District I 1623 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

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

Pit, Below-Grade Tank, or 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 (PIT EXTENSION PERMIT) 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 ordinar	ices.
Operator: Burlington Resources Oil & Gas Company LP OGRID#:14538 Address: PO BOX 4289, Farmington, NM 87499 OIL COMS. DIV DIST. 3 Facility or well name: FLORANCE 2M JUL_F 0.2014 API Number: 30-045- 35566 OCD Permit Number: U/L or Qtr/Qtr _J (NW/SE) Section 1 Township 30N Range 9W County: San Juan Center of Proposed Design: Latitude 36.79420 •N Longitude 107.78122•W NAD: 1927 🖾 1983 Surface Owner: Federal State Private Tribal Trust or Indian Allotment State Private Tribal Trust or Indian Allotment	
2. ∑ Pit: Subsection F, G or J of 19.15.17.11 NMAC Temporary: ∑ Drilling ☐ Workover ☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no ∑ Lined ☐ Unlined Liner type: Thickness _ 20 mil ∑ LLDPE ☐ HDPE ☐ PVC ☐ Other ∑ String-Reinforced Liner Seams: ∑ Welded ∑ Factory ☐ Other Volume: _ 7700 _ bbl Dimensions: L120' _ x W_55' _ x D 12'	
3. Below-grade tank: Subsection I of 19.15.17.11 DENIED Volume:	25
 <u>Alternative Method</u>: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. 	
 5. <u>Fencing</u>: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify <u>4' Field Fence w/ 1 strand barbed wire on top</u> 	

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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)

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

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.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☑ Data obtained from nearby wells	☐ Yes ⊠ No □ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes 🛛 No ☑ NA
 Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) Written confirmation or verification from the municipality; Written approval obtained from the municipality 	🗌 Yes 🛛 No
Within the area overlying a subsurface mine. (Does not apply to below grade tanks) - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	🗋 Yes 🖾 No
 Within an unstable area. (Does not apply to below grade tanks) Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	🗌 Yes 🛛 No
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	🔲 Yes 🖾 No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes 🗌 No
 Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	📋 Yes 🗌 No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
 Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) Topographic map; Visual inspection (certification) of the proposed site 	Yes No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial	Yes 🗌 No
application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes 🗌 No

 Within 100 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No
Temporary Pit Non-low chloride drilling fluid	
 Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	🗋 Yes 🛛 No
 Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	🗌 Yes 🔯 No
 Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	🗌 Yes 🛛 No
 Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🔯 No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	Yes 🗌 No
- 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 	🗌 Yes 🗋 No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.	
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	🗌 Yes 🗋 No
 Within 500 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗋 No
10.	
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:Subsection B of 19.15.17.9 NInstructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached.□Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC○Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC○Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC○Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC○Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC○Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.and 19.15.17.13 NMAC	cuments are 9 NMAC 15.17.9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:	
11. Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do 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	.15.17.9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:	

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12.	
<u>Permanent Pits Permit Application Checklist</u> : Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the	documents are
attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment 	
 Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC 	
 Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC 	,
 Operating and Mannenance 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 	
 Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC 	
^{13.} Proposed Closure: 19.15.17.13 NMAC	
<i>Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.</i> Type:	luid Managament Dit
Alternative Alternative Waste Excavation and Removal	iula Management Pit
 Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) 	
In-place Burial Don-site Trench Burial Alternative Closure Method	
^{14.} <u>Waste Excavation and Removal Closure Plan Checklist</u> : (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.	attached to the
 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. <u>Siting Criteria (regarding on-site closure methods only)</u> : 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. I 19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes ⊠ No □ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. GW @ 176' - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	⊠ Yes □ No □ NA
 Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	🗋 Yes 🛛 No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	🔲 Yes 🖾 No
 Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site 	🗋 Yes 🖾 No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	🗖 Yes 🖾 No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	🗌 Yes 🛛 No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	
Form C-144 Oil Conservation Division Page 4 c	of 6

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adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Writ	ten approval obtained from the municipality	🗌 Yes 🗌 No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNI	RD-Mining and Mineral Division	🗌 Yes 🗌 No
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau Society; Topographic map 	of Geology & Mineral Resources; USGS; NM Geolog	
Within a 100-year floodplain.		Yes No
- FEMA map		Yes No
On-Site Closure Plan Checklist:(19.15.17.13 NMAC) Instructions:by a check mark in the box, that the documents are attached.□□○○○<	opriate requirements of 19.15.17.10 NMAC irements of Subsection E of 19.15.17.13 NMAC upon the appropriate requirements of Subsection K of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC opriate requirements of 19.15.17.13 NMAC rements of 19.15.17.13 NMAC luids and drill cuttings or in case on-site closure stand Subsection H of 19.15.17.13 NMAC	19.15.17.11 NMAC nts of 19.15.17.11 NMAC
Operator Application Certification: I hereby certify that the information submitted with this application is tr Name (Print): Arleen White Signature: Ween White	Tue, accurate and complete to the best of my knowledg Title: <u>Staff Regulatory Technici</u> Date: <u>7/10/14</u>	
e-mail address: arleen.r.white@conocophillips.com	Telephone: <u>505-326-9517</u>	· · · · · · · · · · · · · · · · · · ·
18. OCD Approval: D Perm'	Plan (only) OCD Conditions (see attachr	nent)
OCD Representative Sign	Approval Date:	
Title:	OCD Permit Number:	
19. Closure Report (required within 60 days of closure completion): 19 Instructions: Operators are required to obtain an approved closure plather to be submitted to the division within 60 Section of the form until an approved closure plan has been obtained a 20. Closure Method: □ Use the the the the the the the the the th	an prior to implementing any closure activities and so days of the completion of the closure activities. Plea and the closure activities have been completed.	se do not complete this
If different from approved plan, please explain.		
Closure Report Attachment Checklist: Instructions: Each of the formark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private lance) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site) Soil Backfilling and Cover Installation	d only)	Please indicate, by a check
 Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) 		
On-site Closure Location: Latitude	Longitude NAD	. 🗌 1927 🔲 1983

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	mitted with this closure report is true, accurate and complete to the best of my plicable closure requirements and conditions specified in the approved closure	
Name (Print):	Title:	
Signature:	Date:	
e-mail address:	Telephone:	

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Florance 2M (NEW DRILL)

Burlington Resources Oil Gas Company LP requests a variance for the items listed below. The requested variance, per 19.15.17.15.A, provides equal or better protection of fresh water, public health & the environment.

- 1. Fencing
 - Fencing as described in Section 5 under Alternate, BR will construct all new fences around the temporary pit utilizing 48" steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or work-over operations, when the front side of the fence will be temporarily removed for operational purposes.
 - If the pit is located within 1000 feet of an occupied permanent residence, school, hospital, institution or church, BR will construct all new fences utilizing chain link security fence with two strands of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or work-over operations, when the front side of the fence will be temporarily removed for operational purposes. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.

2. Pit Marker

- BR will also be using a temporary Flat Pit Marker upon closure. 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 onsite burial upon the abandonment of all the wells on the pad. 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 onsite 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 operator's information at the time all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.
- BR will notify Public Entity Surface Owners by email in lieu of certified mail. Private Entity Surface Owners will still be notified via certified mail.

White, Arleen R

From:	White, Arleen R
Sent:	Wednesday, July 09, 2014 12:36 PM
Го:	Mark Kelly
Cc:	'Kelly, Jonathan, EMNRD'; Powell, Brandon, EMNRD
Subject:	FLORANCE 2M - BLM SURFACE OWNER NOTIFICATION

The subject well (FLORANCE 2M) will have a temporary pit that will be closed on-site. Please let me know if you have any questions.

1

Thanks, Arleen

30-045-21982

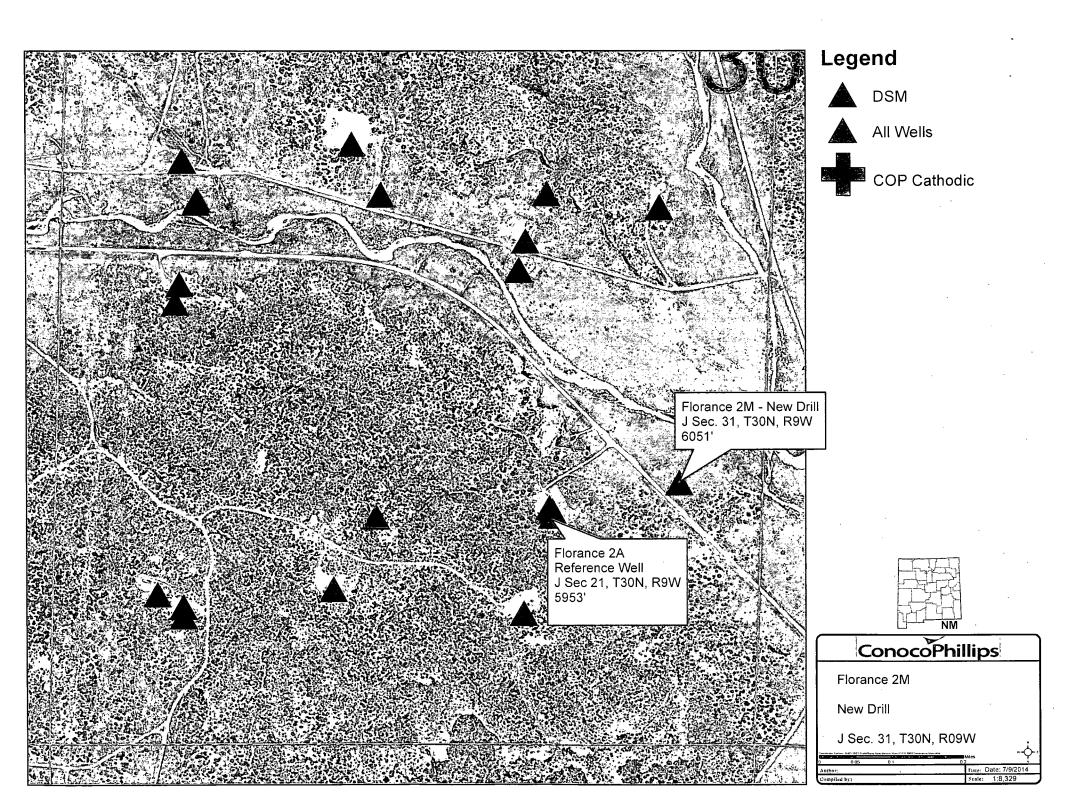
2694

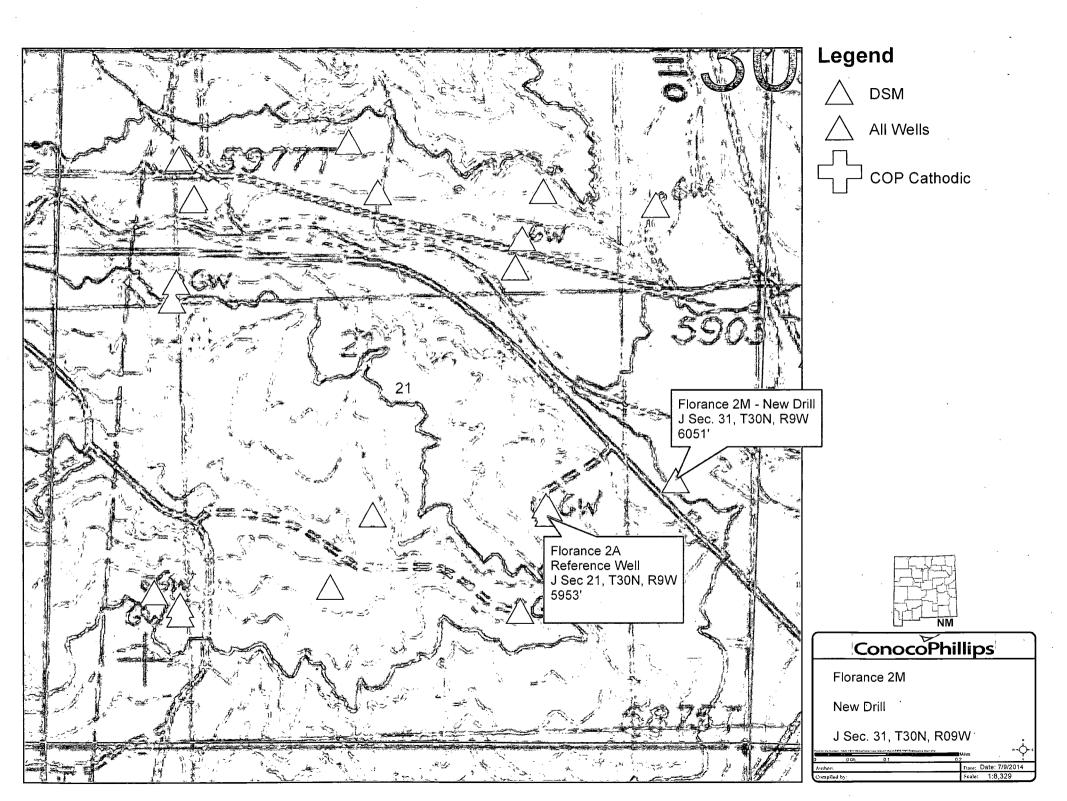
DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS NORTHWESTERN NEW MEXICO (Submit 3 copies to OCD Aztec Office)

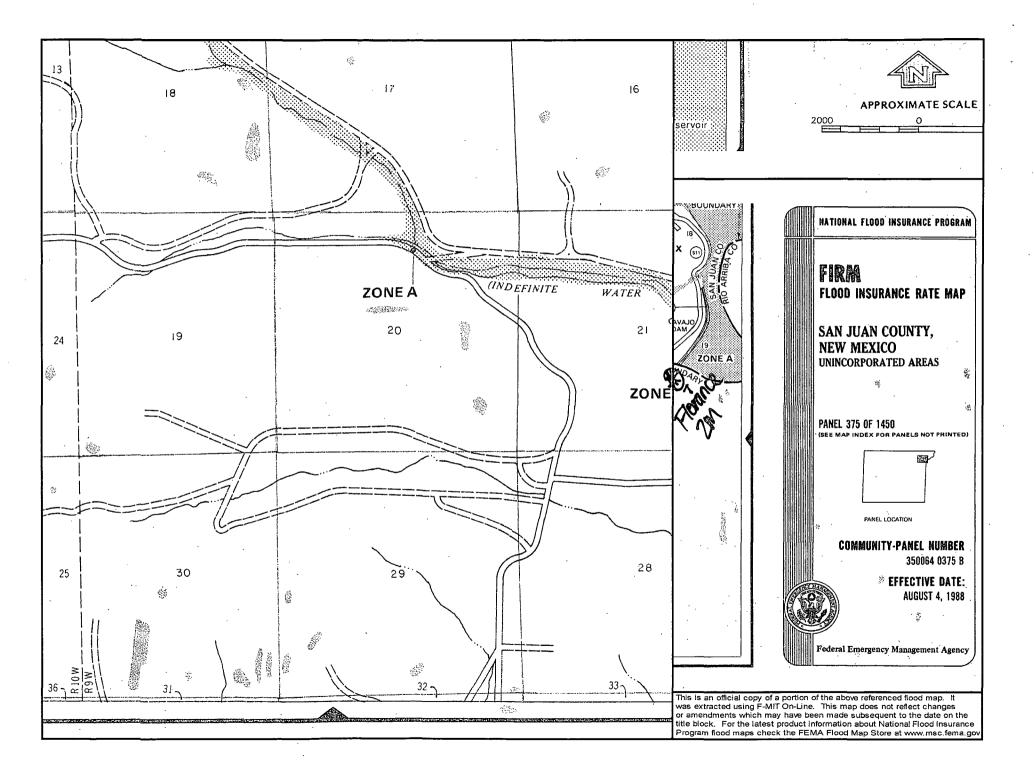
Operator MERIDIAN OIL	Location: UnitSE Sec.21 Twp 30 Rng 9
Name of Well/Wells or Pipeline Servic	cedFLORANCE #2A
	cps 1220w
Elevation 5953'Completion Date 6/19/78	
Casing, Sizes, Types & Depths	N/A
If Casing is cemented, show amounts &	types used N/A
If Cement or Bentonite Plugs have bee N/A	en placed, show depths & amounts used
Depths & thickness of water zones wit Fresh, Clear, Salty, Sulphur, Etc.	th description of water when possible:
Depths gas encountered:N/A	
Type & amount of coke breeze used:	N/A
Depths anodes placed: 270', 260', 250', 2	240', 230', 190', 155', 125', 115', 105'
Depths vent pipes placed: 285'	DECEIVEM
Vent pipe perforations: 205'	MAY 3 1 1991
Remarks: gb #1 CAVITY AT 220' - 222'	
	\DIST. 3

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

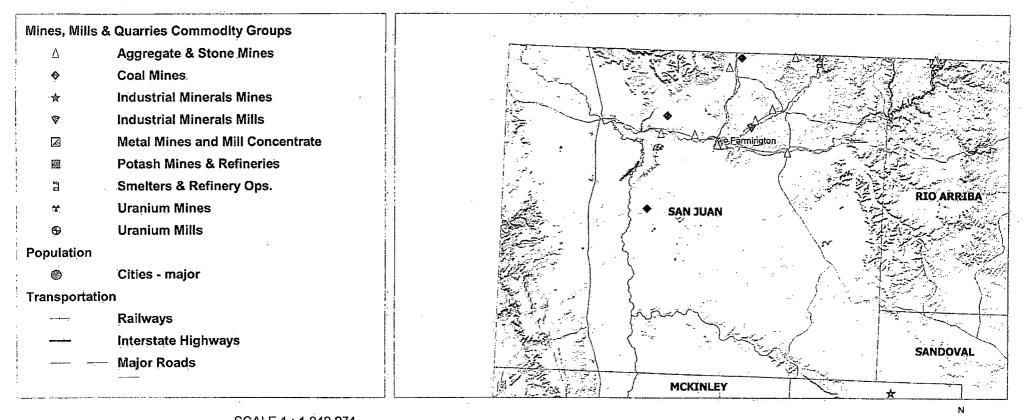
*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee. If Federal or Indian, add Lease Number.

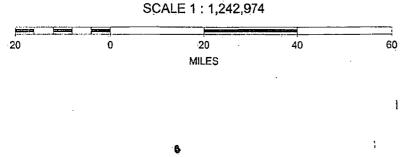






Mines, Mills and Quarries





http://www.emnrd.state.nm.us/MMD/MMQonline/MMQonline-PUBLIC-PROD.mwf

Siting Criteria and Compliance Demonstrations

Well Name: Florance 2M

1. Depth to groundwater (should not be less than 25 feet):

Depth to groundwater is >100'. The nearest recorded well with available water-depth information is the (Florance 2A) with groundwater @ (90') as indicated in the Cathodic Groundbed Data sheet attached.

2. <u>Distance to watercourse (should not be within 100 feet of a continuously flowing</u> <u>watercourse other significant watercourse or 200 feet from lakebed, sinkhole, or playa</u> <u>lake):</u>

Aerial map attached indicates that there are no lakebeds, sinkholes, playa lakes, or watercourses within 200 feet of the proposed pit.

3. Distance to buildings (should not be within 300 feet of any permanent buildings):

Aerial map attached indicates that the pit will not be within 300 feet of any of these locations.

4. <u>Distance to springs or wells (should not be within 300 feet of a private, domestic fresh</u> water well or spring used by less than five (5) households or within 300 feet of any other fresh water well or spring):

Aerial map attached indicates that the pit will not be within 300 feet of any recorded well or spring.

5. <u>Location within a 100 year floodplain (should not be located within a 100 year floodplain)</u>

FEMA map attached indicates that the pit will not be within a 100 year floodplain.

6. Distance to wetlands (should not be within 300 feet):

During initial onsite the well pad was evaluated for Wetland proximity. No wetland was identified within 300 feet of the proposed well pad. See attached Aerial map.

7. Location above subsurface mine (should not overlie a subsurface mine):

The pit will not overlie a mine. The 2010 Mines, Mills, and Quarries map attached indicates that there are no subsurface mines in the area.

8. Presence within unstable area (should not be within an unstable area):

The attached topographic map indicates that the location will not be within an unstable area.

Hydrogeological Report for Nacimiento Formation

Regional Geological context:

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone e al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3.500 feet.

Hydraulic Properties:

Reported well yields for 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conductive to runoff than retention of precipitation.

References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper

552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, ₂₅th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p.

Levings, G.W., Craigg, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983,

Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6.

District 1

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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 August 1, 2011 Submit one copy to appropriate District Office

□ AMENDED REPORT

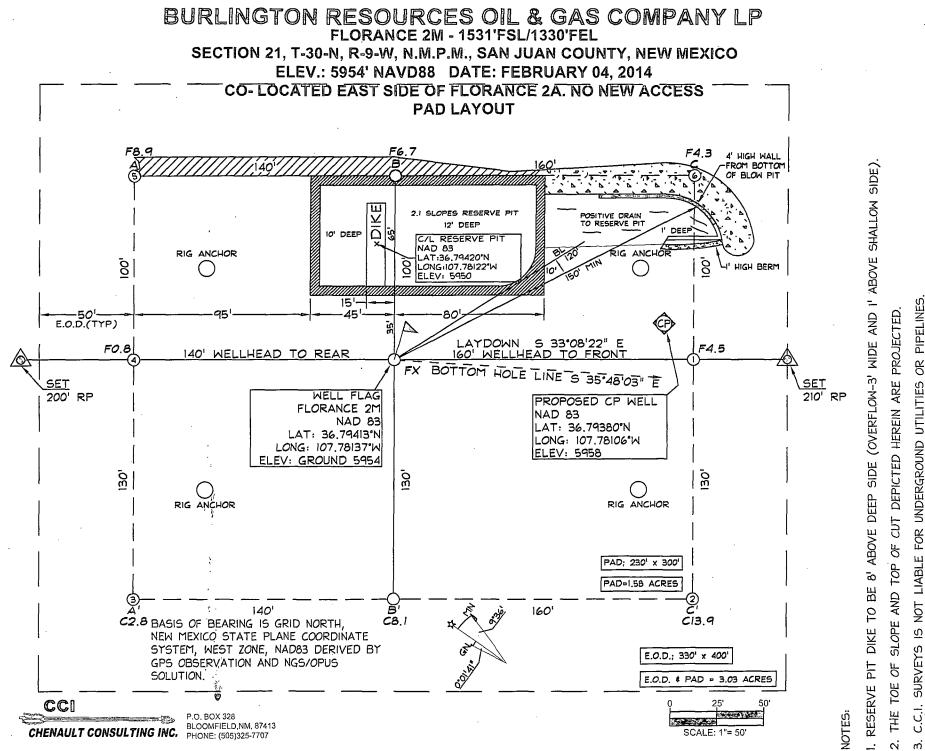
WELL LOCATION AND ACREAGE DEDICATION PLAT

1 A	PI Number		· ² Pool Code			³ Pool Name			
30-045-			72319 / 71599			BLANCO MESAVERDE / BASIN DAKOTA			
⁴ Property Coo A7203		⁵ Property Name FLORANCE							⁶ Well Number 2M
⁷ OGRID N 14538	⁷ OGRID No. 14538				•	Operator Name 9 Elevation RCES OIL AND GAS COMPANY LP 5954			
					¹⁰ SURFACE	LOCATION			
UL or lot no. J	Section 21	n Township 30-N	Range 9-W	Lot Idn	Feet from the 1531	North/South line SOUTH	Feet from the 1330	East/West line EAST	County SAN JUAN
·····	•- <u>-</u>		¹¹ Bc	ottom Hol	le Location If I	Different From	Surface		······
UL or lot no.	Sectio	n Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

UL of lot no.	Section	Township	Range	Lotion					County	
P	21	30-N	9-W		710	SOUTH	710	EAST	SAN JUAN	1
¹² Dedicated Acres S/2(320)MV S/2(320)DF		nt or Infill	¹⁴ Consolida	tion Code	¹⁵ Order No.					

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 Thereby certify that the information contained herein is true and complete
N 89'53' W 5267.46' (R)	
$(1951 \text{ N } 88^{\circ}54^{\circ}51^{\prime\prime} \text{ E } 2629.24^{\prime\prime} \text{ (M)} \text{ S } 88^{\circ}45^{\prime}43^{\prime\prime} \text{ E } 2635.38^{\prime\prime} \text{ (M)} 1951$	to the best of my knowledge and belief, and that this organization either
1051	owns a working interest or unleased mineral interest in the land including
STATE PLANE COORDINATE SYSTEM WEST	the proposed bottom hole location or has a right to drill this well at this
D ZONE, NAD83 AS DETERMINED BY GPS	location pursuant to a contract with an owner of such a mineral or working
ZONE, NADB3 AS DETERMINED BY GPS OBSERVATION AND NGS/OPUS SOLUTION.	interest, or to a voluntary pooling agreement or a compulsory pooling
<u>0'01'41"</u>	order heretofore entered by the division.
ш ≥	aleen white 2/17/14
10	Signature Date
01.32'01" 01.54'44" R)	Arleen White
(£) 01.	Printed Name
	arleen.r.white@conocophillips.com
1951 BLM BC	E-mail Address
INM SF-078116-A WELL FLAG BLM BCI	CUDIEVOD CEDTIEICATION
	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this
$ \begin{array}{c} MAD & 0.5 \\ MAD & 0.5 \\ \hline \\ \\ \\ \hline \\ \\ \\ \\ \hline \\$	plat was plotted from field notes of actual surveys
2 in NAD 27	made by me or under my supervision, and that the same is true and correct to the best of my belief.
LAT: 36°47.64763'N	
LONG: 107°46.84537'W SECTION 21 - 1330'	Date of Survey: 02/06/2014 Signature and Seal of Professional Surveyor:
	Signature and Sear of Professional Surveyor.
□ BOTTOM HOLE	
NAD 83 ACREAGE AT: 36.79187° N NM SF-080244	P.BROADHUR
LONG: 107.77934° W	S (N K/ X X
	I I I I I I I I I I I I I I I I I I I
Z DIN DO LAT: 36°47.51208'N DIN DO	193937
1951 LONG: $107^{\circ}46.72397'W$ 1951 1951	B 02/42/2014 5
S 89'53'48" E 2614.75' (M) N 89'54'01" W 2612.31' (M)	
N 89'51' W 5234.46' (R)	SONAL SUR
	Certificate Number: NM 11393



CONSTRUCTION. **t**0 PRIOR . UNMARKED BURIED (2) WORKING DAYS R MI R PIPELINE MARKED (LEAST TU AT ROAD 0 UTIL NO. UNDERGROUND UTII ЯQ PAD FOR б MELL 111 IABL Ĺ g コ 5 N S IS NOT SHOULD NC CABLES O რთ C.C.I. SURVEY CONTRACTOR PIPELINES OR Ř

Burlington Resources Oil Gas Company LP San Juan Basin

Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Burlington Resources Oil Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

- 1. BR will operate and maintain a temporary pit to contain liquids and solids and maintain the integrity of the liner and liner system to prevent contamination of fresh water and protect public health and environment.
- BR will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal Inc., permit # NM-01-005.
- 3. BR will not discharge or store any hazardous waste in any temporary pit.
- 4. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then BR shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
- 5. If a leak develops below the liquid's level, BR will remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner, notify the appropriate division office pursuant to 19.15.29 NMAC.
 - A Major Release shall be reported by giving both immediate verbal notice and timely written notice by filing form C-141 within 15 days pursuant to Subsection C, Paragraphs (1) and (2) of 19.15.29.7.A NMAC. A Major Release is:
 - (a) An unauthorized release of a volume, excluding natural gases, in excess of 25 barrels;
 - (b) An unauthorized release of any volume which:
 - (i) results in a fire;
 - (ii) will reach a water course;
 - (iii) may with reasonable probability endanger public health; or
 - (iv) results in substantial damage to property or the environment;
 - (c) An unauthorized release of natural gases in excess of 500 mcf; or
 - (d) A release of any volume which may with reasonable probability be detrimental to water or cause an exceedance of the standards in Section 19, Subsections A, B, C of 19.15.30.9 NMAC.
 - A Minor Release shall be reported by giving timely written notice by the filing of form C-141 within 15 days pursuant to 19.15.29.7 NMAC. A Minor Release is an unauthorized release of a volume, greater than 5 barrels but not more than 25 barrels; or greater than 50 mcf but less than 500 mcf of natural gases.
- 6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 7. The pit shall be protected from run-on by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 8. BR shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will be stored on-site until closure of pit.
- 9. Only fluids generated during the drilling or workover process may be discharged into a temporary pit.
- 10. BR will maintain the temporary pit free of miscellaneous solid waste or debris.
- 11. While a rig is on location, BR will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports. BR will file this log with the Aztec Division office upon closure of the pit.

- 12. After drilling operations, BR will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at BR's office electronically and will be filed with the Aztec Division office upon closure of the pit.
- 13. BR shall maintain at least two feet of freeboard for a temporary pit.
- 14. BR shall remove all free liquids from a temporary pit within 60 days from the date the operator releases the drilling rig.
- 15. BR shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. BR may request additional time to remove liquids from the Aztec Division office if it is not feasible to remove liquids within 48 hours.

Burlington Resources Oil Gas Company LP San Juan Basin Pit Design and Construction Plan

In accordance with Rule 19.15.17 the following information describes the design and construction of temporary pits on Burlington Resources Oil Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

- 1. BR will design and construct a properly sized and approved temporary pit which will contain liquids and solids and should prevent contamination of fresh water and protect public health and environment.
- 2. Prior to constructing the pit, (except a pit constructed in an emergency), topsoil will be stockpiled for use as the final cover at the time of closure.
- 3. BR will sign the well location in compliance with 19.15.17.11.C NMAC.
- 4. BR will construct all new fences around the temporary pit utilizing 48" steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes.
 - If pit is located within 1000 feet of an occupied permanent residence, school, hospital, institution or church, BR will construct all new fences utilizing 72" chain link security fence on the bottom with two strands of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary/permanent pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
- 5. BR shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure.
- 6. BR shall construct the pit so that the slopes are no steeper than two horizontal feet to one vertical foot (2H:1V).
- 7. Pit walls will be walked down by a crawler type tractor following construction.
- 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 edges or irregularities cannot be avoided.
- 10. All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
- 11. BR will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. BR will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. BR 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, or a manifold system.
- 13. The pit shall be protected from run-on by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 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 lined drill pit.
- 16. The lower half of the blow pit (nearest lined pit) will be lined with a 20-mil, string reinforced, LLDPE liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11 F.11.
- 17. BR will not allow freestanding liquids to remain on the unlined portion of a temporary blow pit.

Burlington Resources Oil Gas Company LPSan Juan Basin Closure Plan

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of temporary pits on Burlington Resources Oil Gas Company LP (BR)locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to NMOCD within 60 days of closure of pit. Closure report will be filed on C-144 and incorporate the following:

- Details on Capping and Covering, where applicable.
- Plot Plan (Pit Diagram)
- Inspection Reports
- Sampling Results
- C-105
- Copy of Deed Notice will be filed with County Clerk for Fee Wells

General Plan:

- All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011).
- 2. The preferred method of closure for all temporary pits will be in-place burial, assuming that all the criteria listed in 19.15.17.13.D are met.
- 3. The surface owner shall be notified of BR's closing of the temporary pit within 72 hours, but not more than one week, prior to closure via certified mail, return receipt requested.
- 4. Within 6 months of the Rig Off status occurring BR will ensure that temporary pits are closed, re-contoured, and reseeded.
- 5. Notice of Closure will be given prior to closure to the Aztec Division office within 72 hour, but not more than and one week, via email and verbally. The notification of closure will include the following:
 - Operator's name
 - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
- 6. Pit contents will be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents and must pass the paint filter liquids test (EPA SW-846, Method 9095) or other test methods approved by the division.
- 7. BR will collect, at a minimum, a five point composite sample of the temporary pit contents to demonstrate that, after the waste is solidified or stabilized with soil or other non-waste material at a ratio of no more than 3:1 soil or other non-waste material to waste, the concentration of any contaminant in the stabilized waste is not higher than the parameters listed in table II of 19.15.17.13 NMAC.
- 8. BR will fold the outer edges of the liner to overlap the waste material prior to the installation of a geomembrane cover. Install a geomembrane cover over the waste material in the lined temporary pit and in a manner that prevents the collection of infiltration water in the lined temporary pit and on the geomembrane cover after the coil cover is in place; the geomembrane cover shall consist of a 20-mil string reinforced LLDPE liner or equivalent cover that the appropriate division district office approves; the geomembrane cover shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions; cover compatibility shall comply with EPA SW -845 Method 9090A.

- 9. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less that 600 mg/kg as analyzed by EPA Method 300.0. The soil cover shall include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. [19.15.17.13 H.3]
- 10. During the stabilization process if the liner is ripped by equipment the Aztec NMOCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
- 11. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM01001.
- 12. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Reshaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 13. For those portions of the former temporary pit area no longer needed for production activities, BR will seed the disturbed areas the first favorable growing season after the temporary pit is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other Division-approved methods. BR will notify the division when reclamation and revegetation is complete.

Reclamation of the temporary pit area will be considered complete when:

- 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

- Pursuant to 19.15.17.13.H.D, BR 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 water, human health and the environment.
- 14. 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 onsite burial upon the abandonment of all the wells on the pad. 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 onsite 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 operator's information at the time all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.

Tab	le II	
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Closure Criteria for Burial Trenches and Waste Left in Place in Temporary Pits

orido	EPA Method 300 0	20,000 mg/kg
onue		20,000 mg/kg
Н	EPA SW-846 Method 418.1	100 mg/kg
EX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
nzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg
loride	EPA Method 300.0	40,000 mg/kg
E	t X nzene	EPA SW-846 Method 418.1 EX EPA SW-846 Method 8021B or 8260B Izene EPA SW-846 Method 8021B or 8015M

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	ТРН	EPA SW-846 Method 418.1	2,500 mg/kg
51-100 feet	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg
	Chloride	EPA Method 300.0	80,000 mg/kg
> 100 feet	ТРН	EPA SW-846 Method 418.1	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	втех	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg

*Or other test methods approved by the division

**Numerical limits or natural background level, whichever is greater [19.15.17.13 NMAC - Rp, 19.15.17.13 NMAC, 6/28/13]