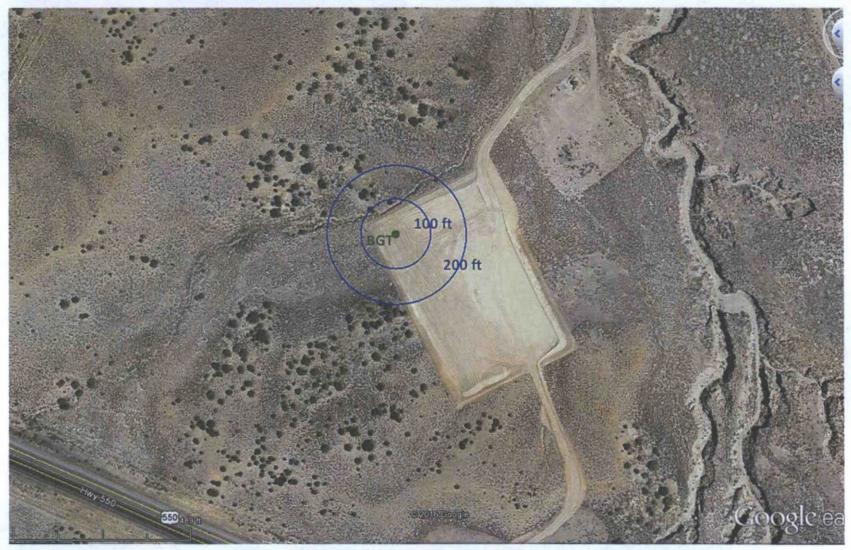


Figure 2. Aerial Photograph

NE Chaco Com #209H, NE Chaco Com #210H, NE Chaco Com #243H,

NE Chaco Com #244H, and NE Chaco Com #271H

Section 16, Township 23N, Range 06W

N36.22198, W107.48257

Rio Arriba County, NM

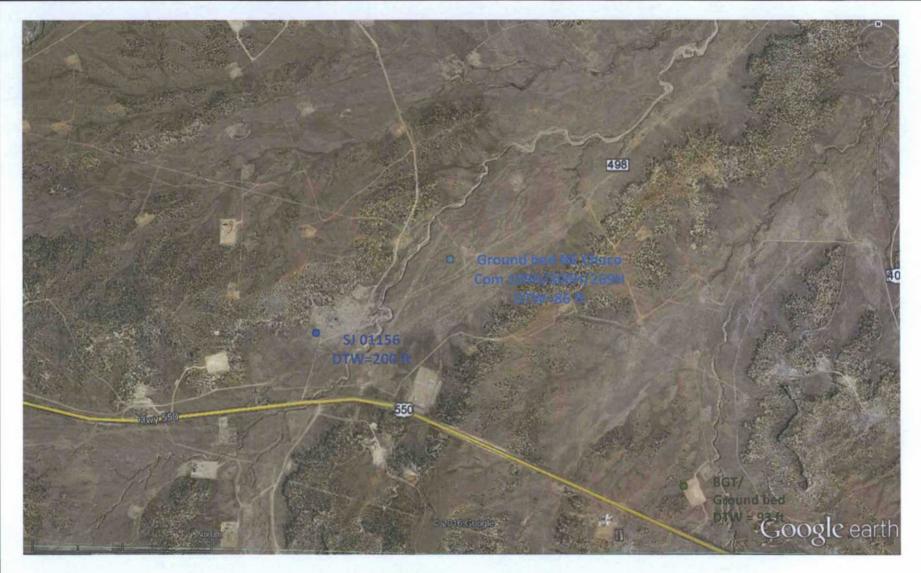


Figure 3. Aerial Photograph
NE Chaco Com #209H, NE Chaco Com #210H, NE Chaco Com #243H,
NE Chaco Com #244H, and NE Chaco Com #271H
Section 16, Township 23N, Range 06W
N36.22198, W107.48257
Rio Arriba County, NM



## New Mexico Office of the State Engineer

## **Point of Diversion Summary**

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

**POD Number** 

Q64 Q16 Q4 Sec Tws Rng

X

SJ 01156

2 1 18 23N 06W

274330 4012555\*

Driller License: 867

**Driller Name:** WESTERN DRILLING

**Drill Start Date:** 04/10/1980 **Drill Finish Date:** 

04/20/1980

Plug Date:

Log File Date:

06/16/1980

**PCW Rcv Date:** 

Source:

**Pump Type:** 

Pipe Discharge Size:

1500 feet

**Estimated Yield:** Depth Water:

Casing Size: 7.00 Depth Well:

200 feet



## New Mexico Office of the State Engineer

## **Point of Diversion Summary**

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

**POD Number** 

SJ 01506

Q64 Q16 Q4 Sec Tws Rng

X

Υ

Estimated Yield: 7 GPM

3 22 23N 06W

278535 4010015\*



**Driller License:** 

**Driller Name:** 

**Drill Start Date:** 

Drill Finish Date: PCW Rcv Date:

12/31/1948

Plug Date:

. ..

Log File Date: Pump Type:

JACK

Pipe Discharge Size:

Source:

Shallow

Casing Size:

6.00

Depth Well:

280 feet

Depth Water:

\*UTM location was derived from PLSS - see Help



## New Mexico Office of the State Engineer Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right

(R=POD has been replaced. O=orphaned.

C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD

Sub-Code basin County Source 6416 4 Sec Tws Rng

qqq

274330

4012555\*

Distance Start Date

**Finish Date Date** 04/20/1980 06/16/1980 Depth Depth Well Water Driller License

**POD Number** SJ 01156

RA

2 2 1 18 23N 06W

2769 04/10/1980

Log File

1500 200 WESTERN DRILLING Number

867

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 276859.66

Northing (Y): 4011427.76

Radius: 4828

\*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 understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data



## New Mexico Office of the State Engineer Wells Without Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.) (R=POD has been replaced, O=orphaned, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

		POD			q	q	q						
POD Number	Code	Subbasin	County	Source	64	16	4	Sec	Tws	Rng	X	Y	Distance
SJ 00681 8			RA		2	1	4	09	23N	06W	277886	4013199*	2047
SJ 01506			SA	Shallow	1	1	3	22	23N	06W	278535	4010015*	2191
SJ 00681 9			RA		4	1	2	29	23N	06W	276316	4009119*	2371
SJ 00681 26			RA		4	4	3	07	23N	06W	274329	4012748*	2854
SJ 00681 27			RA		2	2	3	13	23N	07W	272744	4011839*	4136
SJ 00681 17			RA		2	4	4	33	24N	06W	278397	4016001*	4824

Record Count: 6

UTMNAD83 Radius Search (in meters):

Easting (X): 276859.66 Northing (Y): 4011427.76 Radius: 4828

Sand Stone, Shale, Sand w/ Shale w/ Sand

		GROU	<b>JNDWATER DEPTH LOG</b>	
Company:	WPX Energ	SY.	Location: Chaco F1994	
Probe type	e: Powers u	ell Stero		
Date	Time	Depth	Comments	
4-1-15	7:25 am	40'	Drilled 40'	
	8:30	40'	tested no water	
	9:35	65'	Dulled 65'	
	10:30	65	tested no water	
	111145	115'	Drilled 115'	
	12:50	115'	tested damp 115'	
	1:30	120	set PUC	,
	4:20	380'	Dulled 380'	
4-4-15	8 am	86'	tested water at 86'	
			Finished anode bed	
		1		creas dry

## Ground Bed Drilling Log

Company: WPX	Energy	Well: Chaco 209/12/0, 243,20	4 Date: 3-20-2015
Location Sectle 723	NRGW	State: New Mexico	Rig: Story#1
Ground Bed Depth: _ 3	320'	Water Depth: 93'	Diameter: 8"
Fuel Usage: 30 ga	.1	Lat. 36,22095050	-107.468857
DEPTH	F	DRMATION	OTHER
0-40	Sand Stone,	Shale, Sand w/ Shale w/ Sand	PVC
40-80	Sand Stone,	Shale, Sand w/ Shale w/ Sand	
80-140	Sand Stone,	Shale, Sand w/ Shale w/ Sand	
140-200	Sand Stone,	Shale, Sand w/Shale w/ Sand	
700-780	Sand Stone,	Shale Sand w/ Shale w/ Sand	
280 -320	Sand Stone,	Shale, Sand w/ Shale w/ Sand	·
	Sand Stone,	Shale, Sand w/ Shale w/ Sand	
	Sand Stone,	Shale, Sand w/ Shale w/ Sand	
	Sand Stone,	Shale, Sand w/ Shale w/ Sand	-
	Sand Stone,	Shale, Sand w/ Shale w/ Sand	
-	Sand Stone,	Shale, Sand w/ Shale w/ Sand	
	Sand Stone,	Shale, Sand w/ Shale w/ Sand	

			NDWATER DEPTH LOG
Company:	WPX Energ	У	Location: Chaco 209 H
Probe type	Dowerust	11 Sounder	
Date	Time	Depth	Comments
3-1915	12:30	40'	drilled 40.
	1:20	40'	test No water set casing
	2110	65'	diffed 65'
	31,00	651	test No water
	3:40	115'	dulled 115'
	4:35	1151	test water 100'
320-15	7:30	115	water 931
	11115	320	finished anode bed
	THE	1	



### WPX Energy Production, LLC requests the following variances:

- 1. The BGT will be protected from run on by being installed upon a top felt rock shield with a overlay of 30 mil rubber liner attached to the sidewalls of the inside of the containment berm. The 30 mil rubber liner will provide equal and/or better protection in the prevention of contamination of fresh water and protecting public health and the environment. (See enclosed photo)
- 2. A 42 inch tall, 12 gauge coated metal steel fence will be constructed around the BGT to protect livestock/wildlife as specified by the federal Surface Management Agency or, if not federal land/minerals; which will provide equal and/or better protection of a fence while preventing contamination of fresh water, protecting public health and the environment. (See enclosed photo)
- 3. If the surface owner is of public entity (i.e.: BLM) WPX Energy Production, LLC will notify by email the intent to close the BGT in place of a certified mail letter. WPX Energy Production, LLC will request a read receipt of the email which will be equal and/or equivalent notification as certified mail.

Thank you,

Deborah Watson

**Environmental Specialist** 

Debruch Water

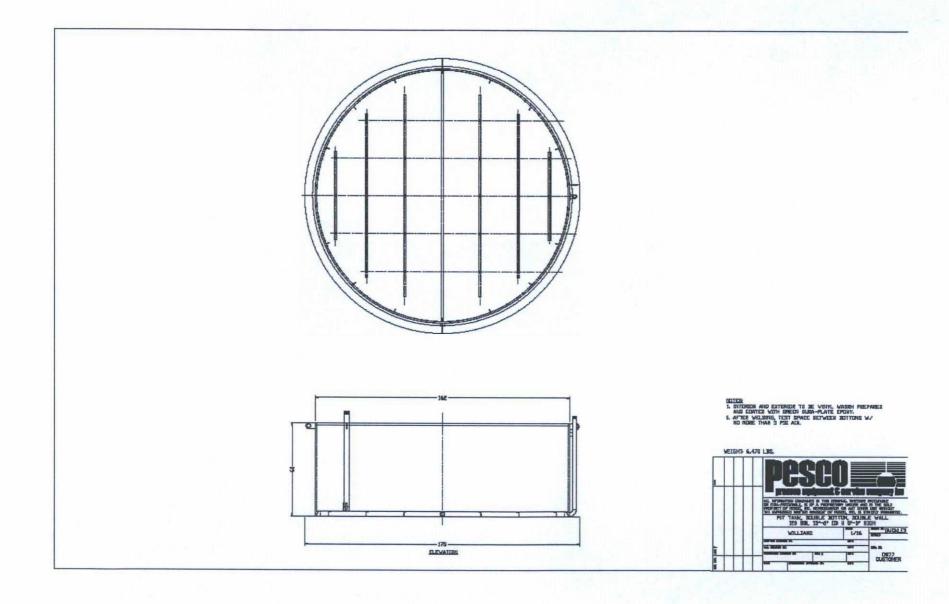
### WPX Energy Company, LLC San Juan Basin: New Mexico Assets

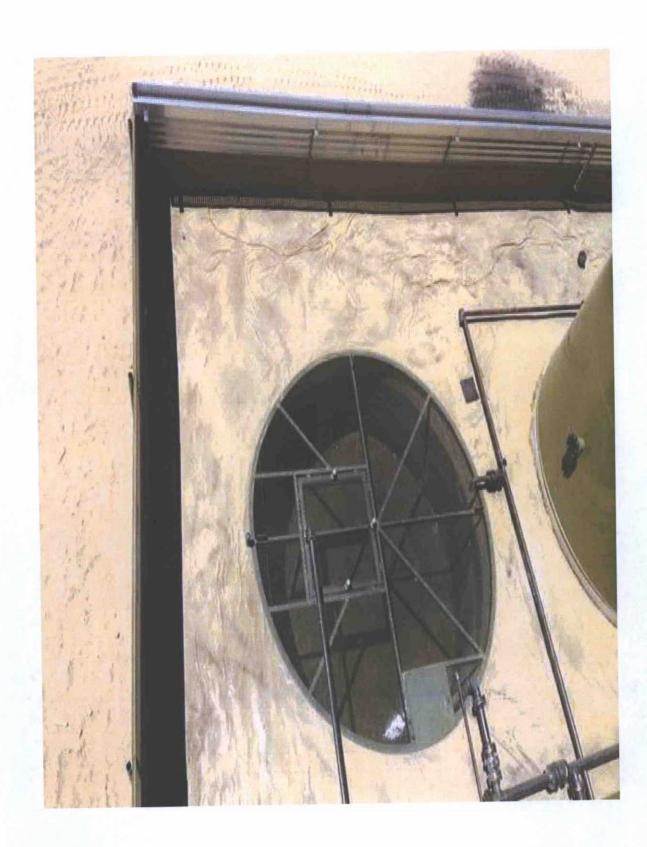
Production BGT: Buried Double-Wall Steel Tank Design and Construction Plan

In accordance with Rule 19.15.17 NMAC, the following plan describes the general design and construction (D&C) of Below Grade Tanks (BGT) using buried double-wall steel tanks on WPX Energy Co, LLC (WPX) locations in the San Juan Basin of New Mexico. For those BGT which do not conform to this standard plan, a separate well-specific D&C plan will be developed and utilized.

### General Plan Requirements:

- WPX will post a well sign in accordance with the federal Surface Management Agency and rule NMAC 19.15.17.11.C
- As a variance a 42 inch tall, 12 gauge coated metal steel "Fence" will be constructed around the BGT to protect livestock/wildlife as specified by the federal Surface Management Agency or, if not federal land/minerals, NMOCD rule 17 requirements. See Attached Design/photo.
- 3. The buried BGT will be constructed of steel with double-walls and double-bottom, welded following appropriate API and industry codes, coated with an epoxy based paint, covered with a steel #9 mesh screen, and equipped with an EFM to monitor high liquid levels and automatically shut off liquid discharges. A solid riser pipe will be installed between the interstitial spaces of the double-walls to allow monthly inspection to determine tank integrity.
- 4. WPX will design and construct a BGT to contain liquids associated with the dehydration and compression of produced natural gas, which will be resistant to ultra violet light and the contents of the tank to prevent contamination of fresh water resources and protect public health and the environment.
- The BGT foundation will be level and free of rocks, debris, sharp edges or irregularities and have a firm compacted bottom and sidewalls that are stable for the soil conditions.
- 6. The BGT will be protected from run on by being installed within the impervious secondary containment provided by the AST tanks on location. See attached Design (Same as Fence)
- 7. The BGT will be placed in the excavation such that there is 30 mil rubber liner overlay between the surrounding soils and the tank top see attached design.
- 8. A solid riser pipe will be installed to allow withdrawal of liquids by suction. The riser will draw from the bottom of the BGT, capped when not in use and sloped to the BGT to allow drainage of liquids not collected during withdrawal operations.









### WPX Energy Company, LLC San Juan Basin: New Mexico Assets

Production BGT: Buried Double-Wall Steel Tank Operations and Maintenance Plan

In accordance with Rule 19.15.17 NMAC, the following plan describes the general operations and maintenance (O&M) of production Below Grade Tanks (BGT) on WPX Energy Co, LLC (WPX) locations in the San Juan Basin of New Mexico. For those BGT which do not conform to this standard O&M plan, a separate well specific O&M plan will be developed and utilized.

- WPX will inspect the BGT monthly for leaks and damage. Electronic copies of the
  inspections will be kept at the WPX San Juan Basin office for a minimum of five years
  following completion. Copies of the inspections will be available to NMOCD upon
  request.
- Any oil or hydrocarbon collecting on the BGT will be removed. Saleable condensate will be returned to the sales tank. Slop oil from compression will be recycled with Safety Kleen, Farmington, NM or Hydropure, Aztec, NM (No Permit Required).
- 3. WPX will only allow produced liquids meeting the RCRA exemption for O&G wastes to be stored in the BGT. WPX will not discharge or store any hazardous waste as defined under RCRA 40CFR 261 and 19.15.2.7.H.3 NMAC in any BGT.
- 4. WPX shall maintain sufficient freeboard for to prevent overflow. Discharges to the BGT will be shutoff automatically if the high-level alarm is triggered from the EFM or manually if the EFM is not functional.
- 5. The Steel fencing around the perimeter of the BGT shall be maintained as protection from run-on.
- 6. Produced water will be disposed by evaporation or transport any of the following NMOCD approved facilities depending on the well location: Basin Disposal, Inc in Bloomfield, New Mexico (Permit # NM-01-005), WPX Energy Rosa Unit SWD #001 (Order # SWD-916), WPX Energy Rosa Unit SWD #002 (Order # SWD-1236), Burlington Resources Jillson SWD#1 (Permit #R10168A), or other NMOCD approved water disposal facilities.
- 7. If the tank integrity is compromised:
  - a. All discharges will be shut off to the BGT.
  - All liquids will be removed as soon as possible but no later than 24 hours after discovery.
  - c. WPX will notify and report to NMOCD in accordance to 19.15.29 NMAC and all other applicable agency's as require.

### WPX Energy Company, LLC San Juan Basin: New Mexico Assets

Production BGT: Buried Double-Wall Steel Tank Closure Plan

In accordance with Rule 19.15.17.13 NMAC, the following plan describes the general closure requirements of below-grade tanks (BGT) on WPX Energy Co, LLC (WPX) locations in the San Juan Basin of New Mexico. This is WPX's standard closure procedure for all BGTs regulated under Rule 19.15.17 NMAC and operated by WPX. For those closures which do not conform to this standard closure plan, a separate BGT specific closure plan will be developed and utilized.

### Closure Conditions and Timing for BGT:

- Within 60 days of cessation of operation WPX will:
  - o Remove all liquids and sludge and dispose in a division approved manner
- Within 72 Hrs or 1 week prior to closure WPX will:
  - Give notice to Surface owners by certified mail. For public entities by email as specified on the variance page.
  - o Give notice to District Division verbally and in writing/email
- · Within 6 months of cessation of operation WPX will:
  - Remove BGT and dispose, recycle, reuse, or reclaim in a division approved manner
  - Remove unused onsite equipment associated with the BGT
- Within 60 Days of Closure WPX will:
  - o Send the District Division a Closure Report per 19.15.17.13.F

### **General Plan Requirements:**

- Prior to initiating any BGT Closure except in the case of an emergency, WPX will notify
  the surface owner of the intent to close the BGT by certified mail no later than 72 hours
  or 1 week before closure and a copy of this notification will be included in the closure
  report. In the case of an emergency, the surface owner of record will be notified as soon
  as practical.
- 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. Operators Name (WPX)
  - b. Well Name and API Number
  - c. Location (USTR)
- 3. All liquids will be removed from the BGT following cessation of operation. Produced water will be disposed at an NMOCD approved facility depending on the proximity of the BGT site. Facilities may include: Rosa Unit SWD #1 (Order: SWD-916, API: 30-039-27055), Rosa Unit SWD #2 (Order: SWD-1236-0, API: 30-039-30812), Jillson Federal SWD #001 (Order: R10168/R10168A, API: 30-039-25465), Middle Mesa SWD #001 (Order: SWD-350-0, API: 30-045-27004) and/or Basin Disposal (Permit: NM-01-0005).
- Solids and sludge's will be shoveled and /or vacuumed out for disposal at Envirotech (Permit Number NM-01-0011) or Industrial Ecosystems Inc (Permit Number NM-01-0010B).

- 5. WPX will obtain prior approval from NMOCD to dispose, recycle, reuse, or reclaim the BGT and provide documentation of the disposition of the BGT in the closure report. Steel materials will be recycled or reused as approved by the Division. Fiberglass tanks will be empty, cut up or shredded, and EPA cleaned for disposal as solid waste. Liners materials will be cleaned without soils or contaminated material for disposal as solid waste. Fiberglass tanks and liner materials will meet the conditions of 19.15.35 NMAC. Disposal will be at a licensed disposal facility, such as San Juan Regional Landfill operated by Waste Management under NMED Permit SWM-052426.
- Any equipment associated with the BGT that is no longer required for some other purpose, following the closure will be removed from the location.
- 7. Following removal of the tank and any liner material, WPX will test the soils beneath the BGT as follows:
  - a. At a minimum, a five-point composite sample will be taken to include any obvious stained or wet soils or any other evidence of contamination.
  - b. The laboratory sample shall be analyzed for the constituents listed in Table I of 19.15.17.13

Depth below bottom of pit to groundwater less than 10,000 mg/1 TDS	Constituent	Method	Limit		
	Chloride	EPA 300.0	600 mg/kg		
	TPH	EPA SW-846 Method 418.1	100 mg/kg		
≤50 feet	BTEX	EPA SE-846 Method 8021B or 8015M	50 mg/kg		
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg		

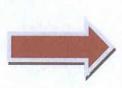
Method

EPA SW-846 Method

8021B or 8015M

than 10,000 mg/1 TDS			
	Chloride	EPA 300.0	10,000 mg/kg
	TPH	EPA SW-846 Method 418.1	2,500 mg/kg
51 feet-100 feet	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SE-846 Method 8021B or 8015M	50 mg/kg
	than 10,000 mg/1 TDS	than 10,000 mg/1 TDS  Chloride TPH  GRO+DRO	than 10,000 mg/1 TDS           Chloride         EPA 300.0           TPH         EPA SW-846 Method 418.1           GRO+DRO         EPA SW-846 Method 8015M           BTEX         EPA SE-846 Method

Constituent



Depth below bottom of

Benzene

Limit

10 mg/kg

Depth below bottom of pit to groundwater less than 10,000 mg/1 TDS	Constituent	Method	Limit
>100 feet	Chloride	EPA 300.0	20,000 mg/kg
	ТРН	EPA SW-846 Method 418.1	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SE-846 Method 8021B or 8015M	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg

<sup>(1)</sup> Or other test methods approved by the division

- 8. If the Division and/or WPX determine there is a release, WPX will comply with 19.15.17.13.C.3b.
- 9. Upon completion of the tank removal, the excavation will be backfilled with non-waste earthen material compacted and covered with a minimum of one foot of top soil or background thickness whichever is greater and to existing grade. The surface will be recontoured to match the native grade and prevent ponding.

For those portions of the former BGT area no longer required for production activities, WPX will seed the disturbed areas the first favorable growing season after the BGT is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other Division-approved methods. WPX will notify the Division when reclamation and re-vegetation is complete.

Reclamation of the BGT shall be considered complete when:

- a. Vegetative cover reflects a life form ratio of +/- 50% of pre disturbance levels
- Total percent plant cover of at least 70% of pre-disturbance levels (Excluding noxious weeds)

OR

- c. Pursuant to 19.15.17.13.H.5d WPX will comply with obligations imposed by other applicable federal or tribal agencies in which their re-vegetation and reclamation requirements provide equal or better protection of fresh water, human health and the environment.
- For those portions of the former BGT area required for production activities, reseeding will be done at well abandonment, and following the procedure noted above.

### **Closure Report:**

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

- Proof of Closure Notice (surface owner & NMOCD)
- Backfilling & Cover Installation
- Confirmation Sampling Analytical Results
- Disposal Facility Name(s) and Permit Number(s)
- Application Rate & Seeding techniques

Page 26 of 27

Photo Documentation of Reclamation

<sup>(2)</sup> Numerical limits or natural background level, whichever is greater (19.15.17.13 MAC-Ro, 19.15.17.13 NMAC 3/28/2013)